LAPP GROUP

ÖLFLEX®

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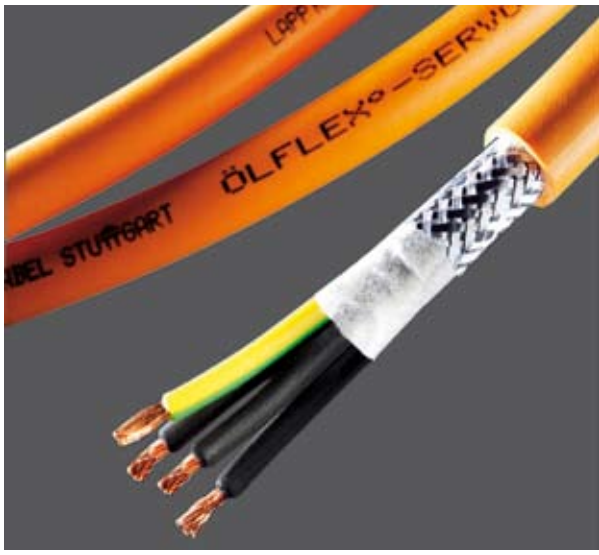

Wide range use

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ÖLFLEX® CLASSIC 100

Info

- **Customised colour option and printing of the outer sheath on request**

Benefits

- Space saving installation due to small cable diameters
- High electrical performance due to 4kV test voltage
- Increased flexibility due short-twisted conductor layers

Application range

- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
  Power station
- Dry or damp interiors under medium mechanical load conditions
- Fixed installation as well as occasional flexing at free, non-continuously recurring movement without tensile load

Product features

- Flame retardant according to IEC 60332-1-2
- Good chemical resistance
  see Appendix T1

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- PVC insulation LAPP P8/1
- Cores twisted in layers
- PVC outer sheath, grey (RAL 7001)

Technical data

Core identification code
Up to 5 cores: according to VDE 0293-308 (appendix T9)
Starting at 6 cores: ÖLFLEX® colour code (appendix T7)

Based on
IEC 60227-5
HD 21.5 S3; VDE 0281 Part 5
HD 21.13 S1; VDE 0281 Part 13

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
Up to 1.5 mm²: U_0/U: 300/500 V
Starting at 2.5 mm²: U_0/U: 450/750 V
Fixed, protected installation:
U_0/U: 600/1000 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CLASSIC 100; U0/U: 300/500 V				
0010000	2 X 0.5	5.4	9.6	42
0010001	3 G 0.5	5.7	14.4	50
00101223	3 X 0.5	5.7	14.4	50
00100023	4 G 0.5	6.2	19.2	60
00101233	4 X 0.5	6.2	19.2	60
00100033	5 G 0.5	6.7	24.0	71
00101243	5 X 0.5	6.7	24.0	71
0010004	6 G 0.5	6.7	28.8	73
0010005	7 G 0.5	6.7	33.6	81
0010006	8 G 0.5	8.0	38.4	97
0010007	10 G 0.5	8.6	48.0	116
0010008	12 G 0.5	8.9	58.0	133
0010009	14 G 0.5	9.5	67.0	151
0010010	16 G 0.5	10.0	76.0	169
0010011	21 G 0.5	11.7	99.0	223
0010012	24 G 0.5	12.4	114.0	254
0010016	40 G 0.5	15.4	192.0	404
0010021	2 X 0.75	6.2	14.4	56
0010022	3 G 0.75	6.5	21.6	67
00101253	3 X 0.75	6.5	21.6	67
00100233	4 G 0.75	7.1	28.8	81
00101263	4 X 0.75	7.1	28.8	81
00100243	5 G 0.75	8.0	36.0	99
00101273	5 X 0.75	8.0	36.0	99
0010025	6 G 0.75	7.3	43.3	104
0010026	7 G 0.75	7.3	50.4	109
0010027	8 G 0.75	8.8	56.0	123
0010028	9 G 0.75	9.4	63.0	144
0010029	10 G 0.75	9.6	72.0	153
0010030	12 G 0.75	9.9	86.4	176
0010031	15 G 0.75	10.9	108.0	211
0010032	18 G 0.75	11.7	129.6	268
0010033	21 G 0.75	13.0	151.0	293
0010034	25 G 0.75	13.8	180.0	374
0010036	40 G 0.75	17.3	288.0	571

ÖLFLEX® CLASSIC 100

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
0010037	50 G 0.75	19.2	360.0	698
0010041	2 X 1	6.5	19.2	64
0010042	3 G 1	6.9	29.0	78
00102033	3 X 1	6.9	28.0	78
00100433	4 G 1	7.7	38.4	97
00102043	4 X 1	7.7	38.4	97
00100443	5 G 1	8.4	48.0	105
00102053	5 X 1	8.4	48.0	105
0010045	6 G 1	8.0	58.0	124
0010046	7 G 1	8.0	67.0	131
0010047	8 G 1	9.5	77.0	146
0010049	10 G 1	10.2	96.0	183
0010050	12 G 1	10.5	115.0	215
0010052	16 G 1	11.8	154.0	282
0010053	18 G 1	12.7	173.0	315
0010054	20 G 1	13.4	192.0	350
0010056	25 G 1	14.7	240.0	449
0010063	2 X 1.5	7.5	29.0	87
0010064	3 G 1.5	8.1	43.0	109
00101283	3 X 1.5	8.1	43.0	109
00100653	4 G 1.5	8.9	58.0	133
00101293	4 X 1.5	8.9	58.0	133
00100663	5 G 1.5	10.0	72.0	163
00101303	5 X 1.5	10.0	72.0	163
0010068	7 G 1.5	8.9	101.0	166
0010069	8 G 1.5	10.6	115.0	205
0010071	12 G 1.5	12.0	173.0	307
0010072	14 G 1.5	12.7	202.0	349
0010074	18 G 1.5	14.4	259.0	465
0010076	25 G 1.5	16.9	360.0	655
ÖLFLEX® CLASSIC 100; U0/U: 450/750 V				
0010086	2 X 2.5	8.9	48.0	128
0010087	3 G 2.5	9.6	72.0	162
00100933	3 X 2.5	9.6	72.0	162
00100883	4 G 2.5	10.7	96.0	203
00100893	5 G 2.5	11.8	120.0	242
0010091	7 G 2.5	13.1	168.0	321
0010092	8 G 2.5	15.8	192.0	385
0010100	2 X 4	10.6	76.8	187
0010210	3 G 4	11.4	115.2	244
00101013	4 G 4	12.7	154.0	297
00101023	5 G 4	13.9	192.0	355
0010103	7 G 4	15.4	269.0	471
0010105	3 G 6	12.6	173.0	318
00101063	4 G 6	13.8	230.0	394
00101073	5 G 6	15.6	288.0	489
0010108	7 G 6	17.3	403.0	651
0010301	3 G 10	15.9	288.0	516
00101093	4 G 10	17.6	384.0	650
00101103	5 G 10	19.7	480.0	792
0010111	7 G 10	21.7	672.0	1,058
0010302	3 G 16	18.3	461.0	728
00101123	4 G 16	20.4	614.0	1,087
00101133	5 G 16	22.8	768.0	1,118
0010303	3 G 25	23.0	720.0	1,388
00101153	4 G 25	25.4	960.0	1,582
00101163	5 G 25	28.5	1,200.0	1,771
0010304	3 G 35	25.6	1,008.0	1,766
00101173	4 G 35	28.5	1,344.0	2,106
00101183	5 G 35	31.9	1,680.0	2,635
0010305	3 G 50	31.0	1,440.0	2,556
00101193	4 G 50	34.5	1,920.0	2,943
00103133	5 G 50	38.6	2,400.0	3,936
0010306	3 G 70	35.3	2,016.0	3,182
00101203	4 G 70	39.4	2,688.0	4,092
00103143	5 G 70	44.1	3,360.0	4,800
0010307	3 G 95	41.3	2,736.0	4,675
00101213	4 G 95	45.8	3,648.0	5,290
00103153	5 G 95	51.6	4,560.0	5,600
0010308	3 G 120	47.6	3,456.0	5,626
00103093	4 G 120	53.1	4,608.0	6,994
00103123	4 G 185	62.8	7,104.0	8,300

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Single lengths for sizes: ≥ 5G50 max. 500m; ≥ 5G95 max. 400; ≥ 3G120 max. 500m; ≥ 4G120 max. 300; ≥ 4G185 max. 250m

■ Comparable products

- UNITRONIC® 100 see page 246
- ÖLFLEX® CLASSIC 100 BK POWER 0,6/1kV see page 27
- ÖLFLEX® CLASSIC 130 H BK 0,6/1kV see page 57

■ Accessories

- SKINTOP® CLICK see page 643
- TY - FAST® standard cable ties see page 962
- STAR STRIP stripping tool see page 908

ÖLFLEX® CLASSIC 100 YELLOW

Yellow outer sheath for special warning purpose

Info
- For warning purposes

Benefits
- Space saving installation due to small cable diameters
- High electrical performance due to 4kV test voltage

Application range
- For electrical circuits which remain live after main switch is disconnected
- Service sockets and illumination circuits in electrical switchboards and cabinets

Product features
- Flame retardant according to IEC 60332-1-2
- Good chemical resistance see Appendix T1

Approvals (Norm references)
CE RoHS

Design
- Fine strands of bare copper wires
- PVC insulation LAPP P8/1
- PVC outer sheath, yellow (RAL 1016)

Technical data
Core identification code
VDE 0293-308, see appendix T9

Based on
IEC 60227-5
HD 21.5 S3; VDE 0281 Part 5
HD 21.13 S1; VDE 0281 Part 13

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U: 450/750 V
Fixed, protected installation:
U_0/U: 600/1000 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CLASSIC 100 yellow; U0/U: 450/750 V				
0010400	3 G 1.5	8.1	43.0	95
00104023	4 G 1.5	8.9	58.0	117
00104033	5 G 1.5	10.0	72.0	144
0010401	3 G 2.5	9.6	72.0	152
00104043	4 G 2.5	10.7	96.0	205
00104053	5 G 2.5	11.8	120.0	225

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® 450 P see page 71
- ÖLFLEX® 540 P see page 73

Accessories

- SKINTOP® CLICK see page 643
- STAR STRIP stripping tool see page 908

ÖLFLEX® CLASSIC 100 CY

Info
- **EMC compliant**

Benefits
- Space saving installation due to small cable diameters
- High electrical performance due to 4kV test voltage

Application range
- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
- Conveying and transport systems
- Servo drives
- In EMI critical environment (electromagnetic interference)

Product features
- Flame retardant according to IEC 60332-1-2
- Good chemical resistance
  see Appendix T1
- High coverage degree of the screen
  low transfer impedance
  (max. 250 Ω/km at 30 MHz)

Approvals (Norm references)
CE RoHS

Design
- Fine strands of bare copper wires
- PVC insulation LAPP P8/1
- PVC inner sheath, grey
- Tinned copper braid
- PVC outer sheath, transparent

Technical data
Core identification code
Up to 5 cores: according to VDE 0293-308 (appendix T9)
Starting at 6 cores: ÖLFLEX® colour code (appendix T7)

Based on
IEC 60227-5
HD 21.5 S3; VDE 0281 Part 5
HD 21.13 S1; VDE 0281 Part 13

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installed: 6 x outer diameter

Rated voltage
Up to 1.0 mm²: U_0/U: 300/500 V
Starting at 1.5 mm²: U_0/U: 450/750 V
Fixed, protected installation:
U_0/U: 600/1000 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CLASSIC 100 CY; U0/U: 300/500 V				
0035001	2 X 0.5	7.0	41.0	75
0035002	3 G 0.5	7.3	46.0	83
00350033	4 G 0.5	7.9	55.0	99
00352013	5 G 0.5	8.4	66.0	112
0035202	7 G 0.5	8.9	80.0	132
0035004	2 X 0.75	7.4	46.0	86
0035005	3 G 0.75	7.9	57.0	100
00350063	4 G 0.75	8.4	64.0	115
00350163	5 G 0.75	8.9	77.0	130
0035203	7 G 0.75	9.7	102.0	161
0035220	2 X 1	7.9	56.0	98
0035221	3 G 1	8.2	65.0	111
00352223	4 G 1	8.7	78.0	130
00352233	5 G 1	9.5	89.0	153
0035204	7 G 1	10.2	113.0	185
ÖLFLEX® CLASSIC 100 CY; U0/U: 450/750 V				
0035000	2 X 1.5	9.9	65.0	132
0035458	3 G 1.5	10.3	79.0	170
00354593	4 G 1.5	11.3	97.0	204
00354603	5 G 1.5	12.6	116.0	246
0035461	7 G 1.5	13.9	149.0	320
0035011	3 G 2.5	11.8	146.0	211
00350173	4 G 2.5	13.5	167.0	310

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
00350123	5 G 2.5	14.6	200.0	326
0035289	7 G 2.5	15.9	288.0	444
00350183	4 G 4	15.1	237.0	403
00350133	5 G 4	16.5	328.0	478
00350193	4 G 6	16.6	318.0	521
00350143	5 G 6	18.2	441.0	624
0034953	3 G 10	18.9	414.0	690
00350213	4 G 10	21.1	558.0	843
00352903	5 G 10	23.1	714.0	1,004
0034954	3 G 16	21.7	607.0	910
00350223	4 G 16	23.9	804.0	1,164
00350153	5 G 16	26.8	1,050.0	1,812
0034955	3 G 25	26.6	936.0	1,330
00350233	4 G 25	29.4	1,289.0	1,903
00350243	5 G 25	32.6	1,446.0	2,374
0034956	3 G 35	29.4	1,258.0	1,370
00350253	4 G 35	32.4	1,693.0	2,489
00350263	5 G 35	36.0	1,975.0	2,771
0034952	3 G 50	35.1	1,748.0	2,590
00350273	4 G 50	38.8	2,342.0	3,362
00350283	4 G 70	43.7	3,035.0	3,719
00350293	4 G 95	50.4	4,055.0	5,849
00354303	4 G 120	56.8	5,225.0	7,509
00354313	4 G 150	62.2	6,300.0	7,800
00354323	4 G 185	67.8	7,753.0	9,866

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Single lengths for sizes: ≥ 4G50 max. 500m; ≥ 4G95 max. 400m; ≥ 4G120 max. 300m; ≥ 4G150 max. 250m

Comparable products
- ÖLFLEX® SERVO 9YSLCY-JB see page 92
- ÖLFLEX® SERVO 2YSLCY-JB see page 89

Accessories
- 3M Scotch 1183 screening tape see page 950
- SKINTOP® MS-M BRUSH see page 658

ÖLFLEX® CLASSIC 100 SY

Info

- **With steel wire braid**

Benefits

- Additional mechanical protection due to steel wire braid

Application range

- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
- Areas with increased mechanical stress requirements

Product features

- Flame retardant according to IEC 60332-1-2
- Good chemical resistance
  see Appendix T1

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- PVC insulation LAPP P8/1
- PVC inner sheath, grey
- Oxidation protected steel wire braid
- PVC outer sheath, transparent

Technical data

Core identification code
Up to 5 cores: according to VDE 0293-308 (appendix T9)
Starting at 6 cores: ÖLFLEX® colour code (appendix T7)

Based on
IEC 60227-5
HD 21.5 S3; VDE 0281 Part 5
HD 21.13 S1; VDE 0281 Part 13

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installed: 6 x outer diameter

Rated voltage
Up to 1.5 mm²: U_0/U: 300/500 V
Starting at 2.5 mm²: U_0/U: 450/750 V
Fixed, protected installation:
U_0/U: 600/1000 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CLASSIC 100 SY; U0/U: 300/500 V				
0016022	2 X 0.75	8.2	14.4	97
0016023	3 G 0.75	8.5	21.6	108
00160243	4 G 0.75	9.2	28.8	126
00160253	5 G 0.75	9.7	36.0	146
0016027	7 G 0.75	10.3	50.0	172
0016031	12 G 0.75	12.9	86.0	260
0016042	2 X 1	8.5	19.2	137
0016043	3 G 1	8.8	29.0	154
00160443	4 G 1	9.5	38.4	180
00160453	5 G 1	10.1	48.0	202
0016047	7 G 1	11.0	67.0	242
0016057	25 G 1	18.1	240.0	653
0016064	2 X 1.5	9.3	29.0	172
0016065	3 G 1.5	9.7	43.0	191
00160663	4 G 1.5	10.2	58.0	217
00160673	5 G 1.5	11.1	72.0	268
0016069	7 G 1.5	11.9	101.0	311
0016072	12 G 1.5	15.4	173.0	499
0016075	18 G 1.5	17.6	259.0	652
0016077	25 G 1.5	20.3	360.0	913
0016078	32 G 1.5	22.1	461.0	1,065

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CLASSIC 100 SY; U0/U: 450/750 V				
0016087	2 X 2.5	12.1	48.0	245
0016088	3 G 2.5	12.6	72.0	278
00160893	4 G 2.5	13.9	96.0	339
00160903	5 G 2.5	15.2	120.0	397
0016092	7 G 2.5	16.3	168.0	470
0016101	2 X 4	13.6	76.8	329
00161023	4 G 4	15.7	154.0	457
00161033	5 G 4	17.1	192.0	545
0016106	3 G 6	15.8	173.0	544
00161073	4 G 6	17.2	230.0	687
00161083	5 G 6	18.8	288.0	798
00161103	4 G 10	21.3	384.0	1,009
00161113	5 G 10	23.3	480.0	1,197
00161133	4 G 16	24.1	614.0	1,384
00161143	5 G 16	26.8	768.0	1,740
00161163	4 G 25	29.4	960.0	2,021
00161173	5 G 25	32.6	1,200.0	2,464
00161183	4 G 35	32.4	1,344.0	2,570
00161193	5 G 35	36.0	1,680.0	3,185
00161203	4 G 50	38.8	1,920.0	3,514

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Single lengths for sizes: ≥ 4G35 max. 500m; ≥ 4G95 max. 400m

Comparable products

- ÖLFLEX® CLASSIC 110 SY see page 33

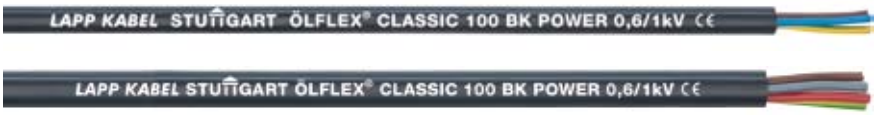
Accessories

- Cable shears KT 4 and KT 5 see page 904

ÖLFLEX® CLASSIC 100 BK POWER 0,6/1kV

Info

- **Down to -30°C also outdoor use**



Benefits

- Space saving installation due to small cable diameters
- High electrical performance due to 4kV test voltage

Application range

- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
  Paint-spray lines
- Stage technology
- Fixed installation as well as occasional flexing at free, non-continuously recurring movement without tensile load
- Outdoor use suitable considering the temperature range
- Suitable for direct burial

Product features

- Flame retardant according to IEC 60332-1-2
- UV resistant and weather proof
- Flexible down to -30°C

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- Core insulation: PVC, cold-resistant
- PVC outer sheath, cold-resistant, black (RAL 9005)

Technical data

Core identification code
Up to 5 cores: according to VDE 0293-308 (appendix T9)
Starting at 6 cores: ÖLFLEX® colour code (appendix T7)

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U: 600/1000 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -30°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX ® CLASSIC 100 BK Power 0,6/1 kV				
1120456	2 X 1	8.6	19.2	98
1120457	3 G 1	9.0	29.0	112
1120458	4 G 1	9.6	38.0	131
1120459	5 G 1	10.4	48.0	152
1120462	2 X 1.5	9.6	29.0	123
1120463	3 G 1.5	10.1	43.0	144
1120464	4 G 1.5	10.8	58.0	170
1120465	5 G 1.5	11.7	72.0	199
1120468	2 X 2.5	10.8	48.0	147
1120469	3 G 2.5	11.3	72.0	182
1120470	4 G 2.5	12.2	96.0	225
1120471	5 G 2.5	13.3	120.0	266
1120474	4 G 4	13.8	154.0	324
1120475	4 G 6	15.1	230.0	442
1120476	4 G 10	18.7	384.0	707
1120477	4 G 16	21.3	614.0	1,100
1120478	4 G 25	26.2	960.0	1,600
1120479	4 G 35	29.1	1,344.0	2,400
1120480	4 G 50	35.6	1,920.0	3,400
1120481	4 G 70	40.7	2,688.0	5,050
1120482	4 G 95	46.8	3,648.0	6,010
1120483	4 G 120	53.5	4,608.0	7,500

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Further sizes as well as screened types on request

Comparable products

- ÖLFLEX® CLASSIC 130 H BK 0,6/1kV see page 57
- ÖLFLEX® CLASSIC 110 BLACK 0,6/1kV see page 34

Accessories

- Stainless steel - Box Starter - Set see page 872
- SKINTOP® MS-M see page 650

ÖLFLEX® CLASSIC 110

Info

- **VDE certificate of conformity with factory surveillance**

Benefits

- Space saving installation due to small cable diameters
- High electrical performance due to 4kV test voltage

Application range

- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
  Power station
  Stage technique
- Fixed installation as well as occasional flexing at free, non-continuously recurring movement without tensile load
- Dry or damp interiors under medium mechanical load conditions

Product features

- Flame retardant according to IEC 60332-1-2
- Good chemical resistance
  see Appendix T1

Approvals (Norm references)

CE DVE RoHS

- Remark: A RoHS-non-compliant version is marketed under ÖLFLEX® 110 with VDE-REG.-Nr. 8067. To order this, please add appendix <1> to the below stated part numbers. This does not affect the above given further technical data or description.

Design

- Fine strands of bare copper wires
- PVC insulation LAPP P8/1
- Cores twisted in layers
- PVC outer sheath, grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

VDE tested
VDE Reg. No. 7030 for sizes up to and including 65 cores

Part number	Number of cores and mm² per conductor	Standard lengths, meter							Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
		25	50	100	200	300	500	1000			
ÖLFLEX® CLASSIC 110											
1119752	2 X 0.5			100	200	300	500	1000	4.8	9.6	35
1119003	3 G 0.5			100	200	300	500	1000	5.1	14.4	42
1119753	3 X 0.5			100	200	300	500	1000	5.1	14.4	42
1119004	4 G 0.5			100	200	300	500	1000	5.7	19.2	54
1119754	4 X 0.5			100	200	300	500	1000	5.7	19.2	54
1119005	5 G 0.5			100	200	300	500	1000	6.2	24.0	63
1119755	5 X 0.5			100	200	300	500	1000	6.2	24.0	63
1119007	7 G 0.5		50	100	200	300	500	1000	6.7	33.6	81
1119757	7 X 0.5		50	100	200	300	500	1000	6.7	33.6	81
1119010	10 G 0.5		50	100	200	300	500	1000	8.6	48.0	116
1119012	12 G 0.5		50	100	200	300	500	1000	8.9	58.0	131
1119014	14 G 0.5		50	100			500	1000	9.5	67.0	153
1119018	18 G 0.5		50	100			500	1000	10.5	86.4	188
1119021	21 G 0.5		50	100			500	1000	11.7	101.0	221
1119025	25 G 0.5		50	100			500	1000	12.4	120.0	261
1119030	30 G 0.5		50	100			500	1000	13.3	144.0	304
1119035	35 G 0.5		50	100			500	1000	14.5	168.0	356
1119040	40 G 0.5		50	100			500	1000	15.4	192.0	400
1119052	52 G 0.5		50	100			500		17.3	250.0	517
1119061	61 G 0.5		50	100			500		18.5	293.0	603
1119065	65 G 0.5		50	100			500		19.6	312.0	644
1119080	80 G 0.5		50	100			500		21.1	384.0	780
1119100	100 G 0.5		50	100			500		23.6	480.0	975
1119802	2 X 0.75			100	200	300	500	1000	5.4	14.4	45
1119103	3 G 0.75			100	200	300	500	1000	5.7	21.6	55
1119803	3 X 0.75			100	200	300	500	1000	5.7	21.6	55
1119104	4 G 0.75			100	200	300	500	1000	6.2	28.8	66
1119804	4 X 0.75			100	200	300	500	1000	6.2	28.8	66
1119105	5 G 0.75		50	100	200	300	500	1000	6.7	36.0	79
1119805	5 X 0.75		50	100	200	300	500	1000	6.7	36.0	79
1119107	7 G 0.75		50	100	200	300	500	1000	7.3	50.0	101
1119807	7 X 0.75		50	100	200	300	500	1000	7.3	50.0	101
1119109	9 G 0.75		50	100	200	300	500	1000	9.4	65.0	137
1119110	10 G 0.75		50	100	200	300	500	1000	9.6	72.0	150
1119112	12 G 0.75		50	100	200	300	500	1000	9.9	86.0	171
1119812	12 X 0.75		50	100	200	300	500	1000	9.9	86.0	171
1119115	15 G 0.75		50	100			500	1000	10.9	108.0	209
1119117	15 X 0.75		50	100			500	1000	10.9	108.0	209
1119116	16 G 0.75		50	100			500	1000	11.1	115.2	220
1119118	18 G 0.75		50	100			500	1000	11.7	130.0	244
1119121	21 G 0.75		50	100			500	1000	13.0	151.0	286
1119125	25 G 0.75		50	100			500	1000	13.8	180.0	337
1119126	26 G 0.75		50	100			500	1000	14.2	187.2	350
1119134	34 G 0.75		50	100			500	1000	15.9	245.0	448
1119141	41 G 0.75		50	100			500	1000	17.4	296.0	538
1119150	50 G 0.75		50	100			500		19.2	360.0	648
1119151	51 G 0.75		50	100			500		19.2	367.0	646
1119161	61 G 0.75		50	100			500		20.5	439.0	779
1119165	65 G 0.75		50	100			500		21.8	468.0	832
1119180	80 G 0.75		50	100			500		23.6	576.0	1,019
1119200	100 G 0.75		50	100			500		26.4	718.0	1,271
1119852	2 X 1			100	200	300	500	1000	5.7	19.2	53
1119203	3 G 1			100	200	300	500	1000	6.0	28.8	65
1119853	3 X 1			100	200	300	500	1000	6.0	28.8	65
1119204	4 G 1		50	100	200	300	500	1000	6.5	38.4	79
1119854	4 X 1		50	100	200	300	500	1000	6.5	38.4	79

ÖLFLEX® CLASSIC 110

Part number	Number of cores and mm² per conductor	Standard lengths, meter							Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
		25	50	100	200	300	500	1000			
1119205	5 G 1		50	100	200	300	500	1000	7.1	48.0	94
1119855	5 X 1		50	100	200	300	500	1000	7.1	48.0	94
1119206	6 G 1		50	100	200	300	500	1000	8.0	58.0	113
1119207	7 G 1		50	100	200	300	500	1000	8.0	67.0	126
1119857	7 X 1		50	100	200	300	500	1000	8.0	67.0	126
1119208	8 G 1		50	100	200	300	500	1000	9.5	77.0	149
1119209	9 G 1		50	100	200	300	500	1000	10.0	86.0	164
1119210	10 G 1		50	100	200	300	500	1000	10.2	96.0	180
1119212	12 G 1		50	100	200	300	500	1000	10.5	115.0	205
1119862	12 X 1		50	100	200	300	500	1000	10.5	115.0	205
1119214	14 G 1		50	100			500	1000	11.2	134.0	238
1119216	16 G 1		50	100			500	1000	11.8	153.6	266
1119218	18 G 1		50	100			500	1000	12.7	173.0	320
1119868	18 X 1		50	100			500	1000	12.7	173.0	320
1119220	20 G 1		50	100			500	1000	13.4	192.0	330
1119870	20 X 1		50	100			500	1000	13.4	192.0	330
1119225	25 G 1		50	100			500	1000	14.7	240.0	408
1119226	26 G 1		50	100			500	1000	15.1	249.0	424
1119234	34 G 1		50	100			500	1000	17.1	326.0	551
1119236	36 G 1		50	100			500	1000	17.4	346.0	578
1119241	41 G 1		50	100			500	1000	18.8	394.0	661
1119250	50 G 1		50	100			500		20.6	480.0	797
1119256	56 G 1		50	100			500		21.4	538.0	888
1119261	61 G 1		50	100			500		22.1	586.0	958
1119265	65 G 1		50	100			500		23.6	624.0	1,033
1119280	80 G 1		50	100			500		25.3	768.0	1,251
1119300	100 G 1		50	100			500		28.3	960.0	1,560
1119902	2 X 1.5			100	200	300	500	1000	6.3	29.0	68
1119303	3 G 1.5	25	50	100	200	300	500	1000	6.7	43.0	84
1119903	3 X 1.5		50	100	200	300	500	1000	6.7	43.0	84
1119304	4 G 1.5	25	50	100	200	300	500	1000	7.2	58.0	104
1119904	4 X 1.5		50	100	200	300	500	1000	7.2	58.0	104
1119305	5 G 1.5	25	50	100	200	300	500	1000	8.1	72.0	128
1119905	5 X 1.5		50	100	200	300	500	1000	8.1	72.0	128
1119306	6 G 1.5		50	100	200	300	500	1000	8.4	86.4	157
1119307	7 G 1.5	25	50	100	200	300	500	1000	8.9	101.0	166
1119907	7 X 1.5		50	100	200	300	500	1000	8.9	101.0	166
1119308	8 G 1.5		50	100			500	1000	10.6	116.0	210
1119313	8 X 1.5		50	100			500	1000	10.6	116.0	210
1119309	9 G 1.5		50	100			500	1000	11.4	130.0	221
1119310	10 G 1.5		50	100			500	1000	11.6	143.0	243
1119311	11 G 1.5		50	100			500	1000	11.6	158.0	258
1119312	12 G 1.5	25	50	100			500	1000	12.0	173.0	279
1119912	12 X 1.5		50	100			500	1000	12.0	173.0	279
1119314	14 G 1.5		50	100			500	1000	12.7	202.0	323
1119316	16 G 1.5		50	100			500	1000	13.4	230.4	361
1119318	18 G 1.5	25	50	100			500	1000	14.4	259.0	407
1119321	21 G 1.5		50	100			500	1000	15.7	302.0	469
1119325	25 G 1.5	25	50	100			500	1000	16.9	360.0	560
1119326	26 G 1.5		50	100			500	1000	17.3	374.4	582
1119332	32 G 1.5		50	100			500	1000	18.7	461.0	704
1119334	34 G 1.5		50	100			500	1000	19.4	490.0	746
1119341	41 G 1.5		50	100			500	1000	21.3	591.0	895
1119350	50 G 1.5		50	100			500		23.5	720.0	1,089
1119361	61 G 1.5		50	100			500		25.2	878.0	1,309
1119365	65 G 1.5		50	100			500		26.7	936.0	1,398
1119952	2 X 2.5	25	50	100	200	300	500	1000	7.5	48.0	101
1119403	3 G 2.5	25	50	100	200	300	500	1000	8.1	72.0	132
1119404	4 G 2.5	25	50	100	200	300	500	1000	8.9	96.0	163
1119405	5 G 2.5	25	50	100	200	300	500	1000	10.0	120.0	200
1119407	7 G 2.5	25	50	100			500	1000	11.1	168.0	267
1119412	12 G 2.5	25	50	100			500	1000	14.8	288.0	445
1119414	14 G 2.5		50	100			500	1000	15.8	336.0	515
1119418	18 G 2.5	25	50	100			500	1000	17.8	432.0	648
1119425	25 G 2.5	25	50	100			500	1000	20.8	600.0	890
1119434	34 G 2.5		50	100			500	1000	24.4	816.0	1,208
1119450	50 G 2.5		50	100			500		29.4	1,200.0	1,754
1119503	3 G 4	25	50	100			500	1000	9.9	115.0	201
1119504	4 G 4	25	50	100			500	1000	10.8	154.0	249
1119505	5 G 4	25	50	100			500	1000	12.1	192.0	294
1119507	7 G 4	25	50	100			500	1000	13.4	269.0	407
1119511	11 G 4		50	100			500	1000	17.6	422.0	634
1119512	12 G 4		50	100			500	1000	18.1	461.0	660
1119603	3 G 6	25	50	100			500	1000	11.7	172.8	289
1119604	4 G 6	25	50	100			500	1000	13.0	230.0	365
1119605	5 G 6	25	50	100			500	1000	14.5	288.0	447
1119607	7 G 6	25	50	100			500	1000	16.0	403.0	600
1119613	3 G 10	25	50	100			500	1000	14.6	288.0	466
1119614	4 G 10	25	50	100			500	1000	16.2	384.0	590
1119615	5 G 10	25	50	100			500	1000	18.1	480.0	722
1119617	7 G 10	25	50	100			500	1000	20.0	672.0	968
1119624	4 G 16		50	100			500		18.8	614.0	1,087
1119625	5 G 16		50	100			500		21.2	768.0	1,370
1119627	7 G 16		50	100			500		23.4	1,075.0	1,779
1119634	4 G 25		50	100			500		23.5	960.0	1,582
1119635	5 G 25		50	100			500		26.4	1,200.0	1,998
1119636	7 G 25		50	100			500		29.1	1,680.0	2,825
1119644	4 G 35		50	100			500		26.4	1,344.0	2,106
1119645	5 G 35		50	100			500		29.6	1,680.0	2,635

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

■ Comparable products

- ÖLFLEX® 191 see page 43

■ Accessories

- SKINTOP® CLICK see page 643

ÖLFLEX® CLASSIC 110 COLD

Info

- **VDE certificate of conformity with factory surveillance**
- **Flexible down to -30°C**

Benefits

- Space saving installation due to small cable diameters
- High electrical performance due to 4kV test voltage

Application range

- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
- Freezing plants, cold stores
- Outdoor use with UV-protection only, considering the temperature range

Product features

- Flame retardant according to IEC 60332-1-2
- Flexible down to -30°C

Approvals (Norm references)

CE, DVE, RoHS

Design

- Fine strands of bare copper wires
- Core insulation: PVC, cold-resistant
- PVC outer sheath, cold-resistant, grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -30°C up to +70°C
Fixed installation: -40°C up to +80°C

VDE tested
VDE Reg. No. 8274

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX CLASSIC 110 COLD				
1119660	2 X 0.75	5.4	14.4	45
1119661	3 X 0.75	5.7	21.6	55
1119662	3 G 0.75	5.7	21.6	55
1119663	4 X 0.75	6.2	28.8	66
1119664	4 G 0.75	6.2	28.8	66
1119665	5 X 0.75	6.7	36.0	79
1119666	5 G 0.75	6.7	36.0	79
1119667	7 X 0.75	7.3	50.0	101
1119668	7 G 0.75	7.3	50.0	101
1119669	12 G 0.75	9.9	86.0	171
1119670	18 G 0.75	11.7	130.0	244
1119671	25 G 0.75	13.8	180.0	337
1119672	2 X 1	5.7	19.2	53
1119673	3 X 1	6.0	28.8	65
1119674	3 G 1	6.0	28.8	65
1119675	4 X 1	6.5	38.4	79
1119676	4 G 1	6.5	38.4	79
1119677	5 X 1	7.1	48.0	94
1119678	5 G 1	7.1	48.0	94
1119679	7 X 1	8.0	67.0	126
1119680	7 G 1	8.0	67.0	126
1119681	12 G 1	10.5	115.0	205
1119682	18 G 1	12.7	173.0	300
1119683	25 G 1	14.7	240.0	408
1119684	2 X 1.5	6.3	29.0	68
1119685	3 X 1.5	6.7	43.0	84
1119686	3 G 1.5	6.7	43.0	84
1119687	4 X 1.5	7.2	58.0	104
1119688	4 G 1.5	7.2	58.0	104
1119689	5 X 1.5	8.1	72.0	128
1119690	5 G 1.5	8.1	72.0	128
1119691	7 X 1.5	8.9	101.0	166
1119692	7 G 1.5	8.9	101.0	166
1119693	12 G 1.5	12.0	173.0	279
1119694	18 G 1.5	14.4	259.0	407
1119695	25 G 1.5	16.9	360.0	560
1119696	2 X 2.5	7.5	48.0	101
1119698	3 G 2.5	8.1	72.0	132
1119700	4 G 2.5	8.9	96.0	163
1119702	5 G 2.5	10.0	120.0	200
1119704	7 G 2.5	11.1	168.0	267
1119710	4 G 4	10.8	154.0	249
1119711	5 G 4	12.1	192.0	305
1119715	4 G 6	13.0	230.0	365
1119716	5 G 6	14.5	288.0	447

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® CLASSIC 110 H see page 51
- ÖLFLEX® ROBUST 210 see page 61

Accessories

- Stainless steel - Box Starter - Set see page 872
- SKINTOP® MS-M see page 650

ÖLFLEX® CLASSIC 110 ORANGE

Info

- **For warning purposes and for excepted circuits according EN 60204-1, e.g. circuits for maintenance or interlocking circuits**

Benefits

- Space saving installation due to small cable diameters
- High electrical performance due to 4kV test voltage

Application range

- According to EN 60204-1 (VDE0113-1) conductors of control circuits supplied by external source and/or remaining live after disconnected main switch shall be orange coloured
- Electrical lighting and socket circuits for maintenance or repair purposes
- Power sag protection circuits
- Interlocking control circuits

Product features

- Flame retardant according to IEC 60332-1-2

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- PVC insulation LAPP P8/1
- Orange cores with black numbers
- PVC outer sheath, orange (RAL 2003)

Technical data

Core identification code
Orange cores with black numbers

Based on
IEC 60227-5
HD 21.5 S3; VDE 0281 Part 5
HD 21.13 S1; VDE 0281 Part 13

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CLASSIC 110 Orange				
0019700	2 X 1	5.7	19.2	57
0019701	3 G 1	6.0	28.8	73
0019702	3 X 1	6.0	28.8	73
0019706	4 G 1	6.5	38.4	85
0019708	4 X 1	6.5	38.4	85
0019709	5 G 1	7.1	50.0	105
0019710	2 X 1.5	6.3	29.0	77
0019711	3 G 1.5	6.7	43.0	95
0019718	4 G 1.5	7.2	58.0	117
0019720	5 G 1.5	8.1	72.0	114

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- H07V-K see page 197
- Orange coloured single cores

Accessories

- SKINTOP® CLICK see page 643

ÖLFLEX® CLASSIC 110 CY

Info
- EMC compliant
- VDE Reg. No. 7030

Benefits
- Space saving installation due to small cable diameters
- High electrical performance due to 4kV test voltage

Application range
- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
- Conveying and transport systems
- In EMI critical environment
  (electromagnetic interference)

Product features
- Flame retardant according to IEC 60332-1-2
- Good chemical resistance
  see Appendix T1
- High coverage degree of the screen
  low transfer impedance
  (max. 250 Ω/km at 30 MHz)

Approvals (Norm references)
- Remark: A RoHS-non-compliant version is marketed under ÖLFLEX® 110 CY with VDE-REG.-Nr. 8067. To order this, please add appendix <1> to the below stated part numbers. This does not affect the above given further technical data or description.

Design
- Fine strands of bare copper wires
- PVC insulation LAPP P8/1
- PVC inner sheath, grey
- Tinned copper braid
- PVC outer sheath, transparent

Technical data
Core identification code
Black with white numbers acc. to VDE 0293

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installed: 6 x outer diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

VDE tested
VDE Reg. No. 7030 for sizes up to and including 65 cores

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CLASSIC 110 CY				
1135752	2 X 0.5	7.0	41.0	75
1135003	3 G 0.5	7.3	45.5	83
1135753	3 X 0.5	7.3	45.5	83
1135004	4 G 0.5	7.9	55.0	99
1135754	4 X 0.5	7.9	55.0	99
1135005	5 G 0.5	8.4	66.0	112
1135755	5 X 0.5	8.4	66.0	112
1135007	7 G 0.5	8.9	80.5	132
1135757	7 X 0.5	8.9	80.5	132
1135012	12 G 0.5	11.3	138.5	202
1135762	12 X 0.5	11.3	138.5	202
1135018	18 G 0.5	13.3	156.4	289
1135025	25 G 0.5	15.2	250.0	378
1135030	30 G 0.5	16.1	297.0	429
1135040	40 G 0.5	18.2	343.0	542
1135802	2 X 0.75	7.4	46.0	86
1135103	3 G 0.75	7.9	57.9	100
1135803	3 X 0.75	7.9	57.9	100
1135104	4 G 0.75	8.4	64.0	115
1135804	4 X 0.75	8.4	64.0	115
1135105	5 G 0.75	8.9	77.4	130
1135805	5 X 0.75	8.9	77.4	130
1135107	7 G 0.75	9.7	102.0	161
1135807	7 X 0.75	9.7	102.0	161
1135112	12 G 0.75	12.3	177.0	247
1135812	12 X 0.75	12.3	177.0	247
1135118	18 G 0.75	14.5	243.0	356
1135818	18 X 0.75	14.5	243.0	356
1135125	25 G 0.75	16.6	307.3	465
1135134	34 G 0.75	18.9	323.2	601
1135840	40 X 0.75	20.5	369.4	734
1135141	41 G 0.75	20.6	488.0	728
1135852	2 X 1	7.9	56.0	98
1135203	3 G 1	8.2	65.3	111
1135853	3 X 1	8.2	65.3	111
1135204	4 G 1	8.7	78.1	130
1135854	4 X 1	8.7	78.1	130
1135205	5 G 1	9.5	89.4	153
1135207	7 G 1	10.2	113.3	185
1135212	12 G 1	13.3	188.1	307
1135216	16 G 1	14.6	216.0	390
1135218	18 G 1	15.5	286.0	418
1135225	25 G 1	17.5	388.5	544

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
1135234	34 G 1	20.3	505.0	738
1135241	41 G 1	22.0	578.0	864
1135250	50 G 1	23.8	688.0	1,011
1135902	2 X 1.5	8.5	65.0	117
1135303	3 G 1.5	8.9	83.0	136
1135903	3 X 1.5	8.9	83.0	136
1135304	4 G 1.5	9.6	100.0	163
1135904	4 X 1.5	9.6	100.0	163
1135305	5 G 1.5	10.3	125.0	188
1135905	5 X 1.5	10.3	125.0	188
1135307	7 G 1.5	11.3	149.0	237
1135907	7 X 1.5	11.3	149.0	237
1135312	12 G 1.5	14.8	280.0	393
1135318	18 G 1.5	17.2	389.0	538
1135325	25 G 1.5	20.1	535.0	745
1135334	34 G 1.5	22.8	702.0	964
1135341	41 G 1.5	24.7	844.6	1,123
1135350	50 G 1.5	27.1	1,006.0	1,372
1135402	2 X 2.5	9.9	112.0	165
1135403	3 G 2.5	10.3	146.0	192
1135404	4 G 2.5	11.3	167.0	233
1135405	5 G 2.5	12.6	200.0	283
1135407	7 G 2.5	13.9	288.0	371
1135412	12 G 2.5	17.6	477.3	585
1135502	2 X 4	11.4	120.0	247
1135504	4 G 4	13.4	237.0	347
1135505	5 G 4	14.7	280.0	413
1135602	2 X 6	13.6	180.0	353
1135604	4 G 6	15.8	318.0	485
1135605	5 G 6	17.3	441.0	702
1135607	7 G 6	18.8	530.0	950
1135702	2 X 10	16.4	256.0	492
1135615	3 G 10	17.4	362.4	507
1135614	4 G 10	19.0	558.0	735
1135616	5 G 10	21.2	595.0	847
1135617	7 G 10	23.2	796.0	1,039
1135622	2 X 16	18.6	390.0	698
1135624	4 G 16	22.2	804.0	1,395
1135623	5 G 16	26.7	935.0	1,440
1135626	4 G 25	28.7	1,161.0	1,730
1135627	5 G 25	31.6	1,400.0	2,090
1135625	4 G 35	32.0	1,543.0	2,210
1135628	5 G 35	35.5	1,901.0	2,710

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products
- ÖLFLEX® CLASSIC 110 CY BLACK 0,6/1 kV see page 35

Accessories
- SKINTOP® MS-M BRUSH see page 658

ÖLFLEX® CLASSIC 110 SY

Info

- **With steel wire braid**
- **VDE Reg. No. 7030**

Benefits

- Additional mechanical protection due to steel wire braid
- High electrical performance due to 4kV test voltage

Application range

- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
- Areas with increased mechanical stress requirements
- Fixed installation as well as occasional flexing at free, non-continuously recurring movement without tensile load

Product features

- Flame retardant according to IEC 60332-1-2
- Good chemical resistance
  see Appendix T1

Approvals (Norm references)

CE, DVE, RoHS

Design

- Fine strands of bare copper wires
- PVC insulation LAPP P8/1
- PVC inner sheath, grey
- Oxidation protected steel wire braid
- PVC outer sheath, transparent

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installed: 6 x outer diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

VDE tested
VDE Reg. No. 7030 for sizes up to and including 65 cores

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CLASSIC 110 SY				
1125752	2 X 0.5	7.8	10.0	87
1125003	3 G 0.5	8.1	15.0	95
1125004	4 G 0.5	8.5	19.2	107
1125005	5 G 0.5	9.2	24.0	123
1125007	7 G 0.5	9.7	33.6	147
1125010	10 G 0.5	11.6	48.0	196
1125012	12 G 0.5	11.9	58.0	213
1125014	14 G 0.5	12.5	67.0	237
1125018	18 G 0.5	13.9	86.4	291
1125021	21 G 0.5	14.9	101.0	332
1125025	25 G 0.5	15.6	120.0	375
1125030	30 G 0.5	16.5	144.0	422
1125040	40 G 0.5	18.8	192.0	545
1125061	61 G 0.5	21.9	293.0	773
1125802	2 X 0.75	8.2	14.4	97
1125103	3 G 0.75	8.5	21.6	108
1125104	4 G 0.75	9.2	28.8	126
1125105	5 G 0.75	9.7	36.0	146
1125107	7 G 0.75	10.3	50.0	172
1125109	9 G 0.75	12.4	65.0	224
1125112	12 G 0.75	12.9	86.0	260
1125115	15 G 0.75	14.1	108.0	315
1125118	18 G 0.75	14.9	130.0	355
1125125	25 G 0.75	17.0	180.0	465
1125134	34 G 0.75	19.3	245.0	596
1125150	50 G 0.75	22.8	360.0	832
1125852	2 X 1	8.5	19.2	106
1125203	3 G 1	8.8	28.8	119
1125204	4 G 1	9.5	38.4	141
1125205	5 G 1	10.1	48.0	164
1125207	7 G 1	11.0	67.0	200
1125208	8 G 1	12.5	77.0	234
1125209	9 G 1	13.2	86.0	260
1125212	12 G 1	13.9	115.0	309
1125214	14 G 1	14.4	134.0	345
1125218	18 G 1	15.9	173.0	415
1125220	20 G 1	16.8	192.0	455
1125225	25 G 1	18.1	240.0	548

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
1125234	34 G 1	20.5	326.0	714
1125241	41 G 1	22.2	394.0	832
1125250	50 G 1	24.2	480.0	987
1125265	65 G 1	27.2	624.0	1,250
1125902	2 X 1.5	9.3	29.0	128
1125303	3 G 1.5	9.7	43.0	151
1125304	4 G 1.5	10.2	58.0	173
1125305	5 G 1.5	11.1	72.0	202
1125307	7 G 1.5	11.9	101.0	248
1125308	8 G 1.5	14.0	115.0	301
1125312	12 G 1.5	15.4	173.0	396
1125314	14 G 1.5	15.9	202.0	438
1125318	18 G 1.5	17.6	259.0	538
1125325	25 G 1.5	20.3	360.0	713
1125332	32 G 1.5	22.1	461.0	876
1125341	41 G 1.5	24.9	591.0	1,101
1125350	50 G 1.5	27.1	720.0	1,305
1125403	3 G 2.5	11.1	72.0	206
1125404	4 G 2.5	12.1	96.0	249
1125405	5 G 2.5	13.2	120.0	295
1125407	7 G 2.5	14.3	168.0	373
1125412	12 G 2.5	18.2	288.0	586
1125418	18 G 2.5	21.4	432.0	823
1125425	25 G 2.5	24.4	600.0	1,093
1125503	3 G 4	12.7	115.0	285
1125504	4 G 4	14.0	154.0	348
1125505	5 G 4	15.1	192.0	410
1125507	7 G 4	16.4	269.0	519
1125604	4 G 6	16.2	230.0	482
1125605	5 G 6	17.7	288.0	579
1125607	7 G 6	19.2	403.0	740
1125614	4 G 10	19.4	384.0	731
1125615	5 G 10	21.5	480.0	889
1125617	7 G 10	23.4	672.0	1,146
1125624	4 G 16	22.4	614.0	1,384
1125625	5 G 16	24.6	768.0	1,740
1125626	4 G 25	28.9	960.0	1,680
1125630	5 G 25	31.8	1,200.0	2,050
1125629	4 G 35	32.2	1,344.0	2,170

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® CLASSIC 100 SY see page 26

Accessories

- SKINTOP® MS-M see page 650

ÖLFLEX® CLASSIC 110 BLACK 0,6/1kV

Info

- **Suitable for outdoor applications**

Benefits

- High electrical performance due to 4kV test voltage

Application range

- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
  Power station
  Stage technique
- Fixed installation as well as occasional flexing at free, non-continuously recurring movement without tensile load
- Outdoor use suitable considering the temperature range
- Suitable for direct burial

Product features

- Flame retardant according to IEC 60332-1-2
- UV resistant and weather proof

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- PVC insulation LAPP P8/1
- PVC outer sheath, black (RAL 9005)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Based on
Cores according to VDE 0281 (H07V-K)
Sheath according to Italian standard CEI-UNEL 35755 + 35756

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U: 600/1000 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CLASSIC 110 BK U0/U: 600/1000 V				
1120232	2 X 0.75	8.3	14.4	81
1120233	3 G 0.75	8.7	21.6	93
1120234	3 X 0.75	8.7	21.6	93
1120235	4 G 0.75	9.2	29.0	108
1120237	5 G 0.75	9.9	36.0	126
1120241	7 G 0.75	10.7	51.0	162
1120248	12 G 0.75	13.4	86.0	236
1120251	18 G 0.75	15.4	130.0	334
1120259	41 G 0.75	21.6	296.0	713
1120266	2 X 1	8.6	19.2	98
1120267	3 G 1	9.0	29.0	112
1120268	3 X 1	9.0	29.0	112
1120269	4 G 1	9.6	38.4	131
1120270	4 X 1	9.6	38.4	131
1120271	5 G 1	10.4	48.0	152
1120274	7 G 1	11.1	67.0	196
1120280	12 G 1	14.0	116.0	286
1120284	18 G 1	16.1	173.0	419
1120290	25 G 1	18.6	240.0	572
1120294	34 G 1	21.3	326.0	764
1120298	41 G 1	23.2	394.0	891
1120306	2 X 1.5	9.6	29.0	123
1120307	3 G 1.5	10.1	43.0	144
1120308	3 X 1.5	10.1	43.0	144
1120309	4 G 1.5	10.8	58.0	170
1120311	5 G 1.5	11.7	72.0	199
1120314	7 G 1.5	12.6	101.0	261
1120320	12 G 1.5	16.1	173.0	399
1120322	14 G 1.5	17.0	202.0	448
1120324	18 G 1.5	18.8	259.0	547
1120328	25 G 1.5	21.7	360.0	770

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
1120330	34 G 1.5	24.9	490.0	996
1120333	50 G 1.5	29.8	720.0	1,427
1120339	2 X 2.5	10.8	48.0	147
1120340	3 G 2.5	11.3	72.0	182
1120342	4 G 2.5	12.2	96.0	225
1120343	4 X 2.5	12.2	96.0	225
1120344	5 G 2.5	13.3	120.0	266
1120346	7 G 2.5	14.4	168.0	354
1120349	12 G 2.5	18.7	288.0	540
1120350	14 G 2.5	19.8	336.0	542
1120351	18 G 2.5	22.0	432.0	788
1120353	25 G 2.5	25.8	600.0	1,094
1120360	4 G 4	13.8	154.0	324
1120361	5 G 4	15.1	192.0	385
1120362	7 G 4	16.4	269.0	513
1120366	4 G 6	15.1	230.0	442
1120367	5 G 6	16.8	288.0	526
1120368	7 G 6	18.2	403.0	705
1120370	4 G 10	18.7	384.0	707
1120371	5 G 10	20.7	480.0	881
1120374	4 G 16	21.3	614.0	1,100
1120375	5 G 16	23.6	768.0	1,600
1120376	7 G 16	26.2	1,075.0	1,890
1120378	4 G 25	26.2	960.0	1,600
1120379	5 G 25	29.0	1,200.0	2,050
1120382	4 G 35	29.1	1,344.0	2,400
1120383	5 G 35	32.5	1,680.0	2,900
1120385	4 G 50	35.6	1,920.0	3,400
1120387	4 G 70	40.7	2,688.0	5,050
1120389	4 G 95	46.8	3,648.0	6,010
1120390	4 G 120	53.5	4,608.0	7,500

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® CLASSIC 100 BK POWER 0,6/1kV see page 27
- ÖLFLEX® CLASSIC 130 H BK 0,6/1kV see page 57

Accessories

- SKINTOP® MS-M see page 650
- Cable shears KT 4 and KT 5 see page 904

ÖLFLEX® CLASSIC 110 CY BLACK 0,6/1 kV

Info
- **Suitable for outdoor applications**
- **EMC compliant**

Benefits
- Space saving installation due to small cable diameters
- High electrical performance due to 4kV test voltage

Application range
- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
  Power station
- In EMI critical environment (electromagnetic interference)
- Fixed installation as well as occasional flexing at free, non-continuously recurring movement without tensile load
- Outdoor use suitable considering the temperature range
- Suitable for direct burial

Product features
- Flame retardant according to IEC 60332-1-2
- UV resistant and weather proof
- High coverage degree of the screen low transfer impedance (max. 250 Ω/km at 30 MHz)

Approvals (Norm references)
CE RoHS

Design
- Fine strands of bare copper wires
- PVC insulation LAPP P8/1
- PVC inner sheath, black
- Tinned copper braid
- PVC outer sheath, black (RAL 9005)

Technical data
Core identification code
Black with white numbers acc. to VDE 0293

Based on
Cores according to VDE 0281 (H07V-K)
Sheath according to Italian standard =CEI-UNEL 35755 + 35756

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installed: 6 x outer diameter

Rated voltage
U_0/U: 600/1000 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CLASSIC 110 CY BK U0/U: 600/1000V				
1121232	2 X 0.75	10.5	46.0	183
1121233	3 G 0.75	10.9	56.0	210
1121235	4 G 0.75	11.4	67.0	238
1121236	4 X 0.75	11.4	67.0	238
1121237	5 G 0.75	12.1	78.0	272
1121241	7 G 0.75	12.9	97.0	315
1121247	12 G 0.75	15.8	168.0	464
1121251	18 G 0.75	18.0	229.0	616
1121254	25 G 0.75	20.7	296.0	762
1121266	2 X 1	10.8	52.0	198
1121267	3 G 1	11.2	66.0	228
1121268	3 X 1	11.2	66.0	228
1121269	4 G 1	11.8	79.0	261
1121270	4 X 1	11.8	79.0	261
1121271	5 G 1	12.6	93.0	300
1121274	7 G 1	13.3	117.0	335
1121280	12 G 1	16.4	204.0	522
1121284	18 G 1	18.7	280.0	687
1121290	25 G 1	21.6	369.0	884
1121306	2 X 1.5	11.8	69.0	243
1121307	3 G 1.5	12.3	87.0	273
1121308	3 X 1.5	12.3	87.0	273
1121309	4 G 1.5	13.0	102.0	290
1121310	4 X 1.5	13.0	102.0	290
1121311	5 G 1.5	13.9	125.0	352

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
1121314	7 G 1.5	15.0	180.0	448
1121320	12 G 1.5	18.7	281.0	690
1121324	18 G 1.5	21.8	391.0	938
1121328	25 G 1.5	25.1	518.0	1,180
1121340	3 G 2.5	13.5	123.0	354
1121342	4 G 2.5	14.6	168.0	413
1121344	5 G 2.5	15.7	204.0	515
1121346	7 G 2.5	17.0	265.0	619
1121349	12 G 2.5	21.7	421.0	936
1121360	4 G 4	16.2	238.0	587
1121361	5 G 4	17.7	302.0	689
1121362	7 G 4	19.0	396.0	828
1121367	4 G 6	17.7	318.0	715
1121368	5 G 6	19.2	419.0	862
1121369	7 G 6	21.2	559.0	1,105
1121372	4 G 10	21.7	574.0	1,188
1121373	5 G 10	23.0	612.0	1,020
1121377	4 G 16	24.3	809.0	1,656
1121378	5 G 16	26.7	935.0	1,440
1121381	4 G 25	29.8	1,165.0	2,179
1121382	5 G 25	31.6	1,400.0	2,090
1121385	4 G 35	32.7	1,683.0	2,893
1121388	4 G 50	39.6	2,368.0	4,094
1121391	4 G 70	44.5	3,261.0	5,467
1121394	4 G 95	51.0	4,055.0	5,849
1121397	4 G 120	58.1	5,225.0	7,509

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products
- ÖLFLEX® CLASSIC 135 CH BK 0,6/1kV see page 58

Accessories
- SKINTOP® MS-M BRUSH see page 658

ÖLFLEX® CLASSIC 115 CY

Info
- EMC compliant
- Slim and light, without inner sheath

Benefits
- Space saving installation due to small cable diameters

Application range
- Measurement and control technology
- Office machines and systems for data processing

Product features
- Flame retardant according to IEC 60332-1-2
- Good chemical resistance see Appendix T1

Approvals (Norm references)
CE RoHS

Design
- Fine strands of bare copper wires
- PVC insulation LAPP P8/1
- Plastic foil wrapping
- Tinned copper braid
- PVC outer sheath, grey (RAL 7001)

Technical data
Core identification code
Black with white numbers acc. to VDE 0293

Based on
HD 21.13 S1; VDE 0281 Part 13

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installed: 6 x outer diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
Core/core: 4000 V
Core/screen: 2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CLASSIC 115 CY				
1136752	2 X 0.5	5.8	36.0	45
1136003	3 G 0.5	6.1	43.0	59
1136753	3 X 0.5	6.1	43.0	59
1136004	4 G 0.5	6.5	49.0	71
1136754	4 X 0.5	6.5	49.0	71
1136005	5 G 0.5	7.0	57.0	86
1136755	5 X 0.5	7.0	57.0	86
1136007	7 G 0.5	7.5	69.0	105
1136757	7 X 0.5	7.5	69.0	105
1136012	12 G 0.5	9.9	104.0	200
1136762	12 X 0.5	9.9	104.0	200
1136018	18 G 0.5	11.5	141.0	275
1136768	18 X 0.5	11.5	141.0	275
1136025	25 G 0.5	13.4	211.0	350
1136775	25 X 0.5	13.4	211.0	350
1136802	2 X 0.75	6.2	43.0	56
1136103	3 G 0.75	6.5	52.0	70
1136803	3 X 0.75	6.5	52.0	70
1136104	4 G 0.75	7.0	61.0	95
1136804	4 X 0.75	7.0	61.0	95
1136105	5 G 0.75	7.7	72.0	130
1136805	5 X 0.75	7.7	72.0	130
1136107	7 G 0.75	8.3	89.0	120
1136807	7 X 0.75	8.3	89.0	168
1136112	12 G 0.75	10.9	138.0	232
1136118	18 G 0.75	12.7	211.0	292
1136125	25 G 0.75	14.8	280.0	435
1136825	25 X 0.75	14.8	280.0	435
1136852	2 X 1	6.5	51.0	71
1136203	3 G 1	6.8	62.0	86
1136853	3 X 1	6.8	62.0	86
1136204	4 G 1	7.3	74.0	98
1136854	4 X 1	7.3	74.0	98
1136205	5 G 1	8.1	88.0	121
1136855	5 X 1	8.1	88.0	121

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
1136207	7 G 1	8.8	112.0	147
1136857	7 X 1	8.8	112.0	147
1136212	12 G 1	11.5	185.0	285
1136218	18 G 1	13.9	268.0	395
1136225	25 G 1	15.9	354.0	486
1136902	2 X 1.5	7.1	65.0	86
1136303	3 G 1.5	7.5	82.0	112
1136903	3 X 1.5	7.5	82.0	112
1136304	4 G 1.5	8.2	100.0	135
1136904	4 X 1.5	8.2	100.0	135
1136305	5 G 1.5	8.9	119.0	148
1136905	5 X 1.5	8.9	119.0	148
1136307	7 G 1.5	9.9	154.0	192
1136907	7 X 1.5	9.9	154.0	192
1136312	12 G 1.5	13.0	268.0	332
1136318	18 G 1.5	15.6	373.0	553
1136325	25 G 1.5	17.9	530.0	734
1136334	34 G 1.5	20.8	683.0	944
1136403	3 G 2.5	8.9	118.0	151
1136404	4 G 2.5	9.9	147.0	188
1136405	5 G 2.5	11.0	176.0	270
1136407	7 G 2.5	11.9	253.0	294
1136412	12 G 2.5	16.0	355.0	589
1136418	18 G 2.5	19.0	569.0	978
1136425	25 G 2.5	22.2	827.0	1,358
1136504	4 G 4	11.6	248.0	305
1136507	7 G 4	14.4	355.0	500
1136604	4 G 6	14.2	343.0	440
1136607	7 G 6	17.0	505.0	672
1136614	4 G 10	17.2	535.0	637
1136615	5 G 10	19.5	592.0	824
1136624	4 G 16	20.2	800.0	1,050
1136625	5 G 16	22.6	895.0	1,285
1136634	4 G 25	25.1	1,075.0	1,413
1136635	5 G 25	28.0	1,400.0	1,976
1136638	4 G 35	28.0	1,576.0	2,070

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products
- ÖLFLEX® ROBUST 215 C see page 62
- ÖLFLEX® CLASSIC 110 CY see page 32

Accessories
- 3M Scotch 1183 screening tape see page 950
- SKINTOP® MS-M BRUSH see page 658

ÖLFLEX® EB

According to DIN EN 60079-14; VDE 0165 part 1

Info

- **For use in a voltage range: < 50 V AC / <75 V DC where acc. to Directive 2006/95/EC respectively 73/23/EEC the CE-mark is not mandatory!**

Benefits

- Space saving installation due to small cable diameters

Application range

- Installation of intrinsically safe circuits, where a special cable marking for hazard area type "i"- intrinsically safety is specified

Product features

- Flame retardant according to IEC 60332-1-2

Approvals (Norm references)

RoHS

- According to DIN EN 60079-14 section 12.2.2 (VDE 0165 part 1) - Electrical characteristics and marking of wires and cables

Design

- Fine strands of bare copper wires
- PVC insulation LAPP P8/1
- PVC outer sheath, sky blue RAL 5015

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Mutual capacitance
Core/core approx. 110 nF/km

Based on
HD 21.13 S1; VDE 0281 Part 13

Specific insulation resistance
> 20 GOhm x cm

Inductivity
approx. 0.65 mH/km

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
< 50 V AC
< 75 V DC
see Info

Test voltage
Core/core: 3000 V

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® EB without protective conductor GN/YE				
0012420	2 X 0.75	5.4	14.7	50
0012421	3 X 0.75	5.7	22.1	60
0012430	4 X 0.75	6.2	29.4	81
0012422	5 X 0.75	6.7	36.8	88
0012423	7 X 0.75	7.3	51.5	115
0012425	12 X 0.75	9.9	88.2	185
0012427	18 X 0.75	11.7	132.3	282
0012429	25 X 0.75	13.8	183.8	393
0012440	2 X 1	5.7	19.7	57
0012441	3 X 1	6.0	29.6	73
0012443	5 X 1	7.1	49.4	105
0012444	7 X 1	8.0	69.1	138
0012446	12 X 1	10.5	118.4	231
0012448	18 X 1	12.7	177.7	331
0012401	2 X 1.5	6.3	29.0	80
0012402	3 X 1.5	6.7	43.0	105
0012403	4 X 1.5	7.2	58.0	125
0012404	5 X 1.5	8.1	72.0	139
ÖLFLEX® EB with protective conductor GN/YE				
0012501	3 G 1.5	6.7	43.0	105
0012502	4 G 1.5	7.2	58.0	125
0012503	5 G 1.5	8.1	72.0	139
0012504	7 G 1.5	8.9	101.0	180
0012505	12 G 1.5	12.0	173.0	339
0012506	18 G 1.5	14.4	259.0	513
0012507	25 G 1.5	16.9	360.0	698

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- UNITRONIC® EB CY (TP) see page 268
- UNITRONIC® EB JE-LiYCY...BD see page 269
- UNITRONIC® EB JE-Y(ST)Y 0,8 BD see page 270

Accessories

- Stainless steel - Box Starter - Set see page 872
- SKINTOP® K-M ATEX plus blue see page 649

ÖLFLEX® EB CY

According to DIN EN 60079-14; VDE 0165 part 1

Info

- **For use in a voltage range: < 50 V AC / <75 V DC where acc. to Directive 2006/95/EC respectively 73/23/EEC the CE-mark is not mandatory!**
- **EMC compliant**

Benefits

- Space saving installation due to small cable diameters
- Copper wire braid of the ÖLFLEX® EB CY protects signal transmission within intrinsically safe circuits against electromagnetic interference

Application range

- Installation of intrinsically safe circuits, where a special cable marking for hazard area type "i"- intrinsically safety is specified
- In EMI critical environment (electromagnetic interference)

Product features

- Flame retardant according to IEC 60332-1-2
- High coverage degree of the screen low transfer impedance (max. 250 Ω/km at 30 MHz)

Approvals (Norm references)

RoHS

Design

- Fine strands of bare copper wires
- PVC insulation LAPP P8/1
- Plastic foil wrapping
- Tinned copper braid
- PVC outer sheath, sky blue RAL 5015

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Mutual capacitance
Core/core approx. 135 nF/km
Core/screen approx. 185 nF/km

Based on
HD 21.13 S1; VDE 0281 Part 13

Specific insulation resistance
> 20 GOhm x cm

Inductivity
approx. 0.65 mH/km

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installed: 6 x outer diameter

Rated voltage
< 50 V AC
< 75 V DC
see Info

Test voltage
Core/core: 3000 V
Core/screen: 2000 V

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® EB CY screened; without inner sheath				
0012640	2 X 0.75	6.2	43.0	56
0012641	3 X 0.75	6.5	52.0	70
0012642	4 X 0.75	7.0	61.0	95
0012643	5 X 0.75	7.7	72.0	108
0012644	7 X 0.75	8.3	89.0	168
0012645	12 X 0.75	10.9	138.0	216
0012646	18 X 0.75	12.7	211.0	315
0012647	25 X 0.75	14.8	280.0	435
0012650	2 X 1	6.5	51.0	84
0012651	3 X 1	6.8	62.0	110
0012652	5 X 1	8.1	88.0	156
0012653	7 X 1	8.8	112.0	192
0012654	12 X 1	11.5	185.0	285
0012655	18 X 1	13.9	268.0	395
0012656	25 X 1	15.9	354.0	656
0012660	2 X 1.5	7.1	65.0	87
0012661	3 X 1.5	7.5	82.0	112
0012662	5 X 1.5	8.9	119.0	148
0012663	7 X 1.5	9.9	154.0	193
0012664	12 X 1.5	13.0	268.0	365
0012666	25 X 1.5	17.9	530.0	734

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- UNITRONIC® EB CY (TP) see page 268
- UNITRONIC® EB JE-LiYCY...BD see page 269
- UNITRONIC® EB JE-Y(ST)Y 0,8 BD see page 270

Accessories

- 3M Scotch 1183 screening tape see page 950
- SKINTOP® K-M ATEX plus blue see page 649

ÖLFLEX® 140

H05VV5-F (HD 21.13 S1)

Info

- **For CCC (China Compulsory Certification) version please add "C" to the common part number**

Application range

- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
- Machine tools
- Mainly in dry, damp and wet interiors (including water-oil mixtures), but not for outdoor use
- For fixed installation under medium mechanical load conditions as well as occasional flexing at free, non-continuously recurring movement without tensile load or compulsory guidance

Product features

- Flame retardant according to IEC 60332-1-2
- Increased oil resistance

Approvals (Norm references)

CE HAR RoHS

Design

- Fine strands of bare copper wires
- PVC core insulation
- PVC outer sheath, increased oil resistance grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Approvals
HD 21.13 S1, VDE 0281-13

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 12.5 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +70°C

Part number	Number of cores and mm² per conductor	Outer diameter mm min./max.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® 140 H05VV5-F				
0011000	3 G 0.5	5.5 - 7.0	14.4	62.4
0011104	4 G 0.5	6.2 - 7.9	19.2	68.2
0011001	5 G 0.5	6.8 - 8.6	24.0	87.1
0011002	7 G 0.5	8.3 - 10.4	33.6	118.7
0011003	12 G 0.5	10.4 - 12.9	58.0	198.0
0011004	18 G 0.5	12.3 - 15.3	86.4	266.9
0011005	25 G 0.5	14.8 - 18.3	120.0	380.4
0011006	34 G 0.5	17.2 - 21.2	163.2	509.0
0011009	3 G 0.75	6.0 - 7.6	21.6	75.6
0011204	4 G 0.75	6.6 - 8.3	28.8	83.9
0011010	5 G 0.75	7.4 - 9.3	36.0	113.3
0011011	7 G 0.75	9.0 - 11.3	50.0	145.0
0011012	12 G 0.75	11.0 - 13.7	86.0	244.9
0011013	18 G 0.75	13.2 - 16.4	130.0	327.7
0011014	25 G 0.75	15.8 - 19.5	180.0	466.4
0011015	34 G 0.75	18.4 - 22.6	245.0	626.5
0011241	41 G 0.75	20.1 - 24.7	296.0	748.0
0011018	3 G 1	6.3 - 8.0	28.8	89.3
0011304	4 G 1	6.9 - 8.7	38.4	98.6
0011019	5 G 1	7.8 - 9.8	48.0	132.1
0011020	7 G 1	9.5 - 11.8	67.0	169.3
0011021	12 G 1	11.8 - 14.6	115.0	285.9
0011022	18 G 1	14.0 - 17.2	173.0	405.2
0011023	25 G 1	16.8 - 20.7	240.0	569.5
0011024	34 G 1	19.6 - 24.0	326.0	741.7
0011341	41 G 1	27.4 - 26.2	394.0	886.0
0011027	3 G 1.5	7.4 - 9.4	43.0	109.8
0011404	4 G 1.5	8.2 - 10.2	58.0	140.7
0011028	5 G 1.5	9.1 - 11.4	72.0	175.0
0011029	7 G 1.5	11.3 - 14.1	101.0	224.2
0011030	12 G 1.5	13.8 - 17.0	173.0	361.7
0011031	18 G 1.5	16.5 - 20.3	259.0	518.3
0011032	25 G 1.5	19.8 - 24.3	360.0	729.9
0011033	34 G 1.5	23.1 - 28.2	490.0	946.6
0011036	3 G 2.5	9.0 - 11.2	72.0	162.4
0011504	4 G 2.5	10.1 - 12.5	96.0	203.3
0011037	5 G 2.5	11.0 - 13.7	120.0	251.1
0011038	7 G 2.5	13.6 - 16.8	168.0	326.0
0011039	12 G 2.5	16.8 - 20.6	288.0	553.3
0011045	14 G 2.5	18.3 - 22.7	336.0	611.0
0011040	18 G 2.5	20.2 - 24.8	432.0	795.2
0011041	25 G 2.5	24.2 - 29.6	600.0	1,109.6

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® 150 QUATTRO see page 41

Accessories

- SKINTOP® CLICK see page 643

ÖLFLEX® 140 CY

H05VVC4V5-K (HD 21.13 S1)

Info

- **For CCC (China Compulsory Certification) version please add "C" to the common part number**
- **EMC compliant**

Application range

- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
- Machine tools
- Mainly in dry, damp and wet interiors (including water-oil mixtures), but not for outdoor use
- For fixed installation under medium mechanical load conditions as well as occasional flexing at free, non-continuously recurring movement without tensile load or compulsory guidance
- In EMI critical environment (electromagnetic interference)

Product features

- Flame retardant according to IEC 60332-1-2
- Increased oil resistance
- High coverage degree of the screen low transfer impedance (max. 250 Ω/km at 30 MHz)

Approvals (Norm references)

CE HAR RoHS

Design

- Fine strands of bare copper wires
- PVC core insulation
- PVC inner sheath, grey
- Tinned copper braid
- PVC outer sheath, increased oil resistance grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Approvals
HD 21.13 S1, VDE 0281-13

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installed: 6 x outer diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +70°C

Part number	Number of cores and mm² per conductor	Outer diameter mm min./max.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® 140 CY H05VVC4V5-K				
0035700	3 G 0.5	8.0 - 10.0	47.0	111.3
0035701	4 G 0.5	8.5 - 10.7	58.0	132.7
0035702	5 G 0.5	9.3 - 11.6	69.0	162.7
0035703	7 G 0.5	10.8 - 13.5	86.0	207.7
0035704	12 G 0.5	13.1 - 16.2	142.0	295.0
0035710	3 G 0.75	8.3 - 10.4	55.0	129.4
0035711	4 G 0.75	9.1 - 11.3	67.0	163.6
0035712	5 G 0.75	9.7 - 12.1	77.4	188.6
0035713	7 G 0.75	11.5 - 14.3	109.0	246.9
0035714	12 G 0.75	13.8 - 17.1	166.0	354.3
0035715	18 G 0.75	16.1 - 19.8	257.3	517.0
0035716	25 G 0.75	18.7 - 23.0	318.6	677.8
0035717	34 G 0.75	21.4 - 26.2	409.4	860.6
0035720	3 G 1	8.8 - 11.0	62.0	144.8
0035721	4 G 1	9.4 - 11.7	78.3	180.8
0035722	5 G 1	10.3 - 12.8	91.0	209.0
0035723	7 G 1	12.2 - 15.1	118.0	273.0
0035724	12 G 1	14.5 - 17.9	198.0	427.6
0035725	18 G 1	16.9 - 20.8	303.6	598.6
0035726	25 G 1	19.8 - 24.2	411.9	791.8
0035727	34 G 1	22.6 - 27.7	516.3	1,003.9
0035730	3 G 1.5	9.7 - 12.1	83.0	189.7
0035731	4 G 1.5	10.7 - 13.2	97.8	221.6
0035732	5 G 1.5	11.8 - 14.7	118.0	261.8
0035733	7 G 1.5	14.1 - 17.4	218.0	356.7
0035734	12 G 1.5	16.7 - 20.6	309.7	559.4
0035735	18 G 1.5	19.5 - 24.0	411.4	767.6
0035736	25 G 1.5	22.9 - 28.0	546.5	1,049.0
0035740	3 G 2.5	11.3 - 14.0	115.0	241.5
0035741	4 G 2.5	12.6 - 15.5	163.0	298.3
0035742	5 G 2.5	13.9 - 17.2	191.0	363.7
0035743	7 G 2.5	16.5 - 20.3	288.9	487.2
0035744	12 G 2.5	19.8 - 24.3	516.6	743.6

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® 150 CY QUATTRO see page 42

Accessories

- SKINTOP® MS-SC-M see page 657
- SKINTOP® MS-M BRUSH see page 658
- KMK Marking labels see page 886

ÖLFLEX® 150 QUATTRO

Info

- **For CCC (China Compulsory Certification) version please add "C" to the common part number**

Benefits

- Broad application range due to multiple approvals

Application range

- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
- Machine tools
- Mainly in dry, damp and wet interiors (including water-oil mixtures), but not for outdoor use
- For fixed installation under medium mechanical load conditions as well as occasional flexing at free, non-continuously recurring movement without tensile load or compulsory guidance
- **Note:** Single conductor or multi-conductor Type AWM (Appliance Wiring Material) shall be permitted for industrial machinery (US) when part of a listed assembly suitable for the intended use only. NFPA 79 Edition 2007 § 12.2.7.3 (Electrical Standard for Industrial Machinery)

Product features

- Flame retardant according to IEC 60332-1-2 and UL 1581 § 1061 Cable Flame Test
- Increased oil resistance

Approvals (Norm references)

- Multi standard cables have conductor strands with nominal sizes in mm² **or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Fine strands of bare copper wires
- PVC core insulation
- PVC outer sheath, increased oil resistance grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Approvals
H05VV5-F (HD 21.13 S1)
UL AWM Style 21098
CSA AWM I A/B II A/B

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 12.5 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
HAR U_0/U: 300/500 V
UL/CSA: 600 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing:
HAR: -5°C up to +70°C
UL/CSA: -5°C up to +90 °C
Fixed installation:
HAR: -40°C up to +70°C
UL/CSA: -40°C up to +90°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® 150 QUATTRO				
0015002	2 X 0.5	5.9	9.6	47
0015003	3 G 0.5	6.2	14.4	62
0015004	4 G 0.5	6.8	19.2	68
0015005	5 G 0.5	7.4	24.0	87
0015007	7 G 0.5	9.0	33.6	118
0015012	12 G 0.5	11.1	58.0	198
0015018	18 G 0.5	14.2	86.4	328
0015025	25 G 0.5	16.0	120.0	380
0015034	34 G 0.5	18.1	164.0	509
0015041	41 G 0.5	19.7	197.0	595
0015102	2 X 0.75	6.3	14.4	61
0015103	3 G 0.75	6.7	21.6	75
0015104	4 G 0.75	7.2	28.8	83
0015105	5 G 0.75	8.1	36.0	113
0015107	7 G 0.75	9.9	50.0	145
0015112	12 G 0.75	12.0	86.0	244
0015118	18 G 0.75	14.4	130.0	327
0015125	25 G 0.75	17.1	180.0	466
0015134	34 G 0.75	19.7	245.0	626
0015141	41 G 0.75	21.6	296.0	748
0015202	2 X 1	6.6	19.2	80
0015203	3 G 1	7.0	28.8	79
0015204	4 G 1	7.8	38.4	98
0015205	5 G 1	8.6	48.0	132
0015206	6 G 1	9.7	57.6	150
0015207	7 G 1	10.4	67.0	169

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
0015212	12 G 1	12.8	115.0	285
0015218	18 G 1	15.1	173.0	405
0015225	25 G 1	18.0	240.0	569
0015234	34 G 1	20.9	326.0	741
0015241	41 G 1	22.8	394.0	886
0015250	50 G 1	25.0	480.0	1,072
0015261	61 G 1	28.5	586.0	1,266
0015262	65 G 1	28.6	624.0	1,410
0015302	2 X 1.5	7.5	28.8	95
0015303	3 G 1.5	8.1	43.0	109
0015304	4 G 1.5	8.9	58.0	145
0015305	5 G 1.5	10.0	72.0	168
0015307	7 G 1.5	12.3	101.0	224
0015312	12 G 1.5	15.1	173.0	361
0015318	18 G 1.5	17.8	259.0	518
0015325	25 G 1.5	21.5	360.0	729
0015334	34 G 1.5	24.7	490.0	946
0015341	41 G 1.5	26.8	591.0	1,136
0015361	61 G 1.5	31.4	879.0	1,638
0015402	2 X 2.5	9.2	48.0	159
0015403	3 G 2.5	9.9	72.0	170
0015404	4 G 2.5	10.7	96.0	210
0015405	5 G 2.5	12.1	120.0	257
0015407	7 G 2.5	14.5	168.0	340
0015412	12 G 2.5	17.7	288.0	580
0015418	18 G 2.5	21.4	432.0	850
0015425	25 G 2.5	25.8	600.0	1,166

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired make-up (e.g. 1 x 600 m drum or 8 x 75 m coils)
VDE certification covers the size range up to and including 60 cores

Comparable products

- ÖLFLEX® 140 see page 39
- ÖLFLEX® 191 see page 43

Accessories

- SKINTOP® CLICK see page 643
- SKINTOP® ST-M see page 641

ÖLFLEX® 150 CY QUATTRO

Info

- **For CCC (China Compulsory Certification) version please add "C" to the common part number**
- **EMC compliant**

Benefits

- Broad application range due to multiple approvals

Application range

- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
- In EMI critical environment (electromagnetic interference)
- Mainly in dry, damp and wet interiors (including water-oil mixtures), but not for outdoor use
- For fixed installation under medium mechanical load conditions as well as occasional flexing at free, non-continuously recurring movement without tensile load or compulsory guidance
- **Note:** Single conductor or multi-conductor Type AWM (Appliance Wiring Material) shall be permitted for industrial machinery (US) when part of a listed assembly suitable for the intended use only. NFPA 79 Edition 2007 § 12.2.7.3 (Electrical Standard for Industrial Machinery)

Product features

- Flame retardant according to IEC 60332-1-2 and UL 1581 § 1061 Cable Flame Test
- Increased oil resistance
- High coverage degree of the screen low transfer impedance (max. 250 Ω/km at 30 MHz)

Approvals (Norm references)

CE CSA HAR UL RoHS

- Multi standard cables have conductor strands with nominal sizes in mm² **or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Fine strands of bare copper wires
- PVC core insulation
- PVC inner sheath, grey
- Tinned copper braid
- PVC outer sheath, increased oil resistance grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Approvals
H05VVC4V5-K (HD 21.13 S1)
UL AWM Style 21098
CSA AWM I A/B II A/B

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installed: 6 x outer diameter

Rated voltage
HAR U_0/U: 300/500 V
UL/CSA: 600 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing:
HAR: -5°C up to +70°C
UL/CSA: -5°C up to +90 °C
Fixed installation:
HAR: -40°C up to +70°C
UL/CSA: -40°C up to +90°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® 150 CY QUATTRO				
0015602	2 X 0.75	8.5	40.0	109
0015603	3 G 0.75	8.9	51.0	125
0015604	4 G 0.75	9.6	70.0	157
0015605	5 G 0.75	10.3	77.0	180
0015607	7 G 0.75	12.3	93.0	226
0015612	12 G 0.75	14.8	155.0	325
0015702	2 X 1	8.9	46.4	121
0015703	3 G 1	9.5	76.0	145
0015704	4 G 1	10.1	80.0	180
0015705	5 G 1	11.1	95.0	203
0015707	7 G 1	13.1	118.0	273
0015712	12 G 1	15.8	195.0	425
0015802	2 X 1.5	9.9	59.2	151
0015803	3 G 1.5	10.5	84.0	159
0015804	4 G 1.5	11.3	94.0	211
0015805	5 G 1.5	12.6	122.0	241
0015807	7 G 1.5	14.9	143.0	306
0015812	12 G 1.5	17.6	254.0	480
0015903	3 G 2.5	11.8	120.0	245
0015904	4 G 2.5	13.1	170.0	295
0015905	5 G 2.5	14.6	205.0	365
0015907	7 G 2.5	17.3	241.0	480

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired make-up (e.g. 1 x 600 m drum or 8 x 75 m coils)

Comparable products

- ÖLFLEX® 140 CY see page 40
- ÖLFLEX® 191 CY see page 44

Accessories

- SKINTOP® MS-SC-M see page 657
- SKINTOP® MS-M BRUSH see page 658

ÖLFLEX® 191

Info

- **Conductor cross section up to 120mm²**

Benefits

- High electrical performance due to 4kV test voltage
- For multi-purpose applications

Application range

- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
- Machine tools
- Mainly in dry, damp and wet interiors (including water-oil mixtures), but not for outdoor use
- For fixed installation under medium mechanical load conditions as well as occasional flexing at free, non-continuously recurring movement without tensile load or compulsory guidance
- **Note:** Single conductor or multi-conductor Type AWM (Appliance Wiring Material) shall be permitted for industrial machinery (US) when part of a listed assembly suitable for the intended use only. NFPA 79 Edition 2007 §12.2.7.3 (Electrical Standard for Industrial Machinery)

Product features

- Flame retardant according to IEC 60332-1-2 and UL 1581 §1061 Cable Flame Test
- Increased oil resistance

Approvals (Norm references)

- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Fine strands of bare copper wires
- PVC core insulation
- PVC outer sheath, increased oil resistance grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Approvals
UL AWM Style 21098
CSA AWM I A/B II A/B

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
HAR U_0/U: 300/500 V
UL/CSA: 600 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing:
HAR: -5°C up to +70°C
UL/CSA: -5°C up to +90 °C
Fixed installation:
HAR: -40°C up to +70°C
UL/CSA: -40°C up to +90°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® 191				
0011106	18 G 0.5	12.1	86.4	267
0011218	2 X 0.75	5.9	14.4	51
0011219	3 G 0.75	6.3	21.6	61
0011220	4 G 0.75	6.8	28.8	74
0011221	5 G 0.75	7.5	36.0	88
0011222	7 G 0.75	8.3	50.4	116
0011223	9 G 0.75	10.5	64.8	152
0011224	12 G 0.75	11.2	86.4	194
0011225	18 G 0.75	13.3	129.6	275
0011226	25 G 0.75	16.1	180.0	383
0011113	3 G 1	6.7	28.8	66
0011114	4 G 1	7.2	38.4	81
0011115	5 G 1	8.1	48.0	95
0011116	7 G 1	8.9	67.2	125
0011117	12 G 1	12.0	115.2	211
0011118	18 G 1	14.4	172.8	309
0011119	25 G 1	17.3	240.0	413
0011136	2 X 1.5	6.9	28.8	74
0011137	3 G 1.5	7.3	44.0	91
0011138	4 G 1.5	8.2	58.0	112
0011139	5 G 1.5	9.0	72.0	136
0011140	7 G 1.5	10.0	101.0	179
0011125	9 G 1.5	12.7	129.6	230

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
0011142	12 G 1.5	13.4	173.0	313
0011143	18 G 1.5	16.1	260.0	444
0011144	25 G 1.5	19.5	360.0	620
0011150	3 G 2.5	8.4	72.0	138
0011151	4 G 2.5	9.1	96.0	182
0011152	5 G 2.5	10.2	120.0	216
0011153	7 G 2.5	11.4	168.0	286
0011160	3 G 4	10.0	115.2	202
0011161	4 G 4	10.9	154.0	245
0011162	5 G 4	12.2	192.0	286
0011167	7 G 4	13.5	268.8	470
0011165	4 G 6	13.0	231.0	398
0011166	5 G 6	14.5	288.0	479
0011169	4 G 10	16.7	384.0	559
0011170	5 G 10	18.4	480.0	782
0011172	4 G 16	22.1	615.0	904
0011173	5 G 16	24.3	768.0	1,171
0011175	4 G 25	25.6	960.0	1,299
0011176	5 G 25	28.0	1,200.0	1,640
0011178	4 G 35	28.1	1,344.0	2,119
0011179	5 G 35	31.5	1,680.0	2,606
0011205	4 G 50	35.7	1,920.0	2,898
0011206	4 G 70	43.0	2,688.0	4,052
0011207	4 G 95	47.2	3,648.0	5,430
0011208	4 G 120	54.2	4,608.0	6,290

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired make-up (e.g. 1 x 600 m drum or 8 x 75 m coils)

Comparable products

- ÖLFLEX® 150 QUATTRO see page 41
- ÖLFLEX® CONTROL TM see page 45
- ÖLFLEX® TRAY II see page 47
- ÖLFLEX® CONTROL M see page 69

Accessories

- SKINTOP® CLICK see page 643
- SKINTOP® ST-M see page 641
- Cable shears KT 4 and KT 5 see page 904

ÖLFLEX® 191 CY

Info

- **Conductor cross section up to 120mm²**
- **EMC compliant**

Benefits

- High electrical performance due to 4kV test voltage
- For multi-purpose applications

Application range

- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
- In EMI critical environment (electromagnetic interference)
- Mainly in dry, damp and wet interiors (including water-oil mixtures), but not for outdoor use
- For fixed installation under medium mechanical load conditions as well as occasional flexing at free, non-continuously recurring movement without tensile load or compulsory guidance
- **Note:** Single conductor or multi-conductor Type AWM (Appliance Wiring Material) shall be permitted for industrial machinery (US) when part of a listed assembly suitable for the intended use only. NFPA 79 Edition 2007 § 12.2.7.3 (Electrical Standard for Industrial Machinery)

Product features

- Flame retardant according to IEC 60332-1-2 and UL 1581 § 1061 Cable Flame Test
- Increased oil resistance
- High coverage degree of the screen low transfer impedance (max. 250 Ω/km at 30 MHz)

Approvals (Norm references)

CE CSA UL RoHS

- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Fine strands of bare copper wires
- PVC core insulation
- PVC inner sheath, grey
- Tinned copper braid
- PVC outer sheath, increased oil resistance grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Approvals
UL AWM Style 21098
CSA AWM I A/B II A/B

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installed: 6 x outer diameter

Rated voltage
HAR U_0/U: 300/500 V
UL/CSA: 600 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing:
HAR: -5°C up to +70°C
UL/CSA: -5°C up to +90 °C
Fixed installation:
HAR: -40°C up to +70°C
UL/CSA: -40°C up to +90°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® 191 CY				
3023436	3 G 0.5	8.0	46.9	122
3025753	4 G 0.5	8.5	47.4	130
0011230	2 X 0.75	8.1	38.4	102
0011231	3 G 0.75	8.5	47.2	115
0011232	4 G 0.75	9.0	55.8	131
0011233	5 G 0.75	9.9	66.4	155
0011234	7 G 0.75	10.5	85.9	187
0011235	12 G 0.75	14.0	145.0	312
0011236	18 G 0.75	16.1	198.3	413
0011237	25 G 0.75	18.9	261.5	548
0011202	2 X 1	8.0	48.0	126
0011180	3 G 1	8.8	55.8	122
0011181	4 G 1	9.6	80.8	157
0011182	5 G 1	10.1	89.4	183
0011183	7 G 1	10.7	99.9	207
0011184	12 G 1	14.6	175.7	342
0011185	18 G 1	16.5	241.7	472
0011186	25 G 1	19.2	341.7	648
0011302	2 X 1.5	8.9	64.7	156
0011187	3 G 1.5	9.3	89.1	166
0011188	4 G 1.5	10.1	96.6	191
0011189	5 G 1.5	11.0	111.2	222

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
0011190	7 G 1.5	12.1	145.2	270
0011191	12 G 1.5	16.0	257.0	464
0011192	18 G 1.5	18.8	382.8	679
0011193	25 G 1.5	22.9	546.2	952
0011194	3 G 2.5	10.9	111.1	221
0011195	4 G 2.5	11.4	140.6	269
0011196	5 G 2.5	12.9	167.3	325
0011197	7 G 2.5	14.1	240.0	421
30010542	12 G 2.5	17.9	414.9	769
30010543	18 G 2.5	22.0	626.1	1,102
30010544	4 G 4	13.6	236.7	462
30010545	5 G 4	14.9	277.8	535
30010546	7 G 4	16.2	393.4	735
30010548	4 G 6	15.8	317.1	574
3023130	5 G 6	17.3	413.7	737
30010547	7 G 6	18.8	563.8	950
3023131	4 G 10	19.5	550.4	946
30010639	4 G 16	24.7	819.1	1,189
3023132	4 G 25	28.5	1,165.0	1,691
30010928	4 G 35	31.7	1,683.0	2,700
3026535	4 G 50	39.7	2,342.0	3,362
3025946	4 G 70	44.8	3,229.0	4,490
3025947	4 G 95	50.0	4,010.0	5,540
3026536	4 G 120	61.3	5,012.0	6,960

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired make-up (e.g. 1 x 600 m drum or 8 x 75 m coils)

Comparable products

- ÖLFLEX® 150 CY QUATTRO see page 42
- ÖLFLEX® CONTROL TM CY see page 46
- ÖLFLEX® TRAY II CY see page 48

Accessories

- SKINTOP® MS-SC-M see page 657
- SKINTOP® MS-M BRUSH see page 658
- Cable shears KT 4 and KT 5 see page 904

ÖLFLEX® CONTROL TM

Info

- **According to NFPA 79 Edition 2007 "Electrical Standard for Industrial Machinery" USA**

Benefits

- Broad application range due to multiple approvals
- Cost saving, easy installation due to renouncement of closed raceways (suitable for open wiring)

Application range

- Industrial machinery; plant engineering
- Machine tools UL MTW (Machine Tool Wiring) conforming
- TC-ER (Tray Cable Exposed Run) approval for open wiring between cable tray and industrial machines/plants acc. to NEC 336.10(7)
- Wind Turbines: USA Wind Turbine Tray Cable (WTTC)
- Class 1, Div. 2 per NEC "National Electrical Code" Art. 336, 392, 501

Product features

- Flame retardant according to CSA FT4 UL Vertical-Tray Flame Test
- Oil resistant according to UL OIL RES I
- Water resistant UL Wet Approval 75 °C

Approvals (Norm references)

- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Fine strands of bare copper wires
- Insulation: PVC with nylon jacket (PA skin)
- Special blended PVC outer sheath, grey (RAL 7001)

Technical data

Core identification code
Black with white numbers

Approvals
UL MTW, TC-ER, WTTC 1000V, BUS DROP
c(UL) Type TC and CIC FT4
CSA AWM I/II A/B FT4

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Finely stranded bare copper wires

Minimum bending radius
6 x cable diameter

Rated voltage
UL/CSA: 600 V (TC, MTW, CIC), WTTC 1000V
UL/CSA: 1000 V (AWM)
HAR U_0/U: 300/500 V

Test voltage
2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Fixed installation: -40°C up to +90°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CONTROL TM				
281803	3 G 1	7.4	28.8	82
281804	4 G 1	8.0	38.4	95
281805	5 G 1	8.6	48.0	112
281807	7 G 1	9.3	67.0	144
281812	12 G 1	12.0	115.0	247
281818	18 G 1	14.9	173.0	365
281825	25 G 1	16.7	240.0	464
281602	2 X 1.5	7.3	28.8	74
281603	3 G 1.5	8.1	43.0	100
281604	4 G 1.5	8.8	58.0	119
281605	5 G 1.5	9.5	72.0	141
281607	7 G 1.5	10.3	101.0	183
281609	9 G 1.5	11.9	129.6	247
281612	12 G 1.5	14.2	173.0	328
281618	18 G 1.5	16.2	259.0	403
281625	25 G 1.5	18.6	360.0	464
281403	3 G 2.5	9.1	72.0	125
281404	4 G 2.5	9.8	96.0	155
281405	5 G 2.5	10.7	120.0	185
281407	7 G 2.5	11.6	168.0	244
281203	3 G 4	10.6	115.0	165
281204	4 G 4	11.5	154.0	220
281205	5 G 4	12.6	192.0	269
281207	7 G 4	14.6	269.0	482
281004	4 G 6	14.5	231.0	382
281005	5 G 6	15.8	288.0	457
280804	4 G 10	19.5	384.0	615
280805	5 G 10	22.6	480.0	771
280604	4 G 16	22.8	615.0	864

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired make-up (e.g. 1 x 610 m drum or 8 x 76 m coils)

Comparable products

- ÖLFLEX® TRAY II see page 47
- ÖLFLEX® CONTROL M see page 69

Accessories

- SKINTOP® MS-M see page 650
- SKINTOP® ST-M see page 641

ÖLFLEX® CONTROL TM CY

Info

- **According to NFPA 79 Edition 2007 "Electrical Standard for Industrial Machinery" USA**
- **EMC compliant**

Benefits

- Broad application range due to multiple approvals
- Cost saving, easy installation due to re-nouncement of closed raceways (suitable for open wiring)

Application range

- Industrial machinery; plant engineering
- Machine tools UL MTW (Machine Tool Wiring) conforming
- TC-ER (Tray Cable Exposed Run) approval for open wiring between cable tray and industrial machines/plants acc. to NEC 336.10(7)
- Wind Turbines: USA Wind Turbine Tray Cable (WTTC)
- Class 1, Div. 2 per NEC "National Electrical Code" Art. 336, 392, 501

Product features

- Flame retardant according to CSA FT4 UL Vertical-Tray Flame Test
- Oil resistant according to UL OIL RES I
- Water resistant UL Wet Approval 75 °C
- High coverage degree of the screen low transfer impedance (max. 250 Ω/km at 30 MHz)

Approvals (Norm references)

RoHS

- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Fine strands of bare copper wires
- Insulation: PVC with nylon jacket (PA skin)
- Aluminum-plated foil
- Tinned copper braid
- Special blended PVC outer sheath, grey (RAL 7001)

Technical data

Core identification code
Black with white numbers

Approvals
UL MTW, TC-ER, WTTC 1000V, BUS DROP
c(UL) Type TC and CIC FT4
CSA AWM I/II A/B FT4

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Finely stranded bare copper wires

Minimum bending radius
Fixed installed: 6 x outer diameter

Rated voltage
UL/CSA: 600 V (TC, MTW, CIC), WTTC 1000V
UL/CSA: 1000 V (AWM)
HAR U_0/U: 300/500 V

Test voltage
2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Fixed installation: -40°C up to +90°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CONTROL TM CY				
281803CY	3 G 1	8.1	49.5	119
281804CY	4 G 1	8.6	60.2	137
281805CY	5 G 1	9.3	81.4	149
281807CY	7 G 1	10.0	101.1	193
281812CY	12 G 1	12.8	161.4	330
281818CY	18 G 1	15.5	228.2	438
281825CY	25 G 1	17.5	326.4	574
281602CY	2 X 1.5	8.3	49.7	115
281603CY	3 G 1.5	8.8	65.0	144
281604CY	4 G 1.5	9.4	81.9	173
281605CY	5 G 1.5	10.2	99.1	189
281607CY	7 G 1.5	11.1	140.4	246
281612CY	12 G 1.5	15.0	225.2	426
281618CY	18 G 1.5	17.2	321.7	552
281625CY	25 G 1.5	19.4	453.6	750
281403CY	3 G 2.5	9.7	105.7	180
281404CY	4 G 2.5	10.4	135.6	223
281405CY	5 G 2.5	11.5	160.3	268
281407CY	7 G 2.5	12.4	213.0	327
281204CY	4 G 4	12.3	198.5	315
281205CY	5 G 4	14.2	242.7	388
281207CY	7 G 4	15.3	323.4	499
281004CY	4 G 6	15.3	284.6	552
281005CY	5 G 6	16.7	348.8	613
280804CY	4 G 10	18.5	458.4	857
280604CY	4 G 16	22.9	723.6	1,208

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired make-up (e.g. 1 x 610 m drum or 8 x 76 m coils)

Comparable products

- ÖLFLEX® TRAY II CY see page 48

Accessories

- SKINTOP® MS-SC-M see page 657

ÖLFLEX® TRAY II

Info

- **According to NFPA 79 Edition 2007 "Electrical Standard for Industrial Machinery" USA**

Benefits

- Broad application range due to multiple approvals
- Cost saving, easy installation due to re-nouncement of closed raceways (suitable for open wiring)

Application range

- Industrial machinery; plant engineering
- TC-ER (Tray Cable Exposed Run) approval for open wiring between cable tray and industrial machines/plants acc. to NEC 336.10(7)
- Wind Turbines: USA Wind Turbine Tray Cable (WTTC)
- Class 1, Div. 2 per NEC "National Electrical Code" Art. 336, 392, 501
- Outdoor use suitable

Product features

- Flame retardant according to CSA FT4 UL Vertical-Tray Flame Test
- Oil resistant according to UL OIL RES I
- Water resistant UL Wet Approval 75 °C
- UV resistant UL SUN RES

Approvals (Norm references)

RoHS

- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Fine strands of bare copper wires
- Insulation: PVC with nylon jacket (PA skin)
- Special blended PVC outer sheath, black (RAL 9005)

Technical data

Core identification code
Black with white numbers

Approvals
UL MTW, TC-ER, WTTC 1000V, BUS DROP
c(UL) Type TC and CIC FT4
CSA AWM I/II A/B FT4

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine copper wire strands

Minimum bending radius
5 x cable diameter

Rated voltage
UL/CSA: 600 V (TC, MTW, CIC), WTTC 1000V
UL/CSA: 1000 V (AWM)
HAR U_0/U: 300/500 V

Test voltage
2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Fixed installation: -40°C up to +90°C

Part number	Number of cores and mm² per conductor	AWG	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® Tray II					
221803	3G1		7.5	28.8	85.0
221804	4G1		8.1	38.4	98.0
221805	5G1		8.9	48.0	115.0
221807	7G1		9.5	67.0	149.0
221809	9G1		11.1	87.0	167.0
221812	12G1		12.1	115.0	255.0
221818	18G1		14.8	173.0	365.0
221825	25G1		17.0	240.0	479.0
221603	3G1,5		8.1	43.0	103.0
221604	4G1,5		8.7	58.0	124.0
221605	5G1,5		9.5	72.0	146.0
221607	7G1,5		10.2	101.0	189.0
221608	8G1,5		11.0	116.0	203.0
221609	9G1,5		11.8	130.0	255.0
221612	12G1,5		13.3	173.0	328.0
221618	18G1,5		16.2	259.0	431.0
221625	25G1,5		18.7	360.0	592.0
221641	41G1,5		24.5	591.0	931.0
221650	50G1,5		25.7	720.0	1,132.0
221403	3G2,5		8.8	72.0	130.0
221404	4G2,5		9.6	96.0	159.0
221405	5G2,5		10.4	120.0	191.0
221407	7G2,5		11.3	168.0	252.0
221409	9G2,5		13.1	216.0	335.0
221412	12G2,5		15.5	288.0	459.0
221418	18G2,5		17.8	432.0	654.0
221425	25G2,5		20.5	600.0	874.0
221204	4G4		11.4	153.0	226.0
221205	5G4		12.5	192.0	279.0
221207	7G4		14.5	269.0	384.0
221004	4G6		15.1	231.0	394.0
221005	5G6		16.5	288.0	472.0
221007	7G6		17.9	405.0	661.0
220804	4G10		19.5	384.0	615.0
220805	5G10		22.6	480.0	771.0
220604	4G16		22.8	615.0	864.0
220605	5G16		24.9	768.0	1,080.0
220404	4 G	4	27.7	960.0	1,418.0
220204	4 G	2	32.0	1,344.0	2,077.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired make-up (e.g. 1 x 610 m drum or 8 x 76 m coils)

Comparable products

- ÖLFLEX® CONTROL TM see page 45
- ÖLFLEX® CONTROL M see page 69

Accessories

- SKINTOP® MS-M see page 650
- SKINTOP® ST-M see page 641

ÖLFLEX® TRAY II CY

Info

- **According to NFPA 79 Edition 2007 "Electrical Standard for Industrial Machinery" USA**
- **EMC compliant**

Benefits

- Broad application range due to multiple approvals
- Cost saving, easy installation due to re-nouncement of closed raceways (suitable for open wiring)

Application range

- Industrial machinery; plant engineering
- TC-ER (Tray Cable Exposed Run) approval for open wiring between cable tray and industrial machines/plants acc. to NEC 336.10(7)
- Wind Turbines: USA Wind Turbine Tray Cable (WTTC)
- Class 1, Div. 2 per NEC "National Electrical Code" Art. 336, 392, 501
- Outdoor use suitable

Product features

- Flame retardant according to CSA FT4 UL Vertical-Tray Flame Test
- Oil resistant according to UL OIL RES I
- Water resistant UL Wet Approval 75 °C
- UV resistant UL SUN RES

Approvals (Norm references)

RoHS

- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Fine strands of bare copper wires
- Insulation: PVC with nylon jacket (PA skin)
- Aluminum-plated foil
- Tinned copper braid
- Special blended PVC outer sheath, black (RAL 9005)

Technical data

Core identification code
Black with white numbers

Approvals
UL MTW, TC-ER, WTTC 1000V, BUS DROP
c(UL) Type TC and CIC FT4
CSA AWM I/II A/B FT4

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine copper wire strands

Minimum bending radius
5 x cable diameter

Rated voltage
UL/CSA: 600 V (TC, MTW, CIC), WTTC 1000V
UL/CSA: 1000 V (AWM)
HAR U_0/U: 300/500 V

Test voltage
2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Fixed installation: -40°C up to +90°C

Part number	Number of cores and mm² per conductor	AWG	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® Tray II CY					
2218030	3G1		8.2	35.1	119.0
2218040	4G1		8.8	55.2	137.0
2218050	5G1		9.4	65.8	149.0
2218070	7G1		10.1	86.9	193.0
2218120	12G1		12.9	149.3	330.0
2218180	18G1		15.6	214.2	438.0
2218250	25G1		17.9	354.2	574.0
2216030	3G1,5		8.8	59.8	144.0
2216040	4G1,5		9.5	74.5	173.0
2216050	5G1,5		10.2	93.5	189.0
2216070	7G1,5		11.1	130.5	246.0
2216120	12G1,5		14.1	213.8	426.0
2216180	18G1,5		17.0	312.4	515.0
2216250	25G1,5		19.5	415.6	708.0
2214030	3G2,5		9.5	91.2	180.0
2214040	4G2,5		10.4	125.7	223.0
2214050	5G2,5		11.2	150.1	268.0
2214070	7G2,5		12.1	201.2	327.0
2214120	12G2,5		16.3	333.6	595.0
2214180	18G2,5		18.6	487.6	784.0
2214250	25G2,5		21.4	685.1	1,048.0
2212040	4G4		12.2	186.4	315.0
2212050	5G4		13.3	232.6	388.0
2212070	7G4		15.3	310.2	499.0
2210040	4G6		15.9	271.7	552.0
2210070	7G6		18.8	457.4	856.0
2208040	4G10		20.3	438.6	857.0
2206040	4G16		23.6	699.0	1,208.0
2204040	4 G	4	28.8	1,296.8	1,982.0
2202040	4 G	2	33.3	1,899.5	2,903.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired make-up (e.g. 1 x 610 m drum or 8 x 76 m coils)

Comparable products

- ÖLFLEX® CONTROL TM CY see page 46

Accessories

- SKINTOP® MS-SC-M see page 657

ÖLFLEX® SF

Info

- **Super flexible hand-held equipment cable**

Application range

- Especially suitable for domestic appliances, electrical power tools and various handyman tools
- H05VV-F cable types may not be used on commercial premises, with the exception of offices.
- Not for permanent outdoor use.

Product features

- Flame retardant according to IEC 60332-1-2
- Highly flexible also during usage at low temperature
- Design and geometry in compliance with harmonisation document

Approvals (Norm references)

CE HAR RoHS

Design

- Superfine strands of plain copper wire with an individual wire diameter of 0.07 mm
- PVC core insulation, cold resistant
- PVC outer sheath, cold resistant orange (RAL 2003)

Technical data

Core identification code
Coloured according to VDE 0293-308 see Appendix T9
Starting at 6 cores: Black with white numbers

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
superfine wire
(0.07 mm single wire diameter)

Minimum bending radius
Occasional flexing: 10 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexing: -15°C up to +60°C

VDE tested
Type H05VV-F acc. to VDE 0281-5, starting at 6 cores: based on VDE 0281-5

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® SF				
0027590	2 X 0.75	6.4	14.9	50
0027591	3 G 0.75	6.9	22.3	60
00275923	4 G 0.75	7.7	29.7	73
00275933	5 G 0.75	8.7	37.1	88
0027594	7 G 0.75	10.4	51.5	109
0027600	2 X 1	6.8	20.1	74
0027601	3 G 1	7.4	30.2	87
00276033	5 G 1	9.2	50.8	130
0027701	3 G 1.5	8.7	44.8	116
00277023	4 G 1.5	9.9	61.0	166
00277033	5 G 1.5	11.1	72.0	184

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® 500 P see page 72
- ÖLFLEX® 550 P see page 75

Accessories

- SKINTOP® ST-M see page 641
- STAR STRIP stripping tool see page 908

ÖLFLEX® CLASSIC 100 H

Info

- **Amendment: out-phased product! <Trimmed size range>**
- **Sizes with conductor cross section smaller than 35 mm² see ÖLFLEX® CLASSIC 130 H BK 0,6/1kV**

Application range

- Public buildings
- Airport, railway station
- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
- Particularly where human and animal life as well as valuable property are exposed to high risk of fire hazards

Product features

- Flame retardant according to IEC 60332-1-2 (flame spread on single cable)
- No flame propagation acc. to IEC 60332-3-24 respectively IEC 60332-3-25 (Flame spread on vertical cable or wire bundle)
- Halogen-free according to IEC 60754-1 (amount of halogen acid gas)
  Corrosiveness of combustion gases according to IEC 60754-2 (degree of acidity)
- Oil resistant according to SEV TB 20 B

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- Core insulation: Halogen-free
- Special blended halogen-free outer sheath grey (RAL 7001)

Technical data

Core identification code
Coloured according to VDE 0293-308 see Appendix T9

Based on
HD 21.13 S1; VDE 0281 Part 13
HD 21.5; VDE 0281 Part 5

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U: 450/750 V
Fixed, protected installation:
U_0/U: 600/1000 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -30°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
00141173	4 G 35	32.8	1,344.0	2,060
00141183	5 G 35	37.6	1,680.0	2,577
00141193	4 G 50	38.0	1,920.0	2,811
00141203	4 G 70	42.8	2,688.0	3,968
00141213	4 G 95	47.1	3,648.0	4,957
00141223	4 G 120	52.4	4,608.0	6,391

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Single lengths for sizes: ≥ 4G50 max. 500m; ≥ 4G120 max. 400m

Comparable products

- ÖLFLEX® CLASSIC 130 H BK 0,6/1kV see page 57

Accessories

- SKINTOP® ST-HF-M see page 644

ÖLFLEX® CLASSIC 110 H

VDE certified characteristics

Info

- **High flexibility and oil resistance**
- **VDE certified**

Application range

- Public buildings
- Airport, railway station
- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
  Stage technique
- Particularly where human and animal life as well as valuable property are exposed to high risk of fire hazards

Product features

- Flame retardant according to IEC 60332-1-2 (flame spread on single cable)
- No flame propagation acc. to IEC 60332-3-24 respectively IEC 60332-3-25 (Flame spread on vertical cable or wire bundle)
- Halogen-free according to IEC 60754-1 (amount of halogen acid gas)
  Corrosiveness of combustion gases according to IEC 60754-2 (degree of acidity)
- Low smoke density acc. to IEC 61034
- Oil resistant acc. to VDE 0473 part 811-2-1 and UL OIL RES I and UL OIL RES II

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- Core insulation: Halogen-free
- Special blended halogen-free outer sheath grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Based on
HD 21.13 S1; VDE 0281 Part 13
HD 21.5; VDE 0281 Part 5

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 10 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -30°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CLASSIC 110 H U0/U: 300/500 V				
10019900	2 X 0.5	5.1	9.6	41
10019901	3 G 0.5	5.4	14.4	49
10019902	3 X 0.5	5.4	14.4	49
10019903	4 G 0.5	5.8	19.2	58
10019904	4 X 0.5	5.8	19.2	58
10019905	5 G 0.5	6.3	24.0	69
10019906	7 G 0.5	6.9	33.6	87
10019907	12 G 0.5	9.1	57.6	141
10019910	2 X 0.75	5.5	14.4	51
10019911	3 G 0.75	5.8	21.6	61
10019912	3 X 0.75	5.8	21.6	61
10019913	4 G 0.75	6.3	28.8	73
10019914	4 X 0.75	6.3	28.8	73
10019915	5 G 0.75	6.9	36.0	87
10019916	5 X 0.75	6.9	36.0	87
10019917	7 G 0.75	7.5	50.4	111
10019918	7 X 0.75	7.5	50.4	111
10019919	9 G 0.75	9.6	64.8	150
10019920	12 G 0.75	10.1	86.4	186
10019921	18 G 0.75	12.0	129.6	265
10019922	25 G 0.75	14.1	180.0	365
10019960	2 X 1	5.8	19.2	59
10019961	3 G 1	6.1	28.8	72
10019962	3 X 1	6.1	28.8	72
10019963	4 G 1	6.6	38.4	87
10019964	4 X 1	6.6	38.4	87
10019965	5 G 1	7.3	48.0	104
10019967	7 G 1	8.1	67.2	138
10019968	8 G 1	9.7	76.8	164
10019969	12 G 1	10.7	115.2	225
10019970	14 G 1	11.4	134.4	261
10019971	18 G 1	12.9	172.8	328
10019972	25 G 1	15.0	240.0	445

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
10019973	41 G 1	19.2	393.6	719
10019930	2 X 1.5	6.4	28.8	76
10019931	3 G 1.5	6.8	43.2	94
10019980	3 X 1.5	6.8	43.2	94
10019932	4 G 1.5	7.4	57.6	115
10019933	5 G 1.5	8.3	72.0	142
10019934	7 G 1.5	9.0	100.8	184
10019981	8 G 1.5	10.8	115.2	218
10019982	9 G 1.5	11.6	129.6	245
10019935	12 G 1.5	12.2	172.8	308
10019936	14 G 1.5	13.0	201.6	357
10019937	18 G 1.5	14.6	259.2	449
10019938	25 G 1.5	17.2	360.0	617
10019927	34 G 1.5	19.8	489.6	821
10019944	2 X 2.5	7.6	48.0	113
10019945	3 G 2.5	8.3	72.0	146
10019946	4 G 2.5	9.0	96.0	180
10019947	5 G 2.5	10.1	120.0	221
10019948	7 G 2.5	11.2	168.0	295
10019949	12 G 2.5	15.1	288.0	491
10019950	4 G 4	10.8	153.6	268
10019951	5 G 4	12.1	192.0	328
10019952	7 G 4	13.4	268.8	438
10019953	4 G 6	13.0	230.4	391
10019954	5 G 6	14.5	288.0	478
10019975	7 G 6	16.0	403.2	638
10019851	4 G 10	16.2	384.0	635
10019852	5 G 10	18.1	480.0	775
10019849	4 G 16	18.8	614.4	930
10019853	5 G 16	21.2	768.0	1,147
10019854	4 G 25	23.5	960.0	1,442
10019855	5 G 25	26.4	1,200.0	1,773
10019856	4 G 35	26.6	1,344.0	1,917

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® CLASSIC 130 H see page 55
- ÖLFLEX® CLASSIC 130 H BK 0,6/1kV see page 57

Accessories

- SKINTOP® ST-HF-M see page 644
- MULTICRIMP 6 crimping pliers see page 919

ÖLFLEX® CLASSIC 110 CH

VDE certified characteristics

Info

- **High flexibility and oil resistance**
- **VDE certified**
- **EMC compliant**

Application range

- Public buildings
- Airport, railway station
- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
- Particularly where human and animal life as well as valuable property are exposed to high risk of fire hazards
- In EMI critical environment (electromagnetic interference)

Product features

- Flame retardant according to IEC 60332-1-2 (flame spread on single cable)
- No flame propagation acc. to IEC 60332-3-24 respectively IEC 60332-3-25 (Flame spread on vertical cable or wire bundle)
- Halogen-free according to IEC 60754-1 (amount of halogen acid gas)
  Corrosiveness of combustion gases according to IEC 60754-2 (degree of acidity)
- Low smoke density acc. to IEC 61034
- Oil resistant acc. to VDE 0473 part 811-2-1 and UL OIL RES I and UL OIL RES II

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- Core insulation: Halogen-free
- Halogen-free inner sheath, grey
- Tinned copper braid
- Special blended halogen-free outer sheath grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Based on
HD 21.13 S1; VDE 0281 Part 13
HD 21.5; VDE 0281 Part 5

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installed: 6 x outer diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -30°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CLASSIC 110 CH U0/U: 300/500 V				
10035030	2 X 0.5	7.1	29.1	85
10035031	3 G 0.5	7.4	35.1	95
10035032	3 X 0.5	7.4	35.1	95
10035033	4 G 0.5	8.0	41.4	111
10035034	4 X 0.5	8.0	41.4	111
10035035	5 G 0.5	8.6	48.0	126
10035036	7 G 0.5	9.1	59.9	148
10035037	12 G 0.5	11.5	91.4	226
10035040	2 X 0.75	7.7	35.4	101
10035041	3 G 0.75	8.0	43.8	114
10035042	3 X 0.75	8.0	43.8	114
10035043	4 G 0.75	8.5	52.8	130
10035044	4 X 0.75	8.5	52.8	130
10035045	5 G 0.75	9.3	62.3	153
10035046	5 X 0.75	9.3	62.3	153
10035047	7 G 0.75	9.9	79.5	183
10035048	7 X 0.75	9.9	79.5	183
10035050	12 G 0.75	12.5	123.2	280
10035051	18 G 0.75	14.8	188.6	399
10035052	25 G 0.75	16.9	247.5	522
10035055	2 X 1	8.0	41.4	112
10035056	3 G 1	8.4	52.1	127
10035057	3 X 1	8.4	52.1	127
10035058	4 G 1	8.9	73.5	157
10035059	4 X 1	8.9	73.5	157
10035060	5 G 1	9.7	83.2	171
10035061	7 G 1	10.3	97.2	210
10035062	12 G 1	13.6	168.7	347
10035063	18 G 1	15.7	235.4	474
10035064	25 G 1	17.8	312.0	611

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
10035065	41 G 1	22.4	508.0	969
10035067	2 X 1.5	8.6	53.2	134
10035068	3 G 1.5	9.0	69.1	155
10035069	3 X 1.5	9.0	69.1	155
10035070	4 G 1.5	9.8	85.8	186
10035071	5 G 1.5	10.5	102.8	215
10035072	7 G 1.5	11.4	134.2	269
10035073	12 G 1.5	15.0	232.8	445
10035074	18 G 1.5	17.4	327.8	610
10035075	25 G 1.5	20.4	463.2	843
10035089	3 G 2.5	10.5	102.8	220
10035090	4 G 2.5	11.4	129.4	265
10035091	5 G 2.5	12.7	157.5	322
10035092	7 G 2.5	14.0	223.0	422
10035093	12 G 2.5	17.9	360.5	659
10035094	4 G 4	13.6	207.6	390
10035095	5 G 4	14.9	251.5	463
10035096	7 G 4	16.2	333.9	588
10035097	4 G 6	15.8	294.8	516
10035098	5 G 6	17.3	356.1	616
10035099	7 G 6	18.8	479.3	792
10035380	4 G 10	19.1	461.1	789
10035381	5 G 10	21.4	586.6	998
10035382	4 G 16	22.3	727.6	1,154
10035383	5 G 16	24.5	888.7	1,389
10035384	4 G 25	27.0	1,123.9	1,807
10035386	4 G 35	30.4	1,529.2	2,321
0035388	4 G 50	36.5	2,162.0	3,741
0035390	4 G 70	41.6	2,973.0	5,054
0035392	4 G 95	47.9	3,966.0	6,427

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Single lengths for sizes: ≥ 4G50 max. 500m

Comparable products

- ÖLFLEX® CLASSIC 135 CH see page 56
- ÖLFLEX® CLASSIC 135 CH BK 0,6/1kV see page 58

Accessories

- SKINTOP® MS-M BRUSH see page 658
- SKINTOP® ST-HF-M see page 644

ÖLFLEX® 120 H

Info

- **Amendment: out-phased product! <Trimmed size range>**
- **Further sizes see alternative option ÖLFLEX® CLASSIC 110 H**

Application range

- Public buildings
- Airport, railway station
- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
- Particularly where human and animal life as well as valuable property are exposed to high risk of fire hazards

Product features

- Flame retardant according to IEC 60332-1-2 (flame spread on single cable)
- Halogen-free according to IEC 60754-1 (amount of halogen acid gas)
  Corrosiveness of combustion gases according to IEC 60754-2 (degree of acidity)
- Flexible down to -25°C

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- Core insulation: Halogen-free
- Special blended halogen-free outer sheath grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Based on
HD 21.13 S1; VDE 0281 Part 13

Specific insulation resistance
> 10 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -25°C up to +70°C
Fixed installation: -40°C up to +70°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® 120 H U0/U: 300/500 V				
1021902	2 X 1.5	6.3	29.0	63
1021303	3 G 1.5	6.7	43.0	79
1021304	4 G 1.5	7.2	58.0	98
1021305	5 G 1.5	8.1	72.0	120
1021307	7 G 1.5	8.9	101.0	158
1021312	12 G 1.5	12.0	173.0	265
1021318	18 G 1.5	14.4	259.0	388
1021325	25 G 1.5	16.9	360.0	535
1021403	3 G 2.5	8.1	72.0	124
1021404	4 G 2.5	8.9	96.0	154
1021405	5 G 2.5	10.0	120.0	189
1021407	7 G 2.5	11.1	168.0	254
1021412	12 G 2.5	14.8	288.0	425
1021504	4 G 4	10.8	154.0	236
1021604	4 G 6	13.0	230.0	350

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® CLASSIC 110 H see page 51
- ÖLFLEX® CLASSIC 130 H see page 55
- ÖLFLEX® CLASSIC 130 H BK 0,6/1kV see page 57

Accessories

- SKINTOP® ST-HF-M see page 644

ÖLFLEX® 120 CH

Info

- **Amendment: out-phased product! <Trimmed size range>**
- **Further sizes see alternative option ÖLFLEX® CLASSIC 110 CH**

Application range

- Public buildings
- Airport, railway station
- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
- Particularly where human and animal life as well as valuable property are exposed to high risk of fire hazards
- In EMI critical environment (electromagnetic interference)

Product features

- Flame retardant according to IEC 60332-1-2 (flame spread on single cable)
- Halogen-free according to IEC 60754-1 (amount of halogen acid gas)
  Corrosiveness of combustion gases according to IEC 60754-2 (degree of acidity)
- Flexible down to -25°C
- High coverage degree of the screen low transfer impedance (max. 250 Ω/km at 30 MHz)

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- Core insulation: Halogen-free
- Halogen-free inner sheath, grey
- Tinned copper braid
- Special blended halogen-free outer sheath grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Based on
HD 21.13 S1; VDE 0281 Part 13

Specific insulation resistance
> 10 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installed: 6 x outer diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -25°C up to +70°C
Fixed installation: -40°C up to +70°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® 120 CH U0/U: 300/500 V				
1022902	2 X 1.5	8.5	65.0	113
1022303	3 G 1.5	8.9	83.0	131
1022304	4 G 1.5	9.6	100.0	158
1022305	5 G 1.5	10.3	125.0	182
1022307	7 G 1.5	11.3	196.0	230
1022312	12 G 1.5	14.8	280.0	383
1022318	18 G 1.5	17.2	389.0	525
1022325	25 G 1.5	20.1	535.0	727
1022403	3 G 2.5	10.3	146.0	186
1022404	4 G 2.5	11.3	167.0	226
1022405	5 G 2.5	12.6	200.0	275
1022407	7 G 2.5	13.9	288.0	361
1022504	4 G 4	13.4	237.0	337
1022604	4 G 6	15.8	318.0	474

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® CLASSIC 110 CH see page 52
- ÖLFLEX® CLASSIC 135 CH see page 56
- ÖLFLEX® CLASSIC 135 CH BK 0,6/1kV see page 58

Accessories

- SKINTOP® CLICK see page 643
- SKINTOP® MS-SC-M see page 657

ÖLFLEX® CLASSIC 130 H

VDE certified characteristics

Info

- **VDE certified**
- **Flame test acc. to NF C 32-070 categorie C1**

Application range

- Public buildings
- Airport, railway station
- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
  Stage technique
- Particularly where human and animal life as well as valuable property are exposed to high risk of fire hazards

Product features

- Flame retardant according to IEC 60332-1-2 (flame spread on single cable)
- No flame propagation acc. to IEC 60332-3-24 respectively IEC 60332-3-25 (Flame spread on vertical cable or wire bundle)
- No flame propagation according to NF C 32-070 category C1
- Halogen-free according to IEC 60754-1 (amount of halogen acid gas)
  Corrosiveness of combustion gases according to IEC 60754-2 (degree of acidity)
- Low smoke density acc. to IEC 61034

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- Core insulation: Halogen-free
- Special blended halogen-free outer sheath grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Based on
VDE 0281 Part 14

Specific insulation resistance
> 10 MOhm x km

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -15°C to +70°C
Fixed installation: -40°C up to +70°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CLASSIC 130 H				
1123000	2 X 0.5	5.1	9.6	36
1123001	3 G 0.5	5.4	14.4	42
1123002	3 X 0.5	5.4	14.4	42
1123003	4 G 0.5	5.8	19.2	55
1123004	4 X 0.5	5.8	19.2	55
1123005	5 G 0.5	6.3	24.0	65
1123006	5 X 0.5	6.3	24.0	65
1123008	7 G 0.5	6.9	33.6	80
1123009	7 X 0.5	6.9	33.6	80
1123010	8 G 0.5	8.2	38.4	103
1123012	10 G 0.5	8.8	48.0	112
1123013	12 G 0.5	9.1	57.6	128
1123017	18 G 0.5	10.8	86.4	189
1123020	25 G 0.5	12.7	120.0	260
1123021	30 G 0.5	13.6	144.0	294
1123032	2 X 0.75	5.5	14.4	47
1123033	3 G 0.75	5.8	21.6	56
1123034	3 X 0.75	5.8	21.6	56
1123035	4 G 0.75	6.3	28.8	69
1123036	4 X 0.75	6.3	28.8	69
1123037	5 G 0.75	6.9	36.0	83
1123038	5 X 0.75	6.9	36.0	83
1123041	7 G 0.75	7.5	50.4	104
1123042	7 X 0.75	7.5	50.4	104
1123046	10 G 0.75	9.8	72.0	149
1123047	12 G 0.75	10.1	86.4	172
1123048	12 X 0.75	10.1	86.4	172
1123051	18 G 0.75	12.0	129.6	252
1123054	25 G 0.75	14.1	180.0	352
1123056	34 G 0.75	16.3	244.8	466
1123066	2 X 1	5.8	19.2	55
1123067	3 G 1	6.1	28.8	67
1123068	3 X 1	6.1	28.8	67
1123069	4 G 1	6.6	38.4	83
1123070	4 X 1	6.6	38.4	83
1123071	5 G 1	7.3	48.0	100
1123072	5 X 1	7.3	48.0	100
1123074	7 G 1	8.1	67.2	130
1123075	7 X 1	8.1	67.2	130
1123076	8 G 1	9.7	76.8	164
1123078	10 G 1	10.4	96.0	183
1123080	12 G 1	10.7	115.2	212

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
1123081	12 X 1	10.7	115.2	212
1123083	16 G 1	12.1	153.6	275
1123084	18 G 1	12.9	172.8	314
1123090	25 G 1	15.0	240.0	429
1123094	34 G 1	17.5	326.4	570
1123106	2 X 1.5	6.4	28.8	72
1123107	3 G 1.5	6.8	43.2	88
1123108	3 X 1.5	6.8	43.2	88
1123109	4 G 1.5	7.4	57.6	110
1123110	4 X 1.5	7.4	57.6	110
1123111	5 G 1.5	8.3	72.0	135
1123112	5 X 1.5	8.3	72.0	135
1123114	7 G 1.5	9.0	100.8	174
1123115	7 X 1.5	9.0	100.8	174
1123116	8 G 1.5	10.8	115.2	223
1123118	10 G 1.5	11.8	144.0	250
1123120	12 G 1.5	12.2	172.8	289
1123124	18 G 1.5	14.6	259.2	433
1123128	25 G 1.5	17.2	360.0	596
1123130	34 G 1.5	19.8	489.6	786
1123139	2 X 2.5	7.6	48.0	110
1123140	3 G 2.5	8.3	72.0	137
1123142	4 G 2.5	9.0	96.0	174
1123144	5 G 2.5	10.1	120.0	217
1123146	7 G 2.5	11.2	168.0	283
1123149	12 G 2.5	15.1	288.0	467
1123151	18 G 2.5	18.0	432.0	696
1123153	25 G 2.5	21.1	600.0	969
1123159	3 G 4	9.8	115.2	213
1123160	4 G 4	10.8	153.6	267
1123161	5 G 4	12.1	192.0	331
1123162	7 G 4	13.4	268.8	432
1123166	3 G 6	11.7	172.8	303
1123167	4 G 6	13.0	230.4	388
1123168	5 G 6	14.5	288.0	480
1123169	7 G 6	16.0	403.2	626
1123172	4 G 10	16.2	384.0	601
1123173	5 G 10	18.1	480.0	735
1123177	4 G 16	18.8	614.4	917
1123178	5 G 16	21.2	768.0	1,148
1123181	4 G 25	23.5	960.0	1,418
1123182	5 G 25	26.4	1,200.0	1,769
1123185	4 G 35	26.6	1,344.0	1,905

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® CLASSIC 130 H BK 0,6/1kV see page 57

Accessories

- SKINTOP® ST-HF-M see page 644

ÖLFLEX® CLASSIC 135 CH

VDE certified characteristics

Info

- **VDE certified**
- **Flame test acc. to NF C 32-070 categorie C1**

Application range

- Public buildings
- Airport, railway station
- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
- Particularly where human and animal life as well as valuable property are exposed to high risk of fire hazards
- In EMI critical environment (electromagnetic interference)

Product features

- Flame retardant according to IEC 60332-1-2 (flame spread on single cable)
- No flame propagation acc. to IEC 60332-3-24 respectively IEC 60332-3-25 (Flame spread on vertical cable or wire bundle)
- No flame propagation according to NF C 32-070 category C1
- Halogen-free according to IEC 60754-1 (amount of halogen acid gas)
  Corrosiveness of combustion gases according to IEC 60754-2 (degree of acidity)
- Low smoke density acc. to IEC 61034

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- Core insulation: Halogen-free
- Halogen-free plastic foil wrapping
- Tinned copper braid
- Special blended halogen-free outer sheath grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Based on
VDE 0281 Part 14

Specific insulation resistance
> 10 MOhm x km

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installed: 6 x outer diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
Core/core: 4000 V
Core/screen: 2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -15°C to +70°C
Fixed installation: -40°C up to +70°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CLASSIC 135 CH				
1123200	2 X 0.5	5.9	36.0	51
1123201	3 G 0.5	6.2	43.0	61
1123202	3 X 0.5	6.2	43.0	61
1123203	4 G 0.5	6.6	49.0	72
1123204	4 X 0.5	6.6	49.0	72
1123205	5 G 0.5	7.1	57.0	85
1123206	5 X 0.5	7.1	57.0	85
1123208	7 G 0.5	7.7	69.0	103
1123209	7 X 0.5	7.7	69.0	103
1123213	12 G 0.5	10.1	104.0	165
1123217	18 G 0.5	11.8	141.0	236
1123220	25 G 0.5	13.7	224.0	324
1123232	2 X 0.75	6.3	43.0	60
1123233	3 G 0.75	6.6	52.0	77
1123234	3 X 0.75	6.6	52.0	77
1123235	4 G 0.75	7.1	61.0	87
1123236	4 X 0.75	7.1	61.0	87
1123237	5 G 0.75	7.9	72.0	106
1123238	5 X 0.75	7.9	72.0	106
1123241	7 G 0.75	8.5	89.0	129
1123242	7 X 0.75	8.5	89.0	129
1123247	12 G 0.75	11.1	138.0	211
1123248	12 X 0.75	11.1	138.0	211
1123251	18 G 0.75	13.0	211.0	307
1123254	25 G 0.75	15.1	280.0	413
1123266	2 X 1	6.6	51.0	79
1123267	3 G 1	6.9	62.0	88
1123268	3 X 1	6.9	62.0	88
1123269	4 G 1	7.4	74.0	106
1123270	4 X 1	7.4	74.0	106
1123271	5 G 1	8.3	88.0	124
1123272	5 X 1	8.3	88.0	124
1123274	7 G 1	8.9	112.0	155
1123275	7 X 1	8.9	112.0	155
1123280	12 G 1	11.7	185.0	250
1123281	12 X 1	11.7	185.0	250

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
1123284	18 G 1	14.1	268.0	368
1123290	25 G 1	16.2	354.0	493
1123291	25 X 1	16.2	354.0	493
1123306	2 X 1.5	7.2	65.0	91
1123307	3 G 1.5	7.6	82.0	112
1123308	3 X 1.5	7.6	82.0	112
1123309	4 G 1.5	8.4	100.0	141
1123310	4 X 1.5	8.4	100.0	141
1123311	5 G 1.5	9.1	119.0	161
1123312	5 X 1.5	9.1	119.0	161
1123314	7 G 1.5	10.0	154.0	206
1123315	7 X 1.5	10.0	154.0	206
1123320	12 G 1.5	13.4	268.0	355
1123324	18 G 1.5	15.8	373.0	517
1123328	25 G 1.5	18.2	530.0	705
1123339	2 X 2.5	8.6	96.0	128
1123340	3 G 2.5	9.1	118.0	157
1123342	4 G 2.5	10.0	147.0	201
1123344	5 G 2.5	11.1	176.0	248
1123346	7 G 2.5	12.0	253.0	313
1123349	12 G 2.5	16.3	385.0	524
1123359	3 G 4	10.6	178.0	231
1123360	4 G 4	11.8	248.0	291
1123361	5 G 4	13.3	269.0	361
1123362	7 G 4	14.6	371.0	468
1123366	3 G 6	12.7	240.0	318
1123367	4 G 6	14.2	343.0	437
1123368	5 G 6	15.5	441.0	510
1123369	7 G 6	17.0	510.0	662
1123372	4 G 10	17.2	535.0	685
1123373	5 G 10	19.5	592.0	824
1123374	7 G 10	21.4	820.0	1,067
1123377	4 G 16	20.2	736.0	1,036
1123378	5 G 16	22.6	895.0	1,285
1123381	4 G 25	25.1	1,129.0	1,663
1123382	5 G 25	28.0	1,400.0	1,976
1123385	4 G 35	28.2	1,546.0	2,052

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® CLASSIC 110 CH see page 52
- ÖLFLEX® CLASSIC 135 CH BK 0,6/1kV see page 58

Accessories

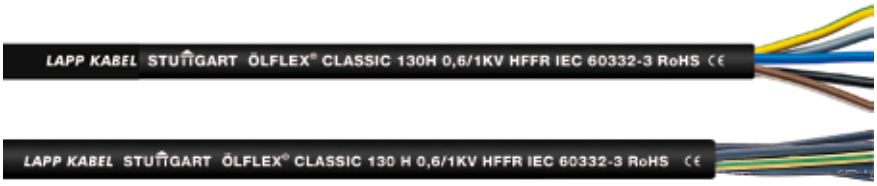
- SKINTOP® MS-SC-M see page 657
- SKINTOP® ST-HF-M see page 644

ÖLFLEX® CLASSIC 130 H BK 0,6/1kV

VDE certified characteristics

Info

- **Colour coded up to 5 cores**
- **Numbered cores from 6 up**
- **VDE certified**



Application range

- Public buildings
- Airport, railway station
- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
- Particularly where human and animal life as well as valuable property are exposed to high risk of fire hazards
- For outdoor applications

Product features

- Flame retardant according to IEC 60332-1-2 (flame spread on single cable)
- No flame propagation acc. to IEC 60332-3-24 respectively IEC 60332-3-25 (Flame spread on vertical cable or wire bundle)
- Halogen-free according to IEC 60754-1 (amount of halogen acid gas)
  Corrosiveness of combustion gases according to IEC 60754-2 (degree of acidity)
- Low smoke density acc. to IEC 61034
- UV resistant

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- Core insulation: Halogen-free
- Special halogen-free outer sheath black (RAL 9005)

Technical data

Core identification code
Up to 5 cores: according to VDE 0293-308 (appendix T9)
Starting at 6 cores: Black with white numbers

Based on
HD 21.14 S1
VDE 0281 Part 14

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U: 600/1000 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -15°C to +70°C
Fixed installation: -40°C up to +70°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CLASSIC 130 H 0,6/1kV - coloured cores				
1123410	2 X 1	8.6	19.2	107
1123411	3 G 1	9.0	28.8	123
1123412	4 G 1	9.6	38.4	144
1123413	5 G 1	10.4	48.0	167
ÖLFLEX® CLASSIC 130 H 0,6/1kV - numbered cores				
1123414	7 G 1	11.1	67.2	206
1123415	12 G 1	14.0	115.2	314
1123416	18 G 1	16.1	172.8	428
1123417	25 G 1	18.6	240.0	569
ÖLFLEX® CLASSIC 130 H 0,6/1kV - coloured cores				
1123418	2 X 1.5	9.6	28.8	137
1123419	3 G 1.5	10.1	43.2	161
1123420	4 G 1.5	10.8	57.6	190
1123421	5 G 1.5	11.7	72.0	221
ÖLFLEX® CLASSIC 130 H 0,6/1kV - numbered cores				
1123422	7 G 1.5	12.6	100.8	276
1123423	12 G 1.5	16.1	172.8	427
1123424	18 G 1.5	18.8	259.2	596
1123425	25 G 1.5	21.7	360.0	799

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CLASSIC 130 H 0,6/1kV - coloured cores				
1123426	2 X 2.5	10.8	48.0	184
1123427	3 G 2.5	11.3	72.0	219
1123428	4 G 2.5	12.2	96.0	262
1123429	5 G 2.5	13.3	120.0	307
ÖLFLEX® CLASSIC 130 H 0,6/1kV - numbered cores				
1123430	7 G 2.5	14.4	168.0	390
1123431	12 G 2.5	18.7	288.0	624
1123432	18 G 2.5	22.0	432.0	879
1123433	25 G 2.5	25.8	600.0	1,212
ÖLFLEX® CLASSIC 130 H 0,6/1kV - coloured cores				
1123434	3 G 4	12.6	115.2	290
1123435	4 G 4	13.7	153.6	351
1123436	5 G 4	14.9	192.0	416
1123437	3 G 6	13.9	172.8	377
1123438	4 G 6	15.1	230.4	463
1123439	5 G 6	16.8	288.0	559
1123440	4 G 10	18.7	384.0	757
1123441	5 G 10	20.7	480.0	915
1123442	4 G 16	21.3	614.4	1,070
1123443	5 G 16	23.6	768.0	1,296
1123444	4 G 25	26.2	960.0	1,631

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® CLASSIC 110 H see page 51
- ÖLFLEX® CLASSIC 130 H see page 55

Accessories

- SKINTOP® ST-HF-M see page 644

ÖLFLEX® CLASSIC 135 CH BK 0,6/1kV

VDE certified characteristics

Info

- **Colour coded up to 5 cores**
  Numbered cores from 6 up
- **EMC compliant**
- **VDE certified**

Application range

- Public buildings
- Airport, railway station
- Plant engineering and construction
  Industrial machinery
  Air conditioning installations
- Particularly where human and animal life as well as valuable property are exposed to high risk of fire hazards
- For outdoor applications

Product features

- Flame retardant according to IEC 60332-1-2 (flame spread on single cable)
- No flame propagation acc. to IEC 60332-3-24 respectively IEC 60332-3-25 (Flame spread on vertical cable or wire bundle)
- Halogen-free according to IEC 60754-1 (amount of halogen acid gas)
  Corrosiveness of combustion gases according to IEC 60754-2 (degree of acidity)
- Low smoke density acc. to IEC 61034
- UV resistant

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- Core insulation: Halogen-free
- Halogen-free plastic foil wrapping
- Tinned copper braid
- Special halogen-free outer sheath black (RAL 9005)

Technical data

Core identification code
Up to 5 cores: according to VDE 0293-308 (appendix T9)
Starting at 6 cores: Black with white numbers

Based on
HD 21.14 S1
VDE 0281 Part 14

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installed: 6 x outer diameter

Rated voltage
U_0/U: 600/1000 V

Test voltage
Core/core: 4000 V
Core/screen: 2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -15°C to +70°C
Fixed installation: -40°C up to +70°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CLASSIC 135 CH 0,6/1kV - coloured cores				
1123460	2 X 1	9.4	39.5	120
1123461	3 G 1	9.8	51.0	140
1123462	4 G 1	10.4	62.8	165
1123463	5 G 1	11.2	76.0	191
ÖLFLEX® CLASSIC 135 CH 0,6/1kV - numbered cores				
1123464	7 G 1	11.9	97.2	231
1123465	12 G 1	15.0	169.1	360
1123466	18 G 1	17.3	238.2	494
1123467	25 G 1	19.8	315.5	643
ÖLFLEX® CLASSIC 135 CH 0,6/1kV - coloured cores				
1123468	2 X 1.5	10.4	53.2	149
1123469	3 G 1.5	10.9	69.5	177
1123470	4 G 1.5	11.6	86.5	209
1123471	5 G 1.5	12.5	104.3	243
ÖLFLEX® CLASSIC 135 CH 0,6/1kV - numbered cores				
1123472	7 G 1.5	13.4	136.5	300
1123473	12 G 1.5	17.3	238.3	486
1123474	18 G 1.5	20.2	355.4	691
1123475	25 G 1.5	23.1	475.1	914

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CLASSIC 135 CH 0,6/1kV - coloured cores				
1123476	2 X 2.5	11.6	79.4	197
1123477	3 G 2.5	12.1	106.1	243
1123478	4 G 2.5	13.0	134.3	293
1123479	5 G 2.5	14.1	158.3	342
ÖLFLEX® CLASSIC 135 CH 0,6/1kV - numbered cores				
1123480	7 G 2.5	15.4	225.0	462
1123481	12 G 2.5	20.1	383.6	718
1123482	18 G 2.5	23.4	548.9	1,011
1123483	25 G 2.5	27.4	761.7	1,370
ÖLFLEX® CLASSIC 135 CH 0,6/1kV - coloured cores				
1123484	3 G 4	13.4	167.7	327
1123485	4 G 4	14.7	211.9	399
1123486	5 G 4	15.9	250.3	471
1123487	3 G 6	14.9	232.1	414
1123488	4 G 6	16.1	298.5	519
1123489	5 G 6	17.8	356.1	607
1123490	4 G 10	20.1	490.6	837
1123491	5 G 10	21.9	586.6	995
1123492	4 G 16	22.5	735.1	1,157
1123493	5 G 16	25.0	888.7	1,407
1123494	4 G 25	27.8	1,126.6	1,683

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® CLASSIC 110 CH see page 52
- ÖLFLEX® CLASSIC 135 CH see page 56

Accessories

- SKINTOP® MS-M BRUSH see page 658

New

ÖLFLEX® PETRO C HFFR

Chemical and mechanical resistant cables for harsh environmental conditions - 0,6/1 kV

Info

- **Oil and drilling fluid resistant according IEC 61892-4, Annex D**
- **Improved characteristics in case of fire Halogen free - reduced fire gases Flame retardant - no flame propagation**
- **EMC compliant**

Benefits

- Reduced formation of toxic gases and fire spreading in the event of fire increase the protection against damage to persons and property
- Also suitable for moved applications due to especial cable design
- The copper braiding serves as electromagnetic screening and could also normatively used as armouring (Braid Armour)
- Due to the mechanical, thermal and physical properties the product is useful for many industries and branches

Application range

- For on- and offshore applications as for instance stationary or mobile drilling rigs and marine vessels
- For electrical connection of drilling units, pumping stations, compressors, generators or also emergency power supply respectively emergency lighting in harsh environmental conditions

Product features

- Cable sheath material complies with the requirements for drilling fluids as per IEC 61892-4, Annex D
- Halogen-free and highly flame retardant
- Excellent moisture, UV- and mechanical abrasion resistance
- Considering economic minimum quantities also customized designs are possible

Approvals (Norm references)

CE RoHS

- Oil resistant according NEK 606:2004 Oil and drilling fluid (mud) resistant according IEC 61892-4, Annex D
- Fire behaviour:
  - Halogen free according IEC 60754-1
  - Flame retardant according IEC 60332-1-2
  - No flame propagation according IEC 60332-3-22 Cat. A
- UV-resistant according ISO 4892-2
- Ozone resistant according EN 50396
- Salt water resistant according UL 1309

Design

- Fine strands of tinned copper wires
- Core insulation of LS0H polyolefin polymer
- Cores twisted in layers
- Inner sheath of halogen free compound
- Tinned copper braiding
- Outer sheath of robust special polymer

Technical data

Core identification code
Colour coded according to VDE 0293-308, see Appendix T9
Starting at 6 cores: Black with white numbers

Fire test
Flame retardant according IEC 60332-1-2
No flame propagation according IEC 60332-3-22 Cat. A

Conductor stranding
Fine wire according to VDE 0295, Class 5 / IEC 60228 Cl. 5 from 0.5 mm²

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installed: 6 x outer diameter

Rated voltage
U_0/U 600/1000 V

Test voltage
4000 V

Range of temperature
Occasional flexing: -40 °C up to +90 °C
Fixed installation: -50°C up to +90°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® PETRO C HFFR colour black - single core				
0023249	1 X 70	19.3	737.0	948
0023250	1 X 95	21.6	1,002.0	1,155
0023251	1 X 120	24.5	1,254.0	1,463
0023248	1 X 150	26.1	1,553.0	1,767
0023233	1 X 185	28.4	1,912.0	2,349
0023234	1 X 240	32.6	2,475.0	2,869
0023279	1 X 300	34.7	3,075.0	3,817
ÖLFLEX® PETRO C HFFR colour black - multicore				
0023275	3 G 0.5	10.1	36.0	140
0023274	2 X 1	10.5	41.0	149
0023252	2 X 1.5	11.5	57.0	183
0023253	3 G 1.5	12.0	72.0	212
0023254	4 G 1.5	12.8	90.0	249
0023255	5 G 1.5	14.0	115.0	307
0023256	7 G 1.5	15.9	151.0	401
0023239	12 G 1.5	18.8	238.0	573
0023257	18 G 1.5	22.3	350.0	846
0023240	25 G 1.5	26.6	490.0	1,183
0023278	3 G 2.5	13.5	105.0	276
0023242	4 G 2.5	14.6	147.0	347
0023244	5 G 2.5	15.7	171.0	401
0023245	7 G 2.5	18.3	233.0	547
0023258	12 G 2.5	22.3	378.0	840

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
0023260	4 G 4	16.2	212.0	457
0023266	5 G 4	17.6	250.0	540
0023261	4 G 6	17.7	288.0	558
0023268	5 G 6	19.9	367.0	710
0023280	4 G 10	22.3	474.0	882
0023272	5 G 10	24.3	582.0	1,069
0023281	4 G 16	24.9	716.0	1,208
0023269	5 G 16	27.6	881.0	1,483
0023267	4 G 25	30.2	1,096.0	1,785
0023270	5 G 25	33.4	1,371.0	2,206
0023262	4 G 35	33.6	1,515.0	2,314
0023282	5 G 35	37.1	1,875.0	2,847
0023246	4 G 50	39.3	2,140.0	3,264
0023271	5 G 50	43.4	2,620.0	4,002
ÖLFLEX® PETRO C HFFR colour blue - multicore				
0023276	3 G 0.5	10.1	36.0	140
0023273	2 X 1	10.5	41.0	147
0023263	2 X 1.5	11.5	57.0	183
0023283	3 G 1.5	12.0	72.0	212
0023237	4 G 1.5	12.8	90.0	249
0023284	5 G 1.5	14.0	115.0	307
0023238	7 G 1.5	15.9	151.0	401
0023264	12 G 1.5	18.8	238.0	573
0023265	25 G 1.5	26.6	490.0	1,183

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

ÖLFLEX® ROBUST 200

Info

- **Robust and weatherproofed**
- **High chemical resistance**

Benefits

- Saving effects due to a wide range of applications
- Thanks to the broad temperature range worldwide applicable
- Good combination of quality and price

Application range

- Machine tool manufacture, medical technology, laundries, car washing equipment, chemical industry, composting plants, sewage works
- Food and beverage industry, especially for production and processing equipment of milk and meat products
- In environments where exposed to oils, fats, waxes (vegetable or animal based or synthetic) or their emulsions
- For indoor and outdoor use

Product features

- Halogen free materials
- High dielectric strength and low mutual capacitance
- Good resistance to hot and cold water as well as to water-soluble cleaning agents (tensides, soaps,...)
- UV resistant and weather proof
- Flexible down to -40 °C

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- Core insulation: Modified PP
- Cores twisted in layers in short lay lengths
- Robust outer sheath made of special halogen-free TPE, black (RAL 9005)

Technical data

Core identification code
Up to 5 cores: according to VDE 0293-308 (appendix T9)
Starting at 6 cores: Black with white numbers

Based on
HD 22.10 (VDE 0282 Part 10)

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 10 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U: 450/750 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -40°C up to +80°C
Fixed installation: -50°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® ROBUST 200				
0021800	2 X 1	8.0	19.2	65
0021801	3 G 1	8.4	29.0	79
0021802	4 G 1	9.2	38.4	96
0021803	5 G 1	10.0	48.0	113
0021805	2 X 1.5	8.6	29.0	78
0021806	3 G 1.5	9.1	43.0	97
0021807	4 G 1.5	9.9	58.0	122
0021808	5 G 1.5	10.8	72.0	146
0021809	7 G 1.5	13.5	101.0	208
0021810	2 X 2.5	9.8	48.0	114
0021811	3 G 2.5	10.4	72.0	144
0021812	4 G 2.5	11.5	96.0	181
0021813	5 G 2.5	13.1	120.0	222
0021814	7 G 2.5	15.9	168.0	312
0021816	3 G 4	12.4	115.2	215
0021817	4 G 4	14.0	154.0	273
0021818	5 G 4	15.8	192.0	333
0021822	4 G 6	15.7	230.0	378
0021823	5 G 6	17.2	288.0	463
0021825	4 G 10	19.4	384.0	570
0021826	5 G 10	21.4	480.0	770
0021828	4 G 16	22.4	614.0	885
0021829	5 G 16	24.6	768.0	1,100
0021831	4 G 25	27.0	960.0	1,365
0021833	4 G 35	29.7	1,344.0	1,773
0021836	4 G 50	36.2	1,920.0	3,454

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Single lengths for sizes: ≥ 4G16 max. 600m; ≥ 4G25 max. 300m; ≥ 4G50 max. 250m

Comparable products

- ÖLFLEX® ROBUST 210 see page 61
- ÖLFLEX® ROBUST 215 C see page 62
- ÖLFLEX® FD ROBUST see page 121
- ÖLFLEX® FD ROBUST C see page 122

Accessories

- Stainless steel - Box Starter - Set see page 872
- SKINTOP® MS-M see page 650
- SKINTOP® ST-HF-M see page 644

ÖLFLEX® ROBUST 210

Info

- **Robust and weatherproofed**
- **High chemical resistance**

Benefits

- Saving effects due to a wide range of applications
- Thanks to the broad temperature range worldwide applicable
- Good combination of quality and price

Application range

- Machine tool manufacture, medical technology, laundries, car washing equipment, chemical industry, composting plants, sewage works
- Food and beverage industry, especially for production and processing equipment of milk and meat products
- In environments where exposed to oils, fats, waxes (vegetable or animal based or synthetic) or their emulsions
- For indoor and outdoor use

Product features

- Halogen free materials
- High dielectric strength and low mutual capacitance
- Good resistance to hot and cold water as well as to water-soluble cleaning agents (tensides, soaps,...)
- UV resistant and weather proof
- Flexible down to -40 °C

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- Core insulation: Modified PP
- Cores twisted in layers in short lay lengths
- Robust outer sheath made of special halogen-free TPE, black (RAL 9005)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Based on
VDE 0250/0281

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -40°C up to +80°C
Fixed installation: -50°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® ROBUST 210				
0021880	2 X 0.5	4.9	10.0	27
0021881	3 G 0.5	5.2	15.0	33
0021882	3 X 0.5	5.2	15.0	33
0021883	4 G 0.5	5.8	19.2	41
0021884	4 X 0.5	5.8	19.2	41
0021885	5 G 0.5	6.3	24.0	49
0021886	5 X 0.5	6.3	24.0	49
0021888	7 G 0.5	6.9	33.6	64
0021889	7 X 0.5	6.9	33.6	64
0021890	10 G 0.5	8.8	48.0	92
0021891	12 G 0.5	9.1	58.0	106
0021892	18 G 0.5	10.8	86.4	151
0021893	25 G 0.5	12.7	120.0	210
0021897	2 X 0.75	5.5	14.4	35
0021898	3 G 0.75	5.8	21.6	43
0021899	3 X 0.75	5.8	21.6	43
0021900	4 G 0.75	6.3	28.8	49
0021901	4 X 0.75	6.3	28.8	49
0021902	5 G 0.75	6.9	36.0	66
0021903	5 X 0.75	6.9	36.0	66
0021904	7 G 0.75	7.5	50.0	85
0021905	7 X 0.75	7.5	50.0	85
0021907	12 G 0.75	10.1	86.0	144
0021908	18 G 0.75	12.0	130.0	208
0021909	25 G 0.75	14.1	180.0	288
0021910	34 G 0.75	16.3	245.0	386
0021911	41 G 0.75	17.8	296.0	464
0021912	50 G 0.75	19.6	360.0	560
0021913	2 X 1	5.8	19.2	42
0021914	3 G 1	6.1	28.8	49
0021915	3 X 1	6.1	28.8	49
0021916	4 G 1	6.6	38.4	63
0021917	4 X 1	6.6	38.4	63
0021918	5 G 1	7.3	48.0	78
0021919	5 X 1	7.3	48.0	78
0021920	7 G 1	8.1	67.0	107
0021921	10 G 1	10.4	96.0	154

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
0021922	12 G 1	10.7	115.0	178
0021923	18 G 1	12.9	173.0	262
0021924	25 G 1	15.0	240.0	357
0021925	34 G 1	17.5	326.0	484
0021926	41 G 1	19.2	394.0	582
0021927	50 G 1	21.0	480.0	703
0021928	2 X 1.5	6.4	29.0	56
0021929	3 G 1.5	6.8	43.0	72
0021930	3 X 1.5	6.8	43.0	72
0021931	4 G 1.5	7.4	58.0	91
0021932	4 X 1.5	7.4	58.0	91
0021933	5 G 1.5	8.3	72.0	108
0021934	5 X 1.5	8.3	72.0	108
0021936	7 G 1.5	9.0	101.0	149
0021937	7 X 1.5	9.0	101.0	149
0021938	10 G 1.5	11.8	143.0	215
0021940	12 G 1.5	12.2	173.0	234
0021941	18 G 1.5	14.6	259.0	369
0021942	25 G 1.5	17.2	360.0	510
0021943	34 G 1.5	19.8	490.0	683
0021945	50 G 1.5	24.0	720.0	999
0021946	2 X 2.5	7.6	48.0	86
0021947	3 G 2.5	8.3	72.0	115
0021949	4 G 2.5	9.0	96.0	131
0021951	5 G 2.5	10.1	120.0	178
0021953	7 G 2.5	11.2	168.0	241
0021954	12 G 2.5	15.1	288.0	405
0021963	3 G 4	10.1	115.0	180
0021964	4 G 4	11.1	157.0	228
0021965	5 G 4	12.4	192.0	280
0021966	7 G 4	13.6	269.0	377
0021967	4 G 6	13.3	230.0	332
0021968	5 G 6	14.8	288.0	407
0021969	4 G 10	16.5	384.0	541
0021970	5 G 10	18.4	480.0	620
0021971	4 G 16	18.8	614.4	806
0021972	4 G 25	23.5	960.0	1,218
0021973	4 G 35	26.4	1,344.0	1,658

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Single lengths for sizes: ≥ 4G16 max. 600m; ≥ 4G25 max. 300m; ≥ 4G50 max. 250m

Comparable products

- ÖLFLEX® ROBUST 200 see page 60
- ÖLFLEX® ROBUST 215 C see page 62
- ÖLFLEX® FD ROBUST see page 121
- ÖLFLEX® FD ROBUST C see page 122

Accessories

- Stainless steel - Box Starter - Set see page 872
- SKINTOP® MS-M see page 650
- SKINTOP® ST-HF-M see page 644

ÖLFLEX® ROBUST 215 C

Info

- **Robust and weatherproofed**
- **High chemical resistance**
- **EMC compliant**

Benefits

- Saving effects due to a wide range of applications
- Thanks to the broad temperature range worldwide applicable
- Good combination of quality and price

Application range

- Machine tool manufacture, medical technology, laundries, car washing equipment, chemical industry, composting plants, sewage works
- Food and beverage industry, especially for production and processing equipment of milk and meat products
- In environments where exposed to oils, fats, waxes (vegetable or animal based or synthetic) or their emulsions
- For indoor and outdoor use
- In EMI critical environment (electromagnetic interference)

Product features

- Halogen free materials
- High dielectric strength and low mutual capacitance
- Good resistance to hot and cold water as well as to water-soluble cleaning agents (tensides, soaps,...)
- UV resistant and weather proof
- Flexible down to -40 °C

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- Core insulation: Modified PP
- Cores twisted in layers in short lay lengths
- Halogen-free plastic foil wrapping
- Tinned copper braid
- Robust outer sheath made of special halogen-free TPE, black (RAL 9005)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Based on
VDE 0250/0281

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installed: 6 x outer diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
Core/core: 4000 V
Core/screen: 2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -40°C up to +80°C
Fixed installation: -50°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® ROBUST 215 C				
0022700	2 X 0.5	5.9	36.0	42
0022701	3 G 0.5	6.2	43.0	52
0022702	3 X 0.5	6.2	43.0	52
0022703	4 G 0.5	6.6	49.0	59
0022704	4 X 0.5	6.6	49.0	59
0022705	5 G 0.5	7.1	57.0	68
0022706	5 X 0.5	7.1	57.0	68
0022708	7 G 0.5	7.7	69.0	85
0022709	7 X 0.5	7.7	69.0	85
0022711	12 G 0.5	10.1	104.0	136
0022712	18 G 0.5	11.8	141.0	189
0022713	25 G 0.5	13.7	211.0	265
0022717	2 X 0.75	6.3	43.0	50
0022718	3 G 0.75	6.6	52.0	60
0022719	3 X 0.75	6.6	52.0	60
0022720	4 G 0.75	7.1	61.0	72
0022721	4 X 0.75	7.1	61.0	72
0022722	5 G 0.75	7.9	72.0	88
0022723	5 X 0.75	7.9	72.0	88
0022724	7 G 0.75	8.5	89.0	110
0022725	7 X 0.75	8.5	89.0	110
0022727	12 G 0.75	11.1	138.0	177
0022728	18 G 0.75	13.0	211.0	247
0022729	25 G 0.75	15.1	280.0	347
0022730	34 G 0.75	17.5	380.0	460
0022733	2 X 1	6.6	51.0	60
0022734	3 G 1	6.9	62.0	70
0022735	3 X 1	6.9	62.0	70
0022736	4 G 1	7.4	74.0	85

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
0022737	4 X 1	7.4	74.0	85
0022738	5 G 1	8.3	88.0	103
0022739	5 X 1	8.3	88.0	103
0022740	7 G 1	8.9	112.0	131
0022742	12 G 1	11.7	185.0	213
0022743	18 G 1	14.1	268.0	321
0022744	25 G 1	16.2	354.0	425
0022748	2 X 1.5	7.2	65.0	71
0022749	3 G 1.5	7.6	82.0	90
0022750	3 X 1.5	7.6	82.0	90
0022751	4 G 1.5	8.4	100.0	114
0022752	4 X 1.5	8.4	100.0	114
0022753	5 G 1.5	9.1	119.0	136
0022754	5 X 1.5	9.1	119.0	136
0022756	7 G 1.5	10.0	154.0	177
0022757	7 X 1.5	10.0	154.0	177
0022760	12 G 1.5	13.4	268.0	290
0022761	18 G 1.5	15.8	373.0	435
0022762	25 G 1.5	18.2	530.0	579
0022763	34 G 1.5	21.2	683.0	797
0022767	3 G 2.5	9.1	118.0	134
0022768	4 G 2.5	10.0	147.0	169
0022769	5 G 2.5	11.1	176.0	207
0022770	7 G 2.5	12.0	253.0	270
0022774	4 G 4	11.9	190.0	258
0022776	4 G 6	14.5	290.0	392
0022777	4 G 10	17.5	458.0	602
0022778	4 G 16	20.2	736.6	928
0022771	4 G 25	25.1	1,126.7	1,411
0022780	4 G 35	28.0	1,540.0	1,883

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Single lengths for sizes: ≥ 4G16 max. 600m; ≥ 4G25 max. 300m; ≥ 4G50 max. 250m

Comparable products

- ÖLFLEX® FD ROBUST C see page 122
- ÖLFLEX® CLASSIC 135 CH BK 0,6/1kV see page 58

Accessories

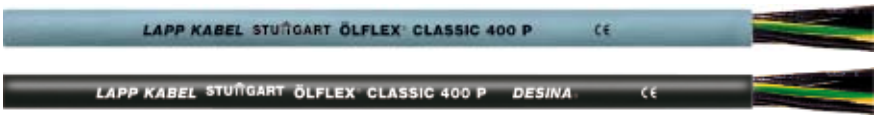
- 3M Scotch 1183 screening tape see page 950
- SKINTOP® MS-SC-M see page 657
- SKINTOP® MS-M BRUSH see page 658

ÖLFLEX® CLASSIC 400 P

PVC insulated, numbered, PUR sheath

Info

- **High mechanical strength**
- **Slim and light, without inner sheath**



Benefits

- Longer durability in harsh applications
- Space saving installation due to small cable diameters
- Wear-resistant

Application range

- Production plants
- Measurement, control and electrical applications
- Outdoor use only in accordance with the indicated temperature range
- Especially in wet area of machine tools and transfer lines under normal mechanical stress.

Product features

- Increased oil resistance
- Abrasion and cut resistant
- Low adhesive surface

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- Core insulation: Special-PVC
- Special polyurethane sheath (PUR)
- Silver grey (RAL 7001)
- DESINA® conformant, black (RAL 9005)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Based on
Based on VDE 0281 und 0282

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 12.5 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CLASSIC 400 P, U0/U: 300/500 V, grey				
1312802	2 X 0.5	4.8	10.0	32
1312003	3 G 0.5	5.1	15.0	43
1312803	3 X 0.5	5.1	15.0	43
1312004	4 G 0.5	5.7	19.2	50
1312804	4 X 0.5	5.7	19.2	50
1312005	5 G 0.5	6.2	24.0	59
1312805	5 X 0.5	6.2	24.0	59
1312007	7 G 0.5	6.7	34.0	73
1312807	7 X 0.5	6.7	34.0	73
1312010	10 G 0.5	8.6	48.0	109
1312012	12 G 0.5	8.9	57.6	125
1312018	18 G 0.5	10.5	87.0	180
1312025	25 G 0.5	12.4	120.0	250
1312034	34 G 0.5	14.3	164.0	333
1312041	41 G 0.5	15.7	197.0	400
1312852	2 X 0.75	5.4	14.4	41
1312103	3 G 0.75	5.7	21.6	51
1312853	3 X 0.75	5.7	21.6	51
1312104	4 G 0.75	6.2	28.8	62
1312854	4 X 0.75	6.2	28.8	62
1312105	5 G 0.75	6.7	36.0	74
1312855	5 X 0.75	6.7	36.0	74
1312107	7 G 0.75	7.3	50.0	97
1312857	7 X 0.75	7.3	50.0	97
1312110	10 G 0.75	9.6	72.0	142
1312112	12 G 0.75	9.9	86.4	163
1312118	18 G 0.75	11.7	129.6	234
1312125	25 G 0.75	13.8	180.0	324
1312134	34 G 0.75	15.9	244.8	431
1312141	41 G 0.75	17.4	295.2	529
1312902	2 X 1	5.7	19.2	48
1312203	3 G 1	6.0	28.8	61
1312903	3 X 1	6.0	28.8	61
1312204	4 G 1	6.5	38.4	74
1312904	4 X 1	6.5	38.4	74
1312205	5 G 1	7.1	48.0	89
1312905	5 X 1	7.1	48.0	89
1312207	7 G 1	8.0	67.0	116
1312210	10 G 1	10.2	96.0	171
1312212	12 G 1	10.5	115.0	197

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
1312218	18 G 1	12.7	173.0	289
1312225	25 G 1	14.7	240.0	412
1312234	34 G 1	17.1	326.4	532
1312241	41 G 1	18.8	393.6	638
1312952	2 X 1.5	6.3	29.0	63
1312303	3 G 1.5	6.7	43.0	79
1312953	3 X 1.5	6.7	43.0	79
1312304	4 G 1.5	7.2	58.0	98
1312954	4 X 1.5	7.2	58.0	98
1312305	5 G 1.5	8.1	72.0	121
1312955	5 X 1.5	8.1	72.0	121
1312307	7 G 1.5	8.9	101.0	159
1312957	7 X 1.5	8.9	101.0	159
1312312	12 G 1.5	12.0	173.0	268
1312318	18 G 1.5	13.4	259.5	392
1312325	25 G 1.5	16.9	360.0	531
1312334	34 G 1.5	19.4	489.6	722
1312341	41 G 1.5	21.3	590.4	867
1312403	3 G 2.5	8.1	72.0	132
1312404	4 G 2.5	8.9	96.0	163
1312405	5 G 2.5	10.0	120.0	186
1312407	7 G 2.5	11.1	168.0	267
1312412	12 G 2.5	14.8	288.0	445
1312504	4 G 4	10.8	154.0	237
1312505	5 G 4	12.1	192.0	291
1312507	7 G 4	13.4	269.0	391
1312604	4 G 6	13.0	230.4	327
1312605	5 G 6	14.5	288.0	424
1312607	7 G 6	16.0	403.0	580
1312614	4 G 10	16.2	384.0	567
1312615	5 G 10	18.1	480.0	695
1312617	7 G 10	20.0	672.0	937
1312624	4 G 16	18.8	614.4	1,064
ÖLFLEX® CLASSIC 400 P DESINA: U0/U: 300/500 V, black				
1312970	4 G 1.5	7.2	58.0	98
1312981	7 G 1.5	8.8	101.0	159
1312983	11 G 1.5	11.6	158.0	228
1312973	4 G 2.5	8.9	96.0	163
1312975	4 G 6	13.0	230.4	350
1312976	4 G 10	16.2	384.0	567
1312978	4 G 25	23.5	940.0	1,582

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
DESINA® is a registered trademark of the Association of German Machine Tool Manufacturers

Comparable products

- ÖLFLEX® 440 P see page 66
- ÖLFLEX® 491 P see page 68

Accessories

- SKINTOP® cable glands polyamide metric see page 641

ÖLFLEX® CLASSIC 400 CP

Screened, PVC- insulated, numbered, PVC- inner and PUR- outer sheath cable

Info
- EMC compliant
- High mechanical strength

Benefits
- Longer durability in harsh applications
- Space saving installation due to small cable diameters
- Wear-resistant

Application range
- Machine tools
- Production plants
- Measurement, control and electrical applications
- Especially in wet area of machine tools and transfer lines under normal mechanical stress.
- Outdoor use only in accordance with the indicated temperature range

Product features
- Increased oil resistance
- Abrasion and cut resistant
- EMC protection
- Low adhesive surface

Approvals (Norm references)
CE RoHS

Design
- Fine strands of bare copper wires
- Core insulation: Special-PVC
- PVC inner sheath, grey
- Tinned copper braid
- Special polyurethane sheath (PUR)
- Silver grey (RAL 7001)

Technical data
Core identification code
Black with white numbers acc. to VDE 0293

Based on
Based on VDE 0281 und 0282

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installed: 6 x outer diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CLASSIC 400 CP, U0/U: 300/500 V				
1313852	2 X 0.75	7.4	45.0	85
1313103	3 G 0.75	7.9	52.0	99
1313853	3 X 0.75	7.9	52.0	99
1313104	4 G 0.75	8.4	77.0	114
1313854	4 X 0.75	8.4	77.0	114
1313105	5 G 0.75	8.9	84.0	130
1313855	5 X 0.75	8.9	84.0	130
1313107	7 G 0.75	9.7	92.0	161
1313857	7 X 0.75	9.7	92.0	161
1313112	12 G 0.75	12.3	138.0	245
1313118	18 G 0.75	14.5	219.0	354
1313125	25 G 0.75	16.6	277.0	463
1313134	34 G 0.75	18.9	420.0	598
1313141	41 G 0.75	20.6	500.0	725
1313902	2 X 1	7.9	50.0	97
1313203	3 G 1	8.2	77.0	111
1313903	3 X 1	8.2	77.0	111
1313204	4 G 1	8.7	87.0	129
1313904	4 X 1	8.7	87.0	129
1313205	5 G 1	9.5	90.0	152
1313207	7 G 1	10.2	110.0	184
1313212	12 G 1	13.3	194.0	306
1313218	18 G 1	15.5	267.0	417
1313225	25 G 1	17.5	379.0	541
1313234	34 G 1	20.3	516.0	735

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
1313241	41 G 1	22.0	610.0	860
1313952	2 X 1.5	8.5	77.0	116
1313303	3 G 1.5	8.9	85.0	135
1313953	3 X 1.5	8.9	85.0	135
1313304	4 G 1.5	9.6	100.0	162
1313954	4 X 1.5	9.6	100.0	162
1313305	5 G 1.5	10.3	120.0	187
1313955	5 X 1.5	10.3	120.0	187
1313307	7 G 1.5	11.3	152.0	236
1313957	7 X 1.5	11.3	152.0	236
1313312	12 G 1.5	14.8	267.0	392
1313318	18 G 1.5	17.2	400.0	536
1313325	25 G 1.5	20.1	572.0	742
1313334	34 G 1.5	21.9	754.0	960
1313341	41 G 1.5	24.7	874.0	1,118
1313403	3 G 2.5	10.3	121.0	191
1313404	4 G 2.5	11.3	163.0	232
1313405	5 G 2.5	12.6	199.0	282
1313407	7 G 2.5	13.9	261.0	370
1313412	12 G 2.5	17.2	470.0	580
1313504	4 G 4	13.4	238.0	345
1313505	5 G 4	14.7	279.0	412
1313604	4 G 6	15.8	318.0	483
1313605	5 G 6	17.3	370.0	576
1313614	4 G 10	19.0	558.0	733
1313624	4 G 16	22.2	804.0	1,340

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
DESINA® is a registered trademark of the Association of German Machine Tool Manufacturers

Comparable products
- ÖLFLEX® CLASSIC 415 CP see page 65
- ÖLFLEX® 440 CP see page 67
- ÖLFLEX® CLASSIC 415 CP
- ÖLFLEX® 440 CP

Accessories
- SKINTOP® MS-SC-M see page 657
- Conductor end sleeves see page 911

ÖLFLEX® CLASSIC 415 CP

Screened, PVC- insulated, numbered, PUR -sheath

Info

- **EMC compliant**
- **Slim and light, without inner sheath**

Benefits

- Space saving installation due to small cable diameters
- Protected against water and dirt
- Wear-resistant

Application range

- Machine tools
- Production plants
- Measurement, control and electrical applications
- Especially in wet area of machine tools and transfer lines under normal mechanical stress.
- Outdoor use only in accordance with the indicated temperature range

Product features

- Increased oil resistance
- Abrasion and cut resistant
- EMC protection
- Low adhesive surface

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- Core insulation: Special-PVC
- Plastic foil wrapping
- Tinned copper braid
- Special polyurethane sheath (PUR)
- Silver grey (RAL 7001)

Technical data

Core identification code
Black cores with printed white numbers (VDE 0293)

Based on
Core in accordance with VDE 0812/0281
Sheath according to VDE 0250/0282

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installed: 6 x outer diameter

Rated voltage
Rated voltage U_0/U
IEC: 300/500 V

Test voltage
C/C: 4000 V
C/S: 2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CLASSIC 415 CP, U0/U: 300/500 V				
1314000	2 X 0.5	5.8	36.0	45
1314001	3 G 0.5	6.1	43.0	59
1314002	3 X 0.5	6.1	43.0	59
1314003	4 G 0.5	6.5	49.0	83
1314004	4 X 0.5	6.5	49.0	83
1314005	5 G 0.5	7.0	57.0	96
1314006	5 X 0.5	7.0	57.0	96
1314007	7 G 0.5	7.5	69.0	136
1314008	7 X 0.5	7.5	69.0	136
1314010	12 G 0.5	9.9	104.0	200
1314011	12 X 0.5	9.9	104.0	200
1314012	18 G 0.5	11.5	141.0	275
1314013	18 X 0.5	11.5	141.0	275
1314014	25 G 0.5	13.4	211.0	350
1314015	25 X 0.5	13.4	211.0	350
1314017	2 X 0.75	6.2	43.0	56
1314018	3 G 0.75	6.5	52.0	70
1314019	3 X 0.75	6.5	52.0	70
1314020	4 G 0.75	7.0	61.0	95
1314021	4 X 0.75	7.0	61.0	95
1314022	5 G 0.75	7.7	72.0	130
1314023	5 X 0.75	7.7	72.0	130
1314024	7 G 0.75	8.3	89.0	168
1314025	7 X 0.75	8.3	89.0	168
1314026	12 G 0.75	10.9	138.0	232
1314027	18 G 0.75	12.7	211.0	315
1314028	25 G 0.75	14.8	280.0	435
1314029	25 X 0.75	14.8	280.0	435
1314032	2 X 1	6.5	51.0	84
1314033	3 G 1	6.8	62.0	110
1314034	3 X 1	6.8	62.0	110
1314035	4 G 1	7.3	74.0	130
1314036	4 X 1	7.3	74.0	130
1314037	5 G 1	8.1	88.0	156

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
1314038	5 X 1	8.1	88.0	156
1314039	7 G 1	8.8	112.0	192
1314040	7 X 1	8.8	112.0	192
1314041	12 G 1	11.5	185.0	285
1314042	18 G 1	13.9	268.0	395
1314043	25 G 1	15.9	354.0	656
1314046	2 X 1.5	7.1	65.0	97
1314047	3 G 1.5	7.5	82.0	125
1314048	3 X 1.5	7.5	82.0	125
1314049	4 G 1.5	8.2	100.0	165
1314050	4 X 1.5	8.2	100.0	165
1314051	5 G 1.5	8.9	119.0	193
1314052	5 X 1.5	8.9	119.0	193
1314053	7 G 1.5	9.9	154.0	245
1314054	7 X 1.5	9.9	154.0	245
1314055	12 G 1.5	13.0	268.0	365
1314056	18 G 1.5	15.6	373.0	553
1314057	25 G 1.5	17.9	530.0	734
1314058	34 G 1.5	20.8	683.0	944
1314061	3 G 2.5	8.9	118.0	188
1314062	4 G 2.5	9.9	147.0	236
1314063	5 G 2.5	11.0	176.0	270
1314064	7 G 2.5	11.9	253.0	340
1314065	12 G 2.5	16.0	355.0	589
1314066	18 G 2.5	19.0	569.0	978
1314067	25 G 2.5	22.2	827.0	1,358
1314068	4 G 4	11.6	248.0	305
1314070	7 G 4	14.4	355.0	500
1314071	4 G 6	14.2	343.0	440
1314073	7 G 6	17.0	505.0	672
1314074	4 G 10	17.2	535.0	710
1314075	4 G 16	20.2	800.0	1,050
1314076	4 G 25	25.1	1,075.0	1,570
1314077	4 G 35	28.0	1,576.0	2,070

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® ROBUST 215 C see page 62
- ÖLFLEX® CLASSIC 400 CP see page 64

Accessories

- SKINTOP® MS-SC-M see page 657
- Conductor end sleeves see page 911

ÖLFLEX® 440 P

TPE -insulated, numbered, PUR sheath, approved

Info

- **All-weather control cable**
- **High mechanical strength**
- **MUD res. acc. IEC61892-4 Annex D**

Benefits

- Protected against water and dirt
- Low corrosive smoke emission
- Cold flexible
- Wear-resistant

Application range

- Construction machinery
- Machine tools
- Especially in wet area of machine tools and transfer lines under normal mechanical stress.
- Production plants
- For indoor- and outdoor use

Product features

- Oil resistant and adhesion-free
- Abrasion and cut resistant
- Hydrolysis resistant
- Halogen-free
- Flame retardant (IEC 60332-1-2)

Approvals (Norm references)

CE, DVE, RoHS

Design

- Fine strands of tinned copper wires
- Core insulation: TPE
- Special polyurethane sheath (PUR)
- Silver grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 12,5 x cable diameter
Static:
4 x cable diameter

Rated voltage
U_0/U:
300/500 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -40 °C up to +90 °C
Fixed installation: -50°C up to +90°C

VDE Reg. No. 6582
4 - 6mm²: based on VDE 0281/0282

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® 440 P				
0012800	2 X 0.5	5.9	10.0	39
0012801	3 G 0.5	6.2	14.0	46
0012802	4 G 0.5	6.9	19.0	53
0012803	5 G 0.5	7.4	24.0	65
0012804	7 G 0.5	9.1	34.0	92
0012805	12 G 0.5	11.3	58.0	149
0012806	18 G 0.5	13.2	86.0	207
0012807	25 G 0.5	15.0	120.0	274
0012813	2 X 0.75	6.4	14.0	48
0012814	3 G 0.75	6.8	22.0	53
0012815	4 G 0.75	7.4	29.0	67
0012816	5 G 0.75	8.6	36.0	81
0012817	7 G 0.75	10.0	50.0	119
0012818	12 G 0.75	12.4	86.0	193
0012819	18 G 0.75	14.4	130.0	269
0012820	25 G 0.75	17.2	180.0	378
0012825	2 X 1	6.8	19.0	57
0012826	3 G 1	7.2	29.0	61
0012827	4 G 1	8.2	38.0	82
0012828	5 G 1	9.0	48.0	107

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
0012829	7 G 1	11.1	67.0	138
0012830	12 G 1	13.2	115.0	215
0012831	18 G 1	15.4	173.0	328
0012832	25 G 1	19.0	240.0	479
0012833	34 G 1	21.8	326.0	616
0012834	41 G 1	23.4	394.0	727
0012837	2 X 1.5	7.4	29.0	73
0012838	3 G 1.5	8.3	43.0	96
0012839	4 G 1.5	9.0	58.0	105
0012840	5 G 1.5	9.8	72.0	133
0012841	7 G 1.5	12.2	101.0	175
0012842	12 G 1.5	14.5	173.0	309
0012843	18 G 1.5	17.6	259.0	458
0012844	25 G 1.5	20.7	360.0	635
0012846	41 G 1.5	26.3	590.0	1,003
0012850	3 G 2.5	9.7	72.0	142
0012851	4 G 2.5	11.0	96.0	184
0012852	5 G 2.5	12.1	120.0	220
0012853	7 G 2.5	14.2	168.0	294
0012854	12 G 2.5	17.8	288.0	489

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® ROBUST 210 see page 61
- ÖLFLEX® CLASSIC 400 P see page 63
- ÖLFLEX® 491 P see page 68

Accessories

- SKINTOP® ST-M see page 641
- Conductor end sleeves see page 911

ÖLFLEX® 440 CP

TPE -insulated, numbered, shielded, PUR sheath, approved

Info

- **All-weather control cable**
- **High mechanical strength**
- **MUD res. acc. IEC61892-4 Annex D**

Benefits

- Protected against water and dirt
- Low corrosive smoke emission
- Cold flexible
- Wear-resistant
- EMC compliant

Application range

- Construction machinery
- Machine tools
- Especially in wet area of machine tools and transfer lines under normal mechanical stress.
- Production plants
- For indoor- and outdoor use

Product features

- Oil resistant and adhesion-free
- Abrasion and cut resistant
- Hydrolysis resistant
- Halogen-free
- Flame retardant (IEC 60332-1-2)

Approvals (Norm references)

CE, DVE, RoHS

Design

- Fine strands of tinned copper wires
- Core insulation: TPE
- Inner sheath: TPE
- Tinned copper braid
- Special polyurethane sheath (PUR)
- Silver grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation :
6 x cable diameter

Rated voltage
300/500 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -40 °C up to +90 °C
Fixed installation: -50°C up to +90°C

VDE Reg. No. 6582
4 - 6mm²: based on VDE 0281/0282

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® 440 CP				
0012901	3 G 0.5	8.3	44.0	100
0012902	4 G 0.5	8.8	52.0	120
0012903	5 G 0.5	9.7	61.0	139
0012904	7 G 0.5	11.2	75.0	175
0012906	12 G 0.5	13.7	131.0	276
0012907	18 G 0.5	15.7	168.0	376
0012908	25 G 0.5	18.5	212.0	485
0012911	2 X 0.75	8.4	45.0	104
0012912	3 G 0.75	8.7	52.0	119
0012913	4 G 0.75	9.5	67.0	126
0012914	5 G 0.75	10.2	75.0	165
0012915	7 G 0.75	11.9	96.0	210
0012917	12 G 0.75	14.5	160.0	331
0012919	25 G 0.75	20.3	283.0	596
0012925	2 X 1	8.7	49.0	117
0012926	3 G 1	9.3	60.0	132
0012927	4 G 1	9.9	78.0	163
0012928	5 G 1	10.8	88.0	187
0012929	7 G 1	12.8	115.0	255
0012931	12 G 1	15.4	201.0	419
0012932	18 G 1	17.7	267.0	546
0012933	25 G 1	21.5	351.0	738
0012934	34 G 1	23.8	498.0	972
0012940	2 X 1.5	9.5	68.0	122
0012941	3 G 1.5	9.9	83.0	140
0012942	4 G 1.5	10.8	102.0	170
0012943	5 G 1.5	11.6	119.0	200
0012944	7 G 1.5	14.2	186.0	290
0012945	12 G 1.5	16.8	264.0	423
0012946	18 G 1.5	20.0	379.0	616
0012947	25 G 1.5	23.5	534.0	804
0012949	41 G 1.5	28.9	803.0	1,360
0012950	3 G 2.5	11.4	121.0	194
0012951	4 G 2.5	12.6	145.0	307
0012952	5 G 2.5	14.0	205.0	413
0012953	7 G 2.5	16.4	259.0	533
0012954	12 G 2.5	21.0	407.0	795

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® CLASSIC 400 CP see page 64
- ÖLFLEX® FD 855 CP see page 120

Accessories

- SKINTOP® MS-SC-M see page 657
- Conductor end sleeves see page 911

ÖLFLEX® 491 P

PVC insulated, numbered, PUR sheath, approved

Info

- For export orientated users
- High mechanical strength

Benefits

- Protected against water and dirt
- Wear-resistant

Application range

- Devices
- Appliances
- Especially in wet area of machine tools and transfer lines under normal mechanical stress.
- Outdoor use only in accordance with the indicated temperature range

Product features

- Increased oil resistance
- Abrasion and cut resistant
- Low adhesive surface
- Flame retardant in accordance with UL/CSA FT1 and IEC 60332.1-2

Approvals (Norm references)

CE c UL us RoHS

- USA: Acc. NFPA79 Ed 08 in industrial machinery as part of a listed assembly only.
- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Fine strands of bare copper wires
- Core insulation: Special-PVC
- Special polyurethane sheath (PUR)
- DESINA® conformant, black (RAL 9005)
- Silver grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Approvals
In accordance with UL-AWM Style 20234
cUL AWM II A/B FT1

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
For flexible applications: 15 x D
For fixed installation: 4 X D

Rated voltage
In accordance with HAR U0: 300/500 V
UL + CSA U: 600 V

Test voltage
Test voltage: 4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
For flexible applications: -5°C up to 80°C
For fixed installation: -40°C to 80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® 491 P BK (black)				
0013009	3 G 1	7.7	27.0	73
0013017	3 G 1.5	8.3	44.0	100
0013018	4 G 1.5	9.0	58.0	123
0013019	5 G 1.5	9.8	72.0	150
0013020	7 G 1.5	10.7	101.0	197
0013021	12 G 1.5	13.8	173.4	344
0013023	25 G 1.5	20.0	360.0	682
0013024	3 G 2.5	9.2	72.0	152
0013025	4 G 2.5	9.9	96.0	200
ÖLFLEX® 491 P GY (grey)				
0013208	2 X 1	7.3	19.2	62
0013210	4 G 1	8.2	35.0	89
0013212	7 G 1	9.7	61.0	138
0013213	12 G 1	12.5	105.0	232
0013214	18 G 1	14.8	157.0	340
0013215	25 G 1	17.8	218.0	454
0013223	3 G 1.5	8.3	44.0	100
0013220	4 G 1.5	9.0	57.6	123
0013222	7 G 1.5	10.7	101.0	197
0013225	12 G 1.5	13.8	173.0	344
0013226	18 G 1.5	16.6	260.0	488
0013227	25 G 1.5	20.0	360.0	682

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
DESINA® is a registered trademark of the Association of German Machine Tool Manufacturers

Comparable products

- ÖLFLEX® CLASSIC 400 P see page 63
- ÖLFLEX® FD 891 P see page 129

Accessories

- SKINTOP® ST-M see page 641
- Cable Marking Products see page 852

ÖLFLEX® CONTROL M

Info

- **According to NFPA 79 Edition 2007 "Electrical Standard for Industrial Machinery" USA**
- **Increased oil resistance**

Benefits

- Broad application range due to multiple approvals
- Cost saving, easy installation due to re-nouncement of closed raceways (suitable for open wiring)

Application range

- Industrial machinery; plant engineering
- Machine tools UL MTW (Machine Tool Wiring) conforming
- Direct usage inside metal processing cabins of machine tools due to increased oil- and wet rating
- TC-ER (Tray Cable Exposed Run) approval for open wiring between cable tray and industrial machines/plants acc. to NEC 336.10(7)
- Wind Turbines: USA Wind Turbine Tray Cable (WTTC)

Product features

- Flame retardant according to CSA FT4 UL Vertical-Tray Flame Test
- Increased oil resistant according to UL OIL RES I and UL OIL RES II
- Water resistant UL Wet Approval 75 °C

Approvals (Norm references)

- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Fine strands of bare copper wires
- Insulation: PVC with nylon jacket (PA skin)
- Special blended PVC outer sheath, grey (RAL 7001)

Technical data

Core identification code
Black cores with white numbers
Alternatively available:
B=blue cores, R= red cores, Y= yellow cores with printed numbers

Approvals
UL MTW, TC-ER, WTTC 1000V, BUS DROP
c(UL) Type TC and CIC FT4
CSA AWM I/II A/B FT4
NOM (Normas Oficiales Mexicanas)

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
5 x cable diameter

Rated voltage
UL/CSA: 600 V (TC, MTW, CIC), WTTC 1000V
UL/CSA: 1000 V (AWM)
HAR U_0/U: 300/500 V

Test voltage
2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -10°C to + 90°C (AWM +105 °C)
Fixed installation: -40°C up to +90 °C (AWM +105°C)

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CONTROL M				
431803	3 G 1	7.6	28.8	85
431804	4 G 1	8.1	38.4	98
431805	5 G 1	8.8	48.0	115
431807	7 G 1	9.5	67.0	149
431812	12 G 1	12.1	115.0	255
431818	18 G 1	14.9	173.0	365
431825	25 G 1	16.9	240.0	479
431603	3 G 1.5	8.3	43.0	103
431604	4 G 1.5	8.9	58.0	124
431605	5 G 1.5	9.7	72.0	146
431607	7 G 1.5	10.5	101.0	189
431609	9 G 1.5	12.1	130.0	255
431612	12 G 1.5	14.3	173.0	328
431618	18 G 1.5	16.6	259.0	431
431625	25 G 1.5	18.8	360.0	592
431403	3 G 2.5	8.8	72.0	130
431404	4 G 2.5	9.6	96.0	159
431405	5 G 2.5	10.8	120.0	191
431407	7 G 2.5	11.8	168.0	252
431204	4 G 4	11.7	153.0	226
431205	5 G 4	12.8	192.0	279
431207	7 G 4	14.8	269.0	384
431004	4 G 6	15.0	231.0	394
431005	5 G 6	16.3	288.0	472
430804	4 G 10	18.4	384.0	615
430604	4 G 16	22.8	615.0	864

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum

Comparable products

- ÖLFLEX® CONTROL TM see page 45
- ÖLFLEX® TRAY II see page 47

Accessories

- SKINTOP® MS-M see page 650
- SKINTOP® ST-M see page 641

New

ÖLFLEX® FORTIS

Robust, cold flexible and increased oil resistant cable - multiple UL listed

Info

- **Increased oil resistance, flexible down to -40°C**
- **According to NFPA 79 Edition 2007 "Electrical Standard for Industrial Machinery" USA**
- **Flexible application in Wind Turbines**

Benefits

- Broad application range due to multiple approvals
- Cost saving, easy installation due to renouncement of closed raceways (suitable for open wiring)
- For worldwide use
- The high flexibility and the good dismantle and stripping properties enable easy space-saving cable installation and fast processing

Application range

- Industrial machinery; plant engineering
- Machine tools UL MTW (Machine Tool Wiring) conforming
- Direct usage inside metal processing cabins of machine tools due to increased oil- and wet rating
- TC-ER (Tray Cable Exposed Run) approval for open wiring between cable tray and industrial machines/plants acc. to NEC 336.10(7)
- Meets WTTC (UL2277) requirements

Product features

- Flame retardant according to CSA FT4 UL Vertical-Tray Flame Test
- Increased oil resistant according to UL OIL RES I and UL OIL RES II
- Water resistant UL Wet Approval 75 °C
- Cold flexible
- Torsion-resistant up to 150° / mtr.

Approvals (Norm references)

- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Fine strands of bare copper wires
- Insulation: PVC with nylon jacket (PA skin)
- Outer sheath of abrasion resistant TPE, black

Technical data

Core identification code
black with white numbers + GN/YE ground

Approvals
UL listed according:
Type TC-ER (Exposed Run)
Type MTW or UL AWM, NPFA 79 2007
CSA listed according:
c(UL) Type TC and CIC FT-4 -40° C
CSA AWM I/II A/B FT-4 -40° C

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
5 x cable diameter

Rated voltage
UL/CSA: 600 V (TC, MTW, CIC), WTTC 1000V
HAR U_0/U: 300/500 V

Test voltage
2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -40°C to + 90°C (AWM +105°C)
Fixed installation: -55°C up to +90 °C (AWM +105°C)

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® FORTIS				
331803	3 G 1	7.5	28.8	85
331804	4 G 1	8.1	38.4	98
331805	5 G 1	8.8	48.0	115
331807	7 G 1	9.5	67.0	149
331809	9 G 1	10.9	87.0	167
331812	12 G 1	12.1	115.0	255
331818	18 G 1	14.9	173.0	365
331825	25 G 1	17.2	240.0	479
331603	3 G 1.5	8.3	43.0	103
331604	4 G 1.5	8.9	58.0	124
331605	5 G 1.5	9.7	72.0	146
331607	7 G 1.5	10.5	101.0	189
331609	9 G 1.5	12.1	130.0	255
331612	12 G 1.5	14.4	173.0	328
331616	16 G 1.5	15.8	230.4	403
331618	18 G 1.5	16.6	259.0	431
331625	25 G 1.5	18.8	360.0	592
331403	3 G 2.5	9.2	72.0	130
331404	4 G 2.5	10.0	96.0	159
331405	5 G 2.5	10.8	120.0	191
331407	7 G 2.5	11.8	168.0	252
331409	9 G 2.5	14.5	216.0	335
331412	12 G 2.5	16.2	288.0	459
331418	18 G 2.5	18.7	432.0	654
331425	25 G 2.5	22.5	600.0	874
331204	4 G 4	11.7	153.0	226
331205	5 G 4	12.8	192.0	279
331207	7 G 4	14.8	269.0	384
331004	4 G 6	14.7	231.0	394
331005	5 G 6	16.0	288.0	472
331007	7 G 6	17.4	405.0	661
330804	4 G 10	17.9	384.0	615
330805	5 G 10	19.6	480.0	771
330604	4 G 16	22.8	615.0	864
330605	5 G 16	24.9	768.0	1,080

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired make-up (e.g. 1 x 610 m drum or 8 x 76 m coils)

ÖLFLEX® 450 P

PVC / PUR power tool cable, economical alternative to a completely PUR cable

Info

- **PVC / PUR -Dual Sheath**
- **Economical alternative to a full-PUR sheath design**

Benefits

- Good combination of quality and price
- Protected against water and dirt
- Oil resistant

Application range

- Electrical devices
- Hand-held equipment
- Portable appliances for home and garden
- Power or extention cord
- Outdoor use only in accordance with the indicated temperature range

Product features

- Abrasion and cut resistant
- Furthermore, it is extremely resistant to dilute acids, aqueous alkaline solutions and regular grade petrol, mineral oils, greases and cooling lubricants.
- Flame retardant (IEC 60332-1-2)

Approvals (Norm references)

CE RoHS

Design

- Fine strands of plain copper wires
- Core insulation: Special-PVC
- Intermediate sheath: PVC in waring colour RED
- Outer sheath: Polyurethane YELLOW (RAL 1016)

Technical data

Core identification code
Colour coded according to VDE 0293-308, see Appendix T9

Based on
VDE 0250/0281

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Static:
4 x cable diameter

Rated voltage
U_0/U:
300/500 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® 450 P				
0012101	2 X 1	8.0	19.2	82
0012102	3 G 1	8.4	29.0	89
0012202	3 G 1.5	9.3	43.0	120
00122033	4 G 1.5	10.1	58.0	160
00122043	5 G 1.5	10.9	72.0	179
0012302	3 G 2.5	10.8	72.0	186
00123043	5 G 2.5	13.6	120.0	283

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® 540 P see page 73
- ÖLFLEX® 550 P see page 75

Accessories

- SKINTOP® BS-M see page 645
- SKINTOP® ST-M see page 641

ÖLFLEX® 500 P

Extra flexible, PUR insulated, colour coded, PUR sheath

Info
- PUR workshop cable
- MUD res. acc. IEC61892-4 Annex D

Benefits
- Ergonomical flexing-friendly design
- Protected against water and dirt
- Wear-resistant

Application range
- Electric operated portables, e.g. for event technology
- Connection- and extension cables

Product features
- Cold flexible
- Furthermore, it is extremely resistant to dilute acids, aqueous alkaline solutions and regular grade petrol, mineral oils, greases and cooling lubricants.
- Flame retardant acc. IEC 60332-1-2 & CSA FT1
- Low adhesive surface

Approvals (Norm references)
CE RoHS

Design
- Extra fine strands of plain copper wires according to VDE 0295 Class 6 / IEC 60228 Class 6
- Core insulation: Polyurethane (PUR)
- Polyurethan outer sheath (PUR)
- Orange (RAL 2003)

Technical data
Core identification code
Colour coded according to VDE 0293-308, see Appendix T9

Based on
VDE 0281/0282

Specific insulation resistance
> 150 MOhm x cm

Conductor stranding
Extra fine wire in acc. to VDE 0295 Cl.6 / IEC 60228 Cl.6

Minimum bending radius
Occasional flexing: 15 x cable diameter
Static:
4 x cable diameter

Rated voltage
U_0/U:
300/500 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -40°C up to +80°C
Fixed installation: -50°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® 500 P				
0012345	2 X 1	7.2	19.5	64
0012346	3 G 1	7.6	29.0	77
00123473	4 G 1	8.5	38.4	96
00123483	5 G 1	9.2	48.0	120
0012351	2 X 1.5	8.0	29.0	81
0012352	3 G 1.5	8.7	43.0	105
00123543	4 G 1.5	9.6	58.0	135
00123533	5 G 1.5	10.8	72.0	158
0012365	3 G 2.5	10.9	72.0	173
00123553	4 G 2.5	11.9	96.0	204
00123663	5 G 2.5	13.2	120.0	254

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® 540 P see page 73
- ÖLFLEX® 550 P see page 75

Accessories

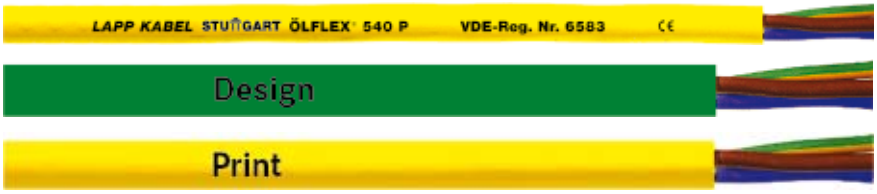
- SKINTOP® CLICK see page 643
- SKINTOP® ST-M see page 641
- Cable Marking Products see page 852
- Conductor end sleeves see page 911

ÖLFLEX® 540 P

TPE-PUR service cordage, VDE -registered, for building sites, event technology, agriculture and camping

Info

- **All-weather service cord**
- **High mechanical strength**
- **MUD res. acc. IEC61892-4 Annex D**



Benefits

- Protected against water and dirt
- Fire: Low corrosive smoke emission
- Cold flexible
- Wear-resistant

Application range

- Construction machinery
- Building sites, camp sites
- Agricultural equipment
- Production plants
- For indoor- and outdoor use

Product features

- Oil resistant and adhesion-free
- Abrasion and cut resistant
- Hydrolysis resistant
- Halogen-free
- Flame retardant (IEC 60332-1-2)

Approvals (Norm references)

CE, DVE, RoHS

Design

- Fine strands of tinned copper wires
- Core insulation: TPE
- Outer sheath: Polyurethane YELLOW (RAL 1016)
- DESIGN: other outer sheath color on demand

Technical data

Core identification code
Colour coded, according to VDE 0293, see Appendix T9
(7-core with printed numbering)

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 10 x cable diameter
Static:
4 x cable diameter

Rated voltage
Up to 1.0mm² 300/500 V
From 1.5mm² 450/750 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -40 °C up to +90 °C
Fixed installation: -50°C up to +90°C

Up to 1.0 mm²: VDE-Reg. No. 6583
Starting at 1.5 mm²: VDE-Reg. No. 6584

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® 540 P U0/U: 300/500 V				
0012452	2 X 0.75	6.6	14.4	52
0012453	3 G 0.75	7.0	21.6	63
00124543	4 G 0.75	7.6	28.8	80
00124553	5 G 0.75	8.5	36.0	98
0012456	7 G 0.75	10.2	51.0	126
0012457	2 X 1	7.0	19.2	53
0012458	3 G 1	7.4	29.0	72
00124593	4 G 1	8.2	38.4	96
00124603	5 G 1	9.0	48.0	117
0012461	7 G 1	10.9	68.0	147
ÖLFLEX® 540 P U0/U: 450/750 V				
0012462	2 X 1.5	8.4	29.0	82
0012463	3 G 1.5	8.9	43.0	108
00124643	4 G 1.5	9.9	58.0	147
00124653	5 G 1.5	10.9	72.0	164
0012466	7 G 1.5	13.5	101.0	267
0012467	2 X 2.5	10.0	48.0	142
0012468	3 G 2.5	10.6	72.0	161
00124693	4 G 2.5	11.8	96.0	220
00124703	5 G 2.5	13.4	120.0	245
0012471	7 G 2.5	15.8	168.0	321
0012474	3 G 4	13.0	115.2	262
00124753	4 G 4	14.2	154.0	284
00124763	5 G 4	16.0	192.0	355
00124783	4 G 6	16.1	230.0	440
00124793	5 G 6	17.6	288.0	530
00124813	4 G 10	19.9	384.0	615
00124823	5 G 10	22.2	480.0	735

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® ROBUST 200 see page 60
- H07RN-F see page 76
- ÖLFLEX® 550 P see page 75

Accessories

- SKINTOP® BS-M see page 645
- SKINTOP® MS-M see page 650
- SKINTOP® ST-M see page 641

ÖLFLEX® 540 CP

Shielded TPE-PUR Service Cordage, VDE -registered, for building sites, agriculture and camping

Info

- **All-weather service cord**
- **High mechanical strength**
- **MUD res. acc. IEC61892-4 Annex D**

Benefits

- Protected against water and dirt
- Fire: Low corrosive smoke emission
- Cold flexible
- Wear-resistant
- EMC compliant

Application range

- Construction machinery
- Building sites, camp sites
- Agricultural equipment
- Production plants
- For indoor- and outdoor use

Product features

- Oil resistant and adhesion-free
- Abrasion and cut resistant
- Hydrolysis resistant
- Halogen-free
- Flame retardant (IEC 60332-1-2)

Approvals (Norm references)

CE, DVE, RoHS

Design

- Fine strands of tinned copper wires
- Core insulation: TPE
- Inner sheath: TPE
- Tinned copper braid
- Polyurethane sheath (PUR)
- Yellow (RAL 1016)

Technical data

Core identification code
Colour coded, according to VDE 0293, see Appendix T9
(7-core with printed numbering)

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 12.5 x cable diameter
Fixed installation :
6 x cable diameter

Rated voltage
Up to 1.0mm² 300/500 V
From 1.5mm² 450/750 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -40 °C up to +90 °C
Fixed installation: -50°C up to +90°C

DIN VDE
Up to 1.0 mm²: VDE-Reg. No. 6583
Starting at 1.5 mm²: VDE-Reg. No. 6584

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® 540 CP U0/U: 300/500 V				
0012752	2 X 0.75	8.6	43.9	103
0012753	3 G 0.75	9.6	67.6	140
00127553	5 G 0.75	10.7	75.0	164
0012757	2 X 1	9.6	65.2	138
0012758	3 G 1	10.0	74.9	153
00127603	5 G 1	11.2	87.2	184
0012761	7 G 1	13.9	138.5	281
ÖLFLEX® 540 CP U0/U: 450/750 V				
0012762	2 X 1.5	10.6	67.7	159
0012763	3 G 1.5	11.1	82.3	181
00127643	4 G 1.5	12.1	101.8	218
00127653	5 G 1.5	13.7	143.3	287
0012766	7 G 1.5	16.7	195.7	394
0012767	2 X 2.5	12.2	92.4	213
0012768	3 G 2.5	13.4	119.0	263
00127693	4 G 2.5	14.6	168.2	334
00127703	5 G 2.5	16.6	204.7	416
00127753	4 G 4	17.4	240.1	476
00127783	4 G 6	19.2	355.5	634
00127793	5 G 6	20.9	452.9	770
00127813	4 G 10	23.6	577.8	993
00127823	5 G 10	25.5	681.2	1,151

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® FD 855 CP see page 120
- ÖLFLEX® 440 CP see page 67
- ÖLFLEX® SERVO FD 785 CP see page 103

Accessories

- SKINTOP® MS-SC-M see page 657
- SKINDICHT® SM-PE-M see page 687

ÖLFLEX® 550 P

PUR-cordage, harmonised (HAR)

Info

- **All-weather service cord**
- **High mechanical strength**
- **H05BQ-F H07BQ-F**

Benefits

- Protected against water and dirt
- Cold flexible
- Wear-resistant

Application range

- Construction machinery
- Building sites, camp sites
- Agricultural equipment
- Electric operated portables, e.g. for event technology
- For indoor- and outdoor use

Product features

- Oil resistant
- Abrasion and cut resistant
- Hydrolysis resistant

Approvals (Norm references)

CE HAR RoHS

Design

- Fine strands of bare copper wires
- Core insulation: Rubber
- Polyurethane sheath (PUR)
- Orange (RAL 2003)

Technical data

Core identification code
Colour coded according to VDE 0293-308, see Appendix T9

Approvals
H05BQ-F;H07BQ-F / HD22.10
VDE 0282 Part 10 / HD 22.10

Specific insulation resistance
> 10 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
For flexible applications: 12.5 x outside diameter
Static:
4 x cable diameter

Rated voltage
Up to 1.0mm² 300/500 V
From 1.5mm² 450/750 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Occasional flexing: -40 °C up to +90 °C
Fixed installation: -50°C up to +90°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® 550 P U0/U: 300/500 V				
0013600	2 X 0.75	6.4	14.4	50
0013601	3 G 0.75	7.0	21.6	64
00136023	4 G 0.75	7.6	28.8	78
00136033	5 G 0.75	8.5	36.0	98
0013610	2 X 1	7.0	19.2	60
0013611	3 G 1	7.4	29.0	74
00136123	4 G 1	8.1	38.4	92
00136133	5 G 1	9.0	48.0	114
ÖLFLEX® 550 P U0/U: 450/750 V				
0013620	2 X 1.5	8.4	29.0	87
0013621	3 G 1.5	8.9	43.0	108
00136223	4 G 1.5	9.9	58.0	137
00136233	5 G 1.5	10.8	72.0	165
0013630	2 X 2.5	10.0	48.0	90
0013631	3 G 2.5	10.6	72.0	161
00136323	4 G 2.5	11.8	96.0	206
00136333	5 G 2.5	13.1	120.0	254

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® ROBUST 200 see page 60
- H05RN-F see page 76
- H07RN-F see page 76
- ÖLFLEX® 500 P see page 72
- ÖLFLEX® 540 P see page 73

Accessories

- SKINTOP® MS-M see page 650
- SKINTOP® ST-M see page 641
- Cutting tools for various applications see page 902
- Stripping tools see page 906

H05RR-F

Rubber cable for light mechanical stress and hand-held devices in households, kitchens, offices

Info
- Harmonised (HAR)
- International use

H05RN-F

Rubber cable for hand-held devices as well as chains of light or electric decoration

Info
- Harmonised (HAR)
- International use

H07RN-F

Heavy standard construction

Info
- Harmonised (HAR)
- International use

Benefits

H05RR-F
- Light duty rubber-sheathed cable
- For light workshop devices with light stress

H05RN-F
- Medium duty, rubber sheathed cable
- For lightweight workshop tools subject to medium loads

H07RN-F
- Heavy-duty, rubber-sheathed cable
- High stresses
- Allowed up to 1000 V (0.6/1 kV) alternating voltage within protected and fixed installation
- Arrangements from single core rubber-sheathed cables H07RN-F can be used for short-circuit and short-to-ground proof installation in accordance with VDE 0100 Part 520

Application range

H05RR-F
- Hand-held and power supply devices acc. HD 516/ VDE 0298-300
- Dry and damp interiors, as well as for limited outdoor use acc. HD 516/ VDE 0298-300
- Light & Sound technology

H05RN-F
- Hand-held and power supply devices acc. HD 516/ VDE 0298-300
- Dry and damp interiors, as well as for limited outdoor use acc. HD 516/ VDE 0298-300

H07RN-F
- Hand-held and power supply devices acc. HD 516/ VDE 0298-300
- Tools and agricultural machinery acc. HD 516/ VDE 0298-300
- Dry and damp interiors as well as outdoors acc. HD 516/ VDE 0298-300
- Light & Sound technology

Product features

H05RR-F
- Flame retardant

H05RN-F
- Flame retardant according to IEC 60332-1-2
- Oil resistant according to EN 60811-2-1

H07RN-F
- Flame retardant according to IEC 60332-1-2
- Oil resistant according to EN 60811-2-1

Approvals (Norm references)

CE ◁HAR▷ RoHS

Design

H05RR-F
- Bare copper wire according to HAR
- Core insulation: Rubber Type EI 4
- Outer jacket of rubber Type EM 3

H05RN-F
- Bare copper wire according to HAR
- Core insulation: Rubber Type EI 4
- Outer jacket of rubber Type EM2

H07RN-F
- Bare copper wire according to HAR
- Core insulation: Rubber Type EI 4
- Outer jacket of rubber Type EM2

Technical data

Core identification code
Up to 5 cores: according to VDE 0293-308 (appendix T9)
Starting at 6 cores: Black with white numbers

Approvals
VDE 0282 Part 4 / HD 22.4 S4

Specific insulation resistance
1 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Flexible use: 6 x outer diameter

Rated voltage
H05RR-F
U_0/U: 300/500 V
H05RN-F
U_0/U: 300/500 V
H07RN-F
U_0/U: 450/750 V

Test voltage
H05RR-F
2000 V
H05RN-F
2000 V
H07RN-F
2500 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Current rating
According to VDE 0298 part 4 Tab. 11 and 13 HD 516

Range of temperature
Flexible use: -25°C up to +60°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
H05RR-F U0/U: 300/500 V				
1600203	2 X 0.75	5.7 - 7.4	14.4	61
1600207	3 G 0.75	6.2 - 8.1	21.6	75
1600204	2 X 1	6.1 - 8.0	19.0	73
1600208	3 G 1	6.5 - 8.5	29.0	86
16002113	4 G 1	7.1 - 9.3	38.0	105
1600205	2 X 1.5	7.6 - 9.8	29.0	115
1600200	3 G 1.5	8.0 - 10.4	43.0	135

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
16002013	4 G 1.5	9.0 - 11.6	58.0	165
16002023	5 G 1.5	9.8 - 12.7	72.0	190
1600206	2 X 2.5	9.0 - 11.6	48.0	160
1600209	3 G 2.5	9.6 - 12.4	72.0	190
16002123	4 G 2.5	10.7 - 13.8	96.0	235
16002133	5 G 2.5	11.9 - 15.3	120.0	285
H05RN-F U0/U: 300/500 V (4-core version as X05RN-F)				
1600250	2 X 0.75	5.7 - 7.4	14.4	80
1600252	3 G 0.75	6.2 - 8.1	21.6	95
16002583	4 G 0.75	6.8 - 8.8	30.0	105
1600251	2 X 1	6.1 - 8.0	19.0	95
1600253	3 G 1	6.5 - 8.5	29.0	115
H07RN-F U0/U: 450/750 V				
1600117	3 G 1	8.3 - 10.7	29.0	130
1600199	2 X 1.5	8.5 - 11.0	29.0	135
1600103	3 G 1.5	9.2 - 11.9	43.0	165
16001233	4 G 1.5	10.2 - 13.1	58.0	200
16001043	5 G 1.5	11.2 - 14.4	72.0	240
1600151	7 G 1.5	14.0 - 17.5	101.0	385
1600148	12 G 1.5	17.6 - 22.4	173.0	516
1600259	19 G 1.5	20.7 - 26.3	274.0	800
1600166	24 G 1.5	24.3 - 30.7	346.0	882
1600263	25 G 1.5	25.1 - 25.9	360.0	920
1600187	2 X 2.5	10.2 - 13.1	48.0	195
1600118	3 G 2.5	10.9 - 14.0	72.0	235
16001053	4 G 2.5	12.1 - 15.5	96.0	290
16001293	5 G 2.5	13.3 - 17.0	120.0	294
1600152	7 G 2.5	16.5 - 20.0	168.0	520
1600154	12 G 2.5	20.6 - 26.2	288.0	810
1600156	19 G 2.5	25.5 - 31.0	456.0	1,200
1600157	24 G 2.5	28.8 - 36.4	576.0	1,650
1600186	2 X 4	11.8 - 15.1	77.0	270
1600119	3 G 4	12.7 - 16.2	115.0	320
16001063	4 G 4	14.0 - 17.9	154.0	395
16001303	5 G 4	15.6 - 19.9	192.0	485
1600161	7 G 4	21.0 - 21.8	268.8	681
1600120	3 G 6	14.1 - 18.0	173.0	360
16001073	4 G 6	15.7 - 20.0	230.0	475
16001313	5 G 6	17.5 - 22.2	288.0	760
1600121	3 G 10	19.1 - 24.2	288.0	880
16001083	4 G 10	20.9 - 26.5	384.0	1,060
16001093	5 G 10	22.9 - 29.1	480.0	1,300
1600122	3 G 16	21.8 - 27.6	461.0	1,090
16001103	4 G 16	23.8 - 30.1	614.0	1,345
16001113	5 G 16	26.4 - 33.3	768.0	1,680
16001123	4 G 25	28.9 - 36.6	960.0	1,995
16001133	5 G 25	32.0 - 40.4	1,200.0	2,470
1600124	3 G 35	29.3 - 37.1	1,008.0	1,910
16001143	4 G 35	32.5 - 41.1	1,344.0	2,645
16001363	5 G 35	37.0 - 45.0	1,680.0	2,810
16001153	4 G 50	37.7 - 47.5	1,920.0	3,635
1600126	5 G 50	40.0 - 50.8	2,400.0	4,050
16001163	4 G 70	42.7 - 54.0	2,688.0	4,830
16001283	4 G 95	48.4 - 61.0	3,648.0	6,320
16001323	4 G 120	53.0 - 66.0	4,608.0	6,830
16000883	4 G 150	58.0 - 73.0	5,760.0	8,320
1600141	4 G 185	64.0 - 80.0	7,104.0	9,800
1600183	4 G 240	72.0 - 91.0	9,216.0	12,800
Single core rubber cable H07RN-F U0/U: 450/750 V				
1600096	1 X 1.5	5.7 - 7.1	14.4	59
1600099	1 X 2.5	6.3 - 7.9	24.0	72
1600097	1 X 4	7.2 - 9.0	38.0	99
1600098	1 X 6	7.9 - 9.8	58.0	130
1600194	1 X 10	9.5 - 11.9	96.0	230
1600195	1 X 16	10.8 - 13.4	154.0	320
1600196	1 X 25	12.7 - 15.8	240.0	450
1600193	1 X 35	14.3 - 17.9	336.0	605
1600197	1 X 50	16.5 - 20.6	480.0	825
1600189	1 X 70	18.6 - 23.3	672.0	1,090
1600190	1 X 95	20.8 - 26.0	912.0	1,405
1600198	1 X 120	22.8 - 28.6	1,152.0	1,745
1600191	1 X 150	25.2 - 31.4	1,440.0	1,887
1600175	1 X 185	27.6 - 34.4	1,776.0	2,274
1600177	1 X 240	30.6 - 38.3	2,304.0	2,955
30015435	1 X 300	33.5 - 41.9	2,880.0	3,479

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Cross-Section 5G35 and 5G50 without <HAR>

■ Comparable products

H05RN-F

- H07ZZ-F see page 78

H07RN-F

- H07ZZ-F see page 78
- H07RN8-F see page 83

■ Accessories

H07RN-F

- EASY STRIP 2 stripping and cutting tool see page 906
- PWE 8.87 crimping pliers see page 920
- KS 20 cable shears see page 904
- SKINTOP® CLICK / CLICK-R see page 643

H07ZZ-F

Machines, devices; Halogen-free: events, places of high person and asset concentration

Info
- halogen-free
- Harmonised (HAR)

Benefits
- Improved usage because of halogen-free materials
- According to VDE 0100-711 cables with low smokes are required in buildings for exhibitions, shows and stands without fire alarm system

Application range
- Stage technology
- Mobile equipment and machines
- Dry and damp interiors, temporarily outdoors: HD 516/ VDE 0298-300

Product features
- Flame retardant according to IEC 60332-1-2
- Low corrosivity of the gases in case of fire
- Low smokes
- Ozone-resistant acc. to HD 22, EN 50363-6, EN 60811-2-1, EN 50396-8.1.3

Approvals (Norm references)
CE HAR RoHS

Design
- Strands of bare copper wires
- Core insulation: Halogen-free rubber compound
- Outer sheath: Halogen-free rubber compound

Technical data
Core identification code
Up to 5 cores: according to VDE 0293-308 (appendix T9)
Starting at 6 cores: Black with white numbers

Approvals
VDE 0282 Part 13 / HD 22.13 S1

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Flexible use: 6 x outer diameter
Fixed installation: 4 x cable diameter

Rated voltage
U0/U: 450/750 VAC,
in protected and fixed installations:
U0/U: 600/1000 V

Test voltage
2500 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Current rating
According to VDE 0298 Part 4
HD 516

Range of temperature
Flexible use: -5°Cup to +70°C
Fixed installation: -40°C up to +70°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
H07ZZ-F				
1600810	3 G 1.5	9.2 - 11.9	43.2	125
1600811	4 G 1.5	10.2 - 13.1	57.6	155
1600812	5 G 1.5	11.2 - 14.4	72.0	190
1600815	14 G 1.5	18.8 - 21.3	201.6	570
1600816	18 G 1.5	20.7 - 26.3	259.2	750
1600820	3 G 2.5	10.9 - 14.0	72.0	185
1600821	4 G 2.5	12.1 - 15.5	96.0	235
1600822	5 G 2.5	13.3 - 17.0	120.0	290
1600823	7 G 2.5	18.2 - 20.7	168.0	520
1600825	14 G 2.5	22.2 - 25.0	336.0	860
1600836	4 G 4	14.0 - 17.9	153.6	325
1600837	5 G 4	15.6 - 19.9	192.0	410
1600841	4 G 6	15.7 - 20.0	230.4	440
1600842	5 G 6	17.5 - 22.2	288.0	550
1600844	4 G 10	20.9 - 26.5	384.0	770
1600845	5 G 10	22.9 - 29.1	480.0	950
1600847	4 G 16	23.8 - 30.1	614.4	1,070
1600849	4 G 25	28.9 - 36.6	960.0	1,570
1600851	4 G 35	32.5 - 41.1	1,344.0	2,040
1600852	4 G 50	37.7 - 47.5	1,920.0	2,810

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products
- H07RN-F see page 76

Accessories
- EASY STRIP 2 stripping and cutting tool see page 906
- PWE 8.87 crimping pliers see page 920
- KS 20 cable shears see page 904
- SKINTOP® CLICK / CLICK-R see page 643

H01N2-D

Normative Arc Welding Cable

Info

- **Arc welding cable according to HD 22.6**
- **Harmonised (HAR)**

Application range

- For the transmission of high currents from the electric welding device to the welding tool
- Usage of the Welding Cable with attention to HD 516/ VDE 0298-300 only
- Use in dry or damp rooms
- H01N2-D improper for battery applications - instead, special cables are available, i.e. ÖLFLEX® TRUCK 170 TWIN.

Product features

- Flame retardant according to IEC 60332-1-2
- Maximum suggested ambient temperature according to HD 516/ VDE 0298-300: +40 °C

Approvals (Norm references)

CE HAR RoHS

- Has replaced the previous VDE-type NSLFFÖU

Design

- Bare copper wire according to HAR
- Stranding corresponds up to 95 mm² approximately to class 6 and from 120 mm² approximately to class 5 acc. to VDE 0295
- Separator of synthetic foil or paper
- Outer jacket of rubber Type EM5

Technical data

Approvals
VDE 0282 Part 6 or HD 22.6

Conductor stranding
Class D according to VDE 0282 part 6 (see table)
Number of wires is a value without obligation

Conductor resistance
In accordance with VDE 0295

Minimum bending radius
Flexible use: 12 x outer diameter

Rated voltage
U_0/U: 100/100 V

Test voltage
1000 V

Current rating
According to VDE 0298 Part 4, table 16 HD 516

Range of temperature
Flexible use: -25°C up to +85°C

Part number	Conductor cross section in mm²	Conductor stranding: Number of wires x wire diameter in mm approx.	Outer diameter in mm approx.	Thickness of the insulation in mm	Copper index kg/km	Weight kg/km approx.
H01N2-D						
2310026	10	320 x 0.21	7.7 - 9.7	2.0	96.0	171
2210700	16	510 x 0.21	8.8 - 11.0	2.0	154.0	198
2210701	25	760 x 0.21	10.1 - 12.7	2.0	240.0	305
2210702	35	1100 x 0.21	11.4 - 14.2	2.0	336.0	415
2210703	50	1570 x 0.21	13.2 - 16.5	2.2	480.0	555
2210704	70	2220 x 0.21	15.3 - 19.2	2.4	672.0	765
2210705	95	3020 x 0.21	17.1 - 21.4	2.6	912.0	1,010
2210706	120	608 x 0.51	19.2 - 24.0	2.8	1,152.0	1,262
2210707	150	765 x 0.51	21.2 - 26.4	3.0	1,440.0	1,610
2210708	240	1225 x 0.51	25.0 - 29.5	3.4	2,304.0	2,520

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Accessories

- KS 20 cable shears see page 904

NSSHÖU

Mechanically robust rubber cable for mining and opencast pit

Info

- **High mechanical strength**

Benefits

- Use at very high mechanical stress
- Single cores are suitable as a robust connection cable for welding equipment

Application range

- For mining as well as surface mining
- Connection of moving equipment and machinery
- Under extreme environmental conditions
- Outdoor use as well as in dry and damp interiors

Product features

- Flame retardant according to IEC 60332-1-2
- Oil resistant according to EN 60811-2-1
- High notch resistance
- Abrasion resistant

Approvals (Norm references)

CE DVE RoHS

Design

- Strands of bare copper wires
- Core insulation: Rubber Type 3GI3
- Inner jacket of rubber type GM1b or 5GM5
- Outer jacket of rubber Type 5GM5

Technical data

Core identification code
Up to 5 cores: according to VDE 0293-308 (appendix T9)
Starting at 6 cores: Black with white numbers

Approvals
VDE 0250 Part 812

Specific insulation resistance
> 1 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Flexible use: 10 x outer diameter
Fixed installation: 5 x outer diameter

Rated voltage
U_0/U: 600/1000 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Current rating
According to VDE 0298 Part 4, Table 15

Range of temperature
Flexible use: -25°C up to +90°C
Fixed installation: -40°C up to +90°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
NSSHÖU-O				
1600500	1 X 16	10.9	154.0	260
1600501	1 X 25	13.3	240.0	390
1600502	1 X 35	14.4	336.0	500
1600503	1 X 50	16.7	480.0	680
1600504	1 X 70	18.9	672.0	900
1600505	1 X 95	21.0	912.0	1,150
1600506	1 X 120	23.3	1,152.0	1,440
1600507	1 X 150	25.2	1,440.0	1,750
1600508	1 X 185	28.4	1,776.0	2,180
1600509	1 X 240	31.4	2,304.0	2,790
NSSHÖU-J				
1600516	3 G 1.5	11.8	43.0	200
16005243	4 G 1.5	12.7	58.0	230
16005333	5 G 1.5	13.6	72.0	280
1600517	3 G 2.5	13.2	72.0	260
16005253	4 G 2.5	15.4	96.0	360
16005343	5 G 2.5	16.5	120.0	420
1600541	7 G 2.5	20.0	168.0	600
1600544	12 G 2.5	26.0	288.0	860
16005263	4 G 4	16.9	154.0	470
16005353	5 G 4	18.2	192.0	550
16005273	4 G 6	18.3	230.0	580
16005363	5 G 6	20.6	288.0	740
16005283	4 G 10	22.3	384.0	950
16005373	5 G 10	24.1	480.0	1,100
16005293	4 G 16	26.1	614.0	1,400
16005383	5 G 16	28.3	768.0	1,720
16005303	4 G 25	31.2	960.0	2,000
16005313	4 G 35	34.1	1,344.0	2,700
16005323	4 G 50	41.0	1,920.0	3,700

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® CRANE VS (N)SHTÖU see page 160
- ÖLFLEX® CRANE PUR see page 161

Accessories

- STAR STRIP stripping tool see page 908
- Cable shears KT 4 and KT 5 see page 904

NSGAFÖU

Flexible single conductor rubber cable up to 1.8/3.0 kV rated voltage

Benefits

- Suitable for high voltage
- Arrangements made of single core cables NSGAFÖU in accordance with VDE 0250 Part 602 with nominal voltage of at least U0/U: 1.8/3.0 kV can be used for short-circuit and short-to-ground proof installation in acc. with VDE 0100 Part 520

Application range

- Switch cabinets and equipment wiring
- Trains and buses
- Only for dry interiors

Product features

- Flame retardant according to IEC 60332-1-2
- Oil resistant according to EN 60811-2-1

Approvals (Norm references)

DVE RoHS

Design

- Strands of bare copper wires
- Core insulation: Rubber Type 3GI3
- Outer jacket of rubber Type 5GM3

Technical data

Approvals
VDE 0250 Part 602

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Flexible use: 10 x outer diameter
Fixed installed: 6 x outer diameter

Rated voltage
U_0/U: 1.8/ 3.0 kV

Test voltage
6000 V

Current rating
According to VDE 0298 Part 4, Table 15

Range of temperature
Flexible use: -25°C up to +90°C
Fixed installation: -40°C up to +90°C

Part number	Max. value outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
NSGAFÖU			
1600300	7	14.4	60
1600301	7.5	24	70
1600302	9	38	90
1600303	9.5	58	120
1600304	11	96	180
1600305	13	154	250
1600306	15	240	390
1600307	16.5	336	470
1600308	18	480	625
1600309	20.5	672	880
1600310	24	912	1190
1600311	26	1152	1430
1600312	28	1440	1750
1600313	31	1776	2160
1600314	34.5	2304	2640
3026826	38	2880	3545

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Accessories

- V 1311 pressing pliers, hydraulic see page 935
- KS 20 cable shears see page 904

NSHXAFÖ

Halogen-free, flexible single conductor rubber cable for public transport and wiring

Info
- halogen-free

Benefits
- Suitable for high voltage
- Arrangements made of single core cables NSHXAFÖ can be used for short-circuit and short-to-ground proof installation in acc. with VDE 0100 Part 520

Application range
- Switch cabinets and equipment wiring
- Trains and buses
- Only for dry interiors

Product features
- Flame retardant according to IEC 60332-1-2

Approvals (Norm references)
DVE RoHS

Design
- Strands of bare copper wires
- Core insulation: Halogen-free rubber compound
- Outer sheath: Halogen-free rubber compound

Technical data
Based on
VDE 0250 Part 606

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Flexible use: 10 x outer diameter
Fixed installed: 6 x outer diameter

Rated voltage
U_0/U: 1.8/ 3.0 kV

Test voltage
6000 V

Range of temperature
Flexible use: -5°C up to +90°C
Fixed installation: -25°C up to +90°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
NSHXAFÖ				
3022673	1 X 1.5	7.0	14.4	60
3022674	1 X 2.5	7.5	24.0	70
3022675	1 X 4	9.0	38.0	90
3022676	1 X 6	9.5	58.0	120
3022677	1 X 10	11.0	96.0	180
3022678	1 X 16	13.0	154.0	250
3022679	1 X 25	15.0	240.0	390
3022680	1 X 35	16.5	336.0	470
3022681	1 X 50	18.0	480.0	625
3022682	1 X 70	20.5	672.0	880
3022683	1 X 95	24.0	912.0	1,190
3022684	1 X 120	26.0	1,152.0	1,430
3022685	1 X 150	28.0	1,440.0	1,750
3022686	1 X 185	31.0	1,776.0	2,160
3022687	1 X 240	34.5	2,304.0	2,718
3022688	1 X 300	38.0	2,890.0	3,470

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Accessories
- V 1311 pressing pliers, hydraulic see page 935
- KS 20 cable shears see page 904

H07RN8-F

Cable for submersible pumps

Info

- **Formerly: ÖLFLEX AQUA RN8**
- **Harmonised (HAR)**

Benefits

- Designed and tested for permanent use in water
- Down to 10 metres normative immersion depth; after consulting with LAPP GROUP down to 100 m, occasionally
- High stresses

Application range

- For connecting electrical equipment in industrial water, e.g. floater switches
- Flexible applications in indoor and outdoor swimming pools
- Suitable for use with submersible pumps
- Dry and damp interiors, as well as outdoors and in industrial water

Product features

- Flame retardant according to IEC 60332-1-2
- Oil resistant according to EN 60811-2-1

Approvals (Norm references)

CE HAR RoHS

Design

- Strands of bare copper wires
- Core insulation: Rubber Type EI 4
- Outer sheath: Rubber compound type EM 2

Technical data

Core identification code
Up to 5 cores: according to VDE 0293-308 (appendix T9)
Starting at 6 cores: Black with white numbers

Approvals
VDE 0282 Part 16

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Flexible use: 6 x outer diameter

Rated voltage
U_0/U: 450/750 V
Fixed, protected installation:
U_0/U: 600/1000 V

Test voltage
2500 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Current rating
According to VDE 0298 Part 4
HD 516

Range of temperature
Flexible use: -25°C up to +80°C
Fixed installation: -40°C up to +80°C
In water: max. +40°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® AQUA RN8				
1600600	1 X 4	7.2 - 9.0	38.0	100
1600601	1 X 6	7.9 - 9.8	58.0	120
1600602	1 X 10	9.5 - 11.9	96.0	200
1600604	1 X 25	12.7 - 15.8	240.0	400
1600606	3 G 1.5	9.2 - 11.9	43.0	170
1600609	4 G 1.5	10.2 - 13.1	58.0	205
1600620	7 G 1.5	14.0 - 17.5	101.0	385
1600607	3 G 2.5	10.9 - 14.0	72.0	210
1600610	4 G 2.5	12.1 - 15.5	96.0	260
1600621	7 G 2.5	16.5 - 20.0	168.0	520
1600611	4 G 4	14.0 - 17.9	154.0	356
1600612	4 G 6	15.7 - 20.0	230.0	475
1600613	4 G 10	20.9 - 26.5	384.0	837
1600614	4 G 16	23.8 - 30.1	614.0	1,220
1600615	4 G 25	28.9 - 36.6	960.0	1,770
1600616	4 G 35	32.5 - 41.1	1,344.0	2,304

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- H07RN-F see page 76

Accessories

- EASY STRIP 2 stripping and cutting tool see page 906
- PWE 8.87 crimping pliers see page 920
- KS 20 cable shears see page 904
- SKINTOP® CLICK / CLICK-R see page 643

New

H07BN4-F Wind Class5 & Class6

Highly Torsion-resistant, harmonised Wind Energy Cable with two available conductor classes

Info

- **Class6 formerly: ÖLFLEX H07BN4-F**
- **Torsion resistant and very flexible**
- **Harmonised (HAR)**

Benefits

- Special design for torsion use in windmill towers

Application range

- Recommended for the use in windmills - designed for windmill constructors' expectations
- Mobile use as well as fixed installation possible
- In dry and wet environment

Product features

- Flame retardant according to IEC 60332-1-2
- Torsion-resistant up to ±150 °/mtr
- Oil resistant to most transmission oils
- Abrasion- and cut-resistant, cold-flexible
- Ozone-resistant according to HD 22, EN 60811-2-1 and EN 50396-8.1.3

Approvals (Norm references)

CE HAR RoHS

Design

- Strands of bare copper wires
- 2 conductor strandings available: Class 5 (H07BN4-F Wind Class5) or Class 6 (H07BN4-F Wind Class6)
- Core insulation: Rubber Type EI 7
- Outer jacket of special rubber compound based on EM 7

Technical data

Approvals
VDE 0282 Part 12 / HD 22.12

Conductor stranding
H07BN4-F Wind Class5: fine-wired/class 5 acc. VDE 0295/ IEC 60228
H07BN4-F Wind Class6: extra-fine wired/class 6 acc. VDE 0295/ IEC 60228

Minimum bending radius
Flexible use: 6 x outer diameter
Fixed installation: 5 x outer diameter

Rated voltage
U0/U: 450/750 VAC,
in protected and fixed installations:
U0/U: 600/1000 V

Test voltage
2500 V

Current rating
According to VDE 0298 Part 4
HD 516

Range of temperature
Flexible use: -15°C up to +90°C
Wind energy: -35°C up to +90°C
Fixed installation: -35°C up to +90°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
H07BN4-F Wind Class5				
1600751	1 X 95	22.9	912.0	1,300
1600752	1 X 120	24.4	1,152.0	1,500
1600753	1 X 150	27.2	1,440.0	1,850
1600754	1 X 185	29.5	1,776.0	2,200
1600755	1 X 240	33.3	2,304.0	2,900
1600756	1 X 300	36.1	2,880.0	3,400
1600757	1 X 400	40.0	3,840.0	4,400
H07BN4-F Wind Class6				
1600715	1 X 95	22.4	912.0	1,230
1600716	1 X 120	24.3	1,152.0	1,490
1600717	1 X 150	27.2	1,440.0	1,875
1600718	1 X 185	29.3	1,776.0	2,190
1600719	1 X 240	32.6	2,304.0	2,900
1600720	1 X 300	36.0	2,880.0	3,400
1600721	1 X 400	40.0	3,840.0	4,400

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths

Accessories

- V 1311 pressing pliers, hydraulic see page 935
- STAR STRIP stripping tool see page 908
- Cable shears KT 4 and KT 5 see page 904

ÖLFLEX® SERVO 700

Combined PVC -control and supply cable for motors of variable frequency drives

Info

- **Combi motor cable for circuits such as:**
- **Power, Break, Temperature control**

Benefits

- One common cable for multiple circuits

Application range

- Connecting cable between Frequency converter and motor
- Connecting cable between servo controler and motor
- Plant engineering

Product features

- Stationary application
- Occasional flexing
- In dry, damp or wet interiors under medium mechanical load conditions
- Outdoor use only with UV protection and in accordance with the temperature range.
- Flame retardant (IEC 60332-1-2)

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- Core insulation: PVC
- Control pairs 0.34 mm² colour coded, from 0.5 mm² black with consecutive imprinted numbering.
- Control pair screened with laminated aluminium foil and tinned copper wire braid
- The model with one control pair is without laminated aluminium foil (FDF).
- PVC outer sheath, grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293
5-core: coloured according to VDE 0293
0.34 mm² pairs: WH/BN; GN/YE

Based on
Core: VDE 0812/0250/0281
Sheath in accordance with VDE 0281/0250

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/
IEC 60228 Class 5

Minimum bending radius
Flexible use: 20 x outer diameter
Fixed installed: 6 x outer diameter

Rated voltage
Supply cores: 600/1000 V
Control core pairs: 250 V/AC

Test voltage
Core: C/C-C/S: 4000 V
Control cores: C/C: 1500V, C/S: 750 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexing: -5°C up to +80°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® SERVO 700				
0036140	4 G 0,75 + 2 x (2 x 0,34) StD	9.6	91.9	120
0036145	4 G 1,5 + 2 x (2 x 0,75) StD	12.1	100.6	185
0036150	4 G 2,5 + (2 x 2 x 0,75) StD	13.9	142.1	327
0036151	4 G 4 + (2 x 0,75 + 2 x 1,0) StD	15.8	217.8	423
0036152	4 G 6 + (2 x 0,75 + 2 x 1,0) StD	16.7	294.6	544
0036154	4 G 16 + (2 x 2 x 1,0) StD	23.5	668.8	1,168
0036025	4 G 1,5 + (2 x 0,75) FDF	11.7	98.0	149
0036001	5 G 1,5 + (2 x 0,75) FDF	12.7	110.0	160
0036015	7 G 1,5 + (2 x 0,75) FDF	12.4	144.8	210
0036026	4 G 2,5 + (2 x 0,75) FDF	13.1	138.6	227
0036020	7 G 2,5 + (2 x 0,75) FDF	15.2	215.7	334

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® SERVO FD 755 P see page 96
- ÖLFLEX® SERVO FD 795 P see page 105

Accessories

- SKINTOP® MS-SC-M see page 657
- SKINDICHT® SM-PE-M see page 687
- EPIC® CIRCON LS1 see page 609
- EPIC® CIRCON LS1 Contacts, tools, accessories see page 617
- Cable Marking Products see page 852

ÖLFLEX® SERVO 700 CY

Combined PVC -control and supply cable for motors of variable frequency drives, shielded

Info

- **Combi motor cable for circuits such as:**
- **Power, Break, Temperature control**
- **EMC compliant**

Benefits

- One common cable for multiple circuits
- Total screening prevents/reduces interference from neighbouring cables

Application range

- Connecting cable between Frequency converter and motor
- Connecting cable between servo controler and motor

Product features

- Stationary application
- Occasional flexing
- In dry, wet and damp interiors
- Outdoor use only with UV protection and in accordance with the temperature range.
- Flame retardant (IEC 60332-1-2)

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- Core insulation: PVC
- Control pairs 0.34 mm² colour coded, from 0.5 mm² black with consecutive imprinted numbering.
- Control pair screened with laminated aluminium foil and tinned copper wire braid
- The model with one control pair is without laminated aluminium foil (FDF).
- Tinned copper braid
- PVC outer sheath, grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293
5-core: coloured according to VDE 0293
0.34 mm² pairs: WH/BN; GN/YE

Based on
Core: VDE 0812/0250/0281
Sheath in accordance with VDE 0281/0250

Conductor stranding
Fine wire according to VDE 0295 Class 5/
IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installed: 6 x outer diameter

Rated voltage
Supply cores: 600/1000 V
Control core pairs: 250 V/AC

Test voltage
Core: C/C-C/S: 4000 V
Control cores: C/C: 1500V, C/S: 750 V
Control core pairs: C/C-C/S: 1000/750 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexing: -5°C up to +80°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® SERVO 700 CY				
0036156	4 G 0,75+2 x (2 x 0,34) StD-CY	10.5	111.1	165
0036157	4 G 1,5+2 x (2 x 0,75) StD-CY	12.7	147.5	245
0036158	4 G 2,5+(2 x 2 x 0,75) StD-CY	14.9	226.1	385
0036159	4 G 4 + (2 x 0,75 + 2 x 1,0) StD-CY	16.6	303.6	482
0036161	4 G 6 + (2 x 0,75 + 2 x 1,0) StD-CY	17.7	379.4	609
0036162	4 G 10 + (2 x 0,75 + 2 x 1,0) StD-CY	21.6	591.7	828
0036163	4 G 16 + (2 x 2 x 1,0) StD-CY	24.5	861.3	1,150
0036164	4 G 25 + (2 x 2 x 1,5) StD-CY	30.1	1,261.8	1,671

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® SERVO 709 CY see page 90
- ÖLFLEX® SERVO FD 755 CP see page 97
- ÖLFLEX® SERVO FD 790 CP see page 104
- ÖLFLEX® SERVO FD 795 CP see page 106
- SERVO cables in acc. to INDRAMAT® Standard INK see page 110

Accessories

- EPIC® CIRCON LS1 see page 609
- EPIC® CIRCON LS1 Contacts, tools, accessories see page 617

ÖLFLEX® SERVO 720 CY

Resolver & encoder cables for fixed installation

Info

- **Fits to encoders of several manufacturers**
- **Signal sensor/encoder cable**
- **Resolver**

Benefits

- Thin, light, reliable functionality
- Total screening prevents/reduces interference from neighbouring cables

Application range

- Analogue and incremental encoders in servo drives.
- Servo drives and Servo harnessings
- Measurement, control and electrical applications

Product features

- Easy laying
- EMC compliant
- Stationary application
- Occasional flexing
- In dry, wet and damp interiors

Approvals (Norm references)

RoHS

- This product is designed for appropriate use in a voltage range < 50 V AC or 75 V DC. Therefore, the EEC (Low Voltage Directive) does not apply.

Design

- Fine strands of bare copper wires
- Core insulation: Based on PVC
- Identity colour code see “Technical data”
- Cores and pairs twisted together
- Tinned copper screen braiding (*with drain wire)
- PVC outer sheath, grey (RAL 7001)
- Flame retardant (IEC 60332-1-2)

Technical data

Core identification code
0036 170 pairs: rd/bk, bn/gn, gy/pk, bl/vt; single cores: wt, bn

0036 175 cores 0.14: wt, bn, gn, ye, gy, pk, bl, rd, bk, vt; cores 0.5: wt, bn

0036 177 cores 0.14: wt, bn, gn, ye, gy, pk, bl, rd, bk, vt; cores 0.5: wt, bn, bl, bk
-
0036 178 cores 0.5: wt, bn, gn, ye; cores 0.14 DIN 47100 from grey.
0036 181 pairs 0.14: rd/bk, bn/gn, ye/vt, gy/pk; single core.0.5: wt, bl, wtgn, bngn
0036 168 pairs: 0.14 gn/ye, rd/bl, gy/pk; single core.0.5: wt, bn

Peak working voltage
(not for power applications) 350 V Uss
Rated voltage: 48 V AC

Based on
Core in accordance with VDE 0812/0281
KRT
Standard version with UL-approval for multi-wire copper conductors with a cross-section range of 10-400 mm².

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire in accordance with VDE 0295 Cl.5/ IEC 60228 Class 5 *) from 0.5 mm²

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installed: 6 x outer diameter

Test voltage
C/C - C/S 2000 - 1000 V

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
Resolver Feedback Cable ÖLFLEX ® SERVO 720 CY				
0036170	4 x 2 x 0,25 + 2 x 1 CY *	8.9	70.8	128
0036175	10 x 0,14 + 2 x 0,5 CY	7.9	39.3	88
0036177	10 x 0,14 + 4 x 0,5 CY	8.2	51.1	101
0036178	15 x 0,14 + 4 x 0,5 CY	8.7	59.7	145
0036181	4 x 2 x 0,14 + 4 x 0,5 CY	8.1	48.8	95
0036168	3 x (2 x 0,14 DY) + 2 x (0,5 DY) CY	8.5	67.0	128

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis‘ and ‚Metal index‘ see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® SERVO FD 760 CP see page 99
- ÖLFLEX®-SERVO-FD 770 CP see page 99
- ÖLFLEX® SERVO FD 770 CP DESINA® see page 99
- Special Encoder and resolver cables see page 112

Accessories

- EPIC® CIRCON M23 Housings see page 592
- EPIC® CIRCON M23 Inserts see page 596
- EPIC® CIRCON M23 Contacts, tools, accessories see page 604

ÖLFLEX® SERVO 730

Motor supply cable 0.6/1 kV

Info
- For machine internal wiring of power circiuts

ÖLFLEX® SERVO 730 CY

Motor supply cable 0.6/1 kV, screended

Info
- For frequency converter powered 3 Phases AC motors
- EMC compliant

Benefits
- Easy laying

Application range

ÖLFLEX® SERVO 730
- Power circuits for electrical equipment in automation engineering
- Plant engineering
- For usage whithin 690V industrial power circuits
- In dry, wet and damp interiors
- Outdoor use only in accordance with the indicated temperature range

ÖLFLEX® SERVO 730 CY
- For machine internal wiring of power circiuts
- Plant engineering
- In dry, wet and damp interiors
- Outdoor use only in accordance with the indicated temperature range

Product features

ÖLFLEX® SERVO 730
- Stationary application
- Occasional flexing
- Flame retardant (IEC 60332-1-2)

ÖLFLEX® SERVO 730 CY
- Stationary application
- Occasional flexing
- In dry, damp or wet interiors under medium mechanical load conditions
- Outdoor use only with UV protection and in accordance with the temperature range.
- Flame retardant (IEC 60332-1-2)

Approvals (Norm references)

CE RoHS

Design

ÖLFLEX® SERVO 730
- Fine strands of bare copper wires
- Core insulation: PVC
- PVC outer sheath, grey (RAL 7001)

ÖLFLEX® SERVO 730 CY
- Fine strands of bare copper wires
- Core insulation: PVC
- PVC- inner sheath, grey
- Tinned copper braid
- PVC outer sheath, grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Based on
VDE 0250/0281

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
ÖLFLEX® SERVO 730
Occasional flexing: 15 x cable diameter
ÖLFLEX® SERVO 730 CY
Occasional flexing: 20 x cable diameter
Fixed installed: 6 x outer diameter

Rated voltage
600/1000 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE

Range of temperature
Occasional flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® SERVO 730				
0036130	4 G 1.5	10.1	58.0	154
0036131	4 G 2.5	11.9	96.0	225
0036132	4 G 4	13.7	154.0	323
0036133	4 G 6	15.0	231.0	462
0036134	4 G 10	18.8	384.0	769
0036135	4 G 16	21.9	615.0	1,153

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® SERVO 730 CY				
0036105	4 G 1.5	12.1	102.0	262
0036106	4 G 2.5	14.3	168.0	413
0036107	4 G 4	15.9	238.0	587
0036108	4 G 6	17.4	318.0	715
0036109	4 G 10	21.9	574.0	1,188
0036110	4 G 16	24.7	809.0	1,656
0036111	4 G 25	30.2	1,165.0	2,179

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

ÖLFLEX® SERVO 730
- ÖLFLEX® CLASSIC 100 see page 22
- ÖLFLEX® CLASSIC 130 H BK 0,6/1kV see page 57
- ÖLFLEX® SERVO FD 785 P see page 103
- ÖLFLEX® CLASSIC 110 BLACK 0,6/1kV see page 34

ÖLFLEX® SERVO 730 CY
- ÖLFLEX® CLASSIC 100 CY see page 25
- ÖLFLEX® CLASSIC 100 BK POWER 0,6/1kV see page 27
- ÖLFLEX® CLASSIC 135 CH BK 0,6/1kV see page 58
- ÖLFLEX® CLASSIC 110 CY BLACK 0,6/1 kV see page 35

Accessories

ÖLFLEX® SERVO 730
- Rectangular connectors see page 447
- Protective cable conduit systems plastic see page 755
- Cable Marking Products see page 852

ÖLFLEX® SERVO 730 CY
- SKINTOP® MS-SC-M see page 657
- SKINTOP® MS-M BRUSH see page 658
- Rectangular connectors see page 447

ÖLFLEX® SERVO 2YSLCY-JB

EMC optimized motor cable, low capacitance, double screened

Info

- **EMC optimised**
- **3+3: Symmetry against common-mode disturbance effects**
- **Double shielded**

Benefits

- Allows EN 61800-3 conform, EMC -conform errection of power drive sytems
- For very large power drive systems
- More technical details, see data sheeth DB0036425EN

Application range

- Interconnection between frequency converter and motor
- Paper industry
- Chemical industry
- Heavy industry

Product features

- Its low capacity design allows longer cable lengths between the frequency converter and motor.
- Its low capacity design occurs significant lower level of interferene currents
- In dry, wet and damp interiors
- The 2YSLCYK black version can also be used outdoors in direct UV rays. Direct burial in the ground is also possible.
- Flame retardant (IEC 60332-1-2)

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- Core insulation: Polyethylene (PE)
- Cores twisted concentrically (this is re-spectively between the gusset in protective conductors divided into three)
- Over the cores aluminium foil
- Screening braid of tinned copper wires
- 4-core design: PVC -outer sheath, transparent
- 3+3 cond version: PVC -outer sheath, black, for outdoor use and direct burial

Technical data

Core identification code
Colours according to HD 308 S2 VDE 0293-308

Based on
VDE 0207 / 0250 / 0295

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Static:
4 x cable diameter

Rated voltage
U_0/U:
0.6/1kV

Test voltage
4000 V

Protective conductor
This is distributed evenly in the gusset in protective conductors divided into three

Range of temperature
Flexing: -5°C up to +70°C
Fixed installation: -40°C up to +70°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX ® SERVO 2YSLCY-JB (transparent)				
0036425	4 G 1.5	11.4	95.0	230
0036426	4 G 2.5	12.4	150.0	300
0036427	4 G 4	15.6	235.0	485
0036428	4 G 6	17.0	320.0	630
0036429	4 G 10	19.6	533.0	860
0036430	4 G 16	22.1	789.0	1,290
0036431	4 G 25	26.3	1,236.0	1,860
0036432	4 G 35	29.5	1,662.0	2,610
0036433	4 G 50	35.8	2,345.0	2,950
0036434	4 G 70	40.3	3,196.0	3,950
0036435	4 G 95	46.5	4,316.0	5,300
0036436	4 G 120	53.2	5,435.0	6,600
0036437	4 G 150	57.3	6,394.0	7,043
0036438	4 G 185	62.3	7,639.0	8,384
ÖLFLEX® SERVO 2YSLCYK-JB black with splitted protective conductors				
0036439	3X1,5 + 3G0,25	11.4	88.0	140
0036440	3X2,5 + 3G0,5	12.2	144.0	220
0036441	3X4,0 + 3G0,75	14.4	224.0	323
0036442	3X6,0 + 3G1,0	15.7	276.0	420
0036443	3X10 + 3G1,5	18.0	491.0	615
0036444	3X16 + 3G2,5	20.2	723.0	819
0036445	3X25 + 3G4,0	23.8	1,136.0	1,325
0036446	3X35 + 3G6,0	26.9	1,535.0	1,718
0036447	3X50 + 3G10	32.6	2,156.0	2,399
0036448	3X70 + 3G10	36.4	2,871.0	3,056
0036449	3X95 + 3G16	42.0	3,953.0	4,162
0036450	3X120 + 3G16	47.8	4,836.0	5,074
0036451	3X150 + 3G25	51.6	5,412.0	6,128
0036479	3X185 + 3G35	56.5	7,041.0	7,500

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® SERVO 9YSLCY-JB see page 92

Accessories

- SKINTOP® MS-SC-M see page 657
- SKINTOP® MS-M BRUSH see page 658

ÖLFLEX® SERVO 709 CY

Combined control and supply line for servo motors with UL AWM approval

Info

- **EMC compliant**
- **Fits to many manufacturers servo motors**

Benefits

- One common cable for multiple circuits
- Multi-Standard= less part varieties= cost savings

Application range

- Connecting cable between Frequency converter and motor
- Connecting cable between servo controler and motor
- Plant engineering
- Machine tools

Product features

- Oil resistant
- Flame retardant acc. IEC 60332-1-2 & CSA FT1
- Stationary application
- Occasional flexing

Approvals (Norm references)

- USA: Acc. NFPA79 Ed 08 in industrial machinery as part of a listed assembly only.
- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Fine strands of bare copper wires
- Core insulation: PVC
- Control pair screened with laminated aluminium foil and tinned copper wire braid
- Tinned copper braid
- PVC outer sheath, orange (RAL 2003)

Technical data

Core identification code
0.34 mm² pairs: wt/bn; gn/ye, from 0.5 mm² black wires with white printed numbers (VDE 0293)

Approvals
USA UL-AWM-Style 20886 VW1; Canada cRU AWM II A/B FT1

Based on
VDE 0245, 250, 281

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installed: 6 x outer diameter

Rated voltage
IEC: power cores: 600/1000 V
Control cores: 300/500 V
UL: power cores: U: 1000 V
Control core pairs: U: 1000 V

Test voltage
Cores: C/C & C/S 4000 V
Control cores: C/C: 4000 V; C/S: 3000 V

Protective conductor
G = with protective conductor GN/YE

Range of temperature
Ocassional flexing: -5°C to +90°C
Fixed installation: -40°C up to +90°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® SERVO 709 CY				
0038010	4 G 1,5 CY	9.9	90.0	173.0
0038011	4 G 2,5 CY	11.8	134.0	250.0
0038012	4 G 4 CY	13.8	217.0	368.0
0038013	4 G 6 CY	15.3	296.0	478.0
0038014	4 G 10 CY	19.5	491.0	781.0
0038015	4 G 16 CY	23.1	742.0	1,198.0
0038016	4 G 25 CY	27.5	1,114.0	1,730.0
0038017	4 G 35 CY	30.9	1,522.0	2,284.0
0038018	4 G 50 CY	38.5	2,194.0	3,393.0
0038019	4 G 0,75 + 2 x (2x0,34)StD-CY	12.4	96.0	225.0
0038020	4 G 1,0 + 2 x (2x0,75)StD-CY	13.6	149.0	296.0
0038021	4 G 1,5 + 2 x (2x0,75)StD-CY	14.8	169.0	343.0
0038022	4 G 2,5 + 2 x (2x1)StD-CY	16.3	238.0	420.0
0038023	4 G 4 + (2x1+2x1,5)StD-CY	16.7	317.0	537.0
0038024	4 G 6 + (2x1+2x1,5)StD-CY	19.2	426.0	704.0
0038025	4 G 10 + (2x1+2x1,5)StD-CY	22.2	599.0	965.0
0038026	4 G 16 + (2x1+2x1,5)StD-CY	25.5	873.0	1,380.0
0038027	4 G 25 + (2x2x1,5)StD-CY	30.1	1,265.0	1,954.0
0038028	4 G 35 + (2x2x1,5)StD-CY	32.6	1,659.0	2,564.0
0038029	4 G 50 + (2x2x2,5)StD-CY	39.6	2,349.0	3,785.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
DESINA® is a registered trademark of the Association of German Machine Tool Manufacturers

Comparable products

- ÖLFLEX® SERVO FD 790 CP see page 104
- ÖLFLEX® SERVO FD 795 CP see page 106
- SERVO cables in acc. to INDRAMAT® Standard INK see page 110

Accessories

- SKINTOP® MS-SC-M see page 657
- SKINTOP® MS-M BRUSH see page 658

New

ÖLFLEX® VFD with Signal

Multible listed flexible VFD Cable with a Pair for Brake or Temperature Sensor

Info

- **According to NFPA 79 Edition 2007 "Electrical Standard for Industrial Machinery" USA**
- **Fits to many manufacturers servo motors**
- **EMC compliant**

Benefits

- One common cable for multiple circuits
- Multi-Standard= less part varieties= cost savings
- Cost saving, easy installation due to renouncement of closed raceways (suitable for open wiring)
- Lapp Surge Guard insulation protects agains cable failure due to presence of typical very high over voltage peaks during VFD'S operations

Application range

- Connecting cable between Frequency converter and motor
- Connecting cable between servo controler and motor
- Plant engineering
- Machine tools

Product features

- Oil resistant according to UL OIL RES I & II
- Flame retardant according to CSA FT4 UL Vertical-Tray Flame Test
- Water resistant UL Wet Approval 75 °C
- Stationary application
- Occasional flexing

Approvals (Norm references)

- TC-ER (Tray Cable Exposed Run) approval for open wiring between cable tray and industrial machines/plants acc. to NEC 336.10(7)
- Class 1, Div. 2 per NEC "National Electrical Code" Art. 336, 392, 501
- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Fine strands of bare copper wires
- Core insulation: made of special "Lapp Surge Guard" material
- Control pair screened with laminated aluminium foil and tinned drain wire
- Barrier tape
- Aluminum-plated foil
- Tinned copper braid with drain wire
- Special blended PVC outer sheath, black (RAL 9005)

Technical data

Core identification code
Black with white numbers

Approvals
USA: UL MTW, TC-ER, WTTC 1000V, DP-1, AWM 105°C
Canada: c(UL) CIC/TC FT4, CSA AWM I/II A/M FT4

Based on
VDE 0245, 250, 281

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire

Minimum bending radius
Occasional flexing: 10 x cable diameter
Static:
4 x cable diameter

Rated voltage
UL/CSA: 600 V (TC, MTW, CIC), WTTC 1000V
IEC U0/U: 600/1000V

Test voltage
7500 V

Protective conductor
G = with protective conductor GN/YE

Range of temperature
Flexing: -5°C up to +90°C(AWM: +105°)
Fixed installation: -25°C up to +90°C(AWM: +105°)

Part number	Number of cores and AWG per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
7416048	4 G AWG16 + (2 x AWG18)	13.1	125.0	262
7414048	4 G AWG14 + (2 x AWG18)	14.1	160.0	372
7414044	4 G AWG 14 + (2 x AWG14)	14.8	186.0	402
7412048	4 G AWG12 + (2 x AWG18)	15.5	210.0	438
7412044	4 G AWG12 + (2 x AWG14)	16.1	239.0	467
7410044	4 G AWG10 + (2 x AWG14)	18.4	347.0	705
7408044	4 G AWG8 + (2 x AWG14)	24.2	494.0	903
7406044	4 G AWG6 + (2 x AWG14)	27.5	677.0	1,262
7404044	4 G AWG4 + (2 x AWG14)	33.6	1,016.0	1,862

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
DESINA® is a registered trademark of the Association of German Machine Tool Manufacturers

Comparable products

- SERVO cables in acc. to SIEMENS® Standard 6FX 5008- see page 93
- ÖLFLEX® TRAY II CY see page 48
- ÖLFLEX® SERVO FD 795 CP see page 106

Accessories

- SKINTOP® MS-SC-M see page 657
- SKINTOP® MS-M BRUSH see page 658

ÖLFLEX® SERVO 9YSLCY-JB

Combined control and supply line for servo motors with AWM approval

Info

- **EMC optimised**
- **3+3: Symmetry against common-mode disturbance effects**
- **Double shielded**

Benefits

- Allows EN 61800-3 conform, EMC -conform errection of power drive sytems
- For very large power drive systems
- EN/VDE 90°C rated PP insulation

Application range

- Interconnection between frequency converter and motor
- Paper industry
- Chemical industry
- Heavy industry

Product features

- Its low capacity design allows longer cable lengths between the frequency converter and motor.
- Its low capacity design occurs significant lower level of interferene currents
- In dry, wet and damp interiors
- Type 9YSLCY black: Also for outdoors as well as direct burial, excluded in USA or Canada
- Flame retardant acc. IEC 60332-1-2 & CSA FT1

Approvals (Norm references)

- USA: Acc. NFPA79 Ed 08 in industrial machinery as part of a listed assembly only.
- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Fine strands of bare copper wires
- Core insulation: Polyprophylene (PP)
- Cores twisted concentrically (this is respectively between the gusset in protective conductors divided into three)
- Over the cores aluminium foil
- Screening braid of tinned copper wires
- 4-core design: PVC -outer sheath, transparent
- 3+3 cond version: PVC -outer sheath, black, for outdoor use and direct burial

Technical data

Core identification code
Colours according to HD 308 S2 VDE 0293-308

Approvals
UL Reg. for the USA: AWM Style 2570 or 20886, 1kV 80° VW-1
UL Reg. for CAN. AWM I/II A/B 1kV 80° FT 1
EU: based on VDE 0276, 0250, 0207

Specific insulation resistance
20 GOhm x km

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
IEC U0/U: 600/1000V
UL & CSA: 1000V

Test voltage
4000 V

Protective conductor
This is distributed evenly in the gusset in protective conductors divided into three

Range of temperature
Flexing UL/CSA: -5°C up to +80°C; IEC: -5°C up to +90°C
Fixed installation: UL/CSA: -40°C up to +80°C; IEC: -40°C up to +90°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® SERVO 9YSLCY-JB (transparent)				
0037000	4 G 1,5	10.5	87.0	230
0037001	4 G 2,5	11.8	133.0	300
0037002	4 G 4	13.3	213.0	485
0037003	4 G 6	14.9	298.0	630
0037004	4 G 10	17.7	460.0	860
0037005	4 G 16	21.5	707.0	1,290
0037006	4 G 25	26.3	1,100.0	1,860
0037007	4 G 35	29.7	1,542.0	2,610
0037008	4 G 50	34.1	2,206.0	2,950
0037009	4 G 95	40.9	3,002.0	3,950
0037010	4 G 95	45.4	4,004.0	5,300
0037011	4 G 120	49.8	5,108.0	6,600
0037012	4 G 150	56.1	6,225.0	7,043
0037013	4 G 185	61.4	7,568.0	8,384
0037014	4 G 240	67.9	9,940.0	12,150
ÖLFLEX® SERVO 9YSLCY-JB BK (Black) / IEC: 90° C				
0037015	3 X1,5 + 3G0,25	11.4	88.0	140
0037016	3 X2,5 + 3G0,5	12.9	130.0	220
0037017	3 X4 + 3G0,75	13.6	224.0	323
0037018	3 X6 + 3G1,0	15.2	276.0	420
0037019	3 X10 + 3G1,5	17.4	511.0	615
0037020	3 X 16 + 3G2,5	20.0	751.0	819
0037021	3 X 25 + 3G4	24.3	1,204.0	1,325
0037022	3 X 35 + 3G6	27.5	1,535.0	1,718
0037023	3 X50 + 3G10	31.1	2,156.0	2,399
0037024	3 X70 + 3G10	37.1	2,980.0	3,056
0037025	3 X 95 + 3G16	40.0	3,953.0	4,162
0037026	3 X120 + 3G16	42.6	4,836.0	5,074
0037027	3 X 150 + 3G25	50.0	5,412.0	6,128
0037028	3 X 185 + 3G35	55.6	7,077.0	7,820

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® SERVO 2YSLCY-JB see page 89

Accessories

- SKINTOP® MS-SC-M see page 657
- SKINDICHT® SM-PE-M see page 687
- SKINTOP® MS-M BRUSH see page 658

SERVO cables in acc. to SIEMENS® Standard 6FX 5008-

Sensor leads for signal transmission systems and Motor connection cables

Info

- **Cost saving alternative to FX8 serie**
- **If for fixed installation or occasionally moved use.**
- **EMC compliant**

Benefits

- New motor & servo motor cable up to 6mm²: Low capacitance characteristic because its PP-Insulation
- Multi-Standard= less part varieties= cost savings

Application range

- Servo and power drive systems
- Plant engineering
- Machine tool manufacturing

Product features

- Oil resistant
- Flame retardant acc. IEC 60332-1-2 & CSA FT1

Approvals (Norm references)

- USA: Acc. NFPA79 Ed 08 in industrial machinery as part of a listed assembly only.
- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Design according to SIEMENS® standard 6FX 5008.
- Core insulation: Up to 6mm²: PP, 10mm² and larger: PVC
- Cores and pairs twisted together
- Tinned copper braid
- Special PVC outer sheath
- Signal cables: green (RAL 6018)
- Motor- and servo motor cables: orange (RAL 2003)

Technical data

Approvals
Power cables:
VDE-registered
UL/CSA AWM style 2570
Signal cables:
UL/CSA AWM style 2502

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
For fixed installation: 5 x outside diameter
Flexing:
15 x cable diameter

Rated voltage
Signal cables:
- 30 V AC/DC (UL/CSA)
- 250 V AC (IEC)
Power cables:
Cores:
1000 V (UL/CSA)
600 / 1000 V (IEC)
Control cores:
1000 V (UL/CSA)
30 V AC (IEC)

Test voltage
Power cables:
Cores: 4000 V eff.
Control cores: 2000 V eff.
Signal cables: 500 V rms

Range of temperature
Fixed installation: from -20°C up to +80°C
Flexing: from -0°C up to +60°C

Part number	Number of cores and mm² per conductor	SIEMENS part. No.	Outer diameter in mm approx.	Sheath colour	Copper index kg/km	Weight kg/km approx.
Signal cables						
0025724	4x2x0,38+4x0,5	6FX5008-1BD21	9.0	green	76.4	120
0025725	3x(2x0,14) + 4x0,14 + 2x0,50	6FX5008-1BD41	8.9	green	63.0	100
0025726	3x(2x0,14) + 4x0,14 + 2x0,50 + 4x0,23	6FX5008-1BD51	9.5	green	69.0	139
Motor cables						
00257001	4 G 1.5	6FX5008-1BB11 LC	8.0	orange	88.0	131
00257011	4 G 2.5	6FX5008-1BB21 LC	9.6	orange	132.0	219
00257021	4 G 4	6FX5008-1BB31 LC	11.0	orange	195.0	312
00257031	4 G 6	6FX5008-1BB41 LC	13.1	orange	280.0	380
0025704	4 G 10	6FX5008-1BB51	19.3	orange	445.0	620
0025705	4 G 16	6FX5008-1BB61	23.3	orange	715.0	1,060
0025706	4 G 25	6FX5008-1BB25	26.9	orange	1,110.0	1,640
0025707	4 G 35	6FX5008-1BB35	30.3	orange	1,540.0	2,310
0025708	4 G 50	6FX5008-1BB50	36.5	orange	2,160.0	3,240
Servo cables						
00257151	4 G 1,5 + (2x1,5)	6FX5008-1BA11 LC	10.4	orange	150.0	248
00257161	4 G 2,5 + (2x1,5)	6FX5008-1BA21 LC	12.0	orange	194.0	310
00257171	4 G 4,0 + (2x1,5)	6FX5008-1BA31 LC	13.6	orange	272.0	445
00257181	4 G 6,0 + (2x1,5)	6FX5008-1BA41 LC	15.6	orange	351.0	554
0025719	4 G 10 + (2x1,5)	6FX5008-1BA51	21.0	orange	536.0	806

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Siemens part designations (6FX5002/5008, 6FX7002/7008, 6FX8002/8008) are registered trademarks of Siemens AG and for comparing purpose only. DESINA® is a registered trademark of the Association of German Machine Tool Manufacturers
FD-cables for powerchain use (continuous flexing) should only be handled on drums prior to installation.
Part number refers to genuine LAPP part

Comparable products

- ÖLFLEX® SERVO FD 790 CP see page 104
- ÖLFLEX® SERVO FD 795 CP see page 106
- SERVO cables in acc. to SIEMENS® Standard 6FX 8008- see page 108
- SERVO cables in acc. to SIEMENS® Standard 6FX 8PLUS see page 109

Accessories

- Circular connectors see page 592
- SKINDICHT® EMC/Earthing see page 657

New

SERVO Cables in acc. to SEW® Standard

Combined control and supply line for servomotors with AWM approval

Info

- **Conform to DESINA®**
- **For power- and break circuits**
- **EMC compliant**

Benefits

- Multi-Standard= less part varieties= cost savings

Application range

- Designed especially to connect SEW servo motors.
- Connecting cable between servo controler and motor
- Plant engineering
- Machine tools

Product features

- For fixed installation or occasionally moved use.
- Oil resistant
- Flame retardant acc. IEC 60332-1-2 & CSA FT1

Approvals (Norm references)

CE UL RoHS

- USA: Acc. NFPA79 Ed 08 in industrial machinery as part of a listed assembly only.
- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Fine strands of bare copper wires
- Core insulation: TPE
- Control core-triplet screened with laminated aluminium foil and tinned copper wire layer
- Cores twisted in short lay lengths
- Tinned copper braid
- PVC outer sheath, orange (RAL 2003)

Technical data

Core identification code
Power: black cores with white letters U, V, and 1 core gnye
Control cores: black cores with white numbers 1, 2 and 3

Approvals
UL-AWM-Style 2570

Based on
VDE 0250, 0281

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Static:
4 x cable diameter

Rated voltage
Power cores: IEC 750V, UL 600V
Control cores: 1mm² and 1,5mm: IEC 350V, UL 600V

Test voltage
2000 V

Protective conductor
G = with protective conductor GN/YE

Range of temperature
Flexing: -10°C up to +80°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
Servo motor cables for fixed installation				
0038060	4G1,5 +(3x1StD)CY	12.0	151.0	300
0038061	4G2,5 +(3x1StD)CY	13.4	212.9	370
0038062	4G4 +(3x1StD)CY	15.0	281.8	476
0038063	4G6 +(3x1,5StD)CY	17.0	392.8	625
0038064	4G10 +(3x1,5StD)CY	20.0	625.1	1,024

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
SEW is an registered trademark of SEW Eurodrive GmbH & Co KG, Ernst-Blickle Str. 42, D-76646 Bruchsal

Accessories

- SKINTOP® MS-SC-M see page 657
- SKINTOP® MS-M BRUSH see page 658

ÖLFLEX® SERVO FD 750 P

Combined control and supply line for servo motors

Info

- **For power- , break- and overheating-control- circuits**
- **Fits to many manufacturers servo motors**

Benefits

- Well-proven, reliable

Application range

- Connecting cable between servo controler and motor
- In power chains or moving machine parts
- Plant engineering
- Especially in wet areas of machine tools and transfer lines subject to average mechanical stress
- Assembly lines, production lines, in all kinds of machines

Product features

- Designed for up to 5 million bending change cycles in the power chain
- Abrasion and cut resistant
- Oil resistant
- Flame retardant according to IEC 60332-1-2

Approvals (Norm references)

CE RoHS

- For travel distances up to 10 m.
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3

Design

- Extra fine strands of plain copper wires (Class 6)
- Core insulation: PVC or TPE (control cores)
- Control core pairs screened with laminated aluminium foil and layer of tinned copper wires
- Cores and pairs twisted together
- Nonwoven wrapping
- Sheath: Co-extruded PVC-PUR- compound, grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293
0.34 mm² pairs: wh/bn, gn/ye

Based on
VDE 0250/0281/0282

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire in acc. with VDE 0295 Cl.6/IEC 60228 Cl.6*
*) from 0.5 mm²

Minimum bending radius
For flexible applications: 12 x outside diameter
Static:
4 x cable diameter

Rated voltage
Core: 600/1000 V
Control cores: 250 V AC

Test voltage
Cores: 4000 V
Control cores: C/C: 1500 V, C/S:750 V

Protective conductor
G = with green/yellow earthing conductor

Range of temperature
Flexing: -10°C up to +70°C
Fixed installation: -40°C up to +70°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® SERVO FD 750 P				
0036240	4 G 0,75 + 2 x (2 x 0,34) StD	9.6	54.0	106
0036245	4 G 1,5 + 2 x (2 x 0,75) StD	12.2	100.6	185
0036250	4 G 2,5 + 2 x (2 x 0,75) StD	15.5	140.7	308
0036251	4 G 4,0 + (2 x 0,75) StD + (2 x 1,0) StD	17.0	216.4	420
0036252	4 G 6,0 + (2 x 0,75) StD + (2 x 1,0) StD	19.4	293.2	550
0036253	4 G 10 + (2 x 0,75) StD + (2 x 1,0) StD	23.0	446.0	804

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® SERVO FD 755 P see page 96
- ÖLFLEX® SERVO FD 795 P see page 105

Accessories

- SKINTOP® ST-M see page 641
- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® SERVO FD 755 P

Super-flexible servo motor connecting cables for power chains with long travels

Info

- **For power- , break- and overheating-control- circuits**
- **Smalles bending radii of all FD cables**
- **MUD res. acc. IEC61892-4 Annex D**

Benefits

- Suitable for the most important servomotor drive systems of leading manufacturers.
- Well-proven, reliable
- Can also be used mobile outdoors
- Halogen-free

Application range

- Connecting cable between servo controler and motor
- In power chains or moving machine parts
- Plant engineering
- Especially in wet areas of machine tools and transfer lines subject to average mechanical stress
- Assembly lines, production lines, in all kinds of machines

Product features

- Designed for up to 5 million bending change cycles in the power chain
- Abrasion and cut resistant
- Oil resistant
- Flame retardant according to IEC 60332-1-2
- Flexible down to -40 °C

Approvals (Norm references)

CE RoHS

- For travel distances up to 100 m (horizontal)
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3

Design

- Extra fine strands of plain copper wires (Class 6)
- Core insulation: TPE
- Control core pairs screened with laminated aluminium foil and layer of tinned copper wires
- Pairs and cores twisted together with polyester fibres in extremely short lay lengths
- Nonwoven wrapping
- Polyurethane sheath (PUR), grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Based on
VDE 0250/0281/0282

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire in accordance with VDE 0295 Class 6/ IEC 60228 Cl. 6**). Control pairs fine wire starting from 0.5 mm²

Minimum bending radius
For flexible applications: 5 x outside diameter
Fixed installation: 3 x outer diameter

Rated voltage
Supply cores: 600/1000 V
Operating voltage: control cores: 250 V AC

Test voltage
Supply cores: 4000 V
Control cores: C/C: 1500 V; C/S: 750 V

Protective conductor
G = with protective conductor GN/YE

Range of temperature
Flexing: -40°C up to +80°C
Fixed installation: -50°C up to +90°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® SERVO FD 755 P				
0036350	4 G 1,5 + 2 x (2 x 0,75 StD) P	15.0	96.0	211
0036351	4 G 2,5 + 2 x (2 x 0,75 StD) P	15.5	134.0	259
0036353	4 G 6,0 + (2 x 0,75 StD) + (2 x 1,0 StD) P	17.8	283.0	444
0036601	4 G 1,5 + (2 x 1,0 StD) P	12.2	86.4	180
0036602	4 G 2,5 + (2 x 1,0 StD) P	13.5	124.8	234
0036603	4 G 4,0 + (2 x 1,0 StD) P	15.1	182.4	320
0036604	4 G 6,0 + (2 x 1,0 StD) P	16.9	259.2	404
0036605	4 G 10 + (2 x 1,0 StD) P	21.0	413.0	635
0036606	4 G 16 + (2 x 1,5StD) P	23.0	660.3	943
0036608	4 G 35 + (2 x 1,5 StD) P	32.4	1,389.9	1,864

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® SERVO FD 795 P see page 105

Accessories

- EPIC® CIRCON LS1 see page 609
- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® SERVO FD 755 CP

Super-flexible servo motor connecting cables for power chains with long travels

Info

- **For power- , break- and overheating-control- circuits**
- **MUD res. acc. IEC61892-4 Annex D**
- **EMC compliant**

Benefits

- Suitable for the most important servomotor drive systems of leading manufacturers.
- Well-proven, reliable
- Can also be used mobile outdoors
- Halogen-free

Application range

- Connecting cable between servo controler and motor
- Plant engineering
- Especially in wet areas of machine tools and transfer lines subject to average mechanical stress
- Assembly lines, production lines, in all kinds of machines

Product features

- Designed for up to 5 million bending change cycles in the power chain
- Abrasion and cut resistant
- Oil resistant
- Flame retardant according to IEC 60332-1-2
- Flexible down to -40 °C

Approvals (Norm references)

CE RoHS

- For travel distances up to 100 m (horizontal)
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3

Design

- Extra fine strands of plain copper wires (Class 6)
- Core insulation: TPE
- Control core pairs screened with laminated aluminium foil and layer of tinned copper wires
- Pairs and cores twisted together with polyester fibres in extremely short lay lengths
- Nonwoven wrapping
- Tinned copper braid
- Polyurethane sheath (PUR), grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Based on
VDE 0250/0281/0282

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire according to VDE 0295 Class 6 / IEC 60228 Class 6
Control pairs: fine wire

Minimum bending radius
For flexible applications: 7.5 x outside diameter
Static:
4 x cable diameter

Rated voltage
Supply cores: 600/1000 V
Operating voltage: control pairs: 250 V AC

Test voltage
Core: C/C-C/S: 4000 V
Control cores:C/C-C/S: 1000 V

Protective conductor
G = with protective conductor GN/YE

Range of temperature
Flexing: -40°C up to +80°C
Fixed installation: -50°C up to +90°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® SERVO FD 755 CP				
0036360	4 G 1,5 + 2 x (2 x 0,75 StD) CP	15.8	150.0	270
0036361	4 G 2,5 + 2 x (2 x 0,75 StD) CP	16.0	190.0	316
0036362	4 G 4 + (2 x 0,75 StD) + (2 x 1,0 StD) CP	17.4	267.0	424
0036363	4 G 6 + (2 x 0,75 StD) + (2 x 1,0 StD) CP	19.1	371.0	540
0036364	4 G 10 + (2 x 0,75 + 2 x 1,0 StD) CP	22.5	537.0	776
0036365	4 G 16 + (2 x 2 x 1,0 StD) CP	25.0	824.0	1,122
0036366	4 G 25 + (2 x 2 x 1,5 StD) CP	29.7	1,258.0	1,670
0036370	4 G 1,5 + (2 x 1,0 StD) CP	13.1	131.0	229
0036371	4 G 2,5 + (2 x 1,0 StD) CP	14.2	175.0	289
0036372	4 G 4 + (2 x 1,0 StD) CP	16.2	238.0	381
0036373	4 G 6 + (2 x 1,0 StD) CP	17.4	318.0	468
0036374	4 G 10 + (2 x 1,0 StD) CP	22.5	512.0	743
0036375	4 G 16 + (2x1,5 StD) CP	24.4	812.0	1,107

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® SERVO FD 795 CP see page 106
- SERVO cables in acc. to SIEMENS® Standard 6FX 8008- see page 108
- SERVO cables in acc. to INDRAMAT® Standard INK see page 110
- SERVO cables in acc. to LENZE® Standard see page 111

Accessories

- SKINTOP® MS-SC-M see page 657
- SKINTOP® MS-M BRUSH see page 658
- EPIC® CIRCON LS1 see page 609
- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® SERVO FD 755 CP DESINA®

Super-flexible servo motor connecting cables for power chains with long travels

Info

- **For power- , break- and overheating-control- circuits**
- **MUD res. acc. IEC61892-4 Annex D**
- **EMC compliant**

Benefits

- Suitable for the most important servomotor drive systems of leading manufacturers.
- Well-proven, reliable
- Can also be used mobile outdoors
- Halogen-free

Application range

- Connecting cable between servo controler and motor
- In power chains or moving machine parts
- Plant engineering
- Especially in wet areas of machine tools and transfer lines subject to average mechanical stress
- Assembly lines, production lines, in all kinds of machines

Product features

- Designed for up to 5 million bending change cycles in the power chain
- Abrasion and cut resistant
- Oil resistant
- Flame retardant according to IEC 60332-1-2
- Flexible down to -40 °C

Approvals (Norm references)

CE RoHS

- For travel distances up to 100 m (horizontal)
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3

Design

- Extra fine strands of plain copper wires (Class 6)
- Core insulation: TPE
- Control core pairs screened with laminated aluminium foil and layer of tinned copper wires
- Pairs and cores twisted together with polyester fibres in extremely short lay lengths
- Nonwoven wrapping
- Tinned copper braid
- Polyurethane sheath (PUR), orange (RAL 2003)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Based on
VDE 0250/0281/0282

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire in accordance with VDE 0295 Class 6/ IEC 60228 Cl. 6**). Control pairs fine wire starting from 0.5 mm²

Minimum bending radius
For flexible applications: 7.5 x outside diameter
Static:
4 x cable diameter

Rated voltage
Supply cores: 600/1000 V
Operating voltage: control pairs: 250 V AC

Test voltage
Core: C/C-C/S: 4000 V
Control core pairs: C/C-C/S: 1000 V

Protective conductor
G = with protective conductor GN/YE

Range of temperature
Flexing: -40°C up to +80°C
Fixed installation: -50°C up to +90°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® SERVO FD 755 CP DESINA				
0036620	4 G 1,5 + (2 x 1,0 StD) CP	13.1	131.0	229
0036621	4 G 2,5 + (2 x 1,0 StD) CP	14.1	175.0	289
0036622	4 G 4 + (2 x 1,0 StD) CP	16.2	238.0	381

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
DESINA® is a registered trademark of the Association of German Machine Tool Manufacturers

Comparable products

- ÖLFLEX® SERVO FD 795 CP see page 106
- SERVO cables in acc. to SIEMENS® Standard 6FX 8008- see page 108
- SERVO cables in acc. to INDRAMAT® Standard INK see page 110
- SERVO cables in acc. to LENZE® Standard see page 111

Accessories

- SKINTOP® MS-SC-M see page 657
- SKINTOP® MS-M BRUSH see page 658
- EPIC® CIRCON LS1 see page 609
- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® SERVO FD 760 CP

Speedo generators

Info
- EMC compliant
- Well-proven, reliable
- MUD res. acc. IEC61892-4 Annex D

ÖLFLEX®-SERVO-FD 770 CP

Encoder and resolver cables

Info
- EMC compliant
- Well-proven, reliable
- MUD res. acc. IEC61892-4 Annex D

ÖLFLEX® SERVO FD 770 CP DESINA®

Encoder and resolver cables, DESINA® green

Info
- EMC compliant
- Well-proven, reliable
- MUD res. acc. IEC61892-4 Annex D

Benefits
- Thin, weight- and volume-optimised
- Total screening prevents/reduces interference from neighbouring cables
- Can also be used mobile outdoors
- Halogen-free

Application range

ÖLFLEX® SERVO FD 760 CP
- Connecting cable between servo controler and speedo generators
- Plant engineering
- Especially in wet areas of machine tools and transfer lines subject to average mechanical stress
- Assembly lines, production lines, in all kinds of machines

ÖLFLEX®-SERVO-FD 770 CP
- Plant engineering
- Especially in wet areas of machine tools and transfer lines subject to average mechanical stress
- Assembly lines, production lines, in all kinds of machines

ÖLFLEX® SERVO FD 770 CP DESINA®
- Plant engineering
- Especially in wet areas of machine tools and transfer lines subject to average mechanical stress
- Assembly lines, production lines, in all kinds of machines

Product features
- Designed for up to 5 million bending change cycles in the power chain
- Abrasion and cut resistant
- Oil resistant
- Flame retardant according to IEC 60332-1-2
- Flexible down to -40 °C

Approvals (Norm references)

RoHS
- For travel distances up to 100 m (horizontal)
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3

Design

ÖLFLEX® SERVO FD 760 CP
- Extra fine strands of plain copper wires (Class 6)
- Core insulation: TPE
- Cores twisted in short lay lengths
- Tinned copper screen braiding or as wrapping (* with drain wire)
- Nonwoven wrapping
- Polyurethane sheath (PUR), grey (RAL 7001)

ÖLFLEX®-SERVO-FD 770 CP
- Extra fine strands of plain copper wires (Class 6)
- Core insulation: TPE
- Cores (or core pairs) twisted in layers or bundles
- Nonwoven wrapping
- Tinned copper screen braiding (*with drain wire)
- Polyurethane sheath (PUR), grey (RAL 7001)

ÖLFLEX® SERVO FD 770 CP DESINA®
- Extra fine strands of plain copper wires (Class 6)
- Core insulation: TPE
- Cores (or core pairs) twisted in layers or bundles
- Nonwoven wrapping
- Tinned copper screen braiding (*with drain wire)
- Polyurethane sheath (PUR), green (RAL 6018)

Technical data

Core identification code
ÖLFLEX® SERVO FD 760 CP
0036 260 & 0036 760: bl, wh, rd, pk, gn, ye, bn, bk, gy
ÖLFLEX®-SERVO-FD 770 CP
0036 270 pairs: rd/bk, bn/gn, gy/pk, bu/vt; single core: wh,bn,bu,bk
0036 280 pairs: wh/bn, gn/ye, gy/pk, bu/rd, bk/vt, gy-pk/rd-bu; single core: wh,bn
0036 275 cores 0.14: wh, bn, gn, ye, gy, pk, bu, rd, bk, vt; cores 0.5: wh,bn
0036 277 cores 0.14: wh, bn,gn,ye,gy,pk,bu,rd, bk,vt; single cores: wh,bn
0036 642 pairs 0.38mm² rd-or, bu-vt, bk-bn, ye-gn, cores 0.5mm² bk/wh, rd/wh, bu/wh, ye/wh
0036 641 see 0036 269
0036 278 single cores: cores 0.14 DIN 47100 from grey: 0.5 mm²: wh, bn, gn, ye
0036 281 pairs: rd-bk, bn-gn, ye-vt, gy-pk; single core.: wh, bu, whgn, bngn
0036 268 pairs: gn-ye, rd-bu, gy-pk; single core: wh, bn
0036 269: 0.14 mm² ye, gn, rd, or, bk, bn, gy, bu, wh-bk, wh-ye. 0.22 mm²: bn-ye, gn-rd, gn-bk, bn-gy. 0.5mm²: bn-rd, bn-bu
ÖLFLEX® SERVO FD 770 CP DESINA®
see 770 CP

Based on
Core in accordance with VDE 0812/0281
Sheath according to VDE 0250/0282

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
ÖLFLEX® SERVO FD 760 CP
Extra fine wire according to VDE 0295 Class 6 / IEC 60228 Class 6
ÖLFLEX®-SERVO-FD 770 CP
Extra fine wire according to VDE 0295 Class 6 / IEC 60228 Class 6
ÖLFLEX® SERVO FD 770 CP DESINA®
Extra fine wire in acc. to VDE 0295 Cl.6 / IEC 60228 Cl.6

Minimum bending radius
For flexible applications: 12 x outside diameter
Static:
4 x cable diameter

Rated voltage
48 V AC
Operating peak voltage: 450 V Upp
(not for power applications)

Test voltage
C/C-C/S 2000 - 1000 V

Range of temperature
Flexing: -40°C up to +75°C
Fixed installation: -50°C up to +80°C

Power and control cables

LAPP GROUP

Power chain applications

Servo applications - power drive systems

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
Feedback cable ÖLFLEX® SERVO FD 760 CP				
0036260	9 X 0,5 CP	9.4	73.0	144
0036760	9 X 0,5 CP DESINA®	9.4	73.0	144
Sensor cable ÖLFLEX®-SERVO-FD 770 CP				
0036270	4 x 2 x 0,25 + 2 x 1 CP	9.3	72.0	122
0036280	6 x 2 x 0,25 + 2 x 0,5 CP	10.8	87.0	152
0036275	10 x 0,14 + 2 x 0,5 CP	8.0	39.3	82
0036277	10 x 0,14 + 4 x 0,5 CP	8.3	51.1	97
0036278	15 x 0,14 + 4 x 0,5 CP	8.8	59.3	113
0036281	4 x 2 x 014 + 4 x 0,5 CP	8.3	48.8	91
0036268	3 x (2 x 0,14 D12Y) + 2 x (0,5 D12Y) CP	8.3	60.0	122
0036269	3 x (2 x 0,14D 12Y) + (2 x 0,14 + 2 x 0,5) + (4 x 0,22 + 2 x 0,14) CP	10.7	86.0	111
Sensor cable ÖLFLEX® SERVO FD 770 CP DESINA®				
0036640	2 x 2 x 0,14 + 2 (2 x 0,14D) + 4 x 0,5 + (4 x 0,14D) CP	8.5	65.4	105
0036641	3 x (2 x 0,14D 12Y) + (2x 0,14 + 2 x 0,5) + (4 x 0,22 + 2 x 0,14) CP	10.7	86.0	111
0036642	4 x 2 x 0,38 + 4 x 0,5 CP	9.9	84.2	144
0036901	4 x 2 x 0,25	8.4	43.2	89

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
DESINA® is a registered trademark of the Association of German Machine Tool Manufacturers

■ Comparable products

ÖLFLEX®-SERVO-FD 770 CP

- SERVO cables in acc. to SIEMENS® Standard 6FX 8008- see page 108
- SERVO cables in acc. to INDRAMAT® Standard INK see page 110

ÖLFLEX® SERVO FD 770 CP DESINA®

- SERVO cables in acc. to SIEMENS® Standard 6FX 8008- see page 108
- SERVO cables in acc. to INDRAMAT® Standard INK see page 110
- Special Encoder and resolver cables see page 112

■ Accessories

- Circular connectors see page 592
- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® SERVO FD 781 CY

Cost-effective, low capacitance, screened servo motor cable

Info
- EMC compliant

Benefits
- Well-priced
- Well-proven, reliable

Application range
- Connecting cable between Frequency converter and motor
- For machine internal wiring of power circiuts
- In dry, damp or wet interiors under medium mechanical load conditions
- Outdoor use only with UV protection and in accordance with the temperature range.

Product features
- Its low capacity design allows longer cable lengths between the frequency converter and motor.
- Oil resistant
- Flame retardant (IEC 60332-1-2)
- Low adhesive surface
- Designed for up to 5 million bending change cycles in the power chain

Approvals (Norm references)
CE RoHS
- For travel distances up to 10 m.
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3

Design
- Extra fine strands of plain copper wires (Class 6)
- Core insulation: Polyprophylene (PP)
- Cores twisted in short lay lengths
- Nonwoven wrapping
- Tinned copper braid
- PVC outer sheath, orange (RAL 2003)

Technical data
Core identification code
Black with white numbers acc. to VDE 0293

Based on
VDE 0250/0281/0282

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire in acc. with VDE 0295 Cl.6/IEC 60228 Cl. 6

Minimum bending radius
Flexible: 7,5 x outside diameter
Static:
4 x cable diameter

Rated voltage
U_0/U:
0.6/1kV

Test voltage
4000 V

Protective conductor
G = with green/yellow earthing conductor

Range of temperature
Flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® SERVO FD 781 CY				
0036320	4 G 1.5	10.1	89.0	157
0036321	4 G 2.5	12.3	133.8	233
0036322	4 G 4	13.9	210.9	335
0036324	4 G 10	20.2	488.2	747
0036325	4 G 16	24.5	744.8	1,109
0036327	4 G 35	34.3	1,565.4	2,264
0036328	4 G 50	39.3	2,174.9	3,090

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® SERVO FD 781 CP see page 102
- ÖLFLEX® SERVO FD 795 CP see page 106
- SERVO cables in acc. to LENZE® Standard see page 111

Accessories

- Rectangular connectors see page 447
- EPIC® CIRCON LS1 see page 609
- SKINDICHT® EMC/Earthing see page 657
- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® SERVO FD 781 CP

Screened, low capacitance, halogen-free highly flexible PUR servo motor cable

Info

- **EMC compliant**
- **Amendment: out-phased product! <Trimmed size range>**
- **MUD res. acc. IEC61892-4 Annex D**

Benefits

- Flexible down to -30°C

Application range

- Connecting cable between Frequency converter and motor
- For machine internal wiring of power circuits
- In dry, damp or wet interiors under medium mechanical load conditions
- Outdoor use suitable considering the temperature range

Product features

- Its low capacity design allows longer cable lengths between the frequency converter and motor.
- Oil resistant
- Halogen-free and flame retardant (IEC 60332-1-2)
- Low adhesive surface
- Designed for up to 5 million bending change cycles in the power chain

Approvals (Norm references)

CE RoHS

- For travel distances up to 10 m.
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3
- Conform to DESINA®

Design

- Extra fine strands of plain copper wires (Class 6)
- Core insulation: Polyprophylene (PP)
- Cores twisted in short lay lengths
- Nonwoven wrapping
- Tinned copper braid
- Polyurethane sheath (PUR), orange (RAL 2003)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Based on
VDE 0250/0281/0282

Specific insulation resistance
> 20TOhm x cm

Conductor stranding
Extra fine wire in acc. with VDE 0295 Cl.6/IEC 60228 Cl. 6

Minimum bending radius
Flexible: 7,5 x outside diameter
Static:
4 x cable diameter

Rated voltage
600/1000 V

Test voltage
4000 V

Protective conductor
G = with green/yellow earthing conductor

Range of temperature
Flexing: -30°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® SERVO FD 781 CP				
0037210	4 G 1.5	10.1	89.0	158
0037211	4 G 2.5	12.3	133.8	233

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
0037212	4 G 4	13.9	210.9	335
0037213	4 G 6	15.8	295.5	456
0037216	4 G 25	29.7	1,118.1	1,654

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® SERVO FD 785 CP see page 103
- ÖLFLEX® SERVO FD 795 CP see page 106

Accessories

- Circular connectors see page 592
- SKINDICHT® EMC/Earthing see page 657
- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® SERVO FD 785 P

Super flexible 0.6/1 kV motor supply cable for power chains for long travel distances

Info
- **Smalles bending radii of all FD cables**
- **MUD res. acc. IEC61892-4 Annex D**

ÖLFLEX® SERVO FD 785 CP

Screened super flexible 0.6/1 kV motor supply cable for power chains, halogen-free.

Info
- **EMC compliant**
- **MUD res. acc. IEC61892-4 Annex D**

Benefits
- Well-proven, reliable
- Flexible down to -40 °C
- Low adhesive surface
- Designed for up to 5 million bending change cycles in the power chain

Application range
ÖLFLEX® SERVO FD 785 P
- Power circuits for electrical equipment in automation engineering
- For machine internal wiring of power circuits
- In dry, damp or wet interiors under medium mechanical load conditions
- For outdoor applications
- For usage whithin 690V industrial power circuits

ÖLFLEX® SERVO FD 785 CP
- Power circuits for electrical equipment in automation engineering
- For machine internal wiring of power circuits
- In dry, damp or wet interiors under medium mechanical load conditions
- For outdoor applications

Product features
- Its low capacity design allows longer cable lengths between the frequency converter and motor.
- Oil resistant
- Halogen-free and flame retardant (IEC 60332-1-2)

Approvals (Norm references)
CE RoHS
- For travel distances up to 100 m (horizontal)
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3

Design
ÖLFLEX® SERVO FD 785 P
- Extra fine strands of plain copper wires (Class 6)
- Core insulation: Based on TPE
- Cores twisted in extremely short lay lengths
- Nonwoven wrapping
- Polyurethane sheath (PUR), grey (RAL 7001)

ÖLFLEX® SERVO FD 785 CP
- Extra fine strands of plain copper wires (Class 6)
- Core insulation: Based on TPE
- Cores twisted in extremely short lay lengths
- Nonwoven wrapping
- Tinned copper braid
- Polyurethane sheath (PUR), grey (RAL 7001)
- DESINA® compliant models with orange outer sheath (RAL 2003).

Technical data
Core identification code
Black with white numbers acc. to VDE 0293

Based on
VDE 0250/0281/0282

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
ÖLFLEX® SERVO FD 785 P
Extra fine wire according to VDE 0295 Class 6 / IEC 60228 Class 6
ÖLFLEX® SERVO FD 785 CP
Extra fine wire in acc. to VDE 0295 Cl.6 / IEC 60228 Cl.6

Minimum bending radius
ÖLFLEX® SERVO FD 785 P
For flexible applications: 5 x outside diameter
Fixed installation: 3 x outer diameter
ÖLFLEX® SERVO FD 785 CP
For flexible applications: 7.5 x outside diameter
Static:
4 x cable diameter

Rated voltage
600/1000 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE

Range of temperature
Flexing: -40°C up to +80°C
Fixed installation: -50°C up to +90°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® SERVO FD 785 P				
0036380	4 G 1.5	10.5	58.0	129
0036381	4 G 2.5	12.3	96.0	187
0036382	4 G 4	14.1	154.0	273
0036383	4 G 6	15.6	231.0	358
0036384	4 G 10	20.1	384.0	585
0036385	4 G 16	23.4	615.0	863
0036650	5 G 1.5	11.2	72.0	166
0036651	5 G 2.5	13.3	120.0	246
0036652	5 G 4	15.2	192.0	350
0036653	5 G 6	16.8	288.0	473
0036655	5 G 16	25.5	768.0	1,168
0036656	5 G 25	30.8	1,200.0	1,789
ÖLFLEX® SERVO FD 785 CP				
0036390	4 G 1.5	11.1	92.0	167

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
0036391	4 G 2.5	12.9	139.0	234
0036392	4 G 4	14.9	221.0	348
0036393	4 G 6	16.4	307.0	442
0036394	4 G 10	21.2	482.0	691
0036395	4 G 16	24.4	725.0	982
0036396	4 G 25	29.5	1,136.0	1,498
0036397	4 G 35	35.0	1,605.0	2,114
0036660	5 G 1.5	11.8	115.5	213
ÖLFLEX® SERVO FD 785 CP DESINA				
0036630	4 G 1.5	11.1	92.0	167
0036631	4 G 2.5	12.9	139.0	234
0036632	4 G 4	14.9	221.0	348
0036633	4 G 6	16.4	307.0	442
0036634	4 G 10	21.2	482.0	691
0036635	4 G 16	24.4	725.0	982

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products
ÖLFLEX® SERVO FD 785 P
- ÖLFLEX® SERVO FD 795 P see page 105

Accessories
- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® SERVO FD 790 CP

Highlyflexible servo motor connection cables for power chains for the European and North American markets

Info

- **For power- , break- and overheating-control- circuits**
- **EMC compliant**

Benefits

- Multi-Standard= less part varieties= cost savings
- Reasonable price-performance ratio

Application range

- Connecting cable between servo controler and motor
- Connecting cable between Frequency converter and motor
- Plant engineering
- Especially in wet areas of machine tools and transfer lines subject to average mechanical stress
- Assembly lines, production lines, in all kinds of machines

Product features

- Designed for up to 5 million bending change cycles in the power chain
- Abrasion and cut resistant
- Oil resistant
- Flame retardant acc. IEC 60332-1-2 & CSA FT1

Approvals (Norm references)

CE UL RoHS

- For travel distances up to 10 m.
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3
- USA: Acc. NFPA79 Ed 08 in industrial machinery as part of a listed assembly only.
- Conform to DESINA®
- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Extra fine strands of plain copper wires (Class 6)
- Core insulation: PVC
- Depending on design, cores together, without, with one or with two double screened control core pairs, twisted together in short lay lengths
- Nonwoven wrapping
- Tinned copper braid
- Polyurethane sheath (PUR), orange (RAL 2003)
- Conform to DESINA®

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Approvals
Without control cores: UL AWM Style 20234
UL-AWM-Style 20235 with control pairs
Based on:
VDE 0250, 0281, 0282

Based on
VDE 0245, 0250, 0281

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire according to VDE 0295
Class 6 / IEC 60228 Class 6

Minimum bending radius
For flexible applications: 12 x outside diameter
Static:
4 x cable diameter

Rated voltage
IEC: power cores: 600/1000 V
Control cores: U: 300 V
UL:with control pairs: 600Vwithout control pairs: depends on its final application

Test voltage
Cores: 4000 V
Control cores: 750 V

Protective conductor
G = with protective conductor GN/YE

Range of temperature
Flexing: 0°C up to +80°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm²/AWG sizes per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® SERVO FD 790 CP				
0037030	4 G 1,5 CP	10.0	87.1	153.0
0037031	4 G 2,5 CP	11.6	135.0	219.0
0037032	4 G 4,0 CP	13.1	197.5	301.0
0037033	4 G 6,0 CP	15.3	298.3	437.0
0037034	4 G 10 CP	19.2	472.3	675.0
0037035	4 G 16 CP	24.5	751.9	1,106.0
0037036	4 G 25 CP	28.7	1,161.6	1,628.0
0037037	4 G 35 CP	34.0	1,576.1	2,186.0
0037038	4 G 50 CP	40.1	1,967.2	3,126.0
0037042	4 G 1,5 + 2 x(2x0,75 StD)CP	15.8	177.9	397.0
0037043	4 G 2,5 + 2 x(2x0,75 StD)CP	16.1	215.8	455.0
0037044	4 G 4,0 +(2x0,75 StD)+(2x1,0 StD) CP	17.3	294.8	576.0
0037046	4 G 10 +(2x0,75 +2x1,0 StD)CP	22.5	573.3	970.0
0037047	4 G 16 +(2x2x1,0 StD)CP	27.1	835.6	1,347.0
0037051	4 G 1,5 + (2x1,0 StD)CP	14.4	159.8	340.0
0037052	4 G 2,5 + (2x1,0 StD)CP	15.3	200.5	404.0
0037053	4 G 4 + (2x1,0 StD)CP	16.4	265.3	496.0
0037054	4 G 6 + (2x1,0 StD)CP	18.0	351.2	634.0
0037055	4 G 10 + (2x1,0 StD)CP	21.6	536.9	836.0
0037056	4 G 16 + (2x1,5 StD)CP	27.7	826.2	1,320.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® SERVO FD 795 CP see page 106
- SERVO cables in acc. to SIEMENS® Standard 6FX 8008- see page 108
- SERVO cables in acc. to INDRAMAT® Standard INK see page 110

Accessories

- SKINTOP® MS-SC-M see page 657
- SKINTOP® MS-M BRUSH see page 658
- Circular connectors see page 592
- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® SERVO FD 795 P

Super-flexible servo motor connection cables for power chains for the European and North American markets

Info

- **For power- , break- and overheating-control- circuits**

Benefits

- Multi-Standard= less part varieties= cost savings
- Can also be used mobile outdoors

Application range

- Connecting cable between servo controler and motor
- Connecting cable between Frequency converter and motor
- Plant engineering
- Especially in wet areas of machine tools and transfer lines subject to average mechanical stress
- Assembly lines, production lines, in all kinds of machines

Product features

- Designed for up to 5 million bending change cycles in the power chain
- Abrasion and cut resistant
- Oil resistant
- Flame retardant acc. IEC 60332-1-2 & CSA FT1
- Flexible down to -40 °C

Approvals (Norm references)

- For travel distances up to 100 m (horizontal)
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3
- USA: Acc. NFPA79 Ed 08 in industrial machinery as part of a listed assembly only.
- Conform to DESINA®
- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Extra fine strands of plain copper wires (Class 6)
- Core insulation: TPE
- Depending on design, cores together, without, with one or with two double screened control core pairs, twisted together in short lay lengths
- Nonwoven wrapping
- Polyurethane sheath (PUR), black (RAL 9005)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Approvals
Without control cores: UL AWM Style 20234
With control pairs UL-AWM-Style 20235

Based on
VDE 0250/0281/0282

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire according to VDE 0295
Class 6 / IEC 60228 Class 6

Minimum bending radius
For flexible applications: 5 x outside diameter
Fixed installation: 3 x outer diameter

Rated voltage
IEC: power cores: 600/1000 V
Control cores: U: 250 V AC
UL:with control pairs: 600Vwithout control pairs: depends on its final application

Test voltage
Cores: 4000 V
Control cores: 750 V

Protective conductor
G = with protective conductor GN/YE

Range of temperature
Flexing: -40°C up to +80°C
Fixed installation: -50°C up to +80°C

Part number	Number of cores and mm²/AWG sizes per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® SERVO FD 795 P				
3028268	4G 1,5 + (2 x 1,0 StD)P	12.9	81.4	166.0
3028269	4G 2,5 + (2 x 1,0 StD)P	13.3	119.8	185.0
3028270	4G 4 + (2 x 1,0 StD)P	15.3	177.4	243.0
3028271	4G 6 + (2 x 1,0 StD)P	16.9	254.2	292.0
3028272	4G 10 + (2 x 1,0 StD)P	21.4	412.4	690.0
3028479	4G 0,75	10.1	28.8	103.0
3028277	4G 2,5	12.1	96.0	191.0
3028278	4G 4	14.1	153.6	278.0
3028279	4G 6	15.6	230.4	376.0
3028281	4G 16	27.3	614.4	1,058.0
3028282	4G 25	31.5	960.0	1,535.0
3028283	4G 35	35.5	1,344.0	2,035.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® SERVO FD 755 P see page 96

Accessories

- Circular connectors see page 592
- SKINDICHT® EMC/Earthing see page 657
- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® SERVO FD 795 CP

Super-flexible servo motor connection cables for power chains for the European and North American markets

Info

- **For power- , break- and overheating-control- circuits**
- **EMC compliant**

Benefits

- Multi-Standard= less part varieties= cost savings
- Can also be used mobile outdoors

Application range

- Connecting cable between servo controler and motor
- Connecting cable between Frequency converter and motor
- Plant engineering
- Especially in wet areas of machine tools and transfer lines subject to average mechanical stress
- Assembly lines, production lines, in all kinds of machines

Product features

- Designed for up to 5 million bending change cycles in the power chain
- Abrasion and cut resistant
- Oil resistant
- Flame retardant acc. IEC 60332-1-2 & CSA FT1
- Flexible down to -40 °C

Approvals (Norm references)

- For travel distances up to 100 m (horizontal)
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3
- USA: Acc. NFPA79 Ed 08 in industrial machinery as part of a listed assembly only.
- Conform to DESINA®
- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Extra fine strands of plain copper wires (Class 6)
- Core insulation: TPE
- Depending on design, cores together, without, with one or with two double screened control core pairs, twisted together in short lay lengths
- Nonwoven wrapping
- Tinned copper braid
- Polyurethane sheath (PUR), orange (RAL 2003)
- Conform to DESINA®

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Approvals
Without control cores: UL AWM Style 20234
With control pairs UL-AWM-Style 20235

Based on
VDE 0250/0281/0282

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire in acc. to VDE 0295 Cl.6 / IEC 60228 Cl.6

Minimum bending radius
For flexible applications: 7.5 x outside diameter
Fixed installation: 5 x outer diameter

Rated voltage
IEC: power cores: 600/1000 V
Control cores: U: 250 V AC
UL:with control pairs: 600Vwithout control pairs: depends on its final application

Test voltage
Cores: C/C: 4000 V
Control core pairs: C/C-C/S: 1000/750 V

Protective conductor
G = with protective conductor GN/YE

Range of temperature
Flexing: -40°C up to +80°C
Fixed installation: -50°C up to +80°C

Part number	Number of cores and mm²/AWG sizes per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® SERVO FD 795 CP				
0037060	4G 1,5 + (2 x 1,0 StD)CP	13.9	140.3	276.0
0037061	4G 2,5 + (2 x 1,0 StD)CP	14.4	179.8	323.0
0037062	4G 4 + (2 x 1,0 StD)CP	16.3	263.0	436.0
0037064	4G 10 + (2 x 1,0 StD)CP	23.2	547.6	875.0
0037067	4G 35 + (2 x 1,5 StD)CP	34.4	1,640.0	2,264.0
0037070	4G 4 + (2 x 0,75 StD) + (2 x 1,0 StD) CP	17.7	281.4	499.0
0037072	4G 10 + (2 x 0,75 + 2 x 1,0 StD) CP	24.0	579.8	962.0
0037074	4G 25 + (2 x 2 x 1,5 StD)CP	33.0	1,271.0	1,897.0
0037078	4G 6	15.9	298.7	453.0
0037080	4G 16	27.7	763.9	1,227.0
0037081	4G 25	31.6	1,177.5	1,774.0
0037082	4G 35	35.5	1,594.0	2,354.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® SERVO FD 755 CP see page 97
- ÖLFLEX® SERVO FD 790 CP see page 104
- SERVO cables in acc. to SIEMENS® Standard 6FX 8008- see page 108
- SERVO cables in acc. to INDRAMAT® Standard INK see page 110
- SERVO cables in acc. to LENZE® Standard see page 111

Accessories

- Circular connectors see page 592
- SKINDICHT® EMC/Earthing see page 657
- SILVYN® CHAIN Cable protection and guiding systems

SERVO cables in acc. to SIEMENS® Standard 6FX 7008-

Motor connection cable for linear drives, orange, DESINA® compliant

Info

- **For high acceleration applications**
- **Amendment: out-phased product! <Trimmed size range>**
- **because new linear motor wiring technology by FX8PLUS**

Benefits

- Multi-Standard= less part varieties= cost savings
- Can also be used mobile outdoors

Application range

- Linear motors
- Connecting cable between servo controler and motor
- Plant engineering
- Especially in wet areas of machine tools and transfer lines subject to average mechanical stress
- Assembly lines, production lines, in all kinds of machines

Product features

- Designed for up to 5 million bending change cycles in the power chain
- Abrasion and cut resistant
- Oil resistant
- Flame retardant acc. IEC 60332-1-2 & CSA FT1
- This cable has been designed especially for linear motor applications and is able to withstand high accelerations, up to 50m/s²

Approvals (Norm references)

- For travel distances up to 100 m (horizontal)
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3
- USA: Acc. NFPA79 Ed 08 in industrial machinery as part of a listed assembly only.
- Conform to DESINA®
- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- In accordance with SIEMENS® standard 6FX7008
- Core insulation: TPE
- Control cores twisted in “”star 4-wire””.
- Nonwoven wrapping
- Tinned copper braid
- Polyurethane sheath (PUR), orange (RAL 2003)

Technical data

Approvals
UL/CSA Style AWM 20234

Conductor stranding
Extra fine strands of plain copper wires according to VDE 0295 Class 6 / IEC 60228 Class 6

Minimum bending radius
Fixed installation: 7 x outer diameter
Occasional flexing: 10 x cable diameter

Rated voltage
Cores:
- 1000 V (UL/CSA)
- 600/1000 V (IEC)
Control cores:
- 1000 V (UL/CSA)
- 24 V (IEC)

Test voltage
Cores: 4000 V
Control cores: 1500 V

Range of temperature
Fixed installation: -40°C up to +90°C
For flexible applications: from -20°C up to +60°C

Part number	Number of cores and mm² per conductor	SIEMENS part. No.	Outer diameter in mm approx.	Sheath colour	Copper index kg/km	Weight kg/km approx.
Servo cables						
0027770	4 G 1,5 + (4x0,50)	6FX7008-1BC11	13.4	orange	150.0	250
0027771	4 G 2,5 + (4x0,50)	6FX7008-1BC21	14.5	orange	190.0	300
0027772	4 G 4,0 + (4x0,50)	6FX7008-1BC31	16.1	orange	250.0	380
0027773	4 G 6,0 + (4x0,50)	6FX7008-1BC41	18.5	orange	350.0	540

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis‘ and ‚Metal index‘ see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Siemens part designations (6FX5002/5008, 6FX7002/7008, 6FX8002/8008) are registered trademarks of Siemens AG and for comparing purpose only. DESINA® is a registered trademark of the Association of German Machine Tool Manufacturers
FD-cables for powerchain use (continuous flexing) should only be handled on drums prior to installation.
Part number refers to genuine LAPP part

Comparable products

- SERVO cables in acc. to SIEMENS® Standard 6FX 8PLUS see page 109

Accessories

- Circular connectors see page 592
- SKINDICHT® EMC/Earthing see page 657
- SILVYN® CHAIN Cable protection and guiding systems

SERVO cables in acc. to SIEMENS® Standard 6FX 8008-

Sensor leads for signal transmission systems and Motor connection cables

Info

- **Signal sensor/encoder cable**
- **Servo drives**
- **Amendment: out-phased product! <Substitute: New FX8PLUS>**

Benefits

- Multi-Standard= less part varieties= cost savings

Application range

- Connecting cable between servo controler and encoder / resolver
- Connecting cable between servo controler and motor
- Plant engineering
- Especially in wet areas of machine tools and transfer lines subject to average mechanical stress
- Assembly lines, production lines, in all kinds of machines

Product features

- Designed for up to 5 million bending change cycles in the power chain
- Abrasion and cut resistant
- Oil resistant
- Flame retardant acc. IEC 60332-1-2 & CSA FT1
- Halogen-free

Approvals (Norm references)

- For travel distances up to 100 m (horizontal)
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3
- USA: Acc. NFPA79 Ed 08 in industrial machinery as part of a listed assembly only.
- Conform to DESINA®
- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- In accordance with SIEMENS® standard 6FX8008
- Core insulation: TPE
- Tinned copper braid
- Polyurethane sheath (PUR)
- Signal cables: green (RAL 6018)
- Servo motor cables: orange (RAL 2003)

Technical data

Approvals
Power cable:
VDE reg. No: 7733
UL/CSA AWM Style 20234
Sensor leads: UL/CSA AWM Style 20236

Conductor stranding
Extra fine wire according to VDE 0295
Class 6 / IEC 60228 Class 6

Minimum bending radius
For fixed installation.
7.5 x D
For flexible applications:
1.5 mm² - 4.0 mm²: 10 x D
from 4.0 mm²: 12 x D

Rated voltage
Signal cables: 30 V AC/DC
Power cables:
Cores:
600 / 1000 V (IEC)
1000 V (UL/CSA)
Control cores:
250 V AC (IEC)
1000 V (UL/CSA)

Test voltage
Cores: 4000 V eff.
Control cores/signal cores: 500 V rms

Range of temperature
Flexing: -10°C up to +60°C
Fixed installation: -50°C up to +80°C

Part number	Number of cores and mm² per conductor	SIEMENS part. No.	Outer diameter in mm approx.	Sheath colour	Copper index kg/km	Weight kg/km approx.
Feedback / signal cables						
0027710	8 x 2 x 0,18	6FX8008-1BD11	7.8	green	54.0	85
0027711	4 x 2 x 0,38 + 4 x 0,5	6FX8008-1BD21	8.9	green	77.0	120
0027712	3 x (2 x 0,14) + 2 x (0,5)	6FX8008-1BD31	9.0	green	69.0	113
0027713	3 x (2 x 0,14) + 4 x 0,14 + 2 x 0,5	6FX8008-1BD41	8.9	green	66.0	101
0027714	3 x (2 x 0,14) + 4 x 0,14 + 2 x 0,5 + 4 x 0,23	6FX8008-1BD51	9.5	green	86.0	139
0027715	4 x 2 x 0,18	6FX8008-1BD61	6.4	green	34.2	53
0027716	2 x 2 x 0,18	6FX8008-1BD71	5.0	green	23.1	36
0027717	12 x 0,23	6FX8008-1BD81	6.9	green	48.0	76
Motor cables						
0027724	4 G1.5	6FX8008-1BB11	9.9	orange	96.0	155
0027725	4 G2.5	6FX8008-1BB21	11.6	orange	135.0	230
0027726	4 G4	6FX8008-1BB31	12.7	orange	205.5	315
0027727	4 G6	6FX8008-1BB41	14.2	orange	270.3	420
0027728	4 G10	6FX8008-1BB51	16.5	orange	458.0	625
0027729	4 G16	6FX8008-1BB61	19.8	orange	723.0	940
Servo cables						
0027718	4 G 1,5 + (2 x 1,5)	6FX8008-1BA11	12.5	orange	146.0	240
0027719	4 G 2,5 + (2 x 1,5)	6FX8008-1BA21	13.8	orange	186.0	300
0027720	4 G 4,0 + (2 x 1,5)	6FX8008-1BA31	14.9	orange	260.5	398
0027721	4 G 6,0 + (2 x 1,5)	6FX8008-1BA41	15.9	orange	330.0	528
0027722	4 G 10,0 + (2 x 1,5)	6FX8008-1BA51	18.0	orange	519.0	780
0027723	4 G 16,0 + (2 x 1,5)	6FX8008-1BA61	21.8	orange	786.0	1,050
0027730	4 G 25,0 + (2 x 1,5)	6FX8008-1BA25	26.7	orange	1,170.0	1,520
0027731	4 G 35,0 + (2 x 1,5)	6FX8008-1BA35	30.8	orange	1,585.0	2,065
0027732	4 G 50,0 + (2 x 1,5)	6FX8008-1BA50	34.7	orange	2,184.0	2,896

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Siemens part designations (6FX5002/5008, 6FX7002/7008, 6FX8002/8008) are registered trademarks of Siemens AG and for comparing purpose only
FD-cables for powerchain use (continuous flexing) should only be handled on drums prior to installation.
Part number refers to genuine LAPP part

Comparable products

- ÖLFLEX® SERVO FD 790 CP see page 104
- ÖLFLEX® SERVO FD 795 CP see page 106
- SERVO cables in acc. to SIEMENS® Standard 6FX 8PLUS see page 109

Accessories

- Circular connectors see page 592
- SKINDICHT® EMC/Earthing see page 657
- SILVYN® CHAIN Cable protection and guiding systems

New

SERVO cables in acc. to SIEMENS® Standard 6FX 8PLUS

Sensor leads for signal transmission systems and Motor connection cables

Info

- **New improved version ! For very high dynamic motion sequences**
- **Servo drives**
- **Signal sensor/encoder cable**

Benefits

- Allows much faster moving operations which increases the economic efficiency of machines
- Multi-Standard= less part varieties= cost savings

Application range

- Connecting cable between servo controler and encoder / resolver
- Connecting cable between servo controler and motor
- Assembling- & pick-and-place machines
- Especially in wet areas of machine tools and transfer lines subject to average mechanical stress
- Assembly lines, production lines, in all kinds of machines

Product features

- Designed for hig dynamic purpose under accelerations up to 50m/s² in power chains up to 3m travel lengths
- Designed for up to 10 million bending change cycles in the power chain
- Torsion-resistant up to ±30 °/mtr
- Abrasion- &, cut resistant, halogen free, oil resistant
- Flame retardant acc. IEC 60332-1-2 & CSA FT1

Approvals (Norm references)

CE SP DVE RoHS

- For travel distances up to 100 m (horizontal)
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3
- USA: Acc. NFPA79 Ed 08 in industrial machinery as part of a listed assembly only.
- Conform to DESINA®
- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Extra fine strands of plain copper wires
- Core insulation: Polyprophylene (PP)
- Tinned copper braid
- Polyurethane sheath (PUR)
- Signal cables: green (RAL 6018)
- Servo motor cables: orange (RAL 2003)

Technical data

Approvals
Power cable:
VDE registered
CSA AWM I/II A/B 1000V 80° FT 1, UL 758
AWM Style 21223
Sensor leads: UL/CSA AWM Style 20236

Conductor stranding
Extra fine wire according to VDE 0295
Class 6 / IEC 60228 Class 6

Minimum bending radius
Power cables:
Static. 4 x D
Dynamic:
1.5 mm² - 16 mm²: 7,5 x D
25 mm² - -50 mm²: 10 x D
Signalleitungen:
Static: 4 x D
Dynamic: 8 x D

Rated voltage
Signal cables: 30 V AC/DC
Power cables:
Cores:
600 / 1000 V (IEC)
1000 V (UL/CSA)
Control cores:
24 V AC/DC (IEC)
1000 V (UL/CSA)

Test voltage
Cores: 4000 V eff.
Control cores/signal cores: 500 V rms

Range of temperature
Flexing: -30°C up to +80°C
Fixed installation: -50°C up to +80°C

Part number	Number of cores and mm² per conductor	SIEMENS part. No.	Outer diameter in mm approx.	Sheath colour	Copper index kg/km	Weight kg/km approx.
Feedback / signal cables						
00277101	8 x 2 x 0,18	6FX8008-1BD11	7.8	green	54.0	85
00277111	4 x 2 x 0,38 + 4 x 0,5	6FX8008-1BD21	8.9	green	77.0	120
00277121	3 x (2 x 0,14) + 2 x (0,5)	6FX8008-1BD31	9.0	green	69.0	113
00277131	3 x (2 x 0,14) + 4 x 0,14 + 2 x 0,5	6FX8008-1BD41	8.9	green	66.0	101
00277141	3 x (2 x 0,14) + 4 x 0,14 + 2 x 0,5 + 4 x 0,23	6FX8008-1BD51	9.5	green	86.0	139
00277151	4 x 2 x 0,18	6FX8008-1BD61	6.4	green	34.2	53
00277161	2 x 2 x 0,18	6FX8008-1BD71	5.0	green	23.1	36
00277171	12 x 0,23	6FX8008-1BD81	6.9	green	48.0	76
00277991	2 x 2 x 0,25 + 1 x 2 x 0,38	6FX8008-2DC00	7.2	green	41.0	90
Motor cables						
0027784	4 G1.5	6FX8008-1BB11	9.1	orange	90.0	150
0027785	4 G2.5	6FX8008-1BB21	10.6	orange	132.0	220
0027786	4 G4	6FX8008-1BB31	11.9	orange	204.0	300
0027787	4 G6	6FX8008-1BB41	14.5	orange	315.0	450
0027788	4 G10	6FX8008-1BB51	17.5	orange	488.0	660
0027789	4 G16	6FX8008-1BB61	21.6	orange	769.0	1,010
Servo cables						
0027790	4 G 1,5 + (2 x 1,5)	6FX8008-1BA11	11.6	orange	146.0	230
0027791	4 G 2,5 + (2 x 1,5)	6FX8008-1BA21	13.4	orange	187.0	300
0027792	4 G 4,0 + (2 x 1,5)	6FX8008-1BA31	14.8	orange	258.0	380
0027793	4 G 6,0 + (2 x 1,5)	6FX8008-1BA41	16.8	orange	365.0	530
0027794	4 G 10,0 + (2 x 1,5)	6FX8008-1BA51	19.4	orange	560.0	765
0027795	4 G 16,0 + (2 x 1,5)	6FX8008-1BA61	23.1	orange	816.0	1,090
0027796	4 G 25,0 + (2 x 1,5)	6FX8008-1BA25	26.6	orange	1,166.0	1,530
0027797	4 G 35,0 + (2 x 1,5)	6FX8008-1BA35	30.9	orange	1,554.0	2,040
0027798	4 G 50,0 + (2 x 1,5)	6FX8008-1BA50	34.0	orange	2,188.0	2,760

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Siemens part designations (6FX5002/5008, 6FX7002/7008, 6FX8002/8008) are registered trademarks of Siemens AG and for comparing purpose only
FD-cables for powerchain use (continuous flexing) should only be handled on drums prior to installation. Part number refers to genuine LAPP part

Comparable products

- ÖLFLEX® SERVO FD 795 CP see page 106

Accessories

- Circular connectors see page 592
- SKINDICHT® EMC/Earthing see page 657
- SILVYN® CHAIN Cable protection and guiding systems

SERVO cables in acc. to INDRAMAT® Standard INK

Sensor leads for signal transmission systems and Motor connection cables

Info

- **Signal sensor/encoder cable**
- **Servo drives**
- **EMC compliant**

Benefits

- Multi-Standard= less part varieties= cost savings
- Can also be used mobile outdoors

Application range

- Connecting cable between servo controler and encoder / resolver
- Connecting cable between servo controler and motor
- Plant engineering
- Especially in wet areas of machine tools and transfer lines subject to average mechanical stress
- Assembly lines, production lines, in all kinds of machines

Product features

- Designed for up to 5 million bending change cycles in the power chain
- Abrasion and cut resistant
- Oil resistant
- Flame retardant acc. IEC 60332-1-2 & CSA FT1
- Halogen-free

Approvals (Norm references)

- For travel distances up to 100 m (horizontal)
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3
- USA: Acc. NFPA79 Ed 08 in industrial machinery as part of a listed assembly only.
- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- In accordance with Indramat standard INK (also suitable for pre-assembled versions, IKS and IKG).
- Core insulation: TPE
- Further details: see Data Sheet (on request)
- Tinned copper braid
- Polyurethane sheath (PUR), orange (RAL 2003)

Technical data

Approvals
Power cables:
UL style 20234
Signal cables:
UL style 20236

Conductor stranding
Extra fine strands in acc. with IEC60228 Class 6

Minimum bending radius
Power cable:
Fixed installation: 4 x outer diameter
For flexible use: 7,5 x external diameter
Signal cables:
Fixed installation: 5 x outer diameter
for flexible use: 10 x D

Rated voltage
Power cable:
Cores: 600/1000 V
Control cores: 250 V/AC
Signal cables: 300 Vpp

Test voltage
Power cables:
Cores: 4000 V eff.
Control cores: 500 V eff
Signal cables: 500 V rms

Range of temperature
Power cables:
Fixed installation: -50 °C to +80 °C
Moving: -30°C to +80 °C
Signal cables:
Fixed installation:-40°C up to +80°C
Moved:-10°C up to +80°C

Part number	Number of cores and mm² per conductor	INDRAMAT® item no.	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
Feedback / encoder / resolver cables					
7072400	4x2x0,25 + 2x1,0	INK-0209	8.8	74.0	120
7072401	4x2x0,25 + 2x0,5	INK-0448	8.5	70.0	100
7072402	9x0,50	INK-0208	8.8	75.0	126
7072414	4x1+4x2x0,14+4x0,14	INK-0532 (neu)	9.7	81.0	140
7072415	2x2x0,25+2x0,5	INK-0234 (neu)	8.7	46.0	90
7072416	2x2x0,25+2x0,5	INK-0750 (neu)	7.6	35.0	92
Servo cables					
7072417	4 G 0,75 + 2x0,5	INK-0670 (neu)	10.0	73.0	132
7072403	4 G 1,0 + 2x(2x0,75)	INK-0653	11.5	170.0	226
7072404	4 G 1,5 + 2x(2x0,75)	INK-0650	12.2	189.0	268
7072405	4 G 2,5 + 2x(2x1,0)	INK-0602	15.1	212.0	320
7072406	4 G 4 + (2x1,0) + (2x1,5)	INK-0603	16.0	306.0	470
7072407	4 G 6 + (2x1,0) + (2x1,5)	INK-0604	18.8	366.0	600
7072408	4 G 10 + (2x1,0) + (2x1,5)	INK-0605	22.0	565.0	850
7072409	4 G 16 + 2x(2x1,5)	INK-0606	25.2	838.0	1,020
7072410	4 G 25 + 2x(2x1,5)	INK-0607	28.0	975.0	1,420

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Indramat part designations (IKG, IKS, INK, INS, RKL und RKG) are registered trademarks of Bosch Rexroth AG and for comparing purpose only
FD-cables for powerchain use (continuous flexing) should only be handled on drums prior to installation.
Part number refers to genuine LAPP part

Comparable products

- ÖLFLEX® SERVO FD 755 CP see page 97
- ÖLFLEX® SERVO FD 755 CP DESINA® see page 98
- ÖLFLEX® SERVO FD 760 CP see page 99
- ÖLFLEX®-SERVO-FD 770 CP see page 99
- ÖLFLEX® SERVO FD 790 CP see page 104

Accessories

- Circular connectors see page 592
- SKINDICHT® EMC/Earthing see page 657
- SILVYN® CHAIN Cable protection and guiding systems

SERVO cables in acc. to LENZE® Standard

Sensor leads for signal transmission systems and Motor connection cables

Info

- **Signal sensor/encoder cable**
- **Servo drives**
- **EMC compliant**

Benefits

- Motor cable: Low capacitance characteristic
- Low capacitance

Application range

- Connecting cable between servo controler and encoder / resolver
- Connecting cable between servo controler and motor
- Plant engineering
- Especially in wet areas of machine tools and transfer lines subject to average mechanical stress
- Assembly lines, production lines, in all kinds of machines

Approvals (Norm references)

- Cables for power chain usage: For travel distances up to 100m (horizontal)

- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3
- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Design according to LENZE® standard:
- Models for fixed installation: PVC vinyl outer sheath, flame-retardant according to IEC 332.1, PVC vinyl core insulation UL/CSA approved.
- Models for highly flexible use: oil-resistant PUR sheath according to VDE472-803 Part B, flame-retardant according to IEC 60332.1-2, TPE core insulation.
- Further details: see Data Sheet (on request)
- Signal cables: green (RAL 6018)
- Servo motor cables: orange (RAL 2003)

Technical data

Core identification code
Encoder cables
- 7072508 (fixed installation)
bk/ye+bk/gn+bk/rd+wt/bl + bk/wt
- 7072517 (flexible installation)
gn/ye+bl/rd+gy/pk+bk/vi + bn/wt
Resolver cables:
- 7072507 (fixed installation)
black/yellow + black/green + black/red + black/white
- 7072516 (flexible application)
green/yellow + blue/red + grey/pink + brown/white

Approvals
Resolver and encoder cable:
UL AWM style 2464 for fixed installation versions, style 20940 for high flexibility applications.
Motor cable:
UL AWM style 2570 for fixed installation version, style 20940 for high flexibility use.

Minimum bending radius
Flexible use: 10 x outer diameter
Fixed installation: 7.5 x cable diameter

Rated voltage
Resolver and encoder cable:
30 V (VDE), 300 V (UL/CSA)
Motor cable:
- Power cores: 0.6/1000 V (VDE), 600 V (UL/CSA).

Test voltage
Resolver and encoder cable:
1.5 kV
Motor cable:
- Power cores: 4 kV
- Control cores: 2 kV

Range of temperature
Flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
Motor cables for fixed installation				
7072500	4G1,0 + (2x0,5)	10.0	81.0	128
7072501	4G1,5 + (2x0,5)	11.2	106.0	173
7072502	4G2,5 + (2x0,5)	12.3	153.0	244
Resolver & encoder cables for fixed installation				
7072507	3x(2x0,14) + 1x(2x0,5)	9.3	43.0	91
7072508	4x(2x0,14) + 1x(2x1,0)	11.0	65.0	136
Motor cables for power chain application				
7072509	4G1,0 + (2x0,5)	10.5	81.0	151

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
7072510	4G1,5 + (2x0,5)	12.1	106.0	192
7072511	4G2,5 + (2x0,5)	13.2	153.0	271
7072512	4G4 + (2x1,0)	14.6	235.0	373
7072513	4G6 + (2x1,0)	16.8	316.0	477
7072514	4G10 + (2x1,0)	20.1	513.0	710
7072515	4G16 + (2x1,0)	23.8	710.0	1,015
Resolver & encoder cable for power chain application				
7072516	3x(2x0,14) + 1x(2x0,5)	10.0	44.0	107
7072517	4x(2x0,14) + 1x(2x1,0)	11.5	65.0	145

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Lenze® part designations (EWLM_, EWLR_, EWLE_, EWLL_, EYL und EYP) are registered trademarks of Lenze® AG used for comparing purposes only. DESINA® is a registered trademark of the Association of German Machine Tool Manufacturers
FD-cables for powerchain use (continuous flexing) should only be handled on drums prior to installation.
Part number refers to genuine LAPP part

Comparable products

- ÖLFLEX® SERVO FD 755 CP see page 97
- ÖLFLEX® SERVO FD 795 CP see page 106
- Special Encoder and resolver cables see page 112

Accessories

- Circular connectors see page 592
- SKINDICHT® EMC/Earthing see page 657

Special Encoder and resolver cables

Compatible with various drive systems

Info

- **Compatible to encoder manufactures listed below**

Benefits

- Well-proven, reliable
- Multi-Standard= less part varieties= cost savings

Application range

- Highly flexible encoder and resolver cables, especially for use in power chains
- Servo drives and Servo harnessings
- Plant engineering
- Especially in wet areas of machine tools and transfer lines subject to average mechanical stress
- Assembly lines, production lines, in all kinds of machines

Product features

- Abrasion and cut resistant
- Oil resistant
- Flame retardant acc. IEC 60332-1-2 & CSA FT1

Approvals (Norm references)

RoHS

- For travel distances up to 10 m.
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3
- USA: Acc. NFPA79 Ed 08 in industrial machinery as part of a listed assembly only.
- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Core insulation: See article table
- Further details: see Data Sheet (on request)
- Polyurethane sheath (PUR)
- Sheath colour: See article table

Technical data

General
Further technical information regarding the above listed servo cables are available on request.

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Core material	Sheath material	Sheath colour	Copper index kg/km	Weight kg/km approx.
Suitable for Heidenhain							
70388718	(4x2x0,14+4x0,50)	8.5	PE/PVC	PUR	black	48.0	92
70388719	3x(2x0,14)+2x(0,5)	8.3	PE/PVC	PUR	black	64.0	100
70388720	3x(2x0,14)+2x(1)	9.1	PE/PVC	PUR	black	64.0	115
70388721	4x2x0,14+4x0,50+(4x0,14)	8.3	PE/PVC	PUR	black	56.0	102
Suitable for ELAU							
70388722	3x2x0,25+2x0,5	8.4	PP	PUR	black	44.0	95
Suitable for KEB							
70388724	3x(2x0,14)+2x(0,5)	8.1	PP	PUR	orange	64.0	100
Suitable for Controles Techniques							
70388725	6x2x0,34+(1x2x0,34)+(1x2x1)	10.9	TPE	PUR	green	112.0	183
Suitable for Berger Lahr							
70388726	5x2x0,25+2x0,50	9.5	TPE	PUR	green	56.0	120
Suitable for B & R							
70388727	3x2x24AWG	6.5	TPE	PUR	green	28.0	60
70388728	5x2x0,14+2x0,5	7.8	TPE	PUR	green	40.0	80
Suitable for FANUC							
70388730	5x0,5+2x2x0,18	7.6	PP	PUR	green	94.0	169
70388731	2x0,5+4x2x0,22	7.6	PP	PUR	green	72.0	120
70388732	3x2x0,18+6x0,50	8.7	PP	PUR	green	105.0	189
70388733	3x2x0,18+6x1,0	8.7	PP	PUR	green	140.0	252
70388734	5x2x0,18+6x0,5	8.7	PP	PUR	green	114.0	205
70388735	10x2x24 AWG	9.0	PP	PUR	green	60.0	121

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Die aufgeführten Antriebssysteme (Heidenhain, Elau, KEB, Controles Techniques, Berger Lahr, B & R, Fanuc) sind eingetragene Marken und dienen nur zu Vergleichszwecken. DESINA® is a registered trademark of the Association of German Machine Tool Manufacture
FD-cables for powerchain use (continuous flexing) should only be handled on drums prior to installation.
Part number refers to genuine LAPP part

Comparable products

- ÖLFLEX®-SERVO-FD 770 CP see page 99
- ÖLFLEX® SERVO FD 770 CP DESINA® see page 99

Accessories

- Circular connectors see page 592
- SKINDICHT® EMC/Earthing see page 657
- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® FD CLASSIC 810

PVC insulated, numbered, PVC sheath

Info

- **Bestseller among the FD- power chain cables**
- **Well-proven, reliable**

Benefits

- Well-proven, reliable
- Economic solution

Application range

- In power chains or moving machine parts
- Use in measuring, control and regulating circuits
- Power circuits for electrical equipment in automation engineering
- Assembly lines, production lines, in all kinds of machines
- Plant engineering

Product features

- Low adhesive surface
- Flame retardant according to IEC 60332-1-2
- In damp and wet rooms
- Designed for up to 5 million bending change cycles in the power chain
- Outdoor use only with UV protection and in accordance with the temperature range.

Approvals (Norm references)

CE RoHS

- For travel distances up to 10 m.
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3

Design

- Extra fine strands of plain copper wires (Class 6)
- Core insulation: PVC
- Cores twisted in layers in short lay lengths
- Nonwoven wrapping
- PVC outer sheath, grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Based on
Core in accordance with VDE 0245/0281
Sheath in accordance with VDE 0245/0281

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire according to VDE 0295
Class 6 / IEC 60228 Class 6

Minimum bending radius
For flexible applications: 7.5 x outside diameter
Static:
4 x cable diameter

Rated voltage
U_0/U:
300/500 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexing: 0°C up to +70°C
Fixed installation: -40°C up to + 70°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® FD CLASSIC 810				
0026100	2 X 0.5	5.8	10.0	40
0026101	3 G 0.5	6.2	15.0	48
0026102	4 G 0.5	6.8	19.2	58
0026103	5 G 0.5	7.3	24.0	67
0026104	7 G 0.5	8.5	34.0	88
0026105	12 G 0.5	10.0	58.0	136
0026106	18 G 0.5	12.0	86.4	195
0026107	25 G 0.5	14.9	120.0	274
0026108	30 G 0.5	14.9	144.0	312
0026109	34 G 0.5	16.3	164.0	359
0026110	50 G 0.5	19.2	240.0	515
0026119	2 X 0.75	6.2	15.0	49
0026120	3 G 0.75	6.7	22.0	60
0026121	4 G 0.75	7.3	29.0	73
0026122	5 G 0.75	7.9	37.0	86
0026123	7 G 0.75	9.4	51.0	117
0026124	12 G 0.75	11.2	87.0	181
0026125	16 G 0.75	12.6	116.0	234
0026126	18 G 0.75	13.3	130.0	259
0026127	25 G 0.75	15.9	181.0	363
0026130	2 X 1	6.6	19.0	58
0026131	3 G 1	7.1	29.0	72
0026132	4 G 1	7.8	39.0	88
0026133	5 G 1	8.5	48.0	104
0026134	7 G 1	10.1	67.0	142
0026135	12 G 1	12.0	115.0	221
0026136	14 G 1	12.9	134.4	258
0026137	16 G 1	13.6	153.0	287
0026138	18 G 1	14.5	173.0	324
0026139	25 G 1	17.8	240.0	445
0026140	26 G 1	17.8	249.6	459

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
0026141	34 G 1	19.6	326.4	595
0026142	41 G 1	21.2	394.0	712
0026143	50 G 1	22.9	480.0	854
0026144	65 G 1	26.2	624.0	1,097
0026149	2 X 1.5	7.3	29.0	74
0026150	3 G 1.5	7.9	43.2	93
0026151	4 G 1.5	8.6	58.0	114
0026152	5 G 1.5	9.6	72.0	139
0026153	7 G 1.5	11.5	101.0	189
0026154	12 G 1.5	13.5	173.0	295
0026156	18 G 1.5	16.3	259.0	429
0026157	25 G 1.5	20.0	360.0	597
0026158	26 G 1.5	20.0	374.4	615
0026159	34 G 1.5	21.7	489.6	783
0026160	41 G 1.5	23.6	613.0	936
0026161	42 G 1.5	23.6	629.0	954
0026162	50 G 1.5	25.6	720.0	1,134
0026170	3 G 2.5	9.5	72.0	145
0026171	4 G 2.5	10.5	96.0	179
0026172	5 G 2.5	11.8	120.0	218
0026173	7 G 2.5	14.2	168.0	303
0026174	12 G 2.5	16.7	288.0	473
0026175	14 G 2.5	17.9	336.0	548
0026180	3 G 4	11.2	120.0	214
0026181	4 G 4	12.3	160.0	266
0026182	5 G 4	13.7	200.0	325
0026183	4 G 6	14.5	223.0	396
0026184	5 G 6	16.2	288.0	484
0026185	4 G 10	18.3	384.0	644
0026186	5 G 10	20.3	480.0	785
0026187	4 G 16	21.2	615.0	922
0026188	5 G 16	23.7	768.0	1,133

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

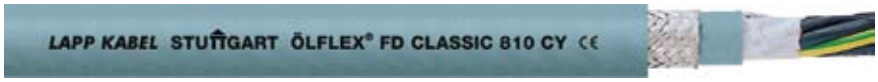
- ÖLFLEX® FD CLASSIC 810 P see page 117
- ÖLFLEX® FD 820 H see page 115

Accessories

- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® FD CLASSIC 810 CY

Screened, PVC- insulated, numbered, PVC- inner- and outer sheath



Info

- **Bestseller among the FD- power chain cables**
- **Well-proven, reliable**
- **EMC compliant**

Benefits

- Well-proven, reliable
- Economic solution

Application range

- In power chains or moving machine parts
- Use in measuring, control and regulating circuits
- Power circuits for electrical equipment in automation engineering
- Assembly lines, production lines, in all kinds of machines
- Plant engineering

Product features

- Low adhesive surface
- Flame retardant according to IEC 60332-1-2
- In damp and wet rooms
- Designed for up to 5 million bending change cycles in the power chain
- Outdoor use only with UV protection and in accordance with the temperature range.

Approvals (Norm references)

CE RoHS

- For travel distances up to 10 m.
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3

Design

- Extra fine strands of plain copper wires (Class 6)
- Core insulation: PVC
- Cores twisted in layers in short lay lengths
- PVC inner sheath, grey
- Tinned copper braid
- Nonwoven wrapping
- PVC outer sheath, grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Based on
Core in accordance with VDE 0245/0281
Sheath in accordance with VDE 0245/0281

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire in acc. to VDE 0295 Cl.6 / IEC 60228 Cl.6

Minimum bending radius
For flexible applications: 7.5 x outside diameter
Static:
4 x cable diameter

Rated voltage
300/500 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexing: 0°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® FD CLASSIC 810 CY				
0026200	2 X 0.5	7.4	33.0	74
0026201	3 G 0.5	7.8	39.0	84
0026202	4 G 0.5	8.4	46.0	98
0026203	5 G 0.5	8.9	54.0	110
0026204	7 G 0.5	10.3	70.0	143
0026205	12 G 0.5	11.9	100.0	201
0026206	18 G 0.5	14.0	153.0	287
0026207	25 G 0.5	17.2	202.0	394
0026208	30 G 0.5	17.2	228.0	432
0026219	2 X 0.75	7.8	39.0	85
0026220	3 G 0.75	8.3	48.0	99
0026221	4 G 0.75	8.9	59.0	116
0026222	5 G 0.75	9.5	69.0	133
0026223	7 G 0.75	11.3	90.0	178
0026224	12 G 0.75	13.0	129.0	253
0026226	18 G 0.75	15.5	205.0	368
0026227	25 G 0.75	18.7	271.0	496
0026229	30 G 0.75	18.7	320.0	549
0026230	2 X 1	8.2	46.0	97
0026231	3 G 1	8.7	57.0	114
0026232	4 G 1	9.4	70.0	134
0026233	5 G 1	10.3	81.0	159
0026234	7 G 1	12.0	110.0	207
0026235	12 G 1	14.0	182.0	314

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
0026238	18 G 1	16.8	254.0	443
0026239	25 G 1	20.2	365.0	612
0026240	26 G 1	20.2	374.0	625
0026241	34 G 1	22.1	463.0	787
0026242	41 G 1	23.8	542.0	918
0026243	50 G 1	26.1	640.0	1,120
0026249	2 X 1.5	8.9	58.0	117
0026250	3 G 1.5	9.5	75.0	139
0026251	4 G 1.5	10.4	91.0	169
0026252	5 G 1.5	11.5	112.0	201
0026253	7 G 1.5	13.3	145.0	262
0026254	12 G 1.5	15.8	247.0	404
0026255	16 G 1.5	17.5	314.0	503
0026256	18 G 1.5	18.5	348.0	560
0026257	25 G 1.5	22.5	498.0	793
0026259	34 G 1.5	24.5	700.0	1,005
0026270	3 G 2.5	11.4	119.0	207
0026271	4 G 2.5	12.4	161.0	247
0026272	5 G 2.5	13.8	194.0	307
0026273	7 G 2.5	16.5	262.0	418
0026281	4 G 4	14.3	238.0	360
0026282	5 G 4	16.0	280.0	436
0026283	4 G 6	16.8	318.0	514
0026285	4 G 10	20.8	521.0	824
0026287	4 G 16	23.8	780.0	1,207

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® FD CLASSIC 810 CP see page 118
- ÖLFLEX® FD 820 CH see page 116

Accessories

- SKINTOP® MS-SC-M see page 657
- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® FD 820 H

Info

- **Halogen-free alternative to PVC- type FD 810**
- **Amendment: out-phased product! <Trimmed size range>**

Benefits

- Prevents expensive damage to buildings and equipment caused by acid fumes produced during combustion

Application range

- For technical equipment of buildings or industrial plants with a high concentration of persons or valuable properties
- In power chains or moving machine parts
- Plant engineering
- Assembly lines, production lines, in all kinds of machines

Product features

- Low adhesive surface
- Flame retardant according to IEC 60332-1-2
- In dry, wet and damp interiors
- Outdoor use only with UV protection
- Designed for up to 5 million bending change cycles in the power chain

Approvals (Norm references)

CE RoHS

- For travel distances up to 10 m.
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3

Design

- Extra fine strands of plain copper wires (Class 6)
- Core insulation: Halogen-free thermoplastics polyolefin copolymer
- Cores twisted in layers in short lay lengths
- Nonwoven wrapping
- Outer sheath of halogen-free thermoplastic polyolefin copolymer, grey (RAL 7001)

Technical data

Core identification code
Black cores with printed white numbers (VDE 0293)

Based on
VDE 0250/0281/0282

Specific insulation resistance
> 10 GOhm x cm

Conductor stranding
Extra fine wire according to VDE 0295 Class 6 / IEC 60228 Class 6

Minimum bending radius
Flexing: 7.5 x outer diameter
Static:
4 x cable diameter

Rated voltage
U_0/U:
300/500 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexing: -25°C up to +70°C
Fixed installation: -40°C up to +70°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
1137112	12 G 0.75	11.2	87.0	169
1137118	18 G 0.75	13.3	130.0	242
1137125	25 G 0.75	16.5	181.0	336
1137852	2 X 1	6.6	19.2	53
1137205	5 G 1	8.5	48.0	96
1137207	7 G 1	10.1	67.0	132
1137218	18 G 1	14.5	173.0	305
1137225	25 G 1	17.8	240.0	415
1137241	41 G 1	21.2	394.0	670
1137303	3 G 1.5	7.9	43.2	86
1137304	4 G 1.5	8.6	58.0	106
1137305	5 G 1.5	9.6	72.0	130
1137307	7 G 1.5	11.5	101.0	177
1137312	12 G 1.5	13.5	173.0	277
1137318	18 G 1.5	16.3	259.0	405
1137325	25 G 1.5	20.0	360.0	558
1137334	34 G 1.5	21.7	489.6	740
1137403	3 G 2.5	9.5	72.0	135
1137404	4 G 2.5	10.5	96.0	168
1137405	5 G 2.5	11.8	120.0	205
1137407	7 G 2.5	14.2	168.0	285
1137504	4 G 4	12.3	160.0	251
1137605	5 G 6	16.2	288.0	458

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® FD 855 P see page 119
- ÖLFLEX® SERVO FD 785 P see page 103

Accessories

- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® FD 820 CH

Screened, halogen-free insulation, numbered, halogen-free inner- and outer sheath

Info

- **Halogen-free alternative to PVC- type FD 810**
- **Amendment: out-phased product! <Trimmed size range>**
- **EMC compliant**

Benefits

- Prevents expensive damage to buildings and equipment caused by acid fumes produced during combustion

Application range

- For technical equipment of buildings or industrial plants with a high concentration of persons or valuable properties
- In power chains or moving machine parts
- Plant engineering
- Assembly lines, production lines, in all kinds of machines

Product features

- Low adhesive surface
- Flame retardant according to IEC 60332-1-2
- In dry, wet and damp interiors
- Outdoor use only with UV protection
- Designed for up to 5 million bending change cycles in the power chain

Approvals (Norm references)

CE RoHS

- For travel distances up to 10 m.
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3

Design

- Extra fine strands of plain copper wires (Class 6)
- Core insulation: Halogen-free thermoplastics polyolefin copolymer
- Cores twisted in layers in short lay lengths
- Halogen-free inner sheath, grey
- Tinned copper braid
- Nonwoven wrapping
- Outer sheath of halogen-free thermoplastic polyolefin copolymer, grey (RAL 7001)

Technical data

Core identification code
Black cores with printed white numbers (VDE 0293)

Based on
VDE 0250/0281/0282

Specific insulation resistance
> 1 TOhm x cm

Conductor stranding
Extra fine wire in acc. to VDE 0295 Cl.6 / IEC 60228 Cl.6

Minimum bending radius
Flexing: 7.5 x outer diameter
Static:
4 x cable diameter

Rated voltage
U_0/U:
300/500 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexing: -25°C up to +70°C
Fixed installation: -40°C up to +70°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
1138104	4 G 0.75	8.4	59.0	108
1138107	7 G 0.75	10.7	90.0	166
1138207	7 G 1	11.4	110.0	194
1138212	12 G 1	13.4	182.0	295
1138303	3 G 1.5	9.0	75.0	129
1138304	4 G 1.5	9.9	91.0	158
1138312	12 G 1.5	15.1	247.0	381
1138325	25 G 1.5	21.9	498.0	737
1138404	4 G 2.5	11.8	161.0	231
1138405	5 G 2.5	13.2	194.0	289

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® FD 855 CP see page 120

Accessories

- SKINTOP® MS-SC-M see page 657
- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® FD CLASSIC 810 P

PVC insulated, numbered, PUR sheath

Info

- **Abrasion and cut resistant**

Benefits

- Well-proven, reliable
- Wide range use

Application range

- In power chains or moving machine parts
- Especially in wet areas of machine tools and transfer lines subject to average mechanical stress
- Mechanical engineering
- Use in measuring, control and regulating circuits
- Power circuits for electrical equipment in automation engineering

Product features

- Low adhesive surface
- Oil resistant
- Flame retardant (IEC 60332-1-2)
- In dry, damp or wet interiors under medium mechanical load conditions
- Designed for up to 5 million bending change cycles in the power chain

Approvals (Norm references)

CE RoHS

- For travel distances up to 10 m.
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3

Design

- Extra fine strands of plain copper wires (Class 6)
- Core insulation: PVC
- Cores twisted in short lay lengths
- Nonwoven wrapping
- Polyurethane sheath (PUR), grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Based on
Cores acc. to VDE 0245 / 0281
Sheath in accordance with VDE 0245/0282

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire according to VDE 0295 Class 6 / IEC 60228 Class 6

Minimum bending radius
For flexible applications: 7.5 x outside diameter
Static:
4 x cable diameter

Rated voltage
U_0/U:
300/500 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® FD CLASSIC 810 P				
0026300	2 X 0.5	5.8	10.0	36
0026301	3 G 0.5	6.2	15.0	44
0026302	4 G 0.5	6.8	19.0	53
0026303	5 G 0.5	7.3	24.0	62
0026304	7 G 0.5	8.5	34.0	82
0026305	12 G 0.5	10.0	58.0	129
0026306	18 G 0.5	12.0	86.4	185
0026319	2 X 0.75	6.2	15.0	44
0026320	3 G 0.75	6.7	22.0	55
0026321	4 G 0.75	7.3	29.0	67
0026322	5 G 0.75	7.9	37.0	80
0026323	7 G 0.75	9.4	51.0	109
0026324	12 G 0.75	11.2	87.0	172
0026326	18 G 0.75	13.3	130.0	247
0026327	25 G 0.75	15.9	181.0	346
0026330	2 X 1	6.6	20.0	52
0026331	3 G 1	7.1	29.0	66
0026332	4 G 1	7.8	39.0	82
0026333	5 G 1	8.5	48.0	97
0026334	7 G 1	10.1	67.0	117
0026335	12 G 1	12.0	115.0	211
0026338	18 G 1	14.5	173.0	310
0026339	25 G 1	17.8	240.0	426
0026341	34 G 1	19.6	326.4	571
0026342	41 G 1	21.2	394.0	684
0026343	50 G 1	22.9	480.0	822
0026344	65 G 1	26.2	624.0	1,058

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
0026349	2 X 1.5	7.3	29.0	68
0026350	3 G 1.5	7.9	43.2	86
0026351	4 G 1.5	8.6	58.0	106
0026352	5 G 1.5	9.6	72.0	131
0026353	7 G 1.5	11.5	101.0	178
0026354	12 G 1.5	13.5	173.0	281
0026355	16 G 1.5	15.2	230.0	365
0026356	18 G 1.5	16.3	259.0	411
0026357	25 G 1.5	20.0	360.0	571
0026359	34 G 1.5	21.7	489.6	753
0026361	42 G 1.5	23.6	629.0	919
0026362	50 G 1.5	25.6	720.0	1,093
0026370	3 G 2.5	9.5	72.0	135
0026371	4 G 2.5	10.5	96.0	168
0026372	5 G 2.5	11.8	120.0	206
0026373	7 G 2.5	14.2	168.0	286
0026374	12 G 2.5	16.7	288.0	453
0026375	14 G 2.5	17.9	336.0	525
0026381	4 G 4	12.3	160.0	252
0026382	5 G 4	13.7	200.0	309
0029200	1 G 6	6.7	60.0	84
0026383	4 G 6	14.7	230.0	377
0029210	1 G 10	8.0	100.0	141
0026385	4 G 10	18.3	384.0	614
0026386	5 G 10	20.3	480.0	751
0029220	1 G 16	9.5	160.0	198
0026387	4 G 16	21.7	615.0	851

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

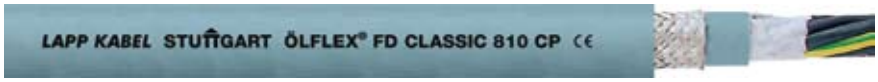
- ÖLFLEX® FD 855 P see page 119
- ÖLFLEX® SERVO FD 785 P see page 103
- ÖLFLEX® FD 891 P see page 129

Accessories

- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® FD CLASSIC 810 CP

Screened, PVC- insulated, numbered, PVC- inner and PUR- outer sheath cable



Info
- **Abrasion and cut resistant**
- **EMC compliant**

Benefits
- Well-proven, reliable
- Wide range use

Application range
- In power chains or moving machine parts
- Especially in wet areas of machine tools and transfer lines subject to average mechanical stress
- Mechanical engineering
- Use in measuring, control and regulating circuits
- Power circuits for electrical equipment in automation engineering

Product features
- Low adhesive surface
- Oil resistant
- Flame retardant (IEC 60332-1-2)
- In dry, damp or wet interiors under medium mechanical load conditions
- Designed for up to 5 million bending change cycles in the power chain

Approvals (Norm references)
CE RoHS
- For travel distances up to 10 m.
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3

Design
- Extra fine strands of plain copper wires (Class 6)
- Core insulation: PVC
- Cores twisted in short lay lengths
- Nonwoven wrapping
- PVC inner sheath
- Copper braiding, tinned
- Polyurethane sheath (PUR), grey (RAL 7001)

Technical data
Core identification code
Black with white numbers acc. to VDE 0293

Based on
Cores acc. to VDE 0245 / 0281
Sheath in accordance with VDE 0245/0282

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire in acc. to VDE 0295 Cl.6 / IEC 60228 Cl.6

Minimum bending radius
For flexible applications: 7.5 x outside diameter
Static:
4 x cable diameter

Rated voltage
U_0/U:
300/500 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexing: -5°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® FD CLASSIC 810 CP				
0026400	2 X 0.5	6.9	33.0	70
0026401	3 G 0.5	7.3	39.0	80
0026402	4 G 0.5	7.9	46.0	94
0026403	5 G 0.5	8.4	54.0	106
0026404	7 G 0.5	9.8	70.0	138
0026405	12 G 0.5	11.3	100.0	194
0026419	2 X 0.75	7.3	39.0	81
0026420	3 G 0.75	7.8	48.0	95
0026421	4 G 0.75	8.4	59.0	111
0026422	5 G 0.75	9.0	69.0	128
0026423	7 G 0.75	10.7	90.0	171
0026424	12 G 0.75	12.4	129.0	244
0026425	16 G 0.75	14.2	186.0	328
0026426	18 G 0.75	14.9	205.0	356
0026427	25 G 0.75	18.0	271.0	479
0026430	2 X 1	7.7	46.0	93
0026431	3 G 1	8.2	57.0	109
0026432	4 G 1	8.9	70.0	129
0026433	5 G 1	9.8	81.0	154
0026434	7 G 1	11.4	110.0	200
0026435	12 G 1	13.4	182.0	304

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
0026438	18 G 1	16.1	254.0	429
0026439	25 G 1	19.5	365.0	593
0026449	2 X 1.5	8.4	58.0	112
0026450	3 G 1.5	9.0	75.0	133
0026451	4 G 1.5	9.9	91.0	163
0026452	5 G 1.5	10.9	112.0	193
0026453	7 G 1.5	12.7	145.0	252
0026454	12 G 1.5	15.1	247.0	391
0026456	18 G 1.5	17.8	348.0	542
0026457	25 G 1.5	21.9	498.0	767
0026470	3 G 2.5	10.8	119.0	199
0026471	4 G 2.5	11.8	161.0	238
0026472	5 G 2.5	13.2	194.0	297
0026473	7 G 2.5	15.8	262.0	403
0026474	12 G 2.5	18.2	410.0	589
0026475	14 G 2.5	19.8	490.0	702
0026481	4 G 4	13.7	238.0	349
0026483	4 G 6	16.1	318.0	499
0026484	5 G 6	17.7	410.0	596
0026485	4 G 10	20.2	521.0	842
0026487	4 G 16	23.2	780.0	1,173

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products
- ÖLFLEX® FD 855 CP see page 120
- ÖLFLEX® FD ROBUST C see page 122

Accessories
- SKINTOP® MS-SC-M see page 657
- SKINTOP® MS-M BRUSH see page 658
- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® FD 855 P

TPE -insulated, numbered, PUR sheath

Info

- **MUD res. acc. IEC61892-4 Annex D**
- **Flexible down to -40 °C**
- **Smalles bending radii of all FD cables**

Benefits

- Well-proven, reliable
- Wide range use
- All-weather control cable

Application range

- In power chains or moving machine parts
- Especially in wet areas of machine tools and transfer lines subject to average mechanical stress
- Mechanical engineering
- Construction machinery
- Assembly lines, production lines, in all kinds of machines

Product features

- Low adhesive surface
- Oil resistant
- Halogen-free and flame retardant (IEC 60332-1-2)
- In dry, damp or wet interiors under medium mechanical load conditions
- Designed for up to 5 million bending change cycles in the power chain

Approvals (Norm references)

CE RoHS

- For travel distances up to 100 m (horizontal)
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3

Design

- Extra fine strands of plain copper wires (Class 6)
- Core insulation: TPE
- Cores twisted together in extremely short lay lengths
- Nonwoven wrapping
- Polyurethane sheath (PUR), grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Based on
VDE 0250/0281/0282

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire according to VDE 0295
Class 6 / IEC 60228 Class 6

Minimum bending radius
For flexible applications: 5 x outside diameter
Fixed installation: 3 x outer diameter

Rated voltage
300/500 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexing: -40°C up to +80°C
Fixed installation: -50°C up to +80 °C
During installation: -40°C up to +80 °C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® FD 855 P				
0027530	2 X 0.5	5.4	10.0	34
0027531	3 G 0.5	5.9	14.0	40
0027532	5 G 0.5	6.9	24.0	55
0027533	6 G 0.5	7.4	29.0	63
0027534	7 G 0.5	8.0	34.0	76
0027535	12 G 0.5	9.5	58.0	114
0027536	18 G 0.5	11.3	86.0	165
0027537	20 G 0.5	11.9	96.0	180
0027538	25 G 0.5	13.8	120.0	219
0027540	30 G 0.5	14.0	144.0	251
0027541	36 G 0.5	15.1	173.0	290
0027545	2 X 0.75	5.9	14.0	42
0027546	3 G 0.75	6.4	22.0	50
0027547	4 G 0.75	7.0	29.0	60
0027548	5 G 0.75	7.6	36.0	71
0027549	7 G 0.75	9.1	50.0	99
0027550	12 G 0.75	10.7	86.0	158
0027551	18 G 0.75	12.8	130.0	219
0027552	20 G 0.75	13.7	144.0	240
0027553	25 G 0.75	16.0	180.0	309
0027555	36 G 0.75	17.4	259.0	411
0027560	2 X 1	6.3	19.0	50
0027561	3 G 1	6.9	29.0	61
0027562	4 G 1	7.5	38.0	70

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
0027563	5 G 1	8.1	48.0	93
0027564	7 G 1	9.8	67.0	122
0027565	12 G 1	11.6	115.0	196
0027566	18 G 1	14.1	173.0	274
0027567	20 G 1	14.8	192.0	300
0027568	25 G 1	17.3	240.0	385
0027570	30 G 1	17.5	288.0	444
0027571	36 G 1	19.1	346.0	516
0027575	2 X 1.5	7.0	29.0	68
0027576	3 G 1.5	7.6	43.0	83
0027586	4 G 1.5	8.3	58.0	100
0027577	5 G 1.5	9.3	72.0	128
0027578	7 G 1.5	11.1	101.0	177
0027579	12 G 1.5	13.1	173.0	275
0027580	18 G 1.5	15.7	259.0	405
0027582	25 G 1.5	19.3	360.0	565
0027584	30 G 1.5	19.3	432.0	652
0027585	36 G 1.5	21.2	518.0	759
0027587	41 G 1.5	23.0	614.0	978
0027370	3 G 2.5	9.2	72.0	121
0027371	4 G 2.5	10.2	96.0	163
0027372	5 G 2.5	11.4	120.0	196
0027373	7 G 2.5	13.8	168.0	266
0027374	12 G 2.5	16.3	288.0	446
0027375	18 G 2.5	19.4	432.0	665
0027376	25 G 2.5	24.1	600.0	929

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® FD ROBUST see page 121

Accessories

- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® FD 855 CP

Screened, TPE -insulated, numbered,TPE-inner sheath, PUR -outer sheath

Info

- **MUD res. acc. IEC61892-4 Annex D**
- **Flexible down to -40 °C**
- **EMC optimised**

Benefits

- Well-proven, reliable
- Wide range use
- All-weather control cable

Application range

- In power chains or moving machine parts
- Especially in wet areas of machine tools and transfer lines subject to average mechanical stress
- Mechanical engineering
- Construction machinery
- Assembly lines, production lines, in all kinds of machines

Product features

- Low adhesive surface
- Oil resistant
- Halogen-free and flame retardant (IEC 60332-1-2)
- In dry, damp or wet interiors under medium mechanical load conditions
- Designed for up to 5 million bending change cycles in the power chain

Approvals (Norm references)

CE RoHS

- For travel distances up to 100 m (horizontal)
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3

Design

- Extra fine strands of plain copper wires (Class 6)
- Core insulation: TPE
- Cores twisted together in extremely short lay lengths
- Nonwoven wrapping
- Inner sheath: TPE
- Tinned copper braid
- Polyurethane sheath (PUR), grey (RAL 7001)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Based on
VDE 0250/0281/0282

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire in acc. to VDE 0295 Cl.6 / IEC 60228 Cl.6

Minimum bending radius
For flexible applications: 7.5 x outside diameter
Static:
4 x cable diameter

Rated voltage
300/500 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexing: -40°C up to +80°C
Fixed installation: -50°C up to +80 °C
During installation: -40°C up to +80 °C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® FD 855 CP				
0027605	2 X 0.5	7.1	32.0	67
0027606	3 G 0.5	7.4	40.0	79
0027607	5 G 0.5	8.6	53.0	107
0027608	6 G 0.5	9.1	59.0	121
0027609	7 G 0.5	9.8	67.0	132
0027610	12 G 0.5	11.5	97.0	190
0027611	18 G 0.5	13.3	131.0	245
0027612	20 G 0.5	13.9	156.0	281
0027613	25 G 0.5	16.2	190.0	367
0027615	30 G 0.5	16.4	222.0	408
0027616	36 G 0.5	17.4	251.0	459
0027620	2 X 0.75	7.7	40.0	79
0027621	3 G 0.75	8.0	47.0	96
0027622	4 G 0.75	8.6	58.0	112
0027623	5 G 0.75	9.4	65.0	126
0027624	7 G 0.75	11.1	85.0	165
0027625	12 G 0.75	12.7	127.0	231
0027626	18 G 0.75	15.0	198.0	330
0027628	25 G 0.75	18.2	259.0	459
0027630	36 G 0.75	20.0	348.0	605
0027635	2 X 1	8.0	45.0	93
0027636	3 G 1	8.5	55.0	109
0027637	4 G 1	9.2	68.0	126

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
0027638	5 G 1	10.0	81.0	147
0027639	7 G 1	11.8	106.0	196
0027640	12 G 1	13.6	175.0	292
0027641	18 G 1	16.6	242.0	418
0027643	25 G 1	19.9	329.0	575
0027645	30 G 1	20.2	377.0	635
0027646	36 G 1	21.8	467.0	758
0027649	2 X 1.5	8.6	58.0	115
0027650	3 G 1.5	9.3	76.0	139
0027661	4 G 1.5	10.2	91.0	156
0027651	5 G 1.5	11.3	111.0	198
0027652	7 G 1.5	12.9	145.0	254
0027653	12 G 1.5	15.4	242.0	416
0027654	18 G 1.5	18.1	346.0	564
0027656	25 G 1.5	22.0	486.0	811
0027659	36 G 1.5	24.3	655.0	1,066
0027380	3 G 2.5	11.1	110.0	194
0027381	4 G 2.5	12.1	136.0	234
0027382	5 G 2.5	13.2	180.0	293
0027383	7 G 2.5	16.1	246.0	418
0027384	12 G 2.5	18.5	377.0	629
0027385	18 G 2.5	22.1	569.0	912
0027386	25 G 2.5	26.3	765.0	1,266

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® FD ROBUST C see page 122

Accessories

- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® FD ROBUST

TPE-insulated, numbered, TPE-sheath

Info

- **Robust and weatherproofed**
- **High chemical resistance**
- **Temperature range: -40°C up to +105°C**

Benefits

- Well-proven, reliable
- Wide range use
- All-weather control cable
- For indoor and outdoor use

Application range

- In power chains or moving machine parts
- Machine tool manufacture, medical technology, laundries, car washing equipment, chemical industry, composting plants, sewage works
- Food and beverage industry, especially for production and processing equipment of milk and meat products
- Especially in wet areas of machine tools and transfer lines subject to average mechanical stress
- In environments where exposed to oils, fats, waxes (vegetable or animal based or synthetic) or their emulsions

Product features

- Low adhesive surface
- Largely resistant to oil and chemicals
- Hydrolysis resistant against warm and hot water
- In dry, damp or wet interiors under medium mechanical load conditions
- Designed for up to 5 million bending change cycles in the power chain

Approvals (Norm references)

CE RoHS

- For travel distances up to 100 m (horizontal)
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3

Design

- Superfine wire, tinned copper strands
- Core insulation: TPE
- Cores twisted together in extremely short lay lengths
- Nonwoven wrapping
- Robust outer sheath made of special halogen-free TPE, black (RAL 9005)

Technical data

Core identification code
Black cores with printed white numbers (VDE 0293)

Based on
VDE 0250/0281/0282

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire according to VDE 0295 Class 6 / IEC 60228 Class 6

Minimum bending radius
For flexible applications:
7.5 x cable diameter
(at temperatures < 70 °C)
10 x cable diameter
(at temperatures max. 105°C)
Static:
4 x cable diameter

Rated voltage
U_0/U:
300/500 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexing: -40°C up to +105°C
Fixed installation: -50°C up to +110°C
Briefly up to +120°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® FD ROBUST				
0026501	3 G 0.75	7.2	21.6	51
0026502	4 G 0.75	8.3	28.8	69
0026503	5 G 0.75	9.2	36.0	87
0026504	7 G 0.75	11.1	50.4	127
0026505	12 G 0.75	12.9	86.4	182
0026506	18 G 0.75	15.8	129.6	277
0026507	25 G 0.75	19.6	180.0	421
0026509	3 G 1	7.5	28.8	63
0026510	4 G 1	8.5	38.4	82
0026511	5 G 1	9.5	48.0	105
0026516	7 G 1	12.1	67.2	157
0026517	12 G 1	13.9	115.2	226
0026518	18 G 1	17.2	172.8	345
0026521	3 G 1.5	9.1	43.2	90
0026522	4 G 1.5	10.3	57.6	118
0026523	5 G 1.5	11.5	72.0	149
0026524	7 G 1.5	14.1	100.8	233
0026525	12 G 1.5	16.3	172.8	322
0026526	18 G 1.5	20.0	259.2	494
0026527	25 G 1.5	24.6	360.0	695
0026531	4 G 2.5	12.3	96.0	181
0026532	5 G 2.5	13.7	120.0	228
0026533	7 G 2.5	16.4	168.0	329
0026534	12 G 2.5	19.2	288.0	491
0026541	4 G 4	14.1	153.6	261
0026551	4 G 6	15.6	230.4	356
0026561	4 G 10	20.0	384.0	596
0026571	4 G 16	24.3	614.4	910

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® FD 855 P see page 119

Accessories

- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® FD ROBUST C

Screened, TPE -insulated, numbered,TPE-inner- and outer sheath

Info

- **Robust and weatherproofed**
- **Temperature range: -40°C up to +105°C**
- **EMC optimised**

Benefits

- Well-proven, reliable
- Wide range use
- All-weather control cable
- EMC compliant
- For indoor and outdoor use

Application range

- Machine tool manufacture, medical technology, laundries, car washing equipment, chemical industry, composting plants, sewage works
- Especially in wet areas of machine tools and transfer lines subject to average mechanical stress
- Food and beverage industry, especially for production and processing equipment of milk and meat products
- In environments where exposed to oils, fats, waxes (vegetable or animal based or synthetic) or their emulsions
- Assembly lines, production lines, in all kinds of machines

Product features

- Hydrolysis resistant against warm and hot water
- Low adhesive surface
- Largely resistant to oil and chemicals
- In dry, damp or wet interiors under medium mechanical load conditions
- Designed for up to 5 million bending change cycles in the power chain

Approvals (Norm references)

CE RoHS

- For travel distances up to 100 m (horizontal)
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3

Design

- Superfine wire, tinned copper strands
- Core insulation: TPE
- Cores twisted together in extremely short lay lengths
- Nonwoven wrapping
- Inner sheath: TPE
- Tinned copper braid
- Robust outer sheath made of special halogen-free TPE, black (RAL 9005)

Technical data

Core identification code
Black cores with printed white numbers (VDE 0293)

Based on
VDE 0250/0281/0282

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire in acc. to VDE 0295 Cl.6 / IEC 60228 Cl.6

Minimum bending radius
For flexible applications:
7.5 x cable diameter
(at temperatures < 70 °C)
10 x cable diameter
(at temperatures max. 105°C)

Rated voltage
300/500 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexing: -40 °C to +105 °C
Fixed installation: -50°C to +105°C
Briefly up to +120°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX FD® FD ROBUST C				
0026701	3 G 0.75	9.6	49.6	110
0026702	4 G 0.75	10.8	60.9	137
0026703	5 G 0.75	11.5	72.8	160
0026704	7 G 0.75	13.9	107.2	238
0026705	12 G 0.75	15.8	151.5	312
0026706	18 G 0.75	18.8	205.5	448
0026707	25 G 0.75	22.9	299.1	657
0026709	3 G 1	9.7	61.1	125
0026716	7 G 1	14.7	132.3	278
0026717	12 G 1	16.8	189.1	370
0026721	3 G 1.5	11.4	79.8	163
0026722	4 G 1.5	13.0	99.2	210
0026723	5 G 1.5	14.3	129.7	264
0026724	7 G 1.5	17.0	175.2	370
0026725	12 G 1.5	19.3	257.1	498
0026726	18 G 1.5	23.3	378.9	749
0026727	25 G 1.5	28.4	555.5	1,042
0026731	4 G 2.5	15.1	161.5	307
0026732	5 G 2.5	16.4	188.3	361
0026733	7 G 2.5	19.6	252.6	512
0026734	12 G 2.5	22.7	406.5	730
0026741	4 G 4	17.2	227.3	412
0026751	4 G 6	18.6	306.7	519
0026761	4 G 10	23.5	513.6	853
0026771	4 G 16	28.5	809.6	1,273

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® FD 855 CP see page 120

Accessories

- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® FD 90

PVC insulated, PVC sheath, single core, approved

Info

- **Multi-Standard: many countries, one cable**

Benefits

- Multi-Standard= less part varieties= cost savings
- Easy laying
- For multi-purpose applications

Application range

- In power chains or moving machine parts
- For internal wiring of electric and electronic equipment in switch cabinets
- This cable can also substitute multi-core shielded servo drive cables where space requirements or minimum bending radii present problems
- Specially designed power circuits of servo motors driven by frequency converters as well as main spindle drives in machine tools
- Test systems of the automotive industry, vehicles and stationary fuel cell systems

Product features

- Low adhesive surface
- Flame retardant acc. IEC 60332-1-2 & CSA FT1
- Oil resistant
- Designed for operation under a minimum bending radius of at least 7.5 times the cable diameter

Approvals (Norm references)

- For travel distances up to 10 m.
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3
- USA: Acc. NFPA79 Ed 08 in industrial machinery as part of a listed assembly only.
- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Extra fine strands of plain copper wires (Class 6)
- Core insulation: PVC
- Nonwoven wrapping
- PVC outer sheath, black (RAL 9005)

Technical data

Core identification code
Black or green-yellow, other colours available on request

Approvals
UL-AWM-Style 10107
CSA AWM IA/B IIA/B FT 1

Based on
VDE 0250, 0281

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire according to VDE 0295 Class 6 / IEC 60228 Class 6

Minimum bending radius
Flexing: 7.5 x outer diameter
Fixed installation: 3 x outer diameter

Rated voltage
IEC: 600/1000 V
UL & CSA: 600 V

Test voltage
4000 V

Protective conductor
G = with PE conductor
X = without PE conductor

Range of temperature
Flexing: -5°C up to +90°C
Fixed installation: -40°C up to +90°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Core colour	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® FD 90					
0026600	1 G 10	9.5	gn/ye	96.0	176
0026601	1 X 10	9.5	black	96.0	176
0026603	1 G 16	11.0	gn/ye	153.6	240
0026604	1 X 16	11.0	black	153.6	240
0026607	1 G 25	12.3	gn/ye	240.0	361
0026608	1 X 25	12.3	black	240.0	361
0026610	1 G 35	14.7	gn/ye	336.0	482
0026611	1 X 35	14.7	black	336.0	482
0026613	1 G 50	16.8	gn/ye	480.0	660
0026614	1 X 50	16.8	black	480.0	660
0026616	1 G 70	18.9	gn/ye	672.0	898
0026617	1 X 70	18.9	black	672.0	898
0026619	1 G 95	20.4	gn/ye	912.0	1,179
0026620	1 X 95	20.4	black	912.0	1,179
0026622	1 G 120	24.2	gn/ye	1,152.0	1,521
0026623	1 X 120	24.2	black	1,152.0	1,521
0026625	1 G 150	25.9	gn/ye	1,341.1	1,739
0026626	1 X 150	25.9	black	1,341.1	1,739
0026628	1 G 185	28.9	gn/ye	1,776.0	2,305
0026629	1 X 185	28.9	black	1,776.0	2,305
0026634	1 G 240	31.4	gn/ye	2,304.0	2,944
0026635	1 X 240	31.4	black	2,304.0	2,944
0026640	1 G 300	34.3	gn/ye	2,671.6	3,545
0026641	1 X 300	34.3	black	2,671.6	3,545

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Accessories

- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® FD 90 CY

Screened, PVC- insulated, PVC sheath, single core, approved

Info

- **Multi-Standard: many countries, one cable**
- **EMC compliant**

Benefits

- Multi-Standard= less part varieties= cost savings
- Easy laying
- For multi-purpose applications

Application range

- In power chains or moving machine parts
- For internal wiring of electric and electronic equipment in switch cabinets
- Specially designed power circuits of servo motors driven by frequency converters as well as main spindle drives in machine tools
- This cable can also substitute multi-core shielded servo drive cables where space requirements or minimum bending radii present problems
- Test systems of the automotive industry, vehicles and stationary fuel cell systems

Product features

- Oil resistant
- Low adhesive surface
- Flame retardant acc. IEC 60332-1-2 & CSA FT1
- Designed for operation under a minimum bending radius of at least 7.5 times the cable diameter

Approvals (Norm references)

- For travel distances up to 10 m.
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3
- USA: Acc. NFPA79 Ed 08 in industrial machinery as part of a listed assembly only.
- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Extra fine strands of plain copper wires (Class 6)
- Core insulation: PVC
- Nonwoven wrapping
- Tinned copper braid
- Nonwoven wrapping
- PVC outer sheath, orange (RAL 2003)

Technical data

Core identification code
Black, other colours on request.

Approvals
UL-AWM-Style 10107 VW-1
CSA AWM IA/B IIA/B FT 1

Based on
VDE 0250, 0281

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire according to VDE 0295 Class 6 / IEC 60228 Class 6

Minimum bending radius
For flexible applications: 7.5 x outside diameter
Fixed installation: 3 x outer diameter

Rated voltage
IEC: 600/1000 V
UL & CSA: 600 V

Test voltage
4000 V

Protective conductor
X = without protective conductor

Range of temperature
Flexing: -5°C up to +90°C
Fixed installation: -40°C up to +90°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Core colour	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® FD 90 CY					
0026651	1 X 10	10.2	black	127.6	227
0026653	1 X 16	11.7	black	186.2	297
0026655	1 X 25	13.0	black	257.8	410
0026657	1 X 35	15.6	black	400.7	607
0026659	1 X 50	17.7	black	554.8	808
0026661	1 X 70	20.0	black	775.6	1,081
0026663	1 X 95	21.7	black	1,028.1	1,382
0026665	1 X 120	24.8	black	1,282.4	1,752
0026667	1 X 150	27.0	black	1,410.4	1,924
0026669	1 X 185	30.0	black	1,935.0	2,611
0026671	1 X 240	32.7	black	2,526.0	3,372
0026673	1 X 300	35.6	black	3,128.8	4,105

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
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Accessories

- SKINTOP® MS-SC-M see page 657
- SKINTOP® MS-M BRUSH see page 658
- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® FD 891

PVC insulated, numbered, PVC sheath, approved

Info

- **Multi-Standard: many countries, one cable**

Benefits

- Multi-Standard= less part varieties= cost savings

Application range

- In power chains or moving machine parts
- Plant engineering
- Machine tools

Product features

- Oil resistant
- Low adhesive surface
- Flame retardant acc. IEC 60332-1-2 & CSA FT1
- In damp and wet rooms
- Designed for up to 5 million bending change cycles in the power chain

Approvals (Norm references)

- For travel distances up to 10 m.
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3
- USA: Acc. NFPA79 Ed 08 in industrial machinery as part of a listed assembly only.
- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Extra fine strands of plain copper wires (Class 6)
- Core insulation: PVC
- Cores twisted in layers in short lay lengths
- Nonwoven wrapping
- PVC outer sheath, black (RAL 9005)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Approvals
UL-AWM-Style 2587 + 21098
CSA AWM IA/B; IIA/B FT 1

Based on
VDE 0250/0281

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire according to VDE 0295 Class 6 / IEC 60228 Class 6

Minimum bending radius
For flexible applications: 7.5 x outside diameter
Static:
4 x cable diameter

Rated voltage
IEC: 300/500 V
UL/CSA: 600 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexing: -5°C up to +90°C
Fixed installation: -40°C up to +90°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
1026012	12 G 0.5	11.4	57.6	170
1026103	3 G 0.75	7.1	21.6	62
1026104	4 G 0.75	7.9	28.8	81
1026105	5 G 0.75	8.6	36.0	100
1026107	7 G 0.75	10.3	50.4	148
1026112	12 G 0.75	12.4	86.5	215
1026118	18 G 0.75	14.8	129.6	313
1026125	25 G 0.75	17.7	180.0	449
1026303	3 G 1.5	8.0	43.2	93
1026304	4 G 1.5	9.1	57.6	125
1026305	5 G 1.5	9.9	72.0	155
1026307	7 G 1.5	11.9	100.8	228
1026312	12 G 1.5	14.3	172.8	337
1026318	18 G 1.5	17.4	259.2	513
1026325	25 G 1.5	20.7	360.0	712
1026334	34 G 1.5	23.7	489.6	965
1026403	3 G 2.5	9.6	72.0	140
1026404	4 G 2.5	10.9	96.0	194
1026405	5 G 2.5	11.9	120.0	234
1026407	7 G 2.5	14.5	168.0	350
1026412	12 G 2.5	17.4	288.0	519
1026504	4 G 4	12.6	153.6	273
1026505	5 G 4	14.1	192.0	348
1026507	7 G 4	17.1	268.8	505
1026604	4 G 6	14.6	230.4	631
1026614	4 G 10	18.4	384.0	800
1026624	4 G 16	23.7	614.4	1,032
1026634	4 G 25	27.7	960.0	1,497
1026644	4 G 35	32.8	1,344.0	2,098

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
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Comparable products

- ÖLFLEX® FD CLASSIC 810 see page 113
- ÖLFLEX® FD 891 P see page 129

Accessories

- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® FD 891 CY

Screened, PVC- insulated, numbered, PVC- inner and outer sheath, approved

Info
- **Multi-Standard: many countries, one cable**
- **EMC compliant**

Benefits
- Multi-Standard= less part varieties= cost savings

Application range
- In power chains or moving machine parts
- Plant engineering
- Machine tools

Product features
- Oil resistant
- Low adhesive surface
- Flame retardant acc. IEC 60332-1-2 & CSA FT1
- In damp and wet rooms
- Designed for up to 5 million bending change cycles in the power chain

Approvals (Norm references)

Design
- Extra fine strands of plain copper wires (Class 6)
- Core insulation: PVC
- Cores twisted in layers in short lay lengths
- Nonwoven wrapping
- Tinned copper braid
- Nonwoven wrapping
- PVC outer sheath, black (RAL 9005)
- For travel distances up to 10 m.
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3
- USA: Acc. NFPA79 Ed 08 in industrial machinery as part of a listed assembly only.
- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Technical data
Core identification code
Black with white numbers acc. to VDE 0293

Approvals
UL-AWM-Style 2587 + 21098
CSA AWM IA/B; IIA/B FT 1

Based on
VDE 0250/0281

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire in acc. to VDE 0295 Cl.6 / IEC 60228 Cl.6

Minimum bending radius
For flexible applications: 7.5 x outside diameter
Static:
4 x cable diameter

Rated voltage
IEC: 300/500 V
UL/CSA: 600 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexing: -5°C up to +90°C
Fixed installation: -40°C up to +90°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® FD 891 CY				
1027003	3 G 0.5	8.8	38.9	100
1027004	4 G 0.5	9.0	47.3	121
1027005	5 G 0.5	9.6	55.3	142
1027007	7 G 0.5	11.5	81.1	200
1027012	12 G 0.5	13.4	99.9	280
1027018	18 G 0.5	15.9	160.1	403
1027025	25 G 0.5	18.5	203.9	533
1027103	3 G 0.75	8.7	49.2	115
1027104	4 G 0.75	9.5	59.9	141
1027105	5 G 0.75	10.5	68.6	169
1027107	7 G 0.75	12.2	91.7	235
1027112	12 G 0.75	14.6	152.1	346
1027118	18 G 0.75	17.1	204.4	470
1027303	3 G 1.5	9.8	74.8	158
1027304	4 G 1.5	11.0	94.2	201
1027305	5 G 1.5	11.8	101.1	227
1027307	7 G 1.5	14.0	165.6	349
1027312	12 G 1.5	16.6	246.5	489
1027318	18 G 1.5	20.0	374.7	740
1027325	25 G 1.5	23.3	489.4	981
1027403	3 G 2.5	11.5	103.9	214
1027404	4 G 2.5	12.7	161.8	334
1027405	5 G 2.5	13.9	184.6	354
1027407	7 G 2.5	16.8	242.1	503
1027412	12 G 2.5	20.0	403.5	746
1027503	3 G 4	13.0	157.5	296
1027504	4 G 4	14.8	218.1	404
1027507	7 G 4	19.5	373.2	717
1027604	4 G 6	16.9	304.7	541
1027624	4 G 16	26.9	803.6	1,405
1027634	4 G 25	31.6	1,180.4	1,991
1027644	4 G 35	36.2	1,593.7	2,667

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
DESINA® is a registered trademark of the Association of German Machine Tool Manufacturers

Comparable products

- ÖLFLEX® FD CLASSIC 810 CY see page 114
- ÖLFLEX® FD 891 CP see page 130

Accessories

- SKINTOP® MS-SC-M see page 657
- EPIC® Industrial connectors see page 447
- SILVYN® CHAIN Cable protection and guiding systems

New

ÖLFLEX® CHAIN 879

PVC insulated, numbered, PVC sheath, approved

Info

- **NFPA 79 Ed. 2007 compliant power chain cable**

Benefits

- USA. Labeling of Industrial machinery. Because its MTW listing, these cables are highly accepted by NRTLs or AHJs
- Broad application range due to multiple approvals

Application range

- In power chains or moving machine parts
- Automated handling equipment
- Production plants
- Plant engineering

Product features

- Oil resistant according to UL OIL RES I & II
- Low adhesive surface
- Flame retardant acc. IEC 60332-1-2 & CSA FT1
- In damp and wet rooms
- Designed for 2 up to 8 million bending change cycles in the power chain

Approvals (Norm references)

- For travel distances up to 10 m.
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3
- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Extra fine strands of plain copper wires (Class 6)
- Insulation: PVC with nylon jacket (PA skin)
- Cores twisted in layers in short lay lengths
- Nonwoven wrapping
- PVC outer sheath, black (RAL 9005)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Approvals
Ul Type MTW & UL-AWM-Style 20886
CSA AWM IA/B; IIA/B FT 1

Based on
VDE 0250/0281

Conductor stranding
Extra fine wire according to VDE 0295
Class 6 / IEC 60228 Class 6

Minimum bending radius
For flexible applications: 7.5 x outside diameter
except #872003, 872012, 871803, 871812: 12 x o.d.
Static:
4 x cable diameter

Rated voltage
IEC: 300/500 V
UL MTW & CSA AWM: 600 V / UL AWM 1000V

Test voltage
2000V

Protective conductor
G = with protective conductor GN/YE

Range of temperature
Flexing: -5°C up to +90°C
Fixed installation: -40°C up to +90°C

Part number	Number of cores and mm² per conductor	AWG	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CHAIN 879					
872003	3 G	20	7.3	15.0	58
872004	4 G	20	8.0	21.0	70
872005	5 G	20	8.6	25.5	81
872007	7 G	20	9.9	36.0	104
872012	12 G	20	11.4	61.0	151
872018	18 G	20	14.2	93.0	236
872025	25 G	20	17.0	127.5	311
871803	3 G	18	7.8	31.5	78
871804	4 G	18	8.6	40.5	95
871805	5 G	18	9.3	51.0	112
871807	7 G	18	10.8	72.0	148
871812	12 G	18	12.4	123.0	248
871815	15 G	18	13.8	154.5	299
871818	18 G	18	15.4	184.5	345
871825	25 G	18	18.5	256.5	461
871603	3 G 1.5		8.6	46.5	100
871604	4 G 1.5		9.5	61.5	124
871605	5 G 1.5		10.3	76.5	147
871607	7 G 1.5		12.0	108.0	195
871612	12 G 1.5		14.7	184.5	329
871618	18 G 1.5		17.2	277.5	463
871625	25 G 1.5		20.8	384.0	680
871404	4 G 2.5		10.6	102.0	175
871407	7 G 2.5		13.6	180.0	310
871204	4 G 4		12.4	163.5	251
871207	7 G 4		16.9	286.5	445
871004	4 G 6		15.3	246.0	388
870804	4 G 10		19.7	411.0	679
870604	4 G 16		23.7	657.0	970

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil 152 m; Drum 305 m
Please specify the desired make-up (e.g. 1 x 610 m drum or 8 x 76 m coils)

Comparable products

- ÖLFLEX® FD CLASSIC 810 see page 113
- ÖLFLEX® FD 891 P see page 129

Accessories

- SILVYN® CHAIN Cable protection and guiding systems

New

ÖLFLEX® CHAIN 879 CY

Screened, PVC- insulated, numbered, PVC- outer sheath, approved

Info

- **NFPA 79 Ed. 2007 compliant power chain cable**
- **EMC compliant**

Benefits

- USA. Labeling of Industrial machinery. Because its MTW listing, these cables are highly accepted by NRTLs or AHJs
- Broad application range due to multiple approvals

Application range

- In power chains or moving machine parts
- Automated handling equipment
- Production plants
- Machine tools
- Plant engineering

Product features

- Oil resistant according to UL OIL RES I & II
- Low adhesive surface
- Flame retardant acc. IEC 60332-1-2 & CSA FT1
- In damp and wet rooms
- Designed for 2 up to 8 million bending change cycles in the power chain

Approvals (Norm references)

- For travel distances up to 10 m.
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3
- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Extra fine strands of plain copper wires
- Insulation: PVC with nylon jacket (PA skin)
- Cores twisted in layers in short lay lengths
- Nonwoven wrapping
- Tinned copper braid
- PVC outer sheath, black (RAL 9005)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Approvals
UI Type MTW & UL-AWM-Style 20886
CSA AWM IA/B; IIA/B FT 1

Based on
VDE 0250/0281

Conductor stranding
Extra fine wire in acc. to VDE 0295 Cl.6 / IEC 60228 Cl.6

Minimum bending radius
Flexible use: 10 x outer diameter
Fixed installed: 6 x outer diameter

Rated voltage
IEC: 300/500 V
UL MTW & CSA AWM: 600 V / UL AWM 1000V

Test voltage
2000V

Protective conductor
G = with protective conductor GN/YE

Range of temperature
Flexing: -5°C up to +90°C
Fixed installation: -40°C up to +90°C

Part number	Number of cores and mm² per conductor	AWG	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CHAIN 879 CY					
872003CY	3 G	20	8.0	37.5	85
872004CY	4 G	20	8.7	46.5	99
872005CY	5 G	20	9.3	54.0	113
872007CY	7 G	20	10.7	70.5	142
872012CY	12 G	20	12.3	112.5	207
872018CY	18 G	20	15.1	153.0	304
872025CY	25 G	20	18.1	225.0	416
871803CY	3 G	18	8.5	55.5	106
871804CY	4 G	18	9.3	69.0	127
871805CY	5 G	18	10.0	82.5	147
871807CY	7 G	18	11.6	118.5	200
871812CY	12 G	18	14.1	178.5	311
871818CY	18 G	18	16.3	252.0	419
871825CY	25 G	18	19.6	363.0	576
871603CY	3 G 1.5		9.3	75.0	132
871604CY	4 G 1.5		10.2	93.0	159
871605CY	5 G 1.5		11.0	112.5	186
871607CY	7 G 1.5		12.9	162.0	254
871612CY	12 G 1.5		15.6	249.0	400
871618CY	18 G 1.5		18.4	375.0	569
871625CY	25 G 1.5		23.1	508.5	814
871404CY	4 G 2.5		11.5	148.5	226
871407CY	7 G 2.5		15.4	243.0	379
871204CY	4 G 4		13.3	220.5	312
871207CY	7 G 4		17.8	363.0	527
871004CY	4 G 6		16.1	313.5	462
870804CY	4 G 10		21.9	525.0	805
870604CY	4 G 16		24.8	792.0	1,116

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg, otherwise drum
Please specify the desired make-up (e.g. 1 x 610 m drum or 8 x 76 m coils)

Comparable products

- ÖLFLEX® FD CLASSIC 810 CY see page 114
- ÖLFLEX® FD 891 CP see page 130

Accessories

- SKINTOP® MS-SC-M see page 657
- EPIC® Industrial connectors see page 447
- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® FD 891 P

PVC insulated, numbered, PUR sheath, approved

Info

- **Multi-Standard: many countries, one cable**

Benefits

- Multi-Standard= less part varieties= cost savings
- Protected against water and dirt

Application range

- In power chains or moving machine parts
- Plant engineering
- Machine tools

Product features

- Abrasion and cut resistant
- Oil resistant
- Low adhesive surface
- Flame retardant acc. IEC 60332-1-2 & CSA FT1
- Designed for up to 5 million bending change cycles in the power chain

Approvals (Norm references)

- For travel distances up to 10 m.
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3
- USA: Acc. NFPA79 Ed 08 in industrial machinery as part of a listed assembly only.
- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Extra fine strands of plain copper wires (Class 6)
- Core insulation: PVC
- Cores twisted in layers in short lay lengths
- Nonwoven wrapping
- Polyurethane sheath (PUR), black (RAL 9005)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Approvals
UL rec. AWM Style 20234
cRU AWM II A/B FT 1

Based on
VDE 0250/0281/0282

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire according to VDE 0295 Class 6 / IEC 60228 Class 6

Minimum bending radius
For flexible applications: 7.5 x outside diameter
Static:
4 x cable diameter

Rated voltage
IEC: 300/500 V
UL/CSA: 600 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexing: -5°C up to +80°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® FD 891 P				
1028752	2 X 0.5	6.8	9.6	46
1028007	7 G 0.5	9.9	33.6	118
1028103	3 G 0.75	7.6	21.6	66
1028104	4 G 0.75	8.3	28.8	82
1028105	5 G 0.75	9.0	36.0	101
1028107	7 G 0.75	10.5	50.4	142
1028112	12 G 0.75	12.1	86.4	196
1028118	18 G 0.75	14.3	129.6	282
1028125	25 G 0.75	17.1	180.0	404
1028134	34 G 0.75	19.4	244.8	541
1028150	50 G 0.75	23.1	360.0	738
1028303	3 G 1.5	8.7	43.2	98
1028304	4 G 1.5	9.6	57.6	125
1028305	5 G 1.5	10.5	72.0	155
1028307	7 G 1.5	12.3	100.8	221
1028312	12 G 1.5	14.3	172.8	318
1028318	18 G 1.5	17.4	259.2	484
1028325	25 G 1.5	20.7	360.0	671
1028334	34 G 1.5	23.7	489.6	910
1028952	2 X 2.5	8.9	48.0	102
1028403	3 G 2.5	9.6	72.0	134
1028404	4 G 2.5	10.7	96.0	173
1028405	5 G 2.5	11.7	120.0	217
1028407	7 G 2.5	13.8	168.0	312
1028412	12 G 2.5	16.3	288.0	460
1028503	3 G 4	11.3	115.2	197
1028504	4 G 4	12.5	153.6	257
1028507	7 G 4	16.6	268.8	471
1028604	4 G 6	14.1	230.4	363
1028614	4 G 10	18.4	384.0	605
1028624	4 G 16	24.0	614.4	973
1028634	4 G 25	28.4	960.0	1,437

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
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Comparable products

- ÖLFLEX® FD CLASSIC 810 P see page 117
- ÖLFLEX® FD 855 P see page 119
- ÖLFLEX® FD 891 see page 125

Accessories

- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® FD 891 CP

Screened, PVC- insulated, numbered, PVC- inner sheath, PUR outer sheath, approved

Info
- **Multi-Standard: many countries, one cable**
- **EMC compliant**

Benefits
- Multi-Standard= less part varieties= cost savings
- Protected against water and dirt

Application range
- In power chains or moving machine parts
- Plant engineering
- Machine tools

Product features
- Abrasion and cut resistant
- Oil resistant
- Low adhesive surface
- Flame retardant acc. IEC 60332-1-2 & CSA FT1
- Designed for up to 5 million bending change cycles in the power chain

Approvals (Norm references)

- For travel distances up to 10 m.
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3
- USA: Acc. NFPA79 Ed 08 in industrial machinery as part of a listed assembly only.
- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design
- Extra fine strands of plain copper wires (Class 6)
- Core insulation: PVC
- Cores twisted in layers in short lay lengths
- Nonwoven wrapping
- Special PVC based inner sheath
- Tinned copper braid
- Polyurethane sheath (PUR), black (RAL 9005)

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Approvals
UL-AWM-Style 20234
cUL AWM II A/B FT1

Based on
VDE 0250/0281/0282

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire in acc. to VDE 0295 Cl.6 / IEC 60228 Cl.6

Minimum bending radius
For flexible applications: 7.5 x outside diameter
Static:
4 x cable diameter

Rated voltage
IEC: 300/500 V
UL/CSA: 600 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexing: -5°C up to +80°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
1029012	12 G 0.5	13.3	114.7	253
1029025	25 G 0.5	18.2	203.9	495
1029103	3 G 0.75	9.2	49.2	118
1029104	4 G 0.75	9.9	59.9	140
1029107	7 G 0.75	12.3	91.7	226
1029125	25 G 0.75	19.7	295.0	618
1029134	34 G 0.75	22.2	363.9	794
1029312	12 G 1.5	16.6	246.5	470
1029318	18 G 1.5	20.0	374.7	711
1029405	5 G 2.5	13.7	184.6	328
1029507	7 G 4	18.8	353.4	650

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
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Comparable products

- ÖLFLEX® FD CLASSIC 810 CP see page 118
- ÖLFLEX® FD 855 CP see page 120
- ÖLFLEX® FD 891 CY see page 126

Accessories

- SKINTOP® MS-SC-M see page 657
- Rectangular connectors see page 447
- SILVYN® CHAIN Cable protection and guiding systems

ÖLFLEX® ROBOT 900 P

TPE-PUR robot cable, for flexing and torsion load

Info

- **Bending and torsion: All-in-once**

Benefits

- Space saving installation due to small cable diameters
- Warehouse available High-Tec Robot cables!
- Protected against water and dirt
- Wear-resistant

Application range

- Plant engineering
- Machine tools
- Automated handling equipment
- Multi-axis articulated robots
- In power chains or moving machine parts

Product features

- Abrasion and cut resistant
- Hydrolysis resistant
- Oil resistant
- Low adhesive surface
- Flame retardant

Approvals (Norm references)

CE RoHS

- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3
- For travel distances up to 10 m.

Design

- Fine or superfine strands of plain copper wire
- Core insulation: TPE
- Cores twisted in layers
- PTFE tape wrapping
- Polyurethane sheath (PUR), black (RAL 9005)

Technical data

Core identification code
Up to 0.34 mm²: DIN 47100 cores
Starting at 0.50 mm²: black cores with white printed numbers

Mutual capacitance
C/C approx. 100 nF/km
C/S approx. 120 nF/km

Peak working voltage
0.34 mm²: 350 V (not for high current purposes)

Based on
VDE 0281/0282
VDE 0812

Specific insulation resistance
> 20 GOhm x cm

Inductivity
Approx 0.7 mH/km

Conductor stranding
Fine wire or superfine wire

Torsion
Torsion load max.
Without screening: +/- 360° /m with screening (DP) +/- 180°/m

Minimum bending radius
Flexing: 15 x cable diameter
Static:
4 x cable diameter

Rated voltage
48 V AC
Starting at 0.5 mm² U0/U: 300/500 V

Test voltage
Up to 0.34 mm²: 1500 V
Starting at 0.5 mm²: 3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexing: -40°C up to +80°C
Fixed installation: -50°C up to +80°C
Core insulation: Capable of temporary overload up to +120 °C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® ROBOT 900 P				
0028110	7 X 0.25	6.2	16.8	48
0028116	25 X 0.25	10.2	60.0	141
0028188	2 X 0.34	5.0	7.0	27
0028145	18 G 0.5	11.2	86.4	120
0028146	25 G 0.5	13.3	120.0	254
0028160	4 G 0.75	6.6	28.8	63
0028164	14 G 0.75	11.4	100.8	199
0028170	2 X 1	6.2	19.2	47
0028171	3 G 1	6.5	29.0	61
0028172	4 G 1	7.2	38.4	76
0028174	7 G 1	9.3	67.2	131
0028176	12 G 1	11.5	115.2	216
0028185	16 G 1,0 + (2 X 1 DP)	16.5	195.0	376
0028178	18 G 1	13.2	172.8	287
0028186	23 G 1,0 + (2 X 1 DP)	17.3	262.0	470
0028180	25 G 1	16.4	240.0	433
0028190	34 G 1	19.9	326.4	571
0028191	41 G 1	22.3	393.6	705
0028198	18 G 1.5	15.8	259.2	446
0028181	3 G 2.5	9.3	72.0	136
0028182	4 G 2.5	10.1	96.0	171
0028400	3 G 16	21.4	460.8	721
0028187	3 G 25	26.2	720.0	1,178
0028189	3 G 35	28.8	1,008.0	1,559

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® ROBOT F1 see page 133

Accessories

- SILVYN® RILL PA 12 see page 781

ÖLFLEX® ROBOT 900 DP

Screened TPE-PUR robot cable, for flexing and torsion load

Info
- **Bending and torsion: All-in-once**

Benefits
- Space saving installation due to small cable diameters
- Warehouse available High-Tec Robot cables!
- Protected against water and dirt
- Wear-resistant

Application range
- Plant engineering
- Machine tools
- Automated handling equipment
- Multi-axis articulated robots
- In power chains or moving machine parts

Product features
- Abrasion and cut resistant
- Hydrolysis resistant
- Oil resistant
- Low adhesive surface
- Flame retardant

Approvals (Norm references)
CE RoHS
- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3
- For travel distances up to 10 m.

Design
- Fine or superfine strands of plain copper wire
- Core insulation: TPE
- Cores twisted in layers
- PTFE tape wrapping
- Screened version (DP): layer of tinned copper wires
- Polyurethane sheath (PUR), black (RAL 9005)

Technical data
Core identification code
Up to 0.34 mm²: DIN 47100 cores
Starting at 0.50 mm²: black cores with white printed numbers

Mutual capacitance
C/C approx. 100 nF/km
C/S approx. 120 nF/km

Peak working voltage
0.34 mm²: 350 V (not for high current purposes)

Based on
VDE 0281/0282
VDE 0812

Specific insulation resistance
> 20 GOhm x cm

Inductivity
Approx 0.7 mH/km

Conductor stranding
Fine wire or superfine wire

Torsion
Torsion load max.
Without screening: +/- 360° /m with screening (DP) +/- 180°/m

Minimum bending radius
Flexing: 15 x outer diameter
Static:
4 x cable diameter

Rated voltage
48 V AC
Starting at 0.5 mm² U0/U: 300/500 V

Test voltage
Up to 0.34 mm²: 1500 V
Starting at 0.5 mm²: 3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexing: -40°C up to +80°C
Fixed installation: -50°C up to +80°C
Core insulation: Capable of temporary overload up to +120 °C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® ROBOT 900 DP				
0028100	12 X 0,14 DP	6.7	42.5	69
0028105	3 X 2 X 0,14 DP	5.9	17.0	44
0028126	25 X 0,25 DP	11.1	103.5	183
0028135	4 X 0,34 DP	5.7	21.3	46
0028136	5 X 2 X 0,34 DP	9.1	64.4	114
0028195	12 G 1,5 DP	14.0	259.0	395

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis‘ and ‚Metal index‘ see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products
- ÖLFLEX® ROBOT F1 see page 133

Accessories
- SILVYN® RILL PA 12 see page 781

ÖLFLEX® ROBOT F1

TPE-PUR robot cable, for flexing and torsion load, AWM- approval

Info

- **Bending and torsion: All-in-once**
- **AWM approvals for USA and Canada**

Benefits

- Space saving installation due to small cable diameters
- Warehouse available High-Tec Robot cables!
- Protected against water and dirt
- Wear-resistant

Application range

- Plant engineering
- Multi-axis articulated robots
- Automated handling equipment
- In power chains or moving machine parts

Product features

- Abrasion and cut resistant
- Hydrolysis resistant
- Oil resistant
- Low adhesive surface
- Flame retardant

Approvals (Norm references)

CE UL RoHS c UL

- Usage in Power Chains: Please comply with the assembly guidelines Appendix T3
- For travel distances up to 100 m (horizontal)
- USA: Acc. NFPA79 Ed 08 in industrial machinery as part of a listed assembly only.
- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Fine or superfine strands, 0.14mm² -0.5mm² made from tinned copper wires, above plain.
- Core insulation: TPE
- Core coding, see Appendix
- Cores (or core pairs) twisted in layers or bundles
- PTFE tape wrapping
- Screened version (C): tinned copper wire braid, (D) layer of tinned copper wires
- Polyurethane sheath (PUR), black (RAL 9005)

Technical data

Core identification code
Up to 0.34 mm²: DIN 47100 cores
Starting at 0.50 mm²: white cores with black printed numbers

Approvals
UL appr AWM style 20940 VW1
cUL appr AWM I/II A/B FT 1

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire or superfine wire

Torsion
Torsion load max.
Without screening: +/- 360° /m with screening (DP) +/- 180°/m

Minimum bending radius
Flexible use: 10 x outer diameter
Static:
4 x cable diameter

Rated voltage
IEC: up to 0.34mm² 250Vss. 0.5 - 2.5mm² 300/500V
UL/CSA up to 1.5mm² 600 V, from 2.5mm² 1000V

Test voltage
Cores: spark test 6 kV

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexing: -40°C up to +80°C
Fixed installation: -50°C up to +80°C
Core insulation: Capable of temporary overload up to +120 °C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® ROBOT F1				
0029590	7 X 0.25	6.7	16.8	62
0029591	12 X 0.25	9.0	30.0	122
0029592	18 X 0.25	10.6	45.0	156
0029593	25 X 0.25	12.5	60.0	205
0029594	2 X 0.34	4.6	7.0	38
0029595	3 X 0.34	4.8	10.0	40
0029596	4 X 0.34	5.2	15.0	48
0029599	12 X 0.34	9.4	40.0	130
0029600	18 X 0.34	11.2	60.0	170
0029601	25 X 0.34	13.1	83.0	220
0029608	18 G 0.5	12.3	84.0	202
0029609	25 G 0.5	15.2	120.0	284
0029610	2 X 1	6.3	19.0	60
0029611	3 G 1	6.6	28.0	71
0029612	4 G 1	7.2	38.0	87
0029614	7 G 1	9.2	65.0	141
0029615	12 G 1	12.4	110.0	237
0029616	14 G 1	13.2	128.0	257
0029617	16G1+(2X1D)	15.4	190.0	346
0029618	18 G 1	16.1	170.0	349
0029619	23G1+(2X1D)	18.0	250.0	461
0029620	25 G 1	17.8	240.0	407

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
0029621	34 G 1	21.1	320.0	600
0029622	41 G 1	23.6	390.0	753
0029624	4 G 1.5	8.2	57.0	114
0029625	5 G 1.5	9.1	72.0	141
0029627	7 G 1.5	10.5	101.0	187
0029629	12 G 1.5	14.3	170.0	294
0029630	18 G 1.5	17.5	259.0	450
0029631	25 G 1.5	21.2	360.0	661
0029632	3 G 2.5	9.1	72.0	136
0029641	4 G 6	13.3	220.0	330
ÖLFLEX® ROBOT F 1 (C)				
0029653	3 x 2x 0,25 DP	8.0	38.0	100
0029654	25 x 0,25 DP	13.8	115.0	280
0029655	2 x 0,34 DP	5.2	18.0	54
0029656	3 x 0,34 DP	5.4	20.0	56
0029657	4 x 0,34 DP	6.6	28.0	72
0029658	5 x 2 x 0,34 DP	10.2	69.0	158
0029689	12 G 1,5 CP	15.4	230.0	380
0029690	18 G 1,5 CP	18.5	340.0	550
0029664	4 G 1,5 DP	8.5	75.1	120
0029665	4 G 2,5 DP	10.3	116.0	200
0029691	4 G 1,5 + (2x1D)DP	11.0	116.0	213
0029692	4 G 2,5 + (2x1D)DP	12.0	150.0	270

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® ROBOT 900 P see page 131
- ÖLFLEX® ROBOT 900 DP see page 132

Accessories

- SILVYN® RILL PA 12 see page 781

LiFY single cores

Cold-flexible class-6 single conductor for devices or measurements

Benefits

- Especially soft, cold-flexible PVC insulation

Application range

- For use in and on mobile equipment
- The 1000 V version with thick insulation wall is ideal for many measuring instruments such as multimeters etc.
- For measuring assemblies in technical training, education and electric laboratory

Approvals (Norm references)

CE RoHS

Design

- Copper conductor
- Core insulation: Based on PVC

Technical data

Based on
VDE 0682/0683 and DIN 46438/46440

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Superfine-wired: 0.07 mm acc. to IEC 60228

Rated voltage
LiFY measurement cores:
U: 1000 VAC
Highly flexible LiFY cores:
up to 1.0 mm²: U0/U: 300/500 V
from 1.5 mm²: U0/U: 450/750 V

Test voltage
1500 V

Range of temperature
Flexible use: -15°C up to +70°C

Conductor cross section in mm²	Outer diameter in mm approx.	Core colour	Copper index kg/km	PU in m	green/yellow	black	blue	red
LiFY single cores for measurement purpose								
0.75	4.0	bk	7.5	50		4560011S	4560021S	4560041S
1.5	4.0	bk	15.0	50		4560012S	4560022S	4560042S
Highly flexible LiFY single cores								
0.75	2.5	see footnote	7.5	100	4560017S	4560013S	4560014S	4560016S
1	2.9	see footnote	10.0	100	4560027S	4560023S	4560024S	4560026S
1.5	3.7	see footnote	15.0	100	4560037S	4560033S	4560034S	4560036S
2.5	4.2	see footnote	25.0	50	4560057S	4560053S	4560054S	4560056S
4	5.1	see footnote	40.0	100	4560067	4560063	4560064	
6	6.0	see footnote	63.0	50	4560077	4560073	4560074	4560076
10	7.4	see footnote	107.5	50	4560087	4560083		4560086

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17

Accessories

- DIN-assorted boxes conductor end sleeves see page 915
- PWE 8.87 crimping pliers see page 920
- KS 15 cable shears see page 903

ESUY Copper Earthing Cable

Flexible single conductor for grounding and shorting as well as for grounding installation and potential equalisation

Benefits
- Very flexible in spite of large conductor cross section

Application range
- Provides protection during repairs
- For earthing in high voltage power installations of electric supply companies and railway systems
- For earthing devices and potential equibonding on machine parts and EDP systems

Product features
- Flame retardant according to IEC 60332-1-2

Approvals (Norm references)
RoHS

Design
- Strands of bare copper wires
- Braiding of bare copper wires
- PVC based outer sheath, transparent

Technical data
Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
see article table

Minimum bending radius
Flexible use: 12 x outer diameter

Test voltage
2000 V

Range of temperature
Flexible use: -5°C up to +70°C

Part number	Conductor cross section in mm²	Conductor stranding: Number of wires x wire diameter in mm approx.	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ESUY Copper Earthing Cable					
4571101	16	4200 x 0.07	8.8	177.0	230
4571102	25	3192 x 0.1	10.4	275.0	316
4571103	35	4480 x 0.1	12.4	387.0	475
4571104	50	6383 x 0.1	14.6	560.0	670
4571105	70	8918 x 0.1	17.0	791.0	905
4571106	95	12100 x 0.1	19.8	1,069.0	1,220

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Packaging size: Coil ≤ 30 kg, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products
- X00V3-D Copper Earthing Cable see page 135

Accessories
- Cable shears KT 4 and KT 5 see page 904

X00V3-D Copper Earthing Cable

Cold-flexible single conductor in the style of <HAR> for grounding and shorting

Info
- **Formerly: H00V3-D Copper Earthing Cable**

Application range
- Provides protection during repairs
- For earthing in high voltage power installations of electric supply companies and railway systems
- For earthing devices and potential equibonding on machine parts and EDP systems
- For applications in cold environments

Approvals (Norm references)
RoHS

Design
- Strands of bare copper wires
- Stranding corresponds approximately to Class 6 acc. to VDE 0295
- PVC based outer sheath, transparent

Technical data
Based on
VDE 0283 Part 3 or EN 61138

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Class D according to VDE 0282 part 6 (see table)
Number of wires is a value without obligation

Minimum bending radius
Flexible use: 12 x outer diameter

Test voltage
1000 V

Range of temperature
Flexible use: -25°C up to +55°C

Part number	Conductor cross section in mm²	Conductor stranding: Number of wires x wire diameter in mm approx.	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
H00V3-D Copper Earthing Cable					
4571110	16	510 x 0.21	8.1	153.6	223
4571111	25	760 x 0.21	9.5	240.0	330
4571112	35	1100 x 0.21	11.0	336.0	455
4571113	50	1570 x 0.21	13.2	480.0	648
4571114	70	2220 x 0.21	15.8	672.0	913
4571115	95	3020 x 0.21	18.3	912.0	1,234

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Packaging size: Coil ≤ 30 kg, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products
- ESUY Copper Earthing Cable see page 135

Accessories
- Cable shears KT 4 and KT 5 see page 904

ÖLFLEX® TRUCK 170 FLRYY

Benefits
- Special ADR/GGVS-approval
- Because of ADR/GGVS approval usage in vehicles transporting hazardous goods possible

Application range
- Commercial vehicles
- Wiring electrical equipment in all trailers and semi-trailers

Product features
- UV resistant
- Resistant to cold
- Resistant to most oils, weather and chemicals

Approvals (Norm references)
- ISO 4141 and DIN/ISO 6722

Design
- Strands of bare copper wires
- Core insulation: Based on PVC
- Special PVC based outer sheath

Technical data
Core identification code
ISO 4141-3

Insulation resistance
10 MOhm x km

Capacity of data pairs
Related to length between cores, max. 50 pF/m and between each data transmission core and all other cores in the cable, max. 100 pF/m

Conductor stranding
Fine wire according to ISO 6722

Minimum bending radius
12 x outer diameter

Rated voltage
60 V

Test voltage
5 kV root mean square value at least 5 min.

Range of temperature
Fixed installation: -40°C up to +85°C
Area of application, Class A

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Colour	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® TRUCK 170 FLRYY					
7027060	2 x 1,0	6.0	white/ black	19.2	55
7027061	2 x 1,0	6.0	white/ brown	19.2	55
7027000	2 x 1,5	6.6	white/ black	28.8	68
7027001	2 x 1,5	6.6	white/ brown	28.8	68
7027062	3 x 1,0	6.3	black/ brown/ blue	28.8	63
7027012	3 x 1,0	6.3	white/ brown/ blue newest ISO design	28.8	63
7027063	4 x 1,0	6.8	white/ black/ red/ brown	38.4	81
7027034	4 x 1,5	7.5	white/ black/ red/ brown	57.6	106
7027064	5 x 1,0	7.5	white/ brown/ green/ red/ grey	48.0	97
7027065	5 x 1,0 + 1 x 2,5	9.0	1.0=green/ brown/red/ blue/ violet; 2.5=white	72.0	133
7027066	5 x 1,0 + 1 x 2,5	9.0	1.0=yellow/ black/ red/ blue/ violet; 2.5=white	72.0	133
7027015	5 x 1,0 + 1 x 2,5	9.0	1.0=brown/ green/ red/ grey/violet; 2.5=white newest ISO design	72.0	133
7027016	5 x 1,0 + 1 x 2,5	9.0	1.0=brown/ yellow/ red/ grey/ violet; 2.5=white newest ISO Design	72.0	133
7027007	7 x 0,75	7.3	white/ black/ yellow/ red/ green/ brown/ blue	50.4	101
7027067	7 x 1,5	8.9	white/ black/ yellow/ red/ green/ brown/ blue	100.8	166
7027068	6 x 1,5 + 1 x 2,5	10.3	ISO 4141 1.5=black/ yellow/ red/ green/ broen/ blue; 2.5=white	110.4	187
7027069	8 x 1,5 + 1 x 2,5	11.7	ISO 4141 + grey/ violet	139.2	239
7027070	10 x 1,5 + 3 x 2,5 + 1x(2x1,5)	14.4	white with black numbers; 1.5=No. 1-3,5-8,10-12; 2.5=No. 4,9,13; 1.5=No. 14,15	244.8	391
7027010	10 x 1,5 + 3 x 2,5 + 1x(2x1,5)	14.4	ISO 12098	244.8	391
7027071	10 x 1,5 + 3 x 2,5	14.4	white with black numbers; 1.5=No. 1-3,5-8,10-12; 2.5=No. 4,9,13	216.0	367
7027035	2 x 0,75 + 2 x 1,5	7.2	0.75=white/ brown; 1.5=yellow/ green	43.2	85
7027017	5 x 1,5 + 2 x 2,5	10.3	1.5=black/ yellow/ green/ brown/ blue; 2.5=white/ red	120.0	217
7027004	8 x 1,5 + 5 x 2,5	14.8	1.5=yellow/ blue/ green/ brown/ red/ black/ pink/ white-blue; 2.5=white/ orange/ grey/ white-black/ white-red	235.2	360
7027073	9 x 1,5 + 4 x 2,5	14.8	white with black numbers; 1.5=No. 2,4-8,10-12; 2.5=No. 1,3,9,13	225.6	352
7027074	4 x 6 + 1 x 1,5	13.7	1.5=grey; 6.0=brown/ red/ black/ blue	244.8	352

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

ÖLFLEX® TRUCK 470 P FLRYY 11Y

Benefits
- Special ADR/GGVS-approval
- Because of ADR/GGVS approval usage in vehicles transporting hazardous goods possible

Application range
- Commercial vehicles
- Wiring electrical equipment in all trailers and semi-trailers

Product features
- UV resistant
- Resistant to cold
- Resistant to most oils, weather and chemicals
- Microbe and hydrolysis resistant

Approvals (Norm references)
RoHS
- ISO 4141 and DIN/ISO 6722

Design
- Strands of bare copper wires
- Core insulation: Based on PVC
- Special PVC based inner sheath
- Special polyurethane outer sheath

Technical data
Core identification code
ISO 4141-3

Insulation resistance
10 MOhm x km

Capacity of data pairs
Related to length between cores, max. 50 pF/m and between each data transmission core and all other cores in the cable, max. 100 pF/m

Conductor stranding
Fine wire according to ISO 6722

Minimum bending radius
12 x outer diameter

Rated voltage
60 V

Test voltage
5 kV root mean square value at least 5 min.

Range of temperature
Fixed installation: -40°C up to +85°C
Area of application, Class A

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Colour	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® TRUCK 470 P FLRYY 11Y					
7027080	2 x 1,0	6.0	white/ black	19.2	55
7027081	2 x 1,0	6.0	white/ brown	19.2	55
7027020	2 x 1,5	6.6	white/ black	28.8	68
7027021	2 x 1,5	6.6	white/ brown	28.8	68
7027082	3 x 1,0	6.3	black/ brown/ blue	28.8	67
7027022	3 x 1,0	6.3	white/ brown/ blue newest ISO design	28.8	67
7027083	4 x 1,0	6.8	white/ black/ red/ brown	38.4	81
7027038	4 x 1,5	7.5	white/ black/ red/ brown	57.6	106
7027084	5 x 1,0	7.5	white/ brown/ green/ red/ grey	48.0	97
7027085	5 x 1,0 + 1 x 2,5	9.0	1.0=green/ brown/red/ blue/ violet; 2.5=white	72.0	133
7027086	5 x 1,0 + 1 x 2,5	9.0	1.0=yellow/ black/ red/ blue/ violet; 2.5=white	72.0	133
7027025	5 x 1,0 + 1 x 2,5	9.0	1.0=brown/ green/ red/ grey/violet; 2.5=white newest ISO design	72.0	133
7027087	6 x 1,5 + 1 x 2,5	10.3	ISO 4141 1.5=black/ yellow/ red/ green/ broen/ blue; 2.5=white	110.4	187
7027130	7 x 0,75	7.3	white/ black/ yellow/ red/ green/ brown/ blue	50.4	101
7027088	7 x 1,5	8.9	white/ black/ yellow/ red/ green/ brown/ blue	100.8	166
7027089	8 x 1,5 + 1 x 2,5	11.7	ISO 4141 + grey/ violet	139.2	239
7027090	10x1,5+3x2,5+1x(2x1,5)	14.4	white with black numbers; 1.5=No. 1-3,5-8,10-12; 2.5=No. 4,9,13; 1.5=No. 14,15	244.8	391
7027030	10x1,5+3x2,5+1x(2x1,5)	14.4	ISO 12098	244.8	395
7027091	10x1,5+3x2,5	14.4	white with black numbers; 1.5=No. 1-3,5-8,10-12; 2.5=No. 4,9,13	216.0	367
7027031	10x1,5+3x2,5	14.4	1.5=yellow/ green/ blue/ black/ brown/ red/ pink/ grey/ white-black/ white-blue; 2.5=white/ orange/ white-red	216.0	367
7027046	2 x 0,75 + 2 x 1,5	7.2	0.75=white/ brown; 1.5=yellow/ green	43.2	85
7027092	2 x 6 + 3 x 1,5 ABS	12.1	DIN 72570 6.0=red/ brown; 1.5=black/ yellow/ white	158.4	267
7027093	2x6+3x1,5+1x(2x1,5) EBS	12.1	DIN 72570 6.0=red/ brown; 1.5=black/ yellow/ white; 1.5=white-grey/ white-brown	187.2	321
7027094	2x4+3x1,5+1x(2x1,5) EBS	12.1	DIN 72570 4.0=red/brown; 1.5=black/ yellow/ white; 1.5=white-grey/ white-brown	148.8	257
7027024	18 x 1,5	13.7	white with black numbers	259.2	407
7027032	25 x 1,5	16.1	white with black numbers	360.0	560

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

ÖLFLEX® TRUCK REFLEX FLRY 11Y

Info

- **Reflecting**

Benefits

- Fulfils the reflection values according to § 51a/7 StVZO acc. to DIN 67520 part 2 for long material trailers

Application range

- Commercial vehicles
- Long material trailers

Product features

- UV resistant
- Resistant to cold
- Resistant to most oils, weather and chemicals
- Microbe and hydrolysis resistant

Approvals (Norm references)

RoHS

- ISO 4141 and DIN/ISO 6722

Design

- Strands of bare copper wires
- Core insulation: Based on PVC
- Reflex-reflecting foil wrapping
- Special polyurethane outer sheath

Technical data

Core identification code
ISO 4141-3

Insulation resistance
10 MOhm x km

Capacity of data pairs
Related to length between cores, max. 50 pF/m and between each data transmission core and all other cores in the cable, max. 100 pF/m

Conductor stranding
Fine wire according to ISO 6722

Minimum bending radius
12 x outer diameter

Rated voltage
60 V

Test voltage
5 kV root mean square value at least 5 min.

Range of temperature
Fixed installation: -40°C up to +85°C
Area of application, Class A

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Colour	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® TRUCK REFLEX FLRY 11Y					
7027039	4 x 1,0	8.0	white/ black/ red/ brown	38.4	85
7027040	7 x 1,5	9.9	white/ black/ yellow/ red/ green/ brown/ blue	100.8	163
7027043	10x1,5+3x2,5+1x(2x1,5)	15.4	white with black numbers; 1.5=No. 1-3,5-8,10-12; 2.5=No. 4,9,13; 1.5=No. 14,15	220.8	360

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

ÖLFLEX® TRUCK 170 TWIN

Benefits

- Polarity identification is possible without stripping the sheath or external marking (the item designation is always printed on the positive pole). This rules out incorrect connections.
- No brushing of cores after stripping and therefore optimum subsequent handling for example crimping / contacting
- Special ADR/GGVS-approval

Application range

- Battery cable between the power source and the end-user
- Commercial vehicles

Product features

- Double sheathed version, extremely tough and therefore to lay without corrugated tubing
- Very strong connection but offering easy separation of the cable by hand

Design

- Strands of bare copper wires
- Core insulation: Based on PVC
- Special PVC based outer sheath

Technical data

Insulation resistance
10 MOhm x km

Minimum bending radius
15 x outer diameter

Rated voltage
75 V DC

Test voltage
3000 V AC

Range of temperature
Fixed installation: -40°C up to +85°C
Area of application, Class A

Part number	Number of cores and mm² per conductor	Overall width in mm approx.	Thickness in mm	Copper index kg/km
ÖLFLEX® TRUCK 170 TWIN				
7027055	PVC/PVC 2 x 6,0	15.2	7.1	120.0
7027056	PVC/PVC 2 x 10,0	18.8	8.9	200.0
7027057	PVC/PVC 2 x 16,0	21.0	10.0	308.0
7027058	PVC/PVC 2 x 25,0	25.6	12.3	480.0
7027059	PVC/PVC 2 x 35,0	28.4	13.5	672.0
7027054	PVC/PVC 2 x 50,0	33.0	16.0	960.0
7027052	PVC/PVC 2 x 70,0	39.8	18.4	1,350.0
7027079	PUR/PVC 2 x 35,0	28.0	13.5	672.0
7027556	PVC/PVC 2 x 10,0 + 2 x 0,5	21.8	10.8	202.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Other construction designs on request

ÖLFLEX® TRAFFIC 3GKW

Single cores for increased requirements in railway applications

Info

- **Meets highest fire protection requirements**

Benefits

- High flexibility and slim diameters enable small bending radii at fixed installation
- Easy to strip and to dismantle
- Resistant to mechanical influences in harsh environmental conditions
- Expanded temperature range
- Reduced formation of toxic gases and fire spreading in the event of fire increase the protection against damage to persons and property

Application range

- For fixed and protected installations inside or outside of railed vehicles and busses
- Suitable for the connection of fixed and moving objects such as lamps, heating, electrical equipment, wiring of vehicles, terminal boxes and power supply

Product features

- Fire behaviour:
  - Halogen-free (IEC 60754-1)
  - No corrosive gases (IEC 60754-2)
  - No toxic gases (EN 50305)
  - Low smoke density (IEC 61034)
  - Flame retardant (IEC 60332-1-2)
  - No fire spreading (IEC 60332-3-24)
  - Low fire load (DIN 51900)
- Chemical properties:
  - Oil and fuel resistance (EN 50305)
  - Ozone resistance (EN 50305)
  - No fluorine (EN 60684-2)

Approvals (Norm references)

CE RoHS

Design

- Tinned copper strand, fine wired
- Electron beam cross-linked polyolefin copolymer insulation
- Colour: grey or green-yellow
- Outer sheath of electron beam cross-linked polyolefin copolymer
- Outer sheath colour: Black

Technical data

Conductor stranding
Fine wired according VDE 0295, Class 5
(SRC = Special Round Conductor)

Minimum bending radius
< 10 mm fixed installation > 3 x D
Occasional movement > 5 x D
> 10 mm fixed installation > 4 x D
Occasional movement > 6 x D

Rated voltage
U_0/U AC 0.6/1 kV
U_0/U DC 0.9/1.5 kV

Test voltage
3.5 kV AC

Range of temperature
Fixed installation:
-45°C up to +120°C
Occasional flexing:
-35 °C up to +90 °C
Short circuit: +200° C

Part number	Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	Fire load in kWh/m
ÖLFLEX® TRAFFIC 3GKW - Colour grey					
4223293	0.5	2.0	4.8	8	0.014
4223294	0.75	2.2	7.2	11	0.017
4223295	1	2.4	9.6	14	0.020
4223296	1.5	2.7	14.4	21	0.023
4223297	2.5	3.4	24.0	31	0.034
4223298	4	3.9	38.4	46	0.040
4223299	6	4.4	57.6	66	0.047
4223300	10	5.3	96.0	106	0.059
4223301	16	7.0	154.0	164	0.081
4223302	25	8.4	240.0	238	0.124
4223303	35	9.5	336.0	330	0.142
4223304	50	11.9	480.0	483	0.200
4223305	70	14.1	672.0	674	0.262
4223306	95	15.4	912.0	883	0.288
4223307	120	17.4	1,152.0	1,103	0.357
4223308	150	20.1	1,440.0	1,370	0.480
ÖLFLEX® TRAFFIC 3GKW - Colour green/yellow					
4223314	0.75	2.2	7.2	11	0.017
4223316	1.5	2.7	14.4	21	0.023
4223317	2.5	3.4	24.0	31	0.034
4223318	4	3.9	38.4	46	0.040
4223319	6	4.4	57.6	66	0.047
4223320	10	5.3	96.0	106	0.059
4223321	16	7.0	154.0	164	0.081
4223322	25	8.4	240.0	238	0.134
4223323	35	9.5	336.0	330	0.142
4223324	50	11.9	480.0	483	0.200
4223325	70	14.1	672.0	674	0.262

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired make-up

Comparable products

- ÖLFLEX® TRAFFIC 4GKW-AXplus see page 143

ÖLFLEX® TRAFFIC 3GKW flex

Multi core cables for increased requirements in railway applications

Info

- **Meets highest fire protection requirements**

Benefits

- High flexibility and slim diameters enable small bending radii at fixed installation
- Easy to strip and to dismantle
- Resistant to mechanical influences in harsh environmental conditions
- Expanded temperature range
- Reduced formation of toxic gases and fire spreading in the event of fire increase the protection against damage to persons and property

Application range

- For fixed and protected installations inside or outside of railed vehicles and busses
- Suitable for the connection of fixed and moving objects such as lamps, heating, electrical equipment, wiring of vehicles, terminal boxes and power supply

Product features

- Fire behaviour:
  - Halogen-free (IEC 60754-1)
  - No corrosive gases (IEC 60754-2)
  - No toxic gases (EN 50305)
  - Low smoke density (IEC 61034)
  - Flame retardant (IEC 60332-1-2)
  - No fire spreading (IEC 60332-3-24)
  - Low fire load (DIN 51900)
- Chemical properties:
  - Oil and fuel resistance (EN 50305)
  - Ozone resistance (EN 50305)
  - No fluorine (EN 60684-2)

Approvals (Norm references)

CE RoHS

Design

- Tinned copper strand, fine wired
- Electron beam cross-linked polyolefin copolymer insulation
- Core colours: White with black printed numbers
- Outer sheath of electron beam cross-linked polyolefin copolymer
- Outer sheath colour: Black

Technical data

Conductor stranding
Fine wired according VDE 0295, Class 5
(SRC = Special Round Conductor)

Minimum bending radius
< 10 mm fixed installation > 3 x D
Occasional movement > 5 x D
> 10 mm fixed installation > 4 x D
Occasional movement > 6 x D

Rated voltage
U_0/U AC 0.6/1 kV
U_0/U DC 0.9/1.5 kV

Test voltage
3.5 kV AC

Range of temperature
Fixed installation:
-45°C up to +120°C
Occasional flexing:
-35 °C up to +90 °C
Short circuit: +200° C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	Fire load in kWh/m
ÖLFLEX® TRAFFIC 3GKW flex					
4223395	2 X 0.5	5.5	9.6	40	0.130
4223396	3 X 0.5	5.7	14.4	50	0.130
4223397	4 X 0.5	6.3	19.2	62	0.160
4223398	5 X 0.5	6.9	24.0	74	0.190
4223399	7 X 0.5	8.2	33.6	102	0.250
4224460	10 X 0.5	9.3	48.0	125	0.286
4223400	2 X 0.75	6.0	14.4	49	0.150
4223401	3 X 0.75	6.2	21.6	63	0.150
4223402	4 X 0.75	6.9	28.8	78	0.180
4223403	5 X 0.75	7.7	36.0	97	0.220
4223404	7 X 0.75	9.1	50.4	131	0.290
4223405	2 X 1	6.4	19.2	60	0.150
4223406	3 X 1	6.8	28.8	78	0.180
4223407	4 X 1	7.4	38.4	95	0.210
4223408	5 X 1	8.3	48.0	119	0.260
4223409	7 X 1	9.9	67.2	163	0.350
4223410	2 X 1.5	7.1	28.8	75	0.220
4223411	3 X 1.5	7.4	43.2	96	0.210
4223412	3 G 1.5	7.4	43.2	96	0.210
4223413	4 X 1.5	8.3	57.6	120	0.250
4223414	4 G 1.5	8.3	57.6	120	0.250
4223415	5 X 1.5	9.1	72.0	146	0.310
4223416	7 X 1.5	11.1	101.0	207	0.410
4224512	12 X 1.5	13.4	173.0	305	0.540
4223417	2 X 2.5	8.5	48.0	115	0.240
4223418	3 X 2.5	8.9	72.0	149	0.280
4223419	3 G 2.5	8.9	72.0	149	0.280
4223420	4 X 2.5	9.9	96.0	183	0.350
4223421	4 G 2.5	9.9	96.0	183	0.350
4223422	5 X 2.5	11.1	120.0	235	0.430
4223423	7 X 2.5	13.0	168.0	309	0.560
4223425	3 X 4	10.2	115.0	210	0.360
4223426	3 G 4	10.2	115.0	210	0.360
4223427	4 X 4	11.3	154.0	266	0.430
4223428	5 X 4	12.6	192.0	330	0.530

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® TRAFFIC 3GKW C-flex see page 142

ÖLFLEX® TRAFFIC 3GKW C-flex

Screened multi core cables for increased requirements in railway applications

Info

- **Screened to comply with EMC**

Benefits

- Copper screening complies with EMC requirements and protects against electromagnetic interference
- High flexibility and slim diameters enable small bending radii at fixed installation
- Resistant to mechanical influences in harsh environmental conditions
- Expanded temperature range
- Reduced formation of toxic gases and fire spreading in the event of fire increase the protection against damage to persons and property

Application range

- For fixed and protected installations inside or outside of railed vehicles and busses
- Suitable for the connection of fixed and moving objects such as lamps, heating, electrical equipment, wiring of vehicles, terminal boxes and power supply

Product features

- Fire behaviour:
  - Halogen-free (IEC 60754-1)
  - No corrosive gases (IEC 60754-2)
  - No toxic gases (EN 50305)
  - Low smoke density (IEC 61034)
  - Flame retardant (IEC 60332-1-2)
  - No fire spreading (IEC 60332-3-24)
  - Low fire load (DIN 51900)
- Chemical properties:
  - Oil and fuel resistance (EN 50305)
  - Ozone resistance (EN 50305)
  - No fluorine (EN 60684-2)

Approvals (Norm references)

CE RoHS

Design

- Tinned copper strand, fine wired
- Electron beam cross-linked polyolefin copolymer insulation
- Core colours: White with black printed numbers
- Tinned copper braid
- Outer sheath of electron beam cross-linked polyolefin copolymer
- Outer sheath colour: Black

Technical data

Conductor stranding
Fine wired according VDE 0295, Class 5
(SRC = Special Round Conductor)

Minimum bending radius
< 10 mm fixed installation > 5 x D
Occasional movement > 7 x D
> 10 mm fixed installation > 6 x D
Occasional movement > 8 x D

Rated voltage
U_0/U AC 0.6/1 kV
U_0/U DC 0.9/1.5 kV

Test voltage
Core/core: 3,5 kV
Core/screen: 3,5 kV AC

Range of temperature
Fixed installation:
-45°C up to +120°C
Occasional flexing:
-35 °C up to +90 °C
Short circuit: +200° C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	Fire load in kWh/m
ÖLFLEX® TRAFFIC 3GKW C-flex					
4223441	2 X 0.5	6.1	28.4	56	0.120
4223442	3 X 0.5	6.4	34.9	65	0.110
4223443	4 X 0.5	7.1	43.3	81	0.140
4223444	5 X 0.5	7.7	48.9	94	0.180
4223445	7 X 0.5	8.9	63.7	127	0.240
4223446	10 X 0.5	10.0	82.5	156	0.280
4223447	12 X 0.5	10.5	93.9	177	0.320
4223448	2 X 0.75	6.7	35.8	69	0.140
4223449	3 X 0.75	7.0	43.9	79	0.130
4223450	4 X 0.75	7.7	53.7	98	0.170
4223451	5 X 0.75	8.4	66.0	119	0.200
4223452	7 X 0.75	10.0	84.9	164	0.290
4223453	10 X 0.75	11.1	111.0	199	0.330
4223454	12 X 0.75	11.6	127.0	225	0.370
4223455	2 X 1	7.1	43.3	82	0.140
4223456	3 X 1	7.5	53.7	83	0.140
4223457	4 X 1	8.2	68.4	117	0.190
4223458	5 X 1	9.0	79.0	139	0.220
4223459	7 X 1	10.6	104.0	193	0.330
4223460	2 X 1.5	7.7	58.8	100	0.180
4223461	3 X 1.5	8.1	73.4	114	0.170
4223462	3 G 1.5	8.1	73.4	114	0.170
4223463	4 X 1.5	8.9	90.4	139	0.210
4223464	5 X 1.5	9.9	108.0	173	0.290
4223465	5 G 1.5	9.9	108.0	173	0.290
4223466	7 X 1.5	11.7	146.0	243	0.390
4223467	2 X 2.5	8.9	79.0	133	0.270
4223468	3 X 2.5	9.4	106.0	155	0.210
4223469	3 G 2.5	9.4	106.0	155	0.210
4223470	4 X 2.5	10.5	133.0	200	0.290
4223471	5 X 2.5	11.6	165.0	250	0.390
4223472	5 G 2.5	11.6	165.0	250	0.390
4223473	7 X 2.5	13.7	218.0	345	0.530
4223475	3 X 4	10.8	153.0	216	0.270
4223476	3 G 4	10.8	153.0	216	0.270
4223477	4 X 4	11.9	199.0	279	0.360
4223478	5 X 4	13.4	240.0	353	0.450

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

ÖLFLEX® TRAFFIC 4GKW-AXplus

Single cored energy cables for increased voltage ratings

LAPP KABEL STUTTGART ÖLFLEX® TRAFFIC 4GKW-AX plus

Info

- **Voltage rating 1,8/3 kV**
- **Cold-resistant down to -60° C**

Benefits

- High electrical strength and mechanical durability due to dual-layer cable construction
- High flexibility and slim diameters enable small bending radii at fixed installation
- Resistant to mechanical influences in harsh environmental conditions
- Excellent chemical resistance and high flammability rating as well
- Reduced formation of toxic gases and fire spreading in the event of fire increase the protection against damage to persons and property

Application range

- For fixed and protected installations inside or outside of railed vehicles and busses
- For connection of stationary and moving parts
- Suitable for cabling of switchboards, converters, panel units and rheostatic braking blocks

Product features

- Fire behaviour:
  - Halogen-free (IEC 60754-1)
  - No corrosive gases (IEC 60754-2)
  - No toxic gases (EN 50305)
  - Low smoke density (IEC 61034)
  - Flame retardant (IEC 60332-1-2)
  - No fire spreading (IEC 60332-3-24)
  - Low fire load (DIN 51900)
- Chemical properties:
  - Oil and fuel resistance (EN 50305)
  - Ozone resistance (EN 50305)
  - No fluorine (EN 60684-2)

Approvals (Norm references)

RoHS

Design

- Tinned copper strand, fine wired
- Insulation: cross-linked polyolefin copolymer
- Outer sheath: electron beam cross-linked elastomer
- Outer sheath colour: Black

Technical data

Conductor stranding
Fine wired according VDE 0295, Class 5
(SRC = Special Round Conductor)

Minimum bending radius
< 10 mm fixed installation > 5 x D
Occasional movement > 7 x D
> 10 mm fixed installation > 6 x D
Occasional movement > 8 x D

Rated voltage
U_0/U AC 1.8/3 kV
U_0DC 2,7 kV

Test voltage
6.5 kV AC

Range of temperature
Fixed installation:
-60°C up to +120°C
Occasional flexing:
-35 °C up to +90 °C
Short circuit: +200° C

Part number	Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	Fire load in kWh/m
ÖLFLEX® TRAFFIC 4GKW-AXplus					
4222082	1.5	3.3	14.4	24	0.040
4222083	2.5	3.7	24.0	34	0.040
4222084	4	4.5	38.4	53	0.060
4222085	6	5.0	57.6	74	0.080
4222086	10	6.1	96.0	118	0.100
4222087	16	8.3	154.0	182	0.170
4222088	25	10.0	240.0	274	0.250
4222089	35	11.4	336.0	379	0.310
4222090	50	13.6	480.0	536	0.390
4222091	70	15.6	672.0	729	0.450
4222092	95	17.3	912.0	960	0.560
4222093	120	19.6	1,152.0	1,203	0.710
4222094	150	21.9	1,440.0	1,464	0.800
4222095	185	23.8	1,776.0	1,802	0.930
4222096	240	26.8	2,304.0	2,348	1.160

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® TRAFFIC 4GKW-AXplus C-flex see page 144

ÖLFLEX® TRAFFIC 4GKW-AXplus C-flex

Screened single cored energy cables for increased voltage ratings

Info

- **Voltage rating 1,8/3 kV**
- **Screened to comply with EMC**
- **Cold-resistant down to -60° C**

Benefits

- High electrical strength and mechanical durability due to dual-layer cable construction
- Copper screening complies with EMC requirements and protects against electromagnetic interference
- High flexibility and slim diameters enable small bending radii at fixed installation
- Resistant to mechanical influences in harsh environmental conditions
- Excellent chemical resistance and high flammability rating as well

Application range

- For fixed and protected installations inside or outside of railed vehicles and busses
- For connection of stationary and moving parts
- Suitable for cabling of switchboards, converters, panel units and rheostatic braking blocks

Product features

- Fire behaviour:
  - Halogen-free (IEC 60754-1)
  - No corrosive gases (IEC 60754-2)
  - No toxic gases (EN 50305)
  - Low smoke density (IEC 61034)
  - Flame retardant (IEC 60332-1-2)
  - No fire spreading (IEC 60332-3-24)
  - Low fire load (DIN 51900)
- Chemical properties:
  - Oil and fuel resistance (EN 50305)
  - Ozone resistance (EN 50305)
  - No fluorine (EN 60684-2)

Approvals (Norm references)

RoHS

Design

- Tinned copper strand, fine wired
- Insulation: cross-linked polyolefin copolymer
- Outer layer: electron beam cross-linked elastomer, black
- Tinned copper braid
- Outer sheath: electron beam cross-linked elastomer
- Outer sheath colour: Black

Technical data

Conductor stranding
Fine wired according VDE 0295, Class 5
(SRC = Special Round Conductor)

Minimum bending radius
< 10 mm fixed installation > 5 x D
Occasional movement > 7 x D
> 10 mm fixed installation > 6 x D
Occasional movement > 8 x D

Rated voltage
U_0/U AC 1.8/3 kV
U_0DC 2,7 kV

Test voltage
6.5 kV AC

Range of temperature
Fixed installation:
-60°C up to +120°C
Occasional flexing:
-35 °C up to +90 °C
Short circuit: +200° C

Part number	Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	Fire load in kWh/m
ÖLFLEX® TRAFFIC 4GKW-AXplus C-flex					
4223336	1.5	4.9	25.1	47	0.080
4223337	2.5	5.5	42.8	62	0.100
4223338	4	6.7	59.8	95	0.140
4223339	6	7.4	81.6	123	0.160
4223340	10	8.5	126.0	178	0.210
4223341	16	10.7	193.0	261	0.320
4223342	25	12.5	288.0	371	0.430
4223343	35	14.0	391.0	492	0.530
4223344	50	16.5	567.0	693	0.660
4223345	70	18.6	779.0	913	0.780
4223346	95	20.3	1,023.0	1,165	0.910
4223347	120	22.8	1,277.0	1,441	1.140
4223348	150	25.1	1,576.0	1,730	1.280
4223349	185	27.0	1,976.0	2,088	1.450
4223350	240	30.2	2,512.0	2,709	1.740
4223351	300	32.8	3,106.0	3,329	2.030
4223352	400	37.1	4,102.0	4,250	2.420

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® TRAFFIC 4GKW-AXplus see page 143

New

ÖLFLEX® SOLAR XLR

The latest solar cable generation according to PV1-F design

Info

- **According to DKE requirements specification PV1-F**
- **TÜV Type Approved (2PfG 1169/08.07)**

Benefits

- High thermal capacity for long lasting operation of the PV system at all seasons
- Reduced spreading of fire source and formation of toxic combustion gases in event of fire
- Variously coloured core insulations simplify on demand the differentiation of the polarity during installation
- Robust against mechanical impact
- Exact quantity control during installation by meter marking on the cable sheath

Application range

- For cabling of solar modules among themselves and as extension cable between the individual module strings or DC/AC inverter
- Gable and flat roof photovoltaic systems
- Open land solarfield plants

Product features

- Excellent weather-, temperature- and UV resistance
- Good notch and abrasion resistance
- Good heat pressure resistance
- Halogen-free and flame-retardant.
- Resistant against oxalic acid and sodium hydroxide

Approvals (Norm references)

- TÜV Type Approved (2PfG 1169/08.07)
- Halogen-free according to EN 50267-2–1/-2, EN 60684-2
- Ozone resistant according EN 50396
- Weather-/UV resistant according HD 605/A1
- Acid-/Brine resistant according EN 60811-2-1

Design

- Conductor: Fine wired tinned copper strands
- Core insulation: Electron beam cross-linked copolymer
- Core insulation colour: Black, red or blue
- Outer sheath: Electron beam cross-linked Copolymer
- Outer sheath colour black

Technical data

Approvals
PV1-F (TÜV Type approved according 2 PfG 1169/08.2007)

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Fixed installation: 4 x cable diameter

Rated voltage
AC U_0/U : 600/1000 V
DC U_0/U : 900/1500 V
Max. permissible operating voltage: DC 1800 V

Test voltage
AC 6500 V

Range of temperature
-40° C up to +120° C max. conductor temperature

Part number	Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® SOLAR XLR				
Core insulation: black / Outer sheath: black				
0025906	2.5	6.0	24.0	58.0
0025907	4.0	6.5	38.4	77.0
0025908	6.0	7.1	57.6	102.0
0025909	10.0	8.9	96.0	163.0
0025910	16.0	9.8	153.6	225.0
Core insulation: red / Outer sheath: black				
0025912	2.5	6.0	24.0	58.0
0025913	4.0	6.5	38.4	77.0
0025914	6.0	7.1	57.6	102.0
0025915	10.0	8.9	96.0	163.0
0025916	16.0	9.8	153.6	225.0
Core insulation: blue / Outer sheath: black				
0025918	2.5	6.0	24.0	58.0
0025919	4.0	6.5	38.4	77.0
0025920	6.0	7.1	57.6	102.0
0025921	10.0	8.9	96.0	163.0
0025922	16.0	9.8	153.6	225.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil 100 m; Drum (500; 1000) m

Comparable products

- ÖLFLEX® SOLAR XL multi see page 150
- ÖLFLEX® SOLAR XLS see page 147

Accessories

- EPIC® SOLAR M pre-assembled see page 627
- EPIC® SOLAR F pre-assembled see page 627
- EPIC® SOLAR Module Box see page 628
- EPIC® SOLAR M field mountable M12 see page 629
- EPIC® SOLAR F field mountable M12 see page 629
- EPIC® SOLAR FMM Y-Splitter see page 631
- EPIC® SOLAR MFF Y-Splitter see page 631

New

ÖLFLEX® SOLAR XLR TF

The latest solar cable generation according to PV1-F design

Info

- **According to DKE requirements specification PV1-F**
- **TÜV Type Approved (2PfG 1169/08.07)**

Benefits

- Reduced outer diameter allows space saving installation
- Reduced spreading of fire source and formation of toxic combustion gases in event of fire
- Variously coloured core insulations simplify on demand the differentiation of the polarity during installation
- High thermal capacity for long lasting operation of the PV system at all seasons
- Exact quantity control during installation by meter marking on the cable sheath

Application range

- For the cabeling of flexible or building-integrated Photovoltaik Generators
- For cabling of solar modules among themselves and as extension cable between the individual module strings or DC/AC inverter
- Open land solarfield plants

Product features

- Excellent weather-, temperature- and UV resistance
- Good notch and abrasion resistance
- Good heat pressure resistance
- Halogen-free and flame-retardant.
- Resistant against oxalic acid and sodium hydroxide

Approvals (Norm references)

- TÜV Type Approved (2PfG 1169/08.07)
- Halogen-free according to EN 50267-2–1/-2, EN 60684-2
- Ozone resistant according EN 50396
- Weather-/UV resistant according HD 605/A1
- Acid-/Brine resistant according EN 60811-2-1

Design

- Conductor: Fine wired tinned copper strands
- Core insulation: Electron beam cross-linked copolymer
- Core insulation colour: Black, red or blue
- Outer sheath: Electron beam cross-linked Copolymer
- Outer sheath colour black

Technical data

Approvals
PV1-F (TÜV Type approved according 2 PfG 1169/08.2007)

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Fixed installation: 4 x cable diameter

Rated voltage
AC U_0/U : 600/1000 V
DC U_0/U : 900/1500 V
Max. permissible operating voltage: DC 1800 V

Test voltage
AC 6500 V

Range of temperature
-40° C up to +120° C max. conductor temperature

Part number	Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® SOLAR XLR TF				
Core insulation: black / Outer sheath: black				
0025905	1.5	5.4	14.4	43.0
0025923	2.5	5.4	24.0	51.0
0025943	4.0	6.0	38.4	70.0
Core insulation: red / Outer sheath: black				
0025911	1.5	5.4	14.4	43.0
0025926	2.5	5.4	24.0	51.0
0025946	4.0	6.0	38.4	70.0
Core insulation: blue / Outer sheath: black				
0025917	1.5	5.4	14.4	43.0
0025927	2.5	5.4	24.0	51.0
0025947	4.0	6.0	38.4	70.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil 100 m; Drum (500; 1000) m

Comparable products

- ÖLFLEX® SOLAR XLS see page 147

Accessories

- EPIC® SOLAR M pre-assembled see page 627
- EPIC® SOLAR F pre-assembled see page 627
- EPIC® SOLAR Module Box see page 628
- EPIC® SOLAR M field mountable M12 see page 629
- EPIC® SOLAR F field mountable M12 see page 629
- EPIC® SOLAR FMM Y-Splitter see page 631
- EPIC® SOLAR MFF Y-Splitter see page 631

ÖLFLEX® SOLAR XLS

Electrobeam cross-linked solar cable

Info

- **Temperature range -40°C up to +100°C**

Benefits

- Robust against mechanical impact
- Reduced spreading of fire source and formation of toxic combustion gases in event of fire
- Exact quantity control during installation by meter marking on the cable sheath

Application range

- For cabling of solar modules among themselves and as extension cable between the individual module strings or DC/AC inverter
- Gable and flat roof photovoltaic systems
- Open land solarfield plants

Product features

- Weathering-, abrasion and UV resistant
- Good heat pressure resistance
- Halogen-free and flame-retardant.
- Resistant against oxalic acid and sodium hydroxide and other chemical media
- On request and considering economic minimum lenghts also available with red and blue outer sheath

Approvals (Norm references)

CE RoHS

- Flame retardant according to IEC 60332-1-2
- Halogen-free according to EN 50267-2–1/-2, EN 60684-2
- Ozone resistant according EN 50396
- Weather-/UV resistant according HD 605/A1
- Acid-/Brine resistant according EN 60811-2-1

Design

- Conductor: Fine wired tinned copper strands
- Core insulation: Electron beam cross-linked copolymer
- Core insulation colour: Black, red or blue
- Outer sheath: Electron beam cross-linked Copolymer
- Outer sheath colour black

Technical data

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Fixed installation: 4 x cable diameter

Rated voltage
AC U_0/U : 600/1000 V
DC U_0/U : 900/1500 V
Max. permissible operating voltage: DC 1800 V

Test voltage
AC 6500 V

Range of temperature
Fixed installation:
-40° C up to +100 °C

Part number	Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® SOLAR XLS - Core insulation: black / Outer sheath: black				
0025800	1.5	5.4	14.4	29.0
0025805	2.5	5.4	24.0	45.0
0025810	4.0	6.0	38.4	72.0
0025815	6.0	7.1	57.6	102.0
0025820	10.0	8.9	96.0	159.0
0025825	16.0	9.8	153.6	247.0
ÖLFLEX® SOLAR XLS - Core insulation: red / Outer sheath: black				
0025801	1.5	5.4	14.4	29.0
0025806	2.5	5.4	24.0	45.0
0025811	4.0	6.0	38.4	72.0
0025816	6.0	7.1	57.6	102.0
0025821	10.0	8.9	96.0	159.0
0025826	16.0	9.8	153.6	247.0
ÖLFLEX® SOLAR XLS - Core insulation: blue / Outer sheath: black				
0025802	1.5	5.4	14.4	29.0
0025807	2.5	5.4	24.0	45.0
0025812	4.0	6.0	38.4	72.0
0025817	6.0	7.1	57.6	102.0
0025822	10.0	8.9	96.0	159.0
0025827	16.0	9.8	153.6	247.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil 100 m; Drum (500; 1000) m

Comparable products

- ÖLFLEX® SOLAR XL multi see page 150

Accessories

- EPIC® SOLAR - Industrially injection overmoulded and field mountable solar connectors for safe connection of PV modules
- SKINTOP® ST / SKINTOP® CLICK - Approved cable glands for use for PV junction boxes, electric meters and DC/AC converters

ÖLFLEX® SOLAR XLSv

Robust solar cable with big conductor cross sections

Info

- **For high electrical power loads**
- **Suitable for direct burial**

Benefits

- Reinforced outer sheath protects well against mechanical stress
- High thermal capacity for long lasting operation of the PV system at all seasons
- Reduced spreading of fire source and formation of toxic combustion gases in event of fire
- Considering universally valid installation guidelines also suitable for direct burial
- Exact quantity control during installation by meter marking on the cable sheath

Application range

- For cabling of individual module strings as well as for fixed solar generators and moved tracking systems
- Open land solarfield plants
- Big conductor cross-sections are used as collecting main to transmit high power loads between the individual panel-strings and as connection to the DC/AC inverter of huge PV plants respectively solar fields

Product features

- Excellent weather-, abrasion-, temperature- and UV resistance
- Good heat pressure resistance
- Halogen-free and flame-retardant.

Approvals (Norm references)

CE RoHS

- Weather-/UV resistant according HD 605/A1
- Flame retardant according to IEC 60332-1-2
- Halogen free in accordance with IEC 60754-1
- Ozone resistant according EN 50396
- Acid-/Brine resistant according EN 60811-2-1

Design

- Conductor: Fine wired tinned copper strands
- Core insulation: Electron beam cross-linked copolymer
- Outer sheath: Electron beam cross-linked Copolymer
- Outer sheath colour black

Technical data

Core identification code
Black

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Fixed installation: 4 x cable diameter

Rated voltage
AC U_0/U : 600/1000 V
DC U_0/U : 900/1500 V
Max. permissible operating voltage: DC 1800 V

Test voltage
AC 6500 V

Range of temperature
Fixed installation:
-40° C up to +100 °C

Part number	Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® SOLAR XLSv				
0027110	4.0	8.0	38.4	104.0
0027111	6.0	9.1	57.6	141.0
0027112	10.0	10.5	96.0	201.0
0027113	16.0	11.9	153.6	280.0
0027114	25.0	13.2	240.0	386.0
0027115	35.0	14.5	336.0	502.0
0027116	50.0	17.7	480.0	698.0
0027117	70.0	19.7	672.0	921.0
0027118	95.0	22.0	912.0	1,210.0
0027119	120.0	23.8	1,152.0	1,475.0
0027120	150.0	28.0	1,440.0	1,868.0
0027121	185.0	31.0	1,776.0	2,299.0
0027122	240.0	34.0	2,304.0	2,910.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil 100 m; Drum (500; 1000) m
Considering economic minimum lenghts we produce on request versions with red respectively blue core insulation colour or an imprinted code stripe on the black outer sheath as distinctive feature

Accessories

- SKINTOP® ST / SKINTOP® CLICK - Approved cable glands for use for PV junction boxes, electric meters and DC/AC converters

ÖLFLEX® SOLAR V4A

High-grade steel armoured solar cable

Info

- **Protected against martens, rodents and termites**

Benefits

- Stainless high-grade (class V4A) steel wire braiding protects very effective against martens, rodents and even termites
- Robust against mechanical impact
- Reduced spreading of fire source and formation of toxic combustion gases in event of fire

Application range

- For the use in PV systems for instance on stable and barn roofs in densely forested areas and farmsteads
- Gable and flat roof photovoltaic systems
- Open land solarfield plants

Product features

- Weathering-, abrasion and UV resistant
- Halogen-free and flame-retardant.
- Good heat pressure resistance

Approvals (Norm references)

CE RoHS

- Flame retardant according to IEC 60332-1-2
- Halogen-free according to EN 50267-2–1/-2, EN 60684-2
- Weather-/UV resistant according HD 605/A1

Design

- Conductor: Fine wired tinned copper strands
- Core insulation: Cross-linked polymer
- Outer sheath: special polymer
- Outer sheath colour black
- Armouring:
  high-grade stainless steel wire braiding (V4A)

Technical data

Core identification code
Black

Conductor stranding
Fine wire in accordance to VDE 0295
Class 5 / IEC 60228 Class 5

Minimum bending radius
Fixed installation: 5 x cable diameter

Rated voltage
AC U_0/U : 600/1000 V
DC U_0/U : 900/1500 V
Max. permissible operating voltage:
DC 1800 V

Test voltage
AC 6500 V

Range of temperature
Fixed installation:
-40° C up to +100 °C

Part number	Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® SOLAR V4A stainless steel				
0025960	4.0	7.0	38.4	98.0
0025961	6.0	8.0	57.6	158.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil 100 m; Drum (500; 1000) m

Accessories

- EPIC® SOLAR - Industrially injection overmoulded and field mountable solar connectors for safe connection of PV modules
- SKINTOP® ST / SKINTOP® CLICK - Approved cable glands for use for PV junction boxes, electric meters and DC/AC converters

ÖLFLEX® SOLAR XL multi

UL/CSA approved solar cable

Info

- **For the North American market**

Benefits

- The c(UL)us listings enable the use for wiring of PV systems in whole North America. According the NEC (National Electrical Code) only especially for outdoor purposes listed cables are permited in the USA for PV installations
- High thermal capacity for long lasting operation of the PV system at all seasons
- Reduced spreading of fire source and formation of toxic combustion gases in event of fire
- Exact quantity control during installation by meter marking on the cable sheath

Application range

- For cabling of solar modules among themselves and as extension cable between the individual module strings or DC/AC inverter
- Gable and flat roof photovoltaic systems
- Open land solarfield plants

Product features

- Excellent weather-, abrasion-, temperature- and UV resistance
- Weatherproof according to ISO 4892-2 respectively UL 1581 Section 1200
- Halogen-free and flame retardant (IEC 60332-1-2)

Approvals (Norm references)

- UL/CSA listed

Design

- Conductor: Fine wired tinned copper strands
- Core insulation: special polyolefin, cross-linked
- Outer sheath: Cross-linked copolymer
- Outer sheath colour black

Technical data

Approvals
c(UL)us listed according
UL USE-2 “SUNLIGHT RESISTANT”
cUL RWU90 “SUNLIGHT RESISTANT”

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5

Minimum bending radius
Fixed installation: 4 x cable diameter

Rated voltage
AC U_0/U : 600/1000 V
DC U_0/U : 900/1500 V
Max. permissible operating voltage: DC 1800 V
Conforms to UL/CSA standard: 600 V

Test voltage
4000 V

Range of temperature
Fixed installation: -40°C up to +120°C

Part number	Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® SOLAR XL multi - UL / cUL approved				
Outer sheath colour black				
0026585	2.5	5.6	24.0	45.0
0026586	4.0	6.0	38.4	72.0
0026587	6.0	7.1	57.6	102.0
0026588	10.0	8.5	96.0	159.0
0026589	16.0	9.9	153.6	247.0
Outer sheath colour black - coded				
0026590	2.5	5.6	24.0	45.0
0026591	4.0	6.0	38.4	72.0
0026592	6.0	7.1	57.6	102.0
0026593	10.0	8.5	96.0	159.0
0026594	16.0	9.9	153.6	247.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis‘ and ‚Metal index‘ see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size : 100mtr = coil / 500mtr u. 1000mtr = drum

Comparable products

- ÖLFLEX® SOLAR XLS see page 147

Accessories

- EPIC® SOLAR - Industrially injection overmoulded and field mountable solar connectors for safe connection of PV modules
- SKINTOP® ST / SKINTOP® CLICK - Approved cable glands for use for PV junction boxes, electric meters and DC/AC converters

New

ÖLFLEX® TORSION

Power and control cables for flexible application under torsional load - 0,6/1 kV

Info

- **Torsion resistant and very flexible**
- **Cable-loop application**

Benefits

- Cost-effective alternative in comparison to the halogen free, highly flame retardant and enhanced oil resistant ÖLFLEX® TORSION FRNC version with improved characteristics in case of fire
- The special construction compensates reliably the permanent torsional movements inside of windmills between the nacelle and the tower
- The high flexibility and the good dismantle and stripping properties enable easy space-saving cable installation and fast processing

Application range

- For fixed, flexible as well as for torsional moved applications in the field of machinery building and wind power plant engineering
- Especially for the drip loop installation between the rotating nacelle and the stationary windmill tower to connect the generator and control units
- As torsional moved cable for application in North America with UL WTTC Listing (Wind Turbine Tray Cable) we recommend ÖLFLEX® FORTIS which complies to the NFPA 79 standard resp. UL 2277 and UL 6140 outline

Product features

- Torsion-resistant up to ±150 °/mtr
- Good UV resistance
- Flame retardant according to IEC 60332-1-2
- UL certification in preparation

Approvals (Norm references)

CE RoHS

Design

- Extra fine wired conductor of plain copper
- Core insulation of special PVC compound
- Cores torsion optimized twisted into layers
- Special PVC based outer sheath

Technical data

Core identification code
Up to 5 cores: colour coded according VDE 0293-308, see Appendix T9
Starting at 6 cores: Black with white numbers

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire in acc. to VDE 0295 Cl.6 / IEC 60228 Cl.6

Minimum bending radius
Flexible use: 10 x outer diameter
Fixed installed: 6 x outer diameter

Rated voltage
nach VDE: U_0/U 0,6/1,0 kV

Test voltage
C/C: 4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexible use: -30°C up to +90°C
Fixed installation: -40°C up to +90°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® TORSION				
1150465	12 G 0.75	12.4	86.4	222
1150466	14 G 0.75	13.0	100.8	272
1150467	18 G 0.75	14.6	129.6	304
1150468	25 G 0.75	17.8	180.0	450
1150469	41 G 0.75	22.4	295.2	701
1150470	50 G 0.75	24.2	360.0	835
1150479	12 G 1	13.2	115.2	258
1150480	16 G 1	14.8	153.6	368
1150485	3 G 1.5	9.0	43.2	122
1150486	4 G 1.5	9.7	57.6	146
1150487	5 G 1.5	10.6	72.0	172
1150488	7 G 1.5	12.6	100.8	238
1150489	12 G 1.5	15.3	172.8	365
1150490	19 G 1.5	18.3	273.6	530
1150491	25 G 1.5	22.8	360.0	790
1150492	32 G 1.5	24.5	460.8	942
1150495	3 G 2.5	10.4	72.0	170
1150496	4 G 2.5	11.3	96.0	227
1150497	5 G 2.5	12.4	120.0	244
1150498	7 G 2.5	15.0	168.0	352
1150499	12 G 2.5	18.9	288.0	540
1150500	16 G 2.5	20.8	384.0	760
1150501	19 G 2.5	23.9	456.0	879
1150502	25 G 2.5	26.8	600.0	1,126
1150505	3 G 4	11.9	115.2	240

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
1150506	4 G 4	13.0	153.6	297
1150507	5 G 4	14.3	192.0	352
1150508	3 G 6	12.9	172.8	322
1150509	4 G 6	14.4	230.4	384
1150510	5 G 6	16.0	288.0	466
1150511	3 G 10	16.6	288.0	530
1150512	4 G 10	18.4	384.0	631
1150513	5 G 10	20.5	480.0	768
1150514	3 G 16	19.2	460.8	794
1150515	4 G 16	22.2	614.4	1,017
1150516	5 G 16	24.4	768.0	1,147
1150517	3 G 25	24.5	720.0	1,133
1150518	3 X 25	24.5	720.0	1,133
1150519	4 G 25	26.9	960.0	1,471
1150520	5 G 25	29.9	1,200.0	1,815
1150521	3 G 35	27.1	1,008.0	1,521
1150522	3 X 35	27.1	1,008.0	1,521
1150523	4 G 35	30.1	1,344.0	1,952
1150524	5 G 35	33.7	1,680.0	2,438
1150525	3 G 50	32.1	1,440.0	2,235
1150526	3 X 50	32.1	1,440.0	2,235
1150527	4 G 50	35.7	1,920.0	2,866
1150528	5 G 50	39.5	2,400.0	3,583
1150529	3 G 70	37.0	2,016.0	3,150
1150530	3 X 70	37.0	2,016.0	3,150
1150531	4 G 70	41.4	2,688.0	4,112

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® TORSION FRNC see page 152
- ÖLFLEX® FORTIS see page 70

New

ÖLFLEX® TORSION FRNC

Cold- and oil resistant cables for flexible application under torsional load, halogen free - 0,6/1 kV

Info

- Torsion resistant and very flexible
- Improved characteristics in case of fire
- Approved for the USA and Canada

ÖLFLEX® TORSION D FRNC

Screened cold- and oil resistant cables for flexible application under torsional load, halogen free - 0,6/1 kV

Info

- Copper screened version

Benefits

- The special construction compensates reliably the permanent torsional movements inside of windmills between the nacelle and the tower
- The high flexibility and the good dismantle and stripping properties enable easy space-saving cable installation and fast processing
- Saltwater resistant for On- and Off-Shore application
- **FRNC** = **F**lame **R**etardant **N**on **C**orrosive
  - Reduction of flame propagation and density and toxicity of smoke gases in event of fire
  - Minimisation of damage to buildings and production facilities
  - Safety for maintenance staff resp. in areas with high personnel concentration
- The copper wrapping of the screened D version protects against electromagnetic interference

Application range

- For fixed, flexible as well as for torsional moved applications in the field of machinery building and wind power plant engineering
- Especially for the drip loop installation between the rotating nacelle and the stationary windmill tower to connect the generator and control units
- As torsional moved cable for application in North America with UL WTTC Listing (Wind Turbine Tray Cable) we recommend ÖLFLEX® FORTIS which complies to the NFPA 79 standard resp. UL 2277 and UL 6140 outline

Product features

- Torsion-resistant up to ±150 °/mtr
- Good weather-, abrasion-, temperature- and UV resistance
- Resistant against a multitude of oils
- Halogen free and flame retardant
- Considering economic minimum quantities also customized designs are possible

Approvals (Norm references)

CE c UL us RoHS

- UL AWM Style 21288 / cUL AWM II A/B
- Fire behaviour :
  - Halogen free (IEC 60754-1)
  - Corrosivity of gases (IEC 60754-2)
  - Smoke density (IEC 61034-2)
  - Flame retardant (IEC 60332-1-2)
  - No flame propagation (IEC 60332-3-24 resp. IEC 60332-3-25)
- Oil resistant acc. to VDE 0473 part 811-2-1 and UL OIL RES I and UL OIL RES II
- UV-resistant according ISO 4892-2
- Ozone resistant according EN 50396

Design

- Extra fine wired conductor of plain copper
- Core insulation of LS0H polyolefin polymer
- Cores torsion optimized twisted into layers
- Optional screening (D) of helically tinned copper wire wrapping
- Outer sheath of halogen free special compound, colour black (RAL 9005)

Technical data

Core identification code
Control and connection cables:
Colour coded according to VDE 0293-308, see Appendix T9
Starting at 6 cores: Black with white numbers
Paired signal cables: DIN 47100

Approvals
UL AWM Style 21288
cUL AWM II A/B

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire in acc. to VDE 0295 Cl.6 / IEC 60228 Cl.6
(For matching US conductor sizes according AWG please see technical table T16)

Minimum bending radius
Flexible use: 10 x outer diameter
Fixed installed: 6 x outer diameter

Rated voltage
nach VDE: U_0/U 0,6/1,0 kV
Working voltage acc. UL: 1000V

Test voltage
ÖLFLEX® TORSION FRNC
C/C: 4000 V
ÖLFLEX® TORSION D FRNC
C/C: 4000 V
C/S: 2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexible use: -40°C up to +90°C (UL +80°C)
Static use: -40°C up to +90°C (UL +80°C)

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® TORSION FRNC				
1150199	12 G 0.75	12.4	86.4	237
1150377	14 G 0.75	13.0	100.8	291
1150201	18 G 0.75	14.6	129.6	323
1150204	25 G 0.75	17.8	180.0	480
1150208	50 G 0.75	24.2	360.0	886
1150373	12 G 1	13.2	115.2	274
1150378	16 G 1	14.8	153.6	392
1150271	3 G 1.5	9.0	43.2	131
1150272	4 G 1.5	9.7	57.6	156
1150273	5 G 1.5	10.6	72.0	183
1150275	7 G 1.5	12.6	100.8	253
1150279	12 G 1.5	15.3	172.8	386
1150280	18 G 1.5	18.3	259.2	563
1150374	25 G 1.5	22.8	360.0	837
1150375	32 G 1.5	24.5	460.8	994
1150311	3 G 2.5	10.4	72.0	181
1150312	4 G 2.5	11.3	96.0	242
1150313	5 G 2.5	12.4	120.0	258
1150315	7 G 2.5	15.0	168.0	372
1150319	12 G 2.5	18.9	288.0	567
1150322	19 G 2.5	23.9	456.0	925
1150376	25 G 2.5	26.8	600.0	1,183
1150350	3 G 4	11.9	115.2	254
1150351	4 G 4	13.0	153.6	313
1150352	5 G 4	14.3	192.0	370
1150355	3 G 6	12.9	173.0	338
1150356	4 G 6	14.4	230.4	401
1150357	5 G 6	16.0	288.0	486
1150360	3 G 10	16.6	288.0	556
1150361	4 G 10	18.4	384.0	658
1150362	5 G 10	20.5	480.0	799
1150366	4 G 16	22.2	614.4	1,061
1150367	5 G 16	24.4	768.0	1,188
1150371	4 G 25	26.9	960.0	1,526
1150372	5 G 25	29.9	1,200.0	1,881
1150369	5 G 35	33.7	1,680.0	2,520
1150379	5 G 50	39.5	2,400.0	3,710
1150363	3 G 70	37.0	2,016.0	3,590
ÖLFLEX® TORSION D FRNC - screened				
1150111	4 x 2 x 0.5	11.9	71.0	205
1150115	12 x 2 x 0.5	18.3	188.0	518
1150121	4 x 2 x 0.75	12.7	90.0	232
1150125	12 x 2 x 0.75	19.8	258.0	603
1150221	18 G 0.75	15.2	180.0	402
1150228	50 G 0.75	24.9	470.0	1,079

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

ÖLFLEX® STAGE BK

The new developed multicore power cable for event companies

Info
- Suitable for outdoor use

Benefits
- Additional application due to outdoor use
- Good flexibility - easy installation with tight space requirements
- Flexible down to -30°C
- Easy to wind for mobile use

Application range
- Power and control cable usable for stage technique (Multicore) with black outer sheath
- Cable is developed especially for circuits for lighting technology

Product features
- Flame retardant according to IEC 60332-1-2
- Good UV resistance

Approvals (Norm references)
CE RoHS

Design
- Stranded, fine wire in accordance with VDE 0295, Class 5 / IEC 60228 Cl. 5
- Core insulation: PVC-based, cold flexible
- Cores twisted in layers
- Outer sheath of cold flexible special PVC based compound in black

Technical data
Core identification code
Black cores with white numbers plus green/yellow protective conductor

Based on
HD 21.13 S1; VDE 0281 Part 13

Conductor stranding
Fine wire according to VDE 0295 Class 5/IEC 60228 Class 5

Minimum bending radius
Fixed installation: 4 x cable diameter
Occasional flexing: 15 x cable diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
4000 V

Range of temperature
Flexing: -30°C up to +70°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km approx.	Weight kg/km approx.
ÖLFLEX® STAGE BK				
3036877	13G1,5	13.2	187.6	325.0
3036878	17G1,5	14.8	244.6	407.0
3036879	13G2,5	16.3	312.0	482.0
3036880	17G2,5	18.2	408.0	639.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Standard lengths: (100; 500; 1000) m
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

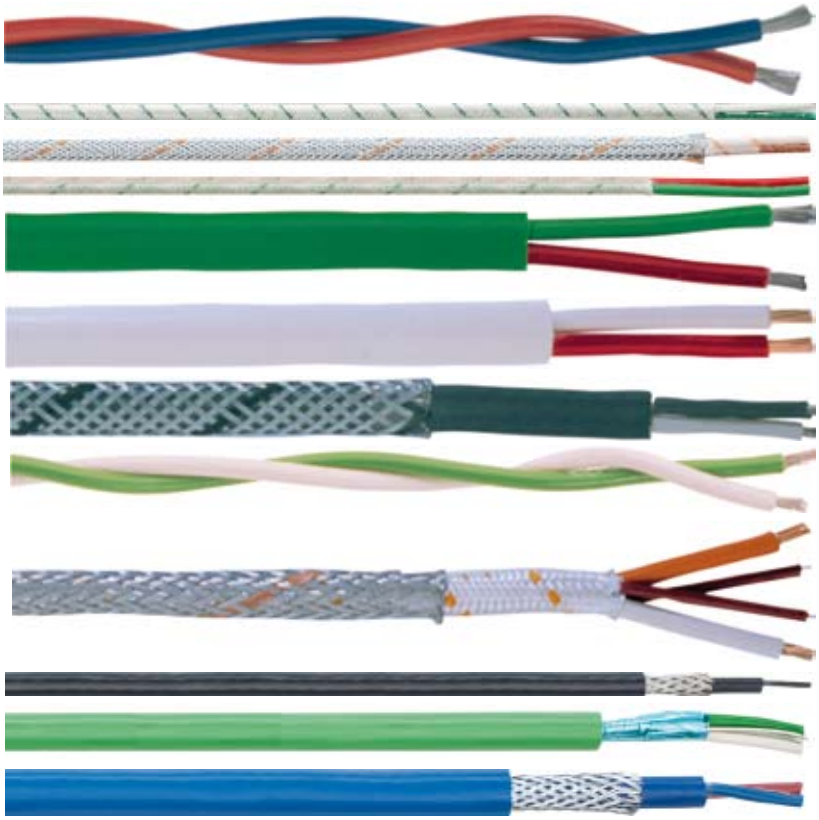
Comparable products
- ÖLFLEX® CLASSIC 110 BLACK 0,6/1kV
- ÖLFLEX® CLASSIC 110

Extension- and compensating cables, paired

PVC, silicone or glass fibre insulated

Info

- **Available in many different designs**



Technical data

Based on
Limiting deviation in acc. with DIN and IEC in accordance with Class 2

Conductor stranding
1.5mm²: approx. 48 x 0.20mm
0.75mm²: approx. 24 x 0.20mm
0.5mm²: approx. 16 x 0.20mm
0.22mm²: approx. 7 x 0.20mm

Minimum bending radius
Without metal braiding:
12 x cable diameter
With metal braiding:
15 x cable diameter

Range of temperature
(referring to insulation and sheath compounds)
PVC: -5°C up to +70°C
Silicone: -25°C up to +180°C
Glass fibre: -25°C up to +200°C

Application range

- For temperature measurement respectively manufacturing process controlling by the use of thermocouples. The sheathing compound should be selected in relation to the maximum occuring ambient temperature around the themocouple junction.
- **Conductor materials (alloys):**
  Fe/CuNi (LX, JX)
  Conductor alloys are identical with thermocouple alloys
- **NiCr/Ni (KCA, KX)**
  KCA version - compensating alloys, not identical with thermocouple alloys
  KX version - conductor alloys are identical with thermocouple alloys
- **PtRh/Pt (RCB, SCB)**
  Compensating alloys are not identical with thermocouple alloys

Approvals (Norm references)

- **Colour identity code**
  DIN 43710
  Negative conductor and outer sheath:
  Fe/CuNi: blue
  NiCr/Ni: green
  PtRh/Pt: white
  Positive conductor: always red
  IEC 60 584
  Positive conductor and outer sheath:
  Fe/CuNi: black
  NiCr/Ni: green
  PtRh/Pt: orange
  Negative conductor: always white

Design

- **Used design abbreviations:**
  PVC: Polyvinylchloride
  SIL: Silicone rubber
  GL: Glass fibre
  C: Copper screen braiding
  ST: Aluminium foil screen
  S: Steel wire braiding
- **Design example for PVC-PVC-S-PVC:**
  - **PVC** core insulation
  - **PVC** inner sheath
  - **S**teel wire braiding
  - **PVC** outer sheath
- **Picture examples (top down):**
  Fe/CuNi DIN 2x1,5 PVC
  NiCr/Ni IEC 2x1,5 GL-GL
  PtRh/Pt IEC 2x1,5 GL-GL-S
  NiCr/Ni DIN 2x1,5 SIL-GL
  NiCr/Ni DIN 2x1,5 PVC-PVC
  PtRh/Pt DIN 2x1,5 PVC-PVC
  Fe/CuNi IEC 2x1,5 SIL-SIL-S
  NiCr/Ni IEC 2x1,5 SIL
  PtRh/Pt IEC 2x1,5 SIL-GL-S
  Fe/CuNi IEC 2x0,22 PVC-PVC-C-PVC
  NiCr/Ni IEC 2x1,5 PVC-ST-PVC
  Fe/CuNi DIN 2x1,5 PVC-PVC-S-PVC

Part number	Thermocouple	Type DIN / IEC	Number of cores and mm² per conductor	Design	Article designation	Conductor material DIN	Conductor material IEC	Outer dimensions in mm approx.	Weight kg/km approx.
Extension- respectively compensating cables 0.22 mm²									
0151051	Fe/CuNi	DIN	2 x 0.22	PVC-PVC	KE 9-022 L	LX		4.0	22.0
0161051	Fe/CuNi	IEC	2 x 0.22	PVC-PVC	KE 9-022 L		JX	4.0	22.0
0152051	NiCr/Ni	DIN	2 x 0.22	PVC-PVC	KN 9-022 L	KCA		4.0	22.0
0162051	NiCr/Ni	IEC	2 x 0.22	PVC-PVC	KN 9-022 L		KCA	4.0	22.0
0153051	PtRh/Pt	DIN	2 x 0.22	PVC-PVC	KP 9-022 L	RCB, SCB		4.0	22.0
0163051	PtRh/Pt	IEC	2 x 0.22	PVC-PVC	KP 9-022 L		RCB, SCB	4.0	22.0
0151052	Fe/CuNi	DIN	2 x 0.22	PVC-PVC-C-PVC	KE 5-022 L-CY	LX		4.9	31.0
0161052	Fe/CuNi	IEC	2 x 0.22	PVC-PVC-C-PVC	KE 5-022 L-CY		JX	4.9	31.0
0152052	NiCr/Ni	DIN	2 x 0.22	PVC-PVC-C-PVC	KN 5-022 L-CY	KCA		4.9	31.0
0162052	NiCr/Ni	IEC	2 x 0.22	PVC-PVC-C-PVC	KN 5-022 L-CY		KCA	4.9	31.0
0153052	PtRh/Pt	DIN	2 x 0.22	PVC-PVC-C-PVC	KP 5-022 L-CY	RCB, SCB		4.9	31.0
0163052	PtRh/Pt	IEC	2 x 0.22	PVC-PVC-C-PVC	KP 5-022 L-CY		RCB, SCB	4.9	31.0
Extension- respectively compensating cables 0.5 mm²									
0151030	Fe/CuNi	DIN	2 x 0.5	PVC-PVC	KE 91 L	LX		5.4	45.0
0161030	Fe/CuNi	IEC	2 x 0.5	PVC-PVC	KE 91 L		JX	5.4	45.0
0152040	NiCr/Ni	DIN	2 x 0.5	PVC-PVC	KN 91 L	KCA		5.4	45.0
0162040	NiCr/Ni	IEC	2 x 0.5	PVC-PVC	KN 91 L		KCA	5.4	45.0
0151040	Fe/CuNi	DIN	2 x 0.5	SIL-SIL-S oval	KE 41 L-SIL	LX		6.4 x 4.4	51.0
0161040	Fe/CuNi	IEC	2 x 0.5	SIL-SIL-S oval	KE 41 L-SIL		JX	6.4 x 4.4	51.0
0152030	NiCr/Ni	DIN	2 x 0.5	SIL-SIL-S oval	KN 41 L-SIL	KCA		6.4 x 4.4	51.0
0162030	NiCr/Ni	IEC	2 x 0.5	SIL-SIL-S oval	KN 41 L-SIL		KCA	6.4 x 4.4	51.0

Power and control cables

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Special applications

Temperature measurement (Extension- and compensating cables)

Part number	Thermocouple	Type DIN / IEC	Number of cores and mm² per conductor	Design	Article designation	Conductor material DIN	Conductor material IEC	Outer dimensions in mm approx.	Weight kg/km approx.
Extension- respectively compensating cables 0.75 mm²									
0151035	Fe/CuNi	DIN	2 x 0.75	PVC-PVC	KE 92 L	LX		6.0	56.0
0161035	Fe/CuNi	IEC	2 x 0.75	PVC-PVC	KE 92 L		JX	6.0	56.0
0152045	NiCr/Ni	DIN	2 x 0.75	PVC-PVC	KN 92 L	KCA		6.0	56.0
0162045	NiCr/Ni	IEC	2 x 0.75	PVC-PVC	KN 92 L		KCA	6.0	56.0
0151050	Fe/CuNi	DIN	2 x 0.75	SIL-SIL-S oval	KE 42 L-SIL	LX		6.4 x 4.4	58.0
0161050	Fe/CuNi	IEC	2 x 0.75	SIL-SIL-S oval	KE 42 L-SIL		JX	6.4 x 4.4	58.0
0152035	NiCr/Ni	DIN	2 x 0.75	SIL-SIL-S oval	KN 42 L-SIL	KCA		6.4 x 4.4	58.0
0162035	NiCr/Ni	IEC	2 x 0.75	SIL-SIL-S oval	KN 42 L-SIL		KCA	6.4 x 4.4	58.0
PVC insulated versions 1,5 mm²									
0151001	Fe/CuNi	DIN	2 x 1.5	PVC	KE 1 L	LX		5.4	40.0
0161001	Fe/CuNi	IEC	2 x 1.5	PVC	KE 1 L		JX	5.4	40.0
0152001	NiCr/Ni	DIN	2 x 1.5	PVC	KN 1 L	KCA		5.4	40.0
0162001	NiCr/Ni	IEC	2 x 1.5	PVC	KN 1 L		KCA	5.4	40.0
0151010	Fe/CuNi	DIN	2 x 1.5	PVC-PVC round	KE 9 L	LX		7.1	79.0
0161010	Fe/CuNi	IEC	2 x 1.5	PVC-PVC round	KE 9 L		JX	7.1	79.0
0152010	NiCr/Ni	DIN	2 x 1.5	PVC-PVC round	KN 9 L	KCA		7.1	79.0
0162010	NiCr/Ni	IEC	2 x 1.5	PVC-PVC round	KN 9 L		KCA	7.1	79.0
0154010	NiCr/Ni	DIN	2 x 1.5	PVC-PVC round	KXN 9 L	KX		7.1	79.0
0164010	NiCr/Ni	IEC	2 x 1.5	PVC-PVC round	KXN 9 L		KX	7.1	79.0
0153010	PtRh/Pt	DIN	2 x 1.5	PVC-PVC round	KP 9 L	RCB, SCB		7.1	79.0
0163010	PtRh/Pt	IEC	2 x 1.5	PVC-PVC round	KP 9 L		RCB, SCB	7.1	79.0
0151017	Fe/CuNi	DIN	2 x 1.5	PVC-PVC oval	KE 12 L	LX		7.2 x 4.4	69.0
0161017	Fe/CuNi	IEC	2 x 1.5	PVC-PVC oval	KE 12 L		JX	7.2 x 4.4	69.0
0152017	NiCr/Ni	DIN	2 x 1.5	PVC-PVC oval	KN 12 L	KCA		7.2 x 4.4	69.0
0162017	NiCr/Ni	IEC	2 x 1.5	PVC-PVC oval	KN 12 L		KCA	7.2 x 4.4	69.0
0154011	Fe/CuNi	DIN	2 x 1.5	PVC-ST-PVC	KE 20 L	LX		7.6	85.0
0164011	Fe/CuNi	IEC	2 x 1.5	PVC-ST-PVC	KE 20 L		JX	7.6	85.0
0154012	NiCr/Ni	DIN	2 x 1.5	PVC-ST-PVC	KN 20 L	KCA		7.6	85.0
0164012	NiCr/Ni	IEC	2 x 1.5	PVC-ST-PVC	KN 20 L		KCA	7.6	85.0
0154013	NiCr/Ni	DIN	2 x 1.5	PVC-ST-PVC	KXN 20 L	KX		7.6	85.0
0164013	NiCr/Ni	IEC	2 x 1.5	PVC-ST-PVC	KXN 20 L		KX	7.6	85.0
0154014	PtRh/Pt	DIN	2 x 1.5	PVC-ST-PVC	KP 20 L	RCB, SCB		7.6	85.0
0164014	PtRh/Pt	IEC	2 x 1.5	PVC-ST-PVC	KP 20 L		RCB, SCB	7.6	85.0
0151011	Fe/CuNi	DIN	2 x 1.5	PVC-PVC-S	KE 9 L-S	LX		8.0	140.0
0161011	Fe/CuNi	IEC	2 x 1.5	PVC-PVC-S	KE 9 L-S		JX	8.0	140.0
0152011	NiCr/Ni	DIN	2 x 1.5	PVC-PVC-S	KN 9 L-S	KCA		8.0	140.0
0162011	NiCr/Ni	IEC	2 x 1.5	PVC-PVC-S	KN 9 L-S		KCA	8.0	140.0
0157514	Fe/CuNi	DIN	2 x 1.5	PVC-PVC-S-PVC	KE 9 L-SY	LX		10.3	160.0
0167514	Fe/CuNi	IEC	2 x 1.5	PVC-PVC-S-PVC	KE 9 L-SY		JX	10.3	160.0
0157513	NiCr/Ni	DIN	2 x 1.5	PVC-PVC-S-PVC	KN 9 L-SY	KCA		10.3	160.0
0167513	NiCr/Ni	IEC	2 x 1.5	PVC-PVC-S-PVC	KN 9 L-SY		KCA	10.3	160.0
0157515	PtRh/Pt	DIN	2 x 1.5	PVC-PVC-S-PVC	KP 9 L-SY	RCB, SCB		10.3	160.0
0167515	PtRh/Pt	IEC	2 x 1.5	PVC-PVC-S-PVC	KP 9 L-SY		RCB, SCB	10.3	160.0
Silicone insulated versions 1.5 mm²									
0151003	Fe/CuNi	DIN	2 x 1.5	SIL	KE 1 L-SIL	LX		5.4	40.0
0161003	Fe/CuNi	IEC	2 x 1.5	SIL	KE 1 L-SIL		JX	5.4	40.0
0152003	NiCr/Ni	DIN	2 x 1.5	SIL	KN 1 L-SIL	KCA		5.4	40.0
0162003	NiCr/Ni	IEC	2 x 1.5	SIL	KN 1 L-SIL		KCA	5.4	40.0
0151022	Fe/CuNi	DIN	2 x 1.5	SIL-SIL round	KE 15 L-SIL	LX		7.0	76.0
0161022	Fe/CuNi	IEC	2 x 1.5	SIL-SIL round	KE 15 L-SIL		JX	7.0	76.0
0152022	NiCr/Ni	DIN	2 x 1.5	SIL-SIL round	KN 15 L-SIL	KCA		7.0	76.0
0162022	NiCr/Ni	IEC	2 x 1.5	SIL-SIL round	KN 15 L-SIL		KCA	7.0	76.0
0153022	PtRh/Pt	DIN	2 x 1.5	SIL-SIL round	KP 15 L-SIL	RCB, SCB		7.0	76.0
0163022	PtRh/Pt	IEC	2 x 1.5	SIL-SIL round	KP 15 L-SIL		RCB, SCB	7.0	76.0
0151023	Fe/CuNi	DIN	2 x 1.5	SIL-SIL-S round	KE 15 L-SIL-S	LX		7.8	105.0
0161023	Fe/CuNi	IEC	2 x 1.5	SIL-SIL-S round	KE 15 L-SIL-S		JX	7.8	105.0
0152023	NiCr/Ni	DIN	2 x 1.5	SIL-SIL-S round	KN 15 L-SIL-S	KCA		7.8	105.0
0162023	NiCr/Ni	IEC	2 x 1.5	SIL-SIL-S round	KN 15 L-SIL-S		KCA	7.8	105.0
0153023	PtRh/Pt	DIN	2 x 1.5	SIL-SIL-S round	KP 15 L-SIL-S	RCB, SCB		7.8	105.0
0163023	PtRh/Pt	IEC	2 x 1.5	SIL-SIL-S round	KP 15 L-SIL-S		RCB, SCB	7.8	105.0
0151007	Fe/CuNi	DIN	2 x 1.5	SIL-SIL-S oval	KE 4 L-SIL-S	LX		8.0 x 5.2	85.0
0161007	Fe/CuNi	IEC	2 x 1.5	SIL-SIL-S oval	KE 4 L-SIL-S		JX	8.0 x 5.2	85.0
0152007	NiCr/Ni	DIN	2 x 1.5	SIL-SIL-S oval	KN 4 L-SIL-S	KCA		8.0 x 5.2	85.0
0162007	NiCr/Ni	IEC	2 x 1.5	SIL-SIL-S oval	KN 4 L-SIL-S		KCA	8.0 x 5.2	85.0
0153007	PtRh/Pt	DIN	2 x 1.5	SIL-SIL-S oval	KP 4 L-SIL-S	RCB, SCB		8.0 x 5.2	85.0
0163007	PtRh/Pt	IEC	2 x 1.5	SIL-SIL-S oval	KP 4 L-SIL-S		RCB, SCB	8.0 x 5.2	85.0
0151019	Fe/CuNi	DIN	2 x 1.5	SIL-GL oval	KE 13 L-SIL	LX		6.0 x 3.3	50.0
0161019	Fe/CuNi	IEC	2 x 1.5	SIL-GL oval	KE 13 L-SIL		JX	6.0 x 3.3	50.0
0152019	NiCr/Ni	DIN	2 x 1.5	SIL-GL oval	KN 13 L-SIL	KCA		6.0 x 3.3	50.0
0162019	NiCr/Ni	IEC	2 x 1.5	SIL-GL oval	KN 13 L-SIL		KCA	6.0 x 3.3	50.0
0153019	PtRh/Pt	DIN	2 x 1.5	SIL-GL oval	KP 13 L-SIL	RCB, SCB		6.0 x 3.3	50.0
0151015	Fe/CuNi	DIN	2 x 1.5	SIL-GL-S	KE 11 L-SIL-S	LX		6.7	82.0
0161015	Fe/CuNi	IEC	2 x 1.5	SIL-GL-S	KE 11 L-SIL-S		JX	6.7	82.0
0152015	NiCr/Ni	DIN	2 x 1.5	SIL-GL-S	KN 11 L-SIL-S	KCA		6.7	82.0
0162015	NiCr/Ni	IEC	2 x 1.5	SIL-GL-S	KN 11 L-SIL-S		KCA	6.7	82.0
0153015	PtRh/Pt	DIN	2 x 1.5	SIL-GL-S	KP 11 L-SIL-S	RCB, SCB		6.7	82.0
0163015	PtRh/Pt	IEC	2 x 1.5	SIL-GL-S	KP 11 L-SIL-S		RCB, SCB	6.7	82.0
Glass fibre insulated versions 1,5 mm²									
0151005	Fe/CuNi	DIN	2 x 1.5	GL-GL oval	KE 3 L	LX		5.1 x 2.7	64.0
0161005	Fe/CuNi	IEC	2 x 1.5	GL-GL oval	KE 3 L		JX	5.1 x 2.7	64.0
0152005	NiCr/Ni	DIN	2 x 1.5	GL-GL oval	KN 3 L	KCA		5.1 x 2.7	64.0
0162005	NiCr/Ni	IEC	2 x 1.5	GL-GL oval	KN 3 L		KCA	5.1 x 2.7	64.0
0153005	PtRh/Pt	DIN	2 x 1.5	GL-GL oval	KP 3 L	RCB, SCB		5.1 x 2.7	64.0
0163005	PtRh/Pt	IEC	2 x 1.5	GL-GL oval	KP 3 L		RCB, SCB	5.1 x 2.7	64.0
0151006	Fe/CuNi	DIN	2 x 1.5	GL-GL-S oval	KE 4 L-S	LX		5.9 x 3.7	87.0
0161006	Fe/CuNi	IEC	2 x 1.5	GL-GL-S oval	KE 4 L-S		JX	5.9 x 3.7	87.0
0152006	NiCr/Ni	DIN	2 x 1.5	GL-GL-S oval	KN 4 L-S	KCA		5.9 x 3.7	87.0
0162006	NiCr/Ni	IEC	2 x 1.5	GL-GL-S oval	KN 4 L-S		KCA	5.9 x 3.7	87.0
0153006	PtRh/Pt	DIN	2 x 1.5	GL-GL-S oval	KP 4 L-S	RCB, SCB		5.9 x 3.7	87.0
0163006	PtRh/Pt	IEC	2 x 1.5	GL-GL-S oval	KP 4 L-S		RCB, SCB	5.9 x 3.7	87.0

Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Extension- and compensating cables, multi-paired

PVC insulated - with and without steel wire armouring resp. foil screen

Info

- **Version SY - armoured against mechanical loads**
  Version ST - screened against electro-magnetical interferences

Approvals (Norm references)

RoHS

Design

- **Version Y:**
  - Fine-wired conductor alloy
  - PVC core insulation
  - Cores twisted into layers
  - PVC outer diameter
- **Version SY:**
  - Design alike Version Y
  - Additional galvanised steel wire braiding
  - PVC outer sheath
- **Version ST:**
  - Design alike version Y
  - Cores twisted into pairs, pairs twisted into layers
  - Aluminium foil screening + drain wire
  - PVC outer sheath
- **Design example for PVC-PVC-S-PVC:**
  - **PVC** core insulation
  - **PVC** inner sheath
  - **S**teel wire braiding
  - **PVC** outer sheath
- **Design example for PVC-ST-PVC:**
  - **PVC** core insulation
  - **ST**atic foil screen
  - **PVC** outer sheath
- **Colour identity code**
  DIN 43710
  Negative conductor and outer sheath:
  Fe/CuNi: blue
  NiCr/Ni: green
  PtRh/Pt: white
  Positive conductor: always red
  IEC 60 584
  Positive conductor and outer sheath:
  Fe/CuNi: black
  NiCr/Ni: green
  PtRh/Pt: orange
  Negative conductor: always white
- **Extension**-conductor alloys are identified with **X**, e.g. JX (Fe/CuNi)
  Compensating-conductor alloys are identified with **C**, e.g. KCA (NiCr/Ni)

Technical data

Core identification code
Starting at 4 cores in pairs with consecutive marked numbers (1-1, 2-2, 3-3, 4-4...)

Based on
Limiting deviation in acc. with DIN and IEC in accordance with Class 2

Conductor stranding
48 x 0.20 mm

Minimum bending radius
For flexible applications:
12,5 x outer diameter
Type SY with steel braid:
15 x outer diameter
Type ST with foil screen:
15 x outer diameter

Range of temperature
(referring to insulation and sheath material)
Flexing: -5°C to +70°C
Fixed installation: -40°C up to +80°C

Part number	Thermocouple	Type DIN / IEC	Number of cores and mm² per conductor	Design	Conductor material DIN	Conductor material IEC	Outer dimensions in mm approx.	Weight kg/km approx.
Type Y without steel wire braiding								
0155001	Fe/CuNi	DIN	4 x 1.5	PVC-PVC	LX		8.2	469.0
0165001	Fe/CuNi	IEC	4 x 1.5	PVC-PVC		JX	8.2	130.0
0156001	NiCr/Ni	DIN	4 x 1.5	PVC-PVC	KCA		8.2	257.0
0166001	NiCr/Ni	IEC	4 x 1.5	PVC-PVC		KCA	8.2	130.0
0157001	PtRh/Pt	DIN	4 x 1.5	PVC-PVC	RCB, SCB		8.2	130.0
0167001	PtRh/Pt	IEC	4 x 1.5	PVC-PVC		RCB, SCB	8.2	130.0
0155002	Fe/CuNi	DIN	6 x 1.5	PVC-PVC	LX		10.2	847.0
0165002	Fe/CuNi	IEC	6 x 1.5	PVC-PVC		JX	10.2	200.0
0156002	NiCr/Ni	DIN	6 x 1.5	PVC-PVC	KCA		10.2	469.0
0166002	NiCr/Ni	IEC	6 x 1.5	PVC-PVC		KCA	10.2	200.0
0157002	PtRh/Pt	DIN	6 x 1.5	PVC-PVC	RCB, SCB		10.2	200.0
0167002	PtRh/Pt	IEC	6 x 1.5	PVC-PVC		RCB, SCB	10.2	200.0
0155003	Fe/CuNi	DIN	8 x 1.5	PVC-PVC	LX		11.2	145.0
0165003	Fe/CuNi	IEC	8 x 1.5	PVC-PVC		JX	11.2	238.0
0156003	NiCr/Ni	DIN	8 x 1.5	PVC-PVC	KCA		11.2	238.0
0166003	NiCr/Ni	IEC	8 x 1.5	PVC-PVC		KCA	11.2	238.0
0155005	Fe/CuNi	DIN	12 x 1.5	PVC-PVC	LX		13.3	573.0
0165005	Fe/CuNi	IEC	12 x 1.5	PVC-PVC		JX	13.3	335.0
0155007	Fe/CuNi	DIN	16 x 1.5	PVC-PVC	LX		15.0	145.0
0165007	Fe/CuNi	IEC	16 x 1.5	PVC-PVC		JX	15.0	447.0
0156007	NiCr/Ni	DIN	16 x 1.5	PVC-PVC	KCA		15.0	573.0
0166007	NiCr/Ni	IEC	16 x 1.5	PVC-PVC		KCA	15.0	447.0
0155010	Fe/CuNi	DIN	24 x 1.5	PVC-PVC	LX		19.0	257.0
0165010	Fe/CuNi	IEC	24 x 1.5	PVC-PVC		JX	19.0	555.0
0156010	NiCr/Ni	DIN	24 x 1.5	PVC-PVC	KCA		19.0	145.0
0166010	NiCr/Ni	IEC	24 x 1.5	PVC-PVC		KCA	19.0	555.0
Type SY with steel wire braiding								
0155501	Fe/CuNi	DIN	4 x 1.5	PVC-PVC-S-PVC	LX		11.4	145.0
0165501	Fe/CuNi	IEC	4 x 1.5	PVC-PVC-S-PVC		JX	11.4	240.0
0156501	NiCr/Ni	DIN	4 x 1.5	PVC-PVC-S-PVC	KCA		11.4	240.0
0166501	NiCr/Ni	IEC	4 x 1.5	PVC-PVC-S-PVC		KCA	11.4	240.0
0157501	PtRh/Pt	DIN	4 x 1.5	PVC-PVC-S-PVC	RCB, SCB		11.4	240.0
0167501	PtRh/Pt	IEC	4 x 1.5	PVC-PVC-S-PVC		RCB, SCB	11.4	240.0
0155502	Fe/CuNi	DIN	6 x 1.5	PVC-PVC-S-PVC	LX		13.0	257.0
0165502	Fe/CuNi	IEC	6 x 1.5	PVC-PVC-S-PVC		JX	13.0	355.0
0156502	NiCr/Ni	DIN	6 x 1.5	PVC-PVC-S-PVC	KCA		13.0	355.0
0166502	NiCr/Ni	IEC	6 x 1.5	PVC-PVC-S-PVC		KCA	13.0	355.0
0157502	PtRh/Pt	DIN	6 x 1.5	PVC-PVC-S-PVC	RCB, SCB		13.0	355.0
0167502	PtRh/Pt	IEC	6 x 1.5	PVC-PVC-S-PVC		RCB, SCB	13.0	355.0
0155503	Fe/CuNi	DIN	8 x 1.5	PVC-PVC-S-PVC	LX		13.8	469.0
0165503	Fe/CuNi	IEC	8 x 1.5	PVC-PVC-S-PVC		JX	13.8	410.0

Power and control cables

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Special applications

Temperature measurement (Extension- and compensating cables)

Part number	Thermocouple	Type DIN / IEC	Number of cores and mm² per conductor	Design	Conductor material DIN	Conductor material IEC	Outer dimensions in mm approx.	Weight kg/km approx.
0156503	NiCr/Ni	DIN	8 x 1.5	PVC-PVC-S-PVC	KCA		13.8	410.0
0166503	NiCr/Ni	IEC	8 x 1.5	PVC-PVC-S-PVC		KCA	13.8	410.0
0155505	Fe/CuNi	DIN	12 x 1.5	PVC-PVC-S-PVC	LX		17.9	257.0
0165505	Fe/CuNi	IEC	12 x 1.5	PVC-PVC-S-PVC		JX	17.9	550.0
0156505	NiCr/Ni	DIN	12 x 1.5	PVC-PVC-S-PVC	KCA		17.9	550.0
0166505	NiCr/Ni	IEC	12 x 1.5	PVC-PVC-S-PVC		KCA	17.9	550.0
0155507	Fe/CuNi	DIN	16 x 1.5	PVC-PVC-S-PVC	LX		19.4	469.0
0165507	Fe/CuNi	IEC	16 x 1.5	PVC-PVC-S-PVC		JX	19.4	730.0
0155510	Fe/CuNi	DIN	24 x 1.5	PVC-PVC-S-PVC	LX		23.8	573.0
0165510	Fe/CuNi	IEC	24 x 1.5	PVC-PVC-S-PVC		JX	23.8	847.0
Type ST with aluminium screening								
0158500	Fe/CuNi	DIN	2 x 2 x 1.5	PVC-ST-PVC	LX		11.4	145.0
0168500	Fe/CuNi	IEC	2 x 2 x 1.5	PVC-ST-PVC		JX	11.4	145.0
0158501	NiCr/Ni	DIN	2 x 2 x 1.5	PVC-ST-PVC	KCA		11.4	145.0
0168501	NiCr/Ni	IEC	2 x 2 x 1.5	PVC-ST-PVC		KCA	11.4	145.0
0158503	Fe/CuNi	DIN	4 x 2 x 1.5	PVC-ST-PVC	LX		13.7	257.0
0168503	Fe/CuNi	IEC	4 x 2 x 1.5	PVC-ST-PVC		JX	13.7	257.0
0158504	NiCr/Ni	DIN	4 x 2 x 1.5	PVC-ST-PVC	KCA		13.7	257.0
0168504	NiCr/Ni	IEC	4 x 2 x 1.5	PVC-ST-PVC		KCA	13.7	257.0
0158506	Fe/CuNi	DIN	8 x 2 x 1.5	PVC-ST-PVC	LX		18.3	469.0
0168506	Fe/CuNi	IEC	8 x 2 x 1.5	PVC-ST-PVC		JX	18.3	469.0
0158507	NiCr/Ni	DIN	8 x 2 x 1.5	PVC-ST-PVC	KCA		18.3	469.0
0168507	NiCr/Ni	IEC	8 x 2 x 1.5	PVC-ST-PVC		KCA	18.3	469.0
0158509	Fe/CuNi	DIN	12 x 2 x 1.5	PVC-ST-PVC	LX		22.2	573.0
0168509	Fe/CuNi	IEC	12 x 2 x 1.5	PVC-ST-PVC		JX	22.2	573.0
0158510	NiCr/Ni	DIN	12 x 2 x 1.5	PVC-ST-PVC	KCA		22.2	573.0
0168510	NiCr/Ni	IEC	12 x 2 x 1.5	PVC-ST-PVC		KCA	22.2	573.0

Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

ÖLFLEX® CRANE NSHTÖU

Reelable cables for low and medium mechanical stress

Info

- **Robust and efficient**
- **Suitable for outdoor use**
- **Jacket integrated supporting braid**

Benefits

- Can be used as hawser, drum and drag cable as well as for power chains
- Integrated supporting braid prevents undesirable cable twists as well as the formation of so-called corkscrew effects

Application range

- For use in hoists, transport and conveyor systems
- Wherever cables are reeled, unreeled or also guided by roller trains
- In dry and damp rooms, outdoors as well as in industrial water

Product features

- Flame retardant according to IEC 60332-1-2
- Oil resistant according to EN 60811-2-1
- Good chemical, thermal and mechanical resistance
- Suitable for connection of mobile equipment in hazardous areas acc. to DIN VDE 0165

Approvals (Norm references)

CE DVE RoHS

- Application profiles for ÖLFLEX® CRANE cables see Appendix, Selection table A3
- Assembly guidelines for ÖLFLEX® CRANE cables see Appendix, Selection table T4

Design

- Strands of tinned copper wires
- Core insulation: Rubber Type 3GI3
- Support braid integrated in the outer sheath
- Outer jacket of rubber Type 5GM3

Technical data

Core identification code
Up to 5 cores: colour coded according VDE 0293-308, see Appendix T9
Starting at 6 cores: Black with white numbers

Approvals
VDE 0250 Part 814 NSHTÖU

Specific insulation resistance
> 10 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Flexible use for reeling applications:
cables with outer diameter < 21,5mm
5 x outer diameter
cables with outer diameter > 21,5mm
6,25 x outer diameter
Flexible use with deflection pulleys:
7,5 x outer diameter

Rated voltage
U_0/U: 600/1000 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Current rating
VDE 0298 Part 4

Range of temperature
Flexible use: -25°C up to +60°C
Max. cond. temperature: +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CRANE NSHTÖU				
0043006	3 G 1.5	12.2	45.0	190
00430053	4 G 1.5	14.8	58.0	220
00430073	5 G 1.5	15.7	81.0	260
0043008	7 G 1.5	18.2	115.0	380
0043009	12 G 1.5	23.9	196.0	720
0043010	18 G 1.5	23.9	271.0	770
0043011	24 G 1.5	27.1	392.0	1,000
0043012	30 G 1.5	30.2	432.0	1,320
0043013	3 G 2.5	13.5	74.0	250
00430303	4 G 2.5	16.9	99.0	330
00430143	5 G 2.5	18.0	124.0	390
0043015	7 G 2.5	20.6	180.0	510
0043016	12 G 2.5	27.4	308.0	970
0043017	18 G 2.5	27.4	451.0	1,100

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
0043018	24 G 2.5	31.6	616.0	1,450
0043019	30 G 2.5	36.3	771.0	1,950
00430203	4 G 4	18.4	158.0	440
00430333	5 G 4	19.6	220.0	520
00430213	4 G 6	19.8	241.0	530
00430343	5 G 6	21.7	317.0	690
00430223	4 G 10	23.4	404.0	830
00430003	5 G 10	25.2	510.0	1,000
00430233	4 G 16	25.5	642.0	1,170
00430323	5 G 16	27.5	768.0	1,400
00430243	4 G 25	32.6	1,005.0	1,830
00430253	4 G 35	34.8	1,410.0	2,280
00430263	4 G 50	40.6	2,010.0	3,220
00430283	4 G 70	44.8	2,688.0	4,200
00430293	4 G 95	51.2	3,648.0	5,530

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® CRANE VS (N)SHTÖU see page 160
- ÖLFLEX® CRANE PUR see page 161

Accessories

- STAR STRIP stripping tool see page 908
- Cable shears KT 4 and KT 5 see page 904

ÖLFLEX® CRANE VS (N)SHTÖU

Reelable cables for medium and high mechanical stress

Info

- **Reinforced jacket design**
- **Concentric and tearproof supporting element**
- **Suitable for extremely tensile load**

Benefits

- The concentric supporting element compensates the applied tensile forces and enables the free-hanging cable reeling resp. deflection process over long distances
- Wherever reeling, unreeling and guiding operations also impose tensile stresses on cables
- Integrated supporting braid prevents undesirable cable twists as well as the formation of so-called corkscrew effects

Application range

- For use in hoists, transport and conveyor systems
- Wherever cables are reeled, unreeled or also guided by roller trains
- In dry and damp rooms, outdoors as well as in industrial water

Product features

- Flame retardant according to IEC 60332-1-2
- Oil resistant according to EN 60811-2-1
- Good chemical, thermal and mechanical resistance
- Suitable for connection of mobile equipment in hazardous areas acc. to DIN VDE 0165

Approvals (Norm references)

CE RoHS

- Application profiles for ÖLFLEX® CRANE cables see Appendix, Selection table A3
- Assembly guidelines for ÖLFLEX® CRANE cables see Appendix, Selection table T4

Design

- Strands of tinned copper wires
- Core insulation: Rubber Type 3GI3
- Central supporting element
- Support braid integrated in the outer sheath
- Outer jacket of rubber Type 5GM5

Technical data

Core identification code
Up to 5 cores: colour coded according VDE 0293-308, see Appendix T9
Starting at 6 cores: Black with white numbers

Specific insulation resistance
> 10 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Flexible use: 7,5 x outer diameter

Rated voltage
U_0/U: 600/1000 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Current rating
VDE 298 part 4

Range of temperature
Flexible use: -25°C up to +60°C
Max. cond. temperature: +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Tension load capacity in N	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CRANE VS (N)SHTÖU					
0044008	7 G 1.5	18.8	2,000	115.0	430
0044009	12 G 1.5	25.3	2,000	196.0	820
0044010	18 G 1.5	25.3	2,000	271.0	930
0044011	24 G 1.5	30.1	2,000	392.0	1,260
0044036	36 G 1.5	34.0	2,000	588.0	1,650
0044015	7 G 2.5	21.6	2,000	180.0	630
0044016	12 G 2.5	29.4	2,000	308.0	1,150
00440333	5 G 4	19.6	2,000	220.0	510
00440223	4 G 10	23.4	2,000	404.0	830
00440233	4 G 16	25.5	2,000	642.0	1,170
00440323	5 G 16	27.5	2,400	768.0	1,400
00440243	4 G 25	32.6	3,000	1,005.0	1,850
00440253	4 G 35	34.8	4,000	1,410.0	2,250
00440263	4 G 50	40.6	6,000	2,010.0	3,200
00440283	4 G 70	44.8	8,000	2,688.0	4,200
00440293	4 G 95	51.2	11,000	3,648.0	5,550

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® CRANE NSHTÖU see page 159
- ÖLFLEX® CRANE PUR see page 161

Accessories

- EASY STRIP 2 stripping and cutting tool see page 906
- V 1311 pressing pliers, hydraulic see page 935
- STAR STRIP stripping tool see page 908
- Cable shears KT 4 and KT 5 see page 904

ÖLFLEX® CRANE PUR

Reelable polyurethane cables for low, medium and high mechanical stress

Info

- **For multi-purpose applications**
- **Lightweight due to minimized diameters**
- **Halogen free**

Benefits

- The significantly minimized outer diameter compared to conventional rubber cables save space and weight
- Cost efficiency due to the use of smaller drums, guide rollers as well as drive engines possible
- Wherever reeling, unreeling and guiding operations also impose tensile stresses on cables
- The concentric supporting element compensates the applied tensile forces and enables the free-hanging cable reeling resp. deflection process over long distances
- Integrated supporting braid prevents undesirable cable twists as well as the formation of so-called corkscrew effects

Application range

- For use in hoists, transport and conveyor systems
- Wherever cables are reeled, unreeled or also guided by roller trains
- In dry and damp rooms, outdoors as well as in industrial water

Product features

- Halogen-free and flame retardant (IEC 60332-1-2)
- Oil resistant according to EN 60811-2-1
- Good chemical, thermal and mechanical resistance
- Suitable for connection of mobile equipment in hazardous areas acc. to DIN VDE 0165

Approvals (Norm references)

CE RoHS

- Application profiles for ÖLFLEX® CRANE cables see Appendix, Selection table A3
- Assembly guidelines for ÖLFLEX® CRANE cables see Appendix, Selection table T4

Design

- Strands of bare copper wires
- Core insulation made of TPE compound
- Central supporting element
- Support braid integrated in the outer sheath
- Outer sheath made of halogen-free PUR compound

Technical data

Core identification code
Up to 5 cores: colour coded according VDE 0293-308, see Appendix T9
Starting at 6 cores: Black with white numbers

Specific insulation resistance
> 10 GOhm x cm

Conductor stranding
Extra fine wire according to VDE 0295 Class 6 / IEC 60228 Class 6

Minimum bending radius
Flexible use: 7,5 x outer diameter

Rated voltage
U_0/U: 600/1000 V

Test voltage
3500 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Current rating
VDE 298 part 4

Range of temperature
Flexible use: -40°C
Max. cond. temperature: +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Tension load capacity in N	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CRANE PUR					
0045207	4 G 1.5	10.9	500	58.0	169
0045209	5 G 1.5	11.6	1,000	72.0	197
0045210	7 G 1.5	12.9	2,500	100.8	239
0045211	12 G 1.5	17.6	2,500	172.8	401
0045212	18 G 1.5	17.5	2,500	259.2	507
0045213	24 G 1.5	20.7	2,500	345.6	673
0045215	30 G 1.5	32.5	3,000	720.0	1,530
0045214	36 G 1.5	31.4	3,000	518.4	1,011
0045216	4 G 2.5	12.2	500	96.0	227
0045218	5 G 2.5	13.2	2,000	120.0	274
0045220	7 G 2.5	15.4	3,000	168.0	358
0045221	12 G 2.5	21.6	3,000	288.0	619
0045222	18 G 2.5	21.5	3,000	432.0	793
0045223	24 G 2.5	25.5	3,000	576.0	1,123
0045224	30 G 2.5	34.7	3,000	720.0	1,641
0045225	4 G 4	14.3	1,000	154.0	341
0045227	5 G 4	15.5	2,000	192.0	411
0045228	4 G 6	16.6	1,500	230.0	457
0045229	5 G 6	17.7	2,000	288.0	538
0045230	4 G 10	19.2	2,000	384.0	674
0045237	5 G 10	21.6	2,500	480.0	825
0045231	4 G 16	22.2	2,500	615.0	966
0045238	5 G 16	25.6	3,500	768.0	1,222
0045232	4 G 25	27.6	3,500	960.0	1,506
0045233	4 G 35	31.0	4,500	1,344.0	2,004
0045234	4 G 50	36.1	6,000	1,920.0	2,838
0045240	3x25+3G6	25.7	2,000	893.0	1,380
0045241	3x35+3G6	27.6	2,500	1,181.0	1,695
0045242	3x50+3G10	32.1	3,500	1,613.0	2,307

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® CRANE NSHTÖU see page 159
- ÖLFLEX® CRANE VS (N)SHTÖU see page 160

Accessories

- EASY STRIP 2 stripping and cutting tool see page 906
- Cable shears KT 4 and KT 5 see page 904

ÖLFLEX® CRANE

High flexible and weatherproof rubber cables with supporting element

Info

- **Suitable for outdoor use**
- **Integrated supporting element**
- **Also suitable for power chains and cable trolley systems**

Benefits

- Weatherproof for harsh environmental conditions
- Very flexible due to extra fine wired conductor design
- Types up to max. 24 cores can also be used in power chains

Application range

- Handling and hoisting gear, construction machinery, dockyard installations
- Machinery and installations which are permanently exposed to climatic conditions
- Suitable for use in special conditions such as industrial or sea water

Product features

- Flame retardant according to IEC 60332-1-2
- Not suitable for use on guide pulleys or drums under tensile load
- Tensile strength of supporting element, see article table
- The cable should be installed in a way that the supporting element can absorb the tensile forces
- The movability of the cores may be not affected by clamps

Approvals (Norm references)

CE RoHS

- For highly flexible use please observe the assembly guidelines for ÖLFLEX® FD cables in power chains, see Appendix T3

Design

- Strands of bare copper wires
- Core insulation: Rubber
- Special supporting element
- Outer jacket of rubber Type EM2

Technical data

Core identification code
Up to 5 cores: colour coded according VDE 0293-308, see Appendix T9
Starting at 6 cores: Black with white numbers

Based on
VDE 0250

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
0.15 mm wire diameter at 1.0 mm²
0.20 mm wire diameter from 1.5 mm²

Minimum bending radius
Flexible use: 12.5 x outer diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexible use: -25°C up to +80°C
Fixed installation: -40°C up to +80°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Tension load capacity in N	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CRANE					
0039001	2 X 1	7.4	300	20.0	89
0039002	3 G 1	8.3	300	30.0	106
00390033	4 G 1	8.9	300	40.0	127
00390043	5 G 1	10.4	300	48.0	149
0039107	7 G 1	12.9	300	69.0	206
0039109	9 G 1	14.4	300	91.0	281
0039054	12 G 1	18.5	360	124.0	422
0039116	16 G 1	17.9	480	165.0	407
0039055	18 G 1	19.2	540	185.0	451
0039120	20 G 1	20.5	600	206.0	530
0039056	24 G 1	22.1	720	247.0	646
0039057	36 G 1	26.1	1,080	371.0	863
0039148	48 G 1	29.6	1,440	461.0	1,222
0039017	2 X 1.5	8.0	300	30.0	108
0039018	3 G 1.5	8.7	300	44.0	128
00390193	4 G 1.5	9.9	300	59.0	158
00390203	5 G 1.5	10.9	300	74.0	188
0039061	7 G 1.5	14.0	315	103.0	260
0039208	8 G 1.5	15.2	360	122.0	300
0039209	9 G 1.5	15.9	405	138.0	375
0039210	10 G 1.5	17.0	450	153.0	427

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Tension load capacity in N	Copper index kg/km	Weight kg/km approx.
0039058	12 G 1.5	19.9	540	185.0	557
0039059	18 G 1.5	20.9	810	277.0	608
0039060	24 G 1.5	23.4	1,080	370.0	825
0039034	2 X 2.5	9.7	300	49.0	145
0039035	3 G 2.5	10.2	300	74.0	173
00390363	4 G 2.5	11.6	300	98.0	219
00390373	5 G 2.5	12.4	375	120.0	259
0039307	7 G 2.5	16.6	525	171.0	378
0039309	9 G 2.5	18.9	675	229.0	518
0039312	12 G 2.5	23.3	900	308.0	770
0039316	16 G 2.5	22.8	1,200	411.0	749
0039318	18 G 2.5	24.4	1,350	432.0	837
0039324	24 G 2.5	28.5	1,800	576.0	1,184
0039336	36 G 2.5	33.2	2,700	864.0	1,634
00390463	4 G 4	15.2	480	157.0	307
00390473	5 G 4	16.8	600	197.0	394
00390483	4 G 6	16.8	720	236.0	409
00390493	5 G 6	19.2	900	295.0	528
00390503	4 G 10	21.8	1,200	393.0	698
00390513	5 G 10	24.6	1,500	491.0	853
00390523	4 G 16	25.4	1,920	629.0	974
00390533	5 G 16	28.0	2,400	787.0	1,226

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® CRANE NSHTÖU see page 159
- ÖLFLEX® CRANE VS (N)SHTÖU see page 160

Accessories

- SKINTOP® CLICK / CLICK-R see page 643

ÖLFLEX® CRANE 2S

Cold flexible PVC cables with external steel supporting elements

Info

- **Doubled tensile strenght safety**
- **Suspension lenght up to 150 mtr**

Benefits

- Two steel supporting elements which are oppositely integrated into the outer sheath absorbing the occuring tensile forces during operation
- The tensile strength of 2100 N per supporting element allows free-hanging installations up to 150 meter

Application range

- For connecting of movable control panels rep. consoles
- As self supporting shaft cable
- In high rack systems
- Suitable for outdoor applications
- Not applicable as lift cable!

Product features

- Flame retardant according to IEC 60332-1-2
- Cold flexible

Approvals (Norm references)

CE RoHS

Design

- Strands of bare copper wires
- Special PVC based core insulation
- Special textile wrapping to improve sliding movement between the sheath and cores
- Special PVC based outer sheath
- Oppositely integrated steel supporting elements

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Based on
VDE 0250

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire according to VDE 0295 Class 6 / IEC 60228 Class 6

Minimum bending radius
Flexible use: 20 x outer diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexible use: -15°C up to +70°C

Part number	Number of cores and mm² per conductor	Overall width in mm approx.	Cable Ø in mm	Distance between strain wires in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CRANE 2S						
0027503	8 G 1.5	25.5	14.7	20	115.0	372
0027504	12 G 1.5	27.0	16.2	21	173.0	439
0027505	20 G 1.5	31.0	20.1	25	288.0	674

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Accessories

- EASY STRIP 2 stripping and cutting tool see page 906

ÖLFLEX® LIFT

Cold flexible PVC lift cables with supporting element

Info

- **High operating efficiency**
- **Suspension lenghts up to 90 mtr**
- **VDE tested and registered**

Benefits

- Special cable make-up for a long service life
- Attractive price and maximised operational efficiency
- Very flexible due to extra fine wired conductor design

Application range

- Lift cable which ensures the electrical integrity in various applications of elevator construction
- Use in outdoor elevators possible

Product features

- Flame retardant according to IEC 60332-1-2
- Good weather resistance

Approvals (Norm references)

- VDE Register No. 7039
- Please observe the assembly guidelines in Appendix T5

Design

- Strands of bare copper wires
- Special PVC based core insulation
- Supporting element made of hemp or aramid
- Fleece wrapping between cores and sheath
- Special PVC based outer sheath

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Suspension length
see article table

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire according to VDE 0295 Class 6 / IEC 60228 Class 6

Minimum bending radius
Flexible use: 20 x outer diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexible use: -15°C up to +70°C

VDE tested
VDE Register No. 7039

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Suspension length in meters max.	Supporting element of	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® LIFT						
0027020	7 G 1	11.5	80	aramid	68.0	178
0027022	12 G 1	16.3	80	hemp	116.0	332
0027024	18 G 1	16.4	70	aramid	173.0	405
0027027	24 G 1	19.4	60	hemp	231.0	533
0027029	36 G 1	25.1	90	hemp	346.0	887

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® LIFT T see page 165
- ÖLFLEX® LIFT S see page 166

Accessories

- Round cable wedged clamps
- Cable shears KT 4 and KT 5 see page 904

ÖLFLEX® LIFT T

Cold flexible PVC lift cables with textile braiding and supporting element

Info

- **Robust cable design**
- **Suspension lenghts up to 110 mtr**
- **VDE tested and registered**

Benefits

- Special cable make-up for a long service life
- Resists mechanical stress even with high suspension lengths
- Very flexible due to extra fine wired conductor design

Application range

- Lift cable which ensures the electrical integrity in various applications of elevator construction
- Use in outdoor elevators possible

Product features

- Flame retardant according to IEC 60332-1-2
- Good weather resistance
- Cold flexible

Approvals (Norm references)

- VDE Register No. 7040
- Please observe the assembly guidelines in Appendix T5

Design

- Strands of bare copper wires
- Special PVC based core insulation
- Supporting element made of hemp or aramid
- Fleece wrapping between cores and sheath
- Supporting braid of textile fibre combination
- Special PVC based outer sheath

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Suspension length
see article table

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire according to VDE 0295 Class 6 / IEC 60228 Class 6

Minimum bending radius
Flexible use: 20 x outer diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexible use: -15°C up to +70°C

VDE tested
VDE Register No. 7040

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Suspension length in meters max.	Supporting element of	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® LIFT T						
0027506	12 G 0.75	18.1	110	hemp	86.0	360
0027507	18 G 0.75	18.3	110	aramid	130.0	460
0027508	24 G 0.75	21.0	80	aramid	173.0	530
0027001	7 G 1	14.5	80	aramid	67.0	225
0027002	12 G 1	19.2	80	hemp	115.0	410
0027008	18 G 1	19.5	70	aramid	173.0	475
0027004	20 G 1	20.3	70	aramid	192.0	525
0027005	24 G 1	22.1	60	hemp	230.0	600
0027007	36 G 1	28.6	90	hemp	346.0	950
0027006	28 G 1,0 + 2 x (0,5) C	25.2	90	hemp	293.0	765

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® LIFT see page 164
- ÖLFLEX® LIFT S see page 166

Accessories

- Round cable wedged clamps
- Cable shears KT 4 and KT 5 see page 904

ÖLFLEX® LIFT S

Cold flexible PVC lift cables with textile braiding and steel supporting element

Info
- **Robust cable design**
- **Suspension lenght up to 150 mtr**

Benefits
- Special cable make-up for a long service life
- Practical experience and long term tests with the cable demonstrate that also extreme stresses are possible
- High suspension lengths due to the steel wire supporting element
- Very flexible due to extra fine wired conductor design

Application range
- Lift cable which ensures the electrical integrity in various applications of elevator construction
- Use in outdoor elevators possible

Product features
- Flame retardant according to IEC 60332-1-2
- Good weather resistance
- Cold flexible

Approvals (Norm references)
CE RoHS
- Please observe the assembly guidelines in Appendix T5

Design
- Strands of bare copper wires
- Special PVC based core insulation
- Steel support element
- Fleece wrapping between cores and sheath
- Supporting braid of textile fibre combination
- Special PVC based outer sheath

Technical data
Core identification code
Black with white numbers acc. to VDE 0293

Suspension length
see article table

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Extra fine wire according to VDE 0295 Class 6 / IEC 60228 Class 6

Minimum bending radius
Flexible use: 20 x outer diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
4000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexible use: -15°C up to +70°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Suspension length in meters max.	Supporting element of	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® LIFT S						
0027009	24 G 1	22.1	150	steel	230.0	680
0027010	36 G 1	28.6	150	steel	346.0	1,092

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® LIFT see page 164
- ÖLFLEX® LIFT T see page 165

Accessories
- Round cable wedged clamps
- STAR STRIP stripping tool see page 908

ÖLFLEX® CRANE F

Weatherproof rubber flat cables

Info

- **For outdoor festoon application**
- **Space-saving installation**
- **Also suitable for power chain and lift applications**

Benefits

- Weatherproof for harsh environmental conditions
- Flat cables need less space than round cables
- Compared with round cables considerably smaller bending radii are possible

Application range

- In crane systems on building sites and shipyards for static installation as well as for flexible use in cable trolley systems
- Sewage plants, steelworks and high rack facilities

Product features

- Flame retardant according to IEC 60332-1-2

Approvals (Norm references)

CE RoHS

Design

- Strands of bare or tinned copper wires
- Core insulation: Rubber
- Outer jacket of special rubber compound

Technical data

Core identification code
Up to 5 cores: colour coded according VDE 0293-308, see Appendix T9
Starting at 6 cores: Black with white numbers

Based on
VDE 0250 (NGFLGÖU)

Specific insulation resistance
> 10 GOhm x cm

Conductor stranding
Copper conductor acc. VDE 0295 / IEC 60228
up to 25mm²: extra fine wire, class 6
from 35mm²: fine wire, class 5
(Single wire diameter see article table)

Minimum bending radius
Flexible use: 10 x cable thickness

Rated voltage
U_0/U: 300/500 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexible use: -25°C up to +90°C

Part number	Number of cores and mm² per conductor	Single wire diameter in mm	Overall width in mm approx.	Thickness in mm	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CRANE F						
0041041	4 G 1.5	0.15	17.5	6.2	58.0	200
0041042	5 G 1.5	0.15	21.5	6.2	72.0	240
0041043	7 G 1.5	0.15	29.0	6.2	101.0	360
0041044	8 G 1.5	0.15	31.5	6.2	115.0	370
0041045	10 G 1.5	0.15	40.0	6.5	144.0	520
0041046	12 G 1.5	0.15	47.0	6.5	173.0	620
0041047	4 G 2.5	0.15	21.0	7.5	96.0	280
0041048	5 G 2.5	0.15	27.0	7.5	120.0	400
0041049	7 G 2.5	0.15	35.0	7.5	168.0	520
0041050	8 G 2.5	0.15	39.0	7.5	192.0	550
0041051	12 G 2.5	0.15	56.0	8.0	288.0	800
0041052	4 G 4	0.15	26.0	9.0	154.0	410
0041053	7 G 4	0.15	42.0	9.0	269.0	700
0041054	4 G 6	0.20	29.0	9.5	230.0	600
0041055	5 G 6	0.20	35.0	9.5	288.0	650
0041056	7 G 6	0.20	42.0	9.5	403.0	850
0041057	4 G 10	0.20	33.0	11.0	384.0	800
0041058	5 G 10	0.20	44.0	11.0	480.0	1,000
0041059	4 G 16	0.20	38.0	13.0	614.0	1,150
0041060	4 G 25	0.20	49.5	15.0	960.0	1,700
0041061	4 G 35	0.40	55.0	17.0	1,344.0	2,200
0041062	4 G 50	0.40	63.0	19.0	1,920.0	3,000
0041063	4 G 70	0.50	71.0	22.0	2,688.0	4,000

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® LIFT F see page 169

Accessories

- flat cable wedge clamps
- Cable trolley systems see page 977

New

ÖLFLEX® CRANE CF

Weatherproof rubber flat cables with copper screening

Info
- For outdoor festoon application
- EMC compliant

Benefits
- Weatherproof for harsh environmental conditions
- Flat cables need less space than round cables
- Compared with round cables considerably smaller bending radii are possible
- Copper braiding assures EMC and screens against electromagnetic interference

Application range
- In crane systems on building sites and shipyards for static installation as well as for flexible use in cable trolley systems
- Sewage plants, steelworks and high rack facilities

Product features
- Flame retardant according to IEC 60332-1-2

Approvals (Norm references)
CE RoHS

Design
- Strands of bare or tinned copper wires
- Core insulation: Rubber
- Separate core screening made of
  - plastic foil wrapping
  - tinned copper braiding
  - plastic foil wrapping
- Outer jacket of special rubber compound

Technical data
Core identification code
Up to 5 cores: colour coded according VDE 0293-308, see Appendix T9
Starting at 6 cores: Black with white numbers

Based on
VDE 0250 NGFLGOEU (unscreened)

Specific insulation resistance
> 10 GOhm x cm

Conductor stranding
Copper conductor acc. VDE 0295 / IEC 60228
up to 25mm²: extra fine wire, class 6
from 35mm²: fine wire, class 5
(Single wire diameter see article table)

Minimum bending radius
Flexible use: 10 x cable thickness

Rated voltage
U_0/U 300/500 V

Test voltage
2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexible use: -25°C up to +90°C

Part number	Number of cores and mm² per conductor	Single wire diameter in mm	Overall width in mm approx.	Thickness in mm	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® CRANE CF						
0041075	4 G 1.5	0.15	18.5	6.5	79.0	220
0041076	8 G 1.5	0.15	36.0	7.5	155.0	470
0041077	12 G 1.5	0.15	54.5	8.5	238.0	745
0041078	4 G 2.5	0.15	22.5	7.5	141.0	320
0041079	12 G 2.5	0.15	69.5	9.5	499.0	1,180
0041080	4 G 4	0.15	29.0	10.5	219.0	505
0041081	4 G 6	0.20	31.0	10.5	302.0	605
0041082	4 G 10	0.20	36.0	11.5	472.0	840
0041083	4 G 16	0.20	41.5	13.5	687.0	1,180
0041084	4 G 25	0.20	47.0	15.0	1,114.0	1,605
0041085	4 G 35	0.40	55.0	17.0	1,482.0	2,520
0041086	4 G 50	0.40	66.0	20.5	2,238.0	3,000

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® CRANE F see page 167
- ÖLFLEX® LIFT F see page 169

Accessories
- flat cable wedge clamps
- Cable trolley systems see page 977

ÖLFLEX® LIFT F

Cold flexible PVC flat cables

Info

- **For festoon application**
- **Space-saving installation**
- **Also suitable for power chain and lift applications**

Benefits

- Flat cables need less space than round cables
- Compared with round cables considerably smaller bending radii are possible

Application range

- In conveyor and hoist equipments as well as transport installations
- Indoor cranes and high rack facilities
- As supply line for moving machine parts
- According to VDE definition can also be used as elevator control cable up to 35 m suspension length with a maximum travelspeed of 1.6 m/sec

Product features

- Flame retardant according to IEC 60332-1-2

Approvals (Norm references)

CE RoHS

- Meets the requirements of the harmonised PVC flat cable H07VVH6-F

Design

- Strands of bare copper wires
- Core insulation: Based on PVC
- PVC based outer sheath

Technical data

Core identification code
Up to 5 cores: colour coded according VDE 0293-308, see Appendix T9
Starting at 6 cores: Black with white numbers

Based on
VDE 0281 (H05VVH6-F resp. H07VVH6-F)

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
According to VDE 0295 Class 5 or 6 / IEC 60228 Class 5 or 6
(Single wire diameter see article table)

Minimum bending radius
Flexible use: 10 x cable thickness

Rated voltage
Up to 1.0 mm²: U_0/U: 300/500 V
From 1,5 mm²: U_0/U: 450/750 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexible use:
0 °C up to +70 °C (up to 1.0 mm²)
-15 °C up to +70 °C (from 1,5 mm²)

Part number	Number of cores and mm² per conductor	Single wire diameter in mm	Overall width in mm approx.	Thickness in mm	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® LIFT F						
Rated voltage U0/U: 300/500 V, Temperature range: 0°C to +70°C						
0042020	12 G 1	0.21	35.0	4.3	115.0	392
0042021	16 G 1	0.21	46.0	4.3	154.0	521
0042022	20 G 1	0.21	57.0	4.3	192.0	645
0042023	24 G 1	0.21	68.0	4.3	230.0	772
Rated voltage U0/U: 450/750 V, Temperature range: -15°C to +70°C						
00420013	4 G 1.5	0.15	15.0	5.0	58.0	132
00420023	5 G 1.5	0.15	19.0	5.0	72.0	170
0042003	7 G 1.5	0.15	26.5	5.0	101.0	236
0042004	8 G 1.5	0.15	28.5	5.0	115.0	266
0042005	10 G 1.5	0.15	35.5	5.0	144.0	333
0042006	12 G 1.5	0.15	41.5	5.0	173.0	422
00420073	4 G 2.5	0.15	18.4	5.7	96.0	206
00420083	5 G 2.5	0.15	23.4	5.7	120.0	257
0042009	7 G 2.5	0.15	32.0	5.7	168.0	345
0042010	8 G 2.5	0.15	34.5	5.7	192.0	390
0042050	12 G 2.5	0.15	51.5	5.7	288.0	580
00420113	4 G 4	0.15	20.4	6.6	154.0	343
0042012	7 G 4	0.15	36.6	6.6	269.0	589
00420133	4 G 6	0.20	23.2	7.3	230.0	425
00420143	4 G 10	0.30	28.0	9.0	384.0	709
00420153	4 G 16	0.30	34.0	10.5	614.0	1,015
00420163	4 G 25	0.30	42.0	12.7	960.0	1,366

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® CRANE F see page 167

Accessories

- flat cable wedge clamps
- Cable trolley systems see page 977

ÖLFLEX® HEAT 105 MC

Colour coded connection cables made of increased heat-resistant PVC

Info

- **For thermal class Y applications**

Benefits

- Almost 30% higher peak temperature possible in comparison to conventional PVC cables

Application range

- For the connection of motors, transformers, machines, appliances, switch cabinets and other installations with increased ambient temperature

Product features

- Flame retardant according to IEC 60332-1-2
- At room temperature resistant against a multitude of oils and chemical media
- Good UV resistance

Approvals (Norm references)

CE RoHS

Design

- Fine strands of bare copper wires
- Core insulation of heat resistant PVC
- Cores twisted in layers
- Outer sheath of heat resistant PVC, Colour black (RAL 9005)

Technical data

Core identification code
Up to 5 cores: colour coded according VDE 0293-308, see Appendix T9
Starting at 7 cores: ÖLFLEX® colour code, see Appendix T 7

Based on
VDE 0281 resp. 0250

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295, Class 5 / IEC 60228 Cl. 5 from 0.5 mm²

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U 300/500 V

Test voltage
2500 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Fixed installation:
-20°C up to +90°C
Temporary: +105°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® HEAT 105 MC				
0026001	2 X 0.75	6.2	14.4	53.0
0026002	3 G 0.75	6.5	21.6	62.0
00260033	4 G 0.75	7.1	28.8	76.0
00260043	5 G 0.75	8.0	36.0	95.0
0026005	7 G 0.75	9.7	50.0	113.0
0026006	2 X 1	6.5	19.2	61.0
0026007	3 G 1	6.9	29.0	74.0
00260083	4 G 1	7.7	38.4	89.0
00260093	5 G 1	8.4	48.0	110.0
0026010	7 G 1	10.2	67.0	130.0
0026011	2 X 1.5	7.5	29.0	78.0
0026012	3 G 1.5	8.1	43.2	98.0
00260133	4 G 1.5	8.9	57.6	122.0
00260143	5 G 1.5	10.0	72.0	144.0
0026015	7 G 1.5	12.3	101.0	180.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

ÖLFLEX® HEAT 145 MC

Electron beam cross-linked cables for increased application requirements

Info

- **Improved characteristics in case of fire**
- **For thermal class B applications**

Benefits

- Safety in areas with high personnel concentration
- Reduction of flame propagation and density and toxicity of smoke gases in event of fire
- Minimizes damage to buildings and equipment caused by the formation of toxic acid fumes in fires
- Certified for maritime application

Application range

- Suitable for wiring respectively connection of lighting, heating appliances, switch gear cabinets and distributors in mechanical engineering and plant construction
- For use in traffic regulation systems as well as outdoors

Product features

- Halogen-free according to IEC 60754-1
  Flame retardant according to IEC 60332-1-2
  No flame propagation according to IEC 60332.3
- Good moisture, ozone- and UV resistance
- Abrasion and notch resistant

Approvals (Norm references)

CE RoHS

Design

- Fine strands of tinned copper wires
- Electron beam cross-linked polyolefin copolymer insulation
- Cores twisted in layers
- Outher sheath: Electron beam cross-linked polyolefin copolymer, colour black

Technical data

Core identification code
Up to 5 cores: according to VDE 0293-308 (appendix T9)
Starting at 7 cores:
Black with white numbers (with gn/ye)

Approvals
GL (Germanischer Lloyd)

Specific insulation resistance
>2 TOhm x cm

Conductor stranding
Fine wire according to VDE 0295, Class 5 / IEC 60228 Cl. 5 from 0.5 mm²

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
Up to 1.0mm² U0/U 300/500 V
From 1.5mm² U0/U 450/750 V
0.6/1kV from 1.5mm² with fixed and protected installation

Test voltage
3500 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Fixed installation:
-55°C up to +125°C
Temporary: up to +145°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® HEAT 145 MC 300/500 V				
0026805	2 X 0.75	5.9	14.4	40.0
0026806	3 G 0.75	6.2	21.6	53.0
00268073	4 G 0.75	6.9	28.8	69.0
00268083	5 G 0.75	7.7	36.0	86.0
0026815	2 X 1	6.3	19.2	50.0
0026816	3 G 1	6.8	28.8	67.0
00268173	4 G 1	7.4	38.4	87.0
00268183	5 G 1	8.3	48.0	107.0
0026819	7 G 1	9.9	67.2	152.0
ÖLFLEX® HEAT 145 MC 450/750 V				
0026825	2 X 1.5	7.6	28.8	71.0
0026826	3 G 1.5	8.1	43.2	96.0
00268273	4 G 1.5	8.8	57.6	123.0
00268293	5 G 1.5	9.8	72.0	156.0
0026830	7 G 1.5	12.0	101.0	224.0
0026831	10 G 1.5	14.6	144.0	322.0
0026832	12 G 1.5	14.6	173.0	316.0
0026833	16 G 1.5	16.2	230.0	415.0
0026837	25 G 1.5	21.1	360.0	731.0
0026838	2 X 2.5	9.0	48.0	102.0
0026839	3 G 2.5	9.8	72.0	145.0
00268403	4 G 2.5	10.8	96.0	189.0
00268413	5 G 2.5	12.0	120.0	235.0
0026842	7 G 2.5	14.6	168.0	344.0
00268503	4 G 4	12.2	153.6	276.0
00268513	5 G 4	13.5	192.0	334.0
00268563	5 G 6	15.4	288.0	494.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® TRAFFIC 3GKW flex see page 141

ÖLFLEX® HEAT 145 C MC

Electron beam cross-linked cables for increased application requirements

Info

- **Improved characteristics in case of fire**
- **Screened to comply with EMC**
- **For thermal class B applications**

Benefits

- Safety in areas with high personnel concentration
- Reduction of flame propagation and density and toxicity of smoke gases in event of fire
- Minimizes damage to buildings and equipment caused by the formation of toxic acid fumes in fires
- Certified for maritime application
- Copper braiding assures EMC and screens against electromagnetic interference

Application range

- Suitable for wiring respectively connection of lighting, heating appliances, switch gear cabinets and distributors in mechanical engineering and plant construction
- For use in traffic regulation systems as well as outdoors

Product features

- Halogen-free according to IEC 60754-1
  Flame retardant according to IEC 60332-1-2
  No flame propagation according to IEC 60332.3
- Good moisture, ozone- and UV resistance
- Abrasion and notch resistant

Approvals (Norm references)

CE RoHS

Design

- Fine strands of tinned copper wires
- Electron beam cross-linked polyolefin copolymer insulation
- Cores twisted in layers
- Tinned copper screen braid
- Outher sheath: Electron beam cross-linked polyolefin copolymer, colour black

Technical data

Core identification code
Black with white numbers (without gn/ye)

Approvals
GL (Germanischer Lloyd)

Specific insulation resistance
>2 TOhm x cm

Conductor stranding
Fine wire according to VDE 0295, Class 5 / IEC 60228 Cl. 5 from 0.5 mm²

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 5 x cable diameter

Rated voltage
Up to 1.0mm² U0/U 300/500 V
From 1.5mm² U0/U 450/750 V
0.6/1kV from 1.5mm² with fixed and protected installation

Test voltage
C/C 3500 V
C/S 2500 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Fixed installation:
-55°C up to +125°C
Temporary: up to +145°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® HEAT 145 C MC screened 300/500 V				
0026908	2 X 0.75	6.9	38.0	79.0
0026909	3 X 0.75	6.9	50.0	96.0
0026910	4 X 0.75	7.6	58.0	116.0
0026911	5 X 0.75	8.3	70.0	139.0
0026912	7 X 0.75	9.9	84.9	186.0
0026916	2 X 1	7.0	43.3	90.0
0026917	3 X 1	7.4	56.0	104.0
0026918	4 X 1	8.1	66.0	129.0
0026919	5 X 1	8.9	95.0	153.0
0026920	7 X 1	10.5	109.0	211.0
ÖLFLEX® HEAT 145 C MC screened 450/750 V				
0026924	2 X 1.5	8.2	58.0	114.0
0026925	3 X 1.5	8.7	71.0	132.0
0026926	4 X 1.5	9.4	86.0	163.0
0026927	5 X 1.5	10.5	104.0	200.0
0026928	7 X 1.5	12.6	136.0	273.0
0026932	2 X 2.5	9.8	96.0	157.0
0026933	3 X 2.5	10.4	146.0	198.0
0026934	4 X 2.5	11.5	150.0	236.0
0026935	5 X 2.5	12.6	200.0	287.0
0026938	4 X 4	12.8	220.0	317.0
0026939	5 X 4	14.3	259.0	376.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® TRAFFIC 3GKW C-flex see page 142

Accessories

- SKINTOP® MS-SC-M see page 657
- SKINTOP® MS-SC see page 712
- SKINTOP® MS-M BRUSH see page 658

ÖLFLEX® HEAT 180 SiHF

Silicone cables with extended temperature range

Info

- **The classic for multisided use**
- **For thermal class H applications**

Benefits

- Good flexibility ease the installation where space is limited
- Possess still insulating properties after combustion due to remaining SiO_2 ash on the conductor

Application range

- Areas with high ambient temperatures where insulating and sheath materials of conventional cables will embrittle after a short while
- Typical fields of application
  - Steel-, cement-, ceramic and iron works
  - Bakery equipment and industrial furnaces
  - Electric motor industry
  - Sauna/solarium construction
  - Thermal and heating elements
  - Lighting technology
  - Ventilator engineering
  - Air conditioning technology
  - Galvanization technology
  - Polymer processing
  - Generator and transformer building
  - Wind turbine engineering

Product features

- Halogen-free and flame retardant (IEC 60332-1-2)
- Reduced smoke density
- Resistant against a multitude of oils, alcohols, vegetable and animal fats and chemical media

Approvals (Norm references)

CE RoHS

Design

- Fine strands of tinned copper wires
- Silicone based core insulation
- Cores twisted in layers
- Silicone based outer sheath, colour red-brown

Technical data

Core identification code
Colour coded according to VDE 0293-308, see Appendix T9
Starting at 6 cores: Black with white numbers

Based on
VDE 0250

Specific insulation resistance
>200 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Occassional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U 300/500 V

Test voltage
2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
-50 °C up to +180 °C
(adequate ventilation provided)

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® HEAT 180 SiHF				
0046001	2 X 0.75	6.4	14.4	59.0
0046002	3 G 0.75	6.8	21.6	70.0
00460033	4 G 0.75	7.6	28.8	89.0
00460043	5 G 0.75	8.5	36.0	112.0
0046005	6 G 0.75	9.2	43.2	131.0
0046006	7 G 0.75	9.2	50.4	136.0
0046007	2 X 1	6.6	19.2	66.0
0046008	3 G 1	7.0	29.0	79.0
00460093	4 G 1	7.9	38.4	101.0
00460103	5 G 1	8.8	48.0	127.0
0046012	7 G 1	9.5	67.0	156.0
0046013	2 X 1.5	7.6	29.0	90.0
0046014	3 G 1.5	8.0	43.0	109.0
00460153	4 G 1.5	8.8	58.0	134.0
00460163	5 G 1.5	9.6	72.0	163.0
0046018	7 G 1.5	10.4	101.0	202.0
0046039	12 G 1.5	14.0	173.0	361.0
0046040	16 G 1.5	16.2	230.4	478.0
0046041	20 G 1.5	17.5	288.0	574.0

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
0046042	24 G 1.5	19.8	345.6	720.0
0046019	2 X 2.5	8.8	48.0	128.0
0046020	3 G 2.5	9.7	72.0	167.0
00460213	4 G 2.5	10.6	96.0	206.0
00460223	5 G 2.5	11.6	120.0	251.0
0046024	7 G 2.5	12.6	168.0	313.0
0046025	2 X 4	10.8	76.8	196.0
0046026	3 G 4	11.5	115.0	241.0
00460273	4 G 4	12.6	154.0	300.0
00460283	5 G 4	14.0	192.0	374.0
0046030	7 G 4	15.6	269.0	486.0
0046031	2 X 6	12.4	116.0	268.0
0046032	3 G 6	13.2	173.0	333.0
00460333	4 G 6	14.7	230.0	425.0
00460343	5 G 6	16.6	288.0	538.0
0046036	7 G 6	18.6	403.0	705.0
00460373	4 G 10	19.4	384.0	707.0
00460453	5 G 10	21.6	480.0	878.0
00460383	4 G 16	21.4	614.0	1,004.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® HEAT 180 H05SS-F EWKF see page 174
- ÖLFLEX® HEAT 180 EWKF see page 177

ÖLFLEX® HEAT 180 H05SS-F EWKF

Europe-wide standardized silicone connection cables with increased mechanical performance

Info

- **International use in combination with proved EWKF quality from Lapp**
- **For thermal class H applications**

Benefits

- Europe-wide use due to harmonisation
- Notch and tear resistant silicone compounds reducing damages due to mechanical stress
- In harsh applications longer durability than conventional H05SS-F standardized cables
- Good flexibility ease the installation where space is limited
- Possess still insulating properties after combustion due to remaining SiO_2 ash on the conductor

Application range

- Areas with high ambient temperatures and additionally high mechanical stress
- Typical fields of application
  - Steel-, cement-, ceramic and iron works
  - Bakery equipment and industrial furnaces
  - Electric motor industry
  - Sauna/solarium construction
  - Thermal and heating elements
  - Lighting technology
  - Ventilator engineering
  - Air conditioning technology
  - Galvanization technology
  - Polymer processing
  - Generator and transformer building
  - Wind turbine engineering

Product features

- Halogen-free and flame retardant (IEC 60332-1-2)
- Reduced smoke density
- Good hydrolysis and UV resistance
- Resistant against a multitude of oils, alcohols, vegetable and animal fats and chemical media
- **EWKF Formula:** Increased initial tear propagation and notch resistance

Approvals (Norm references)

CE HAR RoHS

- HD 22.15 S2 (H05SS-F)

Design

- Fine strands of tinned copper wires
- Core insulation based on EWKF silicone
- Cores twisted together
- Notch resistant silicone based EWKF outer sheath, colour black (RAL 9005)

Technical data

Core identification code
Colour coded according to VDE 0293-308, see Appendix T9

Approvals
HD 22.15 S2 (H05SS-F)

Specific insulation resistance
>200 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U 300/500 V

Test voltage
2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
-50 °C up to +180 °C
(adequate ventilation provided)

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® HEAT 180 H05SS-F EWKF				
0046900	2 X 0.75	6.4	14.4	54.0
0046901	3 G 0.75	7.0	21.6	67.0
00469023	4 G 0.75	7.6	28.8	87.0
00469033	5 G 0.75	8.5	36.0	105.0
0046904	2 X 1	6.8	19.2	63.0
0046905	3 G 1	7.2	28.8	81.0
00469063	4 G 1	7.9	38.4	98.0
00469073	5 G 1	8.8	48.0	121.0
0046908	2 X 1.5	8.4	28.8	84.0
0046909	3 G 1.5	8.9	43.2	103.0
00469103	4 G 1.5	9.9	57.6	128.0
00469113	5 G 1.5	10.9	72.0	154.0
0046912	2 X 2.5	9.8	48.0	141.0
0046913	3 G 2.5	10.4	72.0	158.0
00469143	4 G 2.5	11.6	96.0	195.0
00469153	5 G 2.5	12.9	120.0	241.0
0046916	3 G 4	12.3	115.2	239.0
00469173	4 G 4	13.7	153.6	312.0
0046919	3 G 6	14.0	172.8	345.0
00469203	4 G 6	15.6	230.4	451.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® HEAT 180 EWKF see page 177
- ÖLFLEX® HEAT 180 EWKF C see page 178

ÖLFLEX® HEAT 180 MS

Approved silicone cables for North America (AWM)

Info

- **MS = Multi Standard**
  For the use in the USA and in Canada
- **UL AWM Style 4476 (150°C/600V)**
- **Formerly "ÖLFLEX® HEAT 180 UL/CSA"**

Benefits

- Approved for the USA and Canada for export-oriented appliance and apparatus builders
- Thicker cable design meets the requirements of the**FT-1flametest** and is thus also approved for installation in accordance with UL **outside** of apparatus and appliances
- Good flexibility ease the installation where space is limited
- Possess still insulating properties after combustion due to remaining SiO_2 ash on the conductor

Application range

- Areas with high ambient temperatures where insulating and sheath materials of conventional cables will embrittle after a short while
- Typical fields of application
  - Steel-, cement-, ceramic and iron works
  - Bakery equipment and industrial furnaces
  - Electric motor industry
  - Sauna/solarium construction
  - Thermal and heating elements
  - Lighting technology
  - Ventilator engineering
  - Air conditioning technology
  - Galvanization technology
  - Polymer processing
  - Generator and transformer building
  - Wind turbine engineering

Product features

- Metric flexible conductor design
- Halogen-free and flame retardant (IEC 60332-1-2)
- Reduced smoke density
- Good hydrolysis and UV resistance
- Resistant against a multitude of oils, alcohols, vegetable and animal fats and chemical media

Approvals (Norm references)

- UL AWM 4476 and cUL AWM II A/B
- Also available on request as special product with AWM rating 200°C/600 V
- Multi-conductor Type AWM cables (Appliance Wiring Material) shall be permitted for industrial machinery (US) when part of a listed assembly suitable for the intended use only. NFPA 79 Edition 2007 §12.2.7.3

Design

- Fine strands of tinned copper wires
- Silicone based core insulation
- Cores twisted together
- Silicone based outer sheath, colour black (RAL 9005)

Technical data

Core identification code
Colour coded according to VDE 0293-308, see Appendix T9
Starting at 6 cores: Black with white numbers

Approvals
UL AWM Style 4476 (Construction B)
cUL AWM II A/B (Canada)

Specific insulation resistance
>200 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5
(For matching US conductor sizes according AWG please see technical table T16)

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
VDE U_0/U: 300/500 V
Working voltage UL: 600 V

Test voltage
2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
According VDE: -50 °C up to +180 °C
According to UL-Style: up to +150 °C
(adequate ventilation provided)

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® HEAT 180 MS				
0046600	2 X 0.5	7.4	9.8	72.0
0046601	3 G 0.5	7.8	14.7	83.0
00466023	4 G 0.5	8.5	19.6	99.0
00466033	5 G 0.5	9.2	24.5	119.0
0046604	7 G 0.5	9.9	34.3	142.0
0046612	2 X 1	8.2	19.2	93.0
0046613	3 G 1	8.7	28.8	110.0
00466143	4 G 1	9.4	38.4	133.0
00466153	5 G 1	10.3	48.0	160.0
0046616	7 G 1	11.1	67.2	195.0
0046617	12 G 1	14.9	115.2	345.0
0046618	2 X 1.5	8.8	28.8	113.0
0046619	3 G 1.5	9.3	43.2	135.0
00466203	4 G 1.5	10.1	57.6	165.0
00466213	5 G 1.5	11.1	72.0	200.0
0046622	7 G 1.5	12.0	100.8	246.0
0046623	12 G 1.5	16.1	172.8	437.0
0046625	18 G 1.5	18.8	259.2	613.0
0046626	25 G 1.5	22.9	360.0	904.0
0046628	2 X 2.5	9.6	48.0	146.0
0046629	3 G 2.5	10.2	72.0	178.0
00466303	4 G 2.5	11.1	96.0	220.0
00466313	5 G 2.5	12.2	120.0	269.0
0046633	3 G 4	11.5	115.2	246.0
00466343	4 G 4	12.6	153.6	307.0
00466353	5 G 4	14.2	192.0	389.0
0046636	3 G 6	14.9	172.8	396.0
00466373	4 G 6	16.4	230.4	495.0
00466383	5 G 6	18.0	288.0	608.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® HEAT 180 C MS see page 176

Silicone cables (-50°C up to +180°C)

New

ÖLFLEX® HEAT 180 C MS

Screened and approved silicone cables for Noth America (AWM)

Info

- **MS = Multi Standard**
  For the use in the USA and in Canada
- **UL AWM Style 4476 (150°C/600V)**
- **Formerly ÖLFLEX® HEAT 180 C UL/CSA**

Benefits

- Approved for the USA and Canada for export-oriented appliance and apparatus builders
- Thicker cable design meets the requirements of the**FT-1flametest** and is thus also approved for installation in accordance with UL **outside** of apparatus and appliances
- Good flexibility ease the installation where space is limited
- Copper braiding assures EMC and screens against electromagnetic interference

Application range

- Areas with high ambient temperatures where insulating and sheath materials of conventional cables will embrittle after a short while
- Typical fields of application
  - Steel-, cement-, ceramic and iron works
  - Bakery equipment and industrial furnaces
  - Electric motor industry
  - Sauna/solarium construction
  - Thermal and heating elements
  - Lighting technology
  - Ventilator engineering
  - Air conditioning technology
  - Galvanization technology
  - Polymer processing
  - Generator and transformer building
  - Wind turbine engineering

Product features

- Metric flexible conductor design
- Halogen-free and flame retardant (IEC 60332-1-2)
- Reduced smoke density
- Good hydrolysis and UV resistance
- Resistant against a multitude of oils, alcohols, vegetable and animal fats and chemical media

Approvals (Norm references)

CE c UL us RoHS

- UL AWM 4476 and cUL AWM II A/B
- Also available on request as special product with AWM rating 200°C/600 V
- Multi-conductor Type AWM cables (Appliance Wiring Material) shall be permitted for industrial machinery (US) when part of a listed assembly suitable for the intended use only. NFPA 79 Edition 2007 §12.2.7.3

Design

- Fine strands of tinned copper wires
- Silicone based core insulation
- Cores twisted together
- Tinned copper screen braiding, interleaved plastic foil wrapping
- Silicone based outer sheath, colour black (RAL 9005)

Technical data

Core identification code
Colour coded according to VDE 0293-308, see Appendix T9
Starting at 6 cores: Black with white numbers

Approvals
UL AWM Style 4476 (Construction B)
cUL AWM II A/B (Canada)

Specific insulation resistance
>200 GOhm x cm

Conductor stranding
Fine wire in accordance to VDE 0295 Class 5 / IEC 60228 Class 5
(For matching US conductor sizes according AWG please see technical table T16)

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installation: 6 x cable diameter

Rated voltage
VDE U_0/U: 300/500 V
Working voltage UL: 600 V

Test voltage
2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
According VDE: -50 °C up to +180 °C
According to UL-Style: up to +150 °C
(adequate ventilation provided)

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® HEAT 180 C MS				
0046701	3 G 0.5	8.6	43.4	100.0
0046702	4 G 0.5	9.3	55.4	122.0
0046703	5 G 0.5	10.0	60.2	137.0
0046708	2 X 1	9.0	48.2	104.0
0046709	3 G 1	9.5	65.0	131.0
0046710	4 G 1	10.2	74.6	152.0
0046711	5 G 1	11.0	91.5	181.0
0046712	7 G 1	11.9	117.9	228.0
0046716	2 X 1.5	9.6	65.0	126.0
0046717	3 G 1.5	10.1	79.4	152.0
0046718	4 G 1.5	10.9	101.1	186.0
0046719	5 G 1.5	11.8	122.7	222.0
0046720	7 G 1.5	12.8	158.7	281.0
0046721	12 G 1.5	16.9	245.2	431.0
0046723	18 G 1.5	19.6	346.1	600.0
0046724	25 G 1.5	23.9	495.7	833.0
0046728	3 G 2.5	11.0	115.5	197.0
0046729	4 G 2.5	11.9	146.7	244.0
0046730	5 G 2.5	12.9	177.9	291.0
0046734	3 G 4	12.3	165.9	261.0
0046735	4 G 4	13.4	211.5	325.0
0046736	5 G 4	14.9	257.2	389.0
0046740	4 G 6	17.2	302.8	482.0
0046741	5 G 6	18.7	367.6	580.0
0046742	4 G 10	22.8	508.4	802.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® HEAT 180 MS see page 175
- ÖLFLEX® HEAT 180 EWKF C see page 178

ÖLFLEX® HEAT 180 EWKF

Silicone cables with increased mechanical characteristics

Info

- **Proven notch resistant EWKF quality**

Benefits

- Longer durability in harsh applications than conventional silicone cables
- Notch and tear resistant silicone compounds reducing damages due to mechanical stress
- Due to special additives in EWKF silicone steel wire armoured cable versions partly can become unnecessary
- Good flexibility ease the installation where space is limited
- Possess still insulating properties after combustion due to remaining SiO_2 ash on the conductor

Application range

- Areas with high ambient temperatures and additionally high mechanical stress
- Typical fields of application
  - Steel-, cement-, ceramic and iron works
  - Bakery equipment and industrial furnaces
  - Electric motor industry
  - Sauna/solarium construction
  - Thermal and heating elements
  - Lighting technology
  - Ventilator engineering
  - Air conditioning technology
  - Galvanization technology
  - Polymer processing
  - Generator and transformer building
  - Wind turbine engineering

Product features

- Halogen-free and flame retardant (IEC 60332-1-2)
- Reduced smoke density
- Good hydrolysis and UV resistance
- Resistant against a multitude of oils, alcohols, vegetable and animal fats and chemical media
- **EWKF Formula:** Increased initial tear propagation and notch resistance

Approvals (Norm references)

CE RoHS

Design

- Fine strands of tinned copper wires
- Core insulation based on EWKF silicone
- Cores twisted together
- Notch resistant silicone based EWKF outer sheath, colour black (RAL 9005)

Technical data

Core identification code
Colour coded according to VDE 0293-308, see Appendix T9
Starting at 6 cores: Black with white numbers

Specific insulation resistance
>200 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U 300/500 V

Test voltage
2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
-50 °C up to +180 °C
(adequate ventilation provided)

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® HEAT 180 EWKF				
0046500	2 X 0.75	6.4	15.0	49.0
0046501	3 G 0.75	6.9	22.0	60.0
00465023	4 G 0.75	7.6	29.0	76.0
00465033	5 G 0.75	8.5	36.0	96.0
0046506	2 X 1	6.8	20.0	56.0
0046507	3 G 1	7.1	29.0	68.0
00465083	4 G 1	7.9	39.0	88.0
00465093	5 G 1	8.8	48.0	110.0
0046110	7 G 1	9.5	67.2	137.0
0046511	2 X 1.5	8.0	29.0	77.0
0046512	3 G 1.5	8.4	43.0	94.0
00465133	4 G 1.5	9.5	58.0	117.0
00465143	5 G 1.5	10.4	72.0	143.0
0046115	7 G 1.5	11.0	101.0	180.0
0046116	12 G 1.5	14.9	173.0	319.0
0046117	16 G 1.5	17.1	230.4	424.0
0046119	24 G 1.5	21.0	345.6	637.0
0046520	2 X 2.5	9.4	48.0	110.0
0046521	3 G 2.5	9.8	72.0	146.0
00465223	4 G 2.5	11.1	96.0	181.0
00465233	5 G 2.5	12.4	120.0	222.0
0046131	3 G 4	11.5	114.0	213.0
00461323	4 G 4	12.5	152.0	267.0
00461333	5 G 4	13.9	190.0	334.0
0046141	3 G 6	13.2	174.0	297.0
00461423	4 G 6	14.7	232.0	381.0
00461433	5 G 6	16.5	290.0	481.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® HEAT 180 H05SS-F EWKF see page 174
- ÖLFLEX® HEAT 180 EWKF C see page 178

ÖLFLEX® HEAT 180 EWKF C

Screened silicone cables with increased mechanical characteristics

Info

- **Proven notch resistant EWKF quality**
- **EMC compliant**

Benefits

- Longer durability in harsh applications than conventional silicone cables
- Notch and tear resistant outher sheath material reduces mechanical damage
- Copper braiding assures EMC and screens against electromagnetic interference
- Good flexibility ease the installation where space is limited
- Due to special additives in EWKF silicone steel wire armoured cable versions partly can become unnecessary

Application range

- Areas with high ambient temperatures and additionally high mechanical stress
- Typical fields of application
  - Steel-, cement-, ceramic and iron works
  - Bakery equipment and industrial furnaces
  - Electric motor industry
  - Sauna/solarium construction
  - Thermal and heating elements
  - Lighting technology
  - Ventilator engineering
  - Air conditioning technology
  - Galvanization technology
  - Polymer processing
  - Generator and transformer building
  - Wind turbine engineering

Product features

- Halogen-free and flame retardant (IEC 60332-1-2)
- Reduced smoke density
- Good hydrolysis and UV resistance
- Resistant against a multitude of oils, alcohols, vegetable and animal fats and chemical media
- **EWKF Formula:**
  Increased initial tear propagation and notch resistance

Approvals (Norm references)

CE RoHS

Design

- Fine strands of tinned copper wires
- Cores twisted together
- Silicone based core insulation
- Silicone based inner sheath
- Tinned copper screen braiding, interleaved plastic foil wrapping
- Notch resistant silicone based EWKF outer sheath, colour black (RAL 9005)

Technical data

Core identification code
Up to 5 cores: according to VDE 0293-308 (appendix T9)
Starting at 6 cores: Black with white numbers

Specific insulation resistance
>200 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installed: 6 x outer diameter

Rated voltage
U_0/U 300/500 V

Test voltage
2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
-50 °C up to +180 °C
(adequate ventilation provided)

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® HEAT 180 EWKF C				
0046301	2 X 0.75	8.6	37.5	104.0
0046302	3 G 0.75	8.9	46.1	118.0
00463033	4 G 0.75	10.2	57.3	152.0
00463043	5 G 0.75	10.9	67.3	176.0
0046307	2 X 1	9.0	43.0	116.0
0046308	3 G 1	9.7	55.7	142.0
00463093	4 G 1	10.9	67.8	175.0
00463103	5 G 1	11.6	80.3	203.0
0046312	7 G 1	12.3	113.9	250.0
0046313	2 X 1.5	10.8	58.0	166.0
0046314	3 G 1.5	11.2	74.0	188.0
00463153	4 G 1.5	12.0	91.4	222.0
00463163	5 G 1.5	12.8	121.7	273.0
0046318	7 G 1.5	13.6	157.2	341.0
0046320	3 G 2.5	12.8	121.2	271.0
00463213	4 G 2.5	13.9	150.9	328.0
00463223	5 G 2.5	14.8	180.5	387.0
00463273	4 G 4	16.0	218.0	448.0
00463283	5 G 4	17.2	262.9	531.0
0046330	3 G 6	16.4	240.5	489.0
00463313	4 G 6	17.9	304.7	591.0
00463323	5 G 6	19.4	370.0	706.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® HEAT 180 H05SS-F EWKF see page 174
- ÖLFLEX® HEAT 180 EWKF see page 177

Accessories

- SKINTOP® MS-SC-M see page 657
- SKINTOP® MS-SC see page 712
- SKINTOP® MS-M BRUSH see page 658

ÖLFLEX® HEAT 180 GLS

Steel armoured silicone cables for increased mechanical stress

Info

- **Protected against high thermal and mechanical loads**

Benefits

- Close-meshed braid made of galvanised steel wires protects against mechanical damage
- Longer durability in harsh applications than conventional silicone cables
- Possess still insulating properties after combustion due to remaining SiO_2 ash on the conductor

Application range

- Areas with high ambient temperatures and additionally high mechanical stress
- Typical fields of application
  - Steel and glass works
  - Cement and ceramic works
  - Foundries
  - Ship building industry
  - Oven construction

Product features

- Halogen-free and flame retardant (IEC 60332-1-2)
- Reduced smoke density
- Only suitable for installation in dry conditions

Approvals (Norm references)

CE RoHS

Design

- Fine strands of tinned copper wires
- Silicone based core insulation
- Cores twisted together
- Silicone based outer sheath, colour red-brown
- Glass fibre wrapping
- Galvanised steel wire braiding

Technical data

Core identification code
Colour coded according to VDE 0293-308, see Appendix T9
Starting at 6 cores: Black with white numbers

Specific insulation resistance
>200 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 20 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U 300/500 V

Test voltage
2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
-50 °C up to +180 °C
(adequate ventilation provided)

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® HEAT 180 GLS				
0046201	2 X 0.75	7.6	14.4	84.0
0046202	3 G 0.75	8.0	21.6	96.0
00462033	4 G 0.75	8.8	28.8	118.0
00462043	5 G 0.75	9.7	36.0	145.0
0046205	6 G 0.75	10.4	43.2	167.0
0046206	7 G 0.75	10.4	50.4	171.0
0046207	2 X 1	7.8	19.2	92.0
0046208	3 G 1	8.2	28.8	106.0
00462093	4 G 1	9.1	38.4	132.0
00462103	5 G 1	10.0	48.0	161.0
0046212	7 G 1	10.7	67.0	205.0
0046213	2 X 1.5	8.8	29.0	119.0
0046214	3 G 1.5	9.2	43.0	140.0
00462153	4 G 1.5	10.0	57.6	168.0
00462163	5 G 1.5	10.8	72.0	212.0
0046218	7 G 1.5	11.8	101.0	255.0
0046237	12 G 1.5	15.4	173.0	433.0
0046219	2 X 2.5	10.0	48.0	162.0
0046220	3 G 2.5	10.9	72.0	217.0
00462213	4 G 2.5	12.0	96.0	260.0
00462223	5 G 2.5	13.0	120.0	310.0
0046224	7 G 2.5	14.0	168.0	362.0
0046226	3 G 4	12.9	115.0	300.0
00462273	4 G 4	14.0	154.0	365.0
00462283	5 G 4	15.4	192.0	446.0
00462313	4 G 6	16.1	230.0	500.0
00462343	4 G 10	20.8	384.0	807.0
00462353	4 G 16	22.8	614.0	1,117.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® HEAT 260 GLS see page 182

ÖLFLEX® HEAT 205 MC

Fluoroethylenepropylene cables for harsh applications

Info
- **High chemical resistance**

ÖLFLEX® HEAT 205 PTFE/FEP

Info
- **EMC compliant**

Benefits
- Space and weight saving installation due to thin cable diameters
- Low outgassing behaviour

Application range
- Various fields of industry wherever very high temperatures, aggressive chemical media or tight spaces rule out the use of conventional cables
- Typical fields of application
  - Industrial furnace construction
  - Foundries
  - Chemical industry
  - Power plant engineering
  - Paint shop line technology
  - Heating elements
  - Polymer processing
  - Wind turbine engineering

Product features
- ÖLFLEX® HEAT 205 made of FEP
  - Outstanding resistance against acids, solvents, lacquers, petrol, oils and many other chemical media
  - Difficult to inflame
  - High dielectric strength and high abrasion resistance
  - Low water absorption
  - Resistant to microbes
  - Adhesion free insulation
  - Weather and ozone resistant
  - Hydrophobic and dirt-repellent
  - High elongation and tear resistance
  - Resistant against hydraulic fluids

Approvals (Norm references)

CE RoHS

Design

ÖLFLEX® HEAT 205 MC
- Fine strands of tinned copper wires
- FEP based core insulation
- Cores twisted together
- FEP based outer sheath, colour black

ÖLFLEX® HEAT 205 PTFE/FEP
- Fine strands of tinned copper wires
- PTFE based core insulation
- Cores twisted together
- Copper braiding, tinned
- Outer sheath of FEP, colour white

Technical data

Core identification code
ÖLFLEX® HEAT 205 MC
Up to 5 cores:
Colour coded acc. to VDE 0293-308
Starting at 7 cores:
ÖLFLEX® colour code, see Appendix T7
ÖLFLEX® HEAT 205 PTFE/FEP
Blue, red, grey, black

Conductor stranding
Fine wire according to VDE 0295, Class 5 / IEC 60228 Cl. 5 from 0.5 mm²

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U 300/500 V

Test voltage
ÖLFLEX® HEAT 205 MC
2500 V
ÖLFLEX® HEAT 205 PTFE/FEP
C/C : 2500 V
C/S : 2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Fixed installation:
-100°C up to +205°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® HEAT 205 MC				
0091200	2 X 0.25	3.1	5.0	17.2
0091201	3 G 0.25	3.3	7.5	22.2
00912023	4 G 0.25	3.6	10.0	27.5
0091210	2 X 0.5	3.7	9.8	21.6
0091211	3 G 0.5	3.9	14.7	32.8
00912123	4 G 0.5	4.3	19.6	44.4
0091220	2 X 0.75	4.3	14.4	31.5
0091221	3 G 0.75	4.6	21.6	46.1
00912223	4 G 0.75	5.1	29.0	57.9
0091230	2 X 1	4.7	19.0	41.6
0091231	3 G 1	5.0	29.0	55.6

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
00912323	4 G 1	5.5	38.0	70.0
0091100	3 G 1.5	5.8	43.0	70.0
00911033	4 G 1.5	6.3	58.0	98.0
00911013	5 G 1.5	7.0	72.0	117.0
0091102	7 G 1.5	7.6	101.0	184.0
0091236	3 G 2.5	6.9	72.0	86.0
00912353	4 G 2.5	7.6	96.0	115.0
00912373	5 G 2.5	8.4	120.0	144.0
00912423	4 G 4	9.3	154.0	180.0
00912433	5 G 4	10.3	192.0	225.0
ÖLFLEX® HEAT 205 PTFE/FEP				
30016373	4 X 0.75	5.9	49.0	78.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

ÖLFLEX® HEAT 205 MC
- ÖLFLEX® HEAT 260 MC see page 181

ÖLFLEX® HEAT 260 MC

Polytetrafluoroethylene cables for most extreme loads

Info

- **Excellent chemical, thermal and electrical performance**

ÖLFLEX® HEAT 260 C MC

Copper screened polytetrafluoroethylene cables for most extreme loads

Info

- **Failure-free transmission in EMC critical environments**

Benefits

- Space and weight saving installation due to thin cable diameters
- Stress tearing resistant under frequently ambient thermal fluctuations
- Low outgassing behaviour
- Copper braiding of screened version complies with EMC requirements and protects against electromagnetic interference

Application range

- Various fields of industry wherever very high temperatures, aggressive chemical media or tight spaces rule out the use of conventional cables
- The use of ÖLFLEX® HEAT 260 in harsh environments like for instance in paint shop lines is a proved solution
- Typical fields of application
  - Industrial furnace construction
  - Foundries
  - Chemical industry
  - Power plant engineering
  - Paint shop line technology
  - Heating elements
  - Polymer processing
  - Wind turbine engineering

Product features

- ÖLFLEX® HEAT 260 made of PTFE
  - Outstanding resistance against acids, alkalis, solvents, synthetic liquids, lacquers, petrol, oils and many other chemical media
  - Difficult to inflame
  - High dielectric strength and abrasion-proof
  - Low water absorption
  - Resistant to microbes
  - Adhesion free insulation
  - Weather and ozone resistant
  - Hydrophobic and dirt-repellent
  - High elongation resistance and tear strength
  - Resists contact with liquid nitrogen
  - Resistant against synthetic hydraulic fluids

Approvals (Norm references)

CE RoHS

Design

ÖLFLEX® HEAT 260 MC

- Fine strands of nickel-plated copper wires
- PTFE based core insulation
- Cores twisted together
- PTFE based outer sheath, colour black

ÖLFLEX® HEAT 260 C MC

- Fine strands of nickel-plated copper wires
- PTFE based core insulation
- Cores twisted together
- Special wrapping
- Nickel plated copper braiding
- PTFE based outer sheath, colour black

Technical data

Core identification code
Coloured acc. VDE 0293-308, see appendix T9

Specific insulation resistance
> 1 TOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Occasional flexing: 15 x cable diameter
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U 300/500 V

Test voltage
ÖLFLEX® HEAT 260 MC
2500 V
ÖLFLEX® HEAT 260 C MC
C/C : 2500 V
C/S : 2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Fixed installation:
-190°C up to +260°C
temporary: +300°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® HEAT 260 MC - unscreened				
0091300	2 X 0.5	3.9	9.6	22.0
0091301	3 G 0.5	4.1	14.4	33.0
0091302	4 G 0.5	4.5	19.2	45.0
0091305	2 X 0.75	4.2	14.4	32.0
0091306	3 G 0.75	4.4	21.6	47.0
0091307	4 G 0.75	5.1	28.8	58.0
0091310	2 X 1	4.8	19.2	42.0
0091311	3 G 1	5.1	28.8	56.0
0091312	4 G 1	5.8	38.4	71.0
0091315	3 G 1.5	5.6	43.2	72.0
0091316	4 G 1.5	6.1	57.6	98.0
0091317	5 G 1.5	7.0	72.0	118.0
0091320	3 G 2.5	7.1	72.0	87.0

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
0091321	4 G 2.5	7.7	96.0	116.0
0091322	5 G 2.5	8.5	120.0	145.0
ÖLFLEX® HEAT 260 C MC - screened				
0091330	3 G 0.75	5.5	46.0	75.0
0091331	4 G 0.75	5.9	51.0	87.0
0091332	3 G 1	5.8	48.0	81.0
0091333	4 G 1	6.4	65.0	104.0
0091334	3 G 1.5	6.3	65.0	101.0
0091335	4 G 1.5	7.2	86.0	134.0
0091336	5 G 1.5	7.8	105.0	162.0
0091337	3 G 2.5	7.9	114.0	160.0
0091338	4 G 2.5	8.7	140.0	204.0
0091339	5 G 2.5	9.4	209.0	270.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

ÖLFLEX® HEAT 260 MC

- ÖLFLEX® HEAT 205 MC see page 180

ÖLFLEX® HEAT 260 GLS

Steel armoured PTFE cables for increased mechanical stress

Info

- **Good thermal and mechanical performance**
- **Germanischer Lloyd approval**

Benefits

- Close-meshed braid made of galvanised steel wires protects against mechanical damage
- Thin outer diameters for maximum saving of space and weight
- Germanischer Lloyd approval for use at ship diesel engines

Application range

- Extremely high temperatures in addition with mechanical stress require special insulated and armoured cables
- Main applications
  - Ship building
  - Signal systems
  - Monitoring devices
  - Diesel engines
  - Steam boiler units
  - Turbine manufacture

Product features

- Difficult to inflame
- Stress tearing resistant under frequently ambient thermal fluctuations
- High dielectric strength and high abrasion resistance
- High elongation resistance and tear strength
- Only suitable for installation in dry conditions

Approvals (Norm references)

CE RoHS

Design

- Fine strands of nickel-plated copper wires
- PTFE based core insulation
- Cores twisted together
- Impregnated glass fibre braiding
- Galvanised steel wire braiding

Technical data

Core identification code
Up to 5 cores: colour coded according VDE 0293-308, see Appendix T9
7-core version:
gn/ye, bl, bn, bk, bk, bk, tr

Approvals
GL (Germanischer Lloyd)

Specific insulation resistance
> 1 TOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
In fixed installations:
5 x cable diameter

Rated voltage
U_0/U 300/500V
according to GL: 250 V

Test voltage
1500 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Fixed installation:
-190°C up to +260°C
In accordance with GL: +205 °C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® HEAT 260 GLS				
0091120	2 X 1.5	5.7	29.0	93.0
0091121	3 G 1.5	6.1	43.0	102.0
00911223	4 G 1.5	6.6	58.0	130.0
00911233	5 G 1.5	7.3	72.0	149.0
0091124	7 G 1.5	8.0	101.0	180.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® HEAT 180 GLS see page 179

ÖLFLEX® HEAT 350 MC

Suitable for use in ambient temperatures between -50°C up to +350° C

Info

- **Voltage rating 230/400 V**

Benefits

- Low conductor resistance through use of nickel-plated copper conductors

Application range

- Wide ambient temperature range offers a number of applications all around Thermal Class C range
- Blast furnaces and glass works
- Chemical and power station construction
- Motor and oven construction
- Lighting, apparatus and instrument industry

Product features

- Flame retardant according to IEC 60332-1-2
- Only suitable for installation in dry conditions
- For peak temperatures temporarily over 350°C we recommend ÖLFLEX® HEAT 1565

Approvals (Norm references)

CE RoHS

Design

- Fine strands of nickel-plated copper wires
- Core insulation: Glass fibre covering and impregnated fibre glass braid
- Cores twisted together
- Outer sheath of impregnated glass fibre braiding, colour white (natural)

Technical data

Core identification code
Colour coded according to VDE 0293-308, see Appendix T9

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Fixed installed: 6 x outer diameter

Rated voltage
U_0/U 230/400 V

Test voltage
1500 V

Range of temperature
Fixed installation:
-50°C to 350°C
(adequate ventilation required)

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® HEAT 350 MC				
0091375	2 X 1	6.8	19.2	56.0
0091376	3 G 1	7.4	28.8	70.0
0091377	4 G 1	8.2	38.4	88.0
0091380	2 X 1.5	7.8	28.8	77.0
0091381	3 G 1.5	8.4	43.2	93.0
0091382	4 G 1.5	9.4	57.6	118.0
0091383	5 G 1.5	10.3	72.0	140.0
0091390	3 G 2.5	8.9	72.0	124.0
0091391	4 G 2.5	9.8	96.0	160.0
0091392	5 G 2.5	10.1	120.0	194.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® HEAT 1565 MC see page 184

ÖLFLEX® HEAT 1565 MC

Suitable for use in ambient temperatures between -195°C up to +400° C

Info

- **Temporary loadable up to +1565°C**

Benefits

- Low conductor resistance through use of nickel-plated copper conductors
- Withstands temporary contact with molten metal or glass

Application range

- Maintenance of circuit even in areas with extremely high ambient temperatures
- Blast furnaces and cokery plants
- Refineries
- Glassworks
- Aluminium and steelworks

Product features

- Flame retardant
- Only suitable for installation in dry conditions

Approvals (Norm references)

CE RoHS

Design

- Fine strands of nickel-plated copper wires
- MICA tape wrapping and impregnated glass fibre braiding
- Cores twisted together
- Outer sheath of MICA tape wrapping and impregnated fibre glass braid, colour red

Technical data

Core identification code
Two cored cable:
black, blue
4-cored cable:
black, blue, yellow, brown

Conductor stranding
Fine copper wire strands

Minimum bending radius
Fixed installation :
5 x cable diameter

Rated voltage
U_0/U 300/500 V

Test voltage
2200 V

Range of temperature
-195°C up to +400 °C
(adequate ventilation provided)
Temporary loadable up to +1565°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® HEAT 1565 MC				
30020808	2 x 0.5	7.0	9.6	48.0
30020809	2 x 0.75	7.4	14.4	66.0
30016609	2 x 1	7.7	19.2	74.0
30016603	2 x 1.5	8.2	28.8	87.0
30020810	2 x 2.5	9.7	48.0	114.0
30020811	2 x 4	11.2	76.8	161.0
30016606	4 x 1	8.9	38.4	123.0
30016600	4 x 1.5	9.5	57.6	148.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

ÖLFLEX® HEAT 145 SC

Electron beam cross-linked cores for increased application requirements

Info

- **Improved characteristics in case of fire**
- **For thermal class B applications**

Benefits

- Safety in areas with high personnel concentration
- Reduction of flame propagation and density and toxicity of smoke gases in event of fire
- Minimizes damage to buildings and equipment caused by the formation of toxic acid fumes in fires
- Certified for maritime application

Application range

- Suitable for wiring respectively connection of lighting, heating appliances, switch gear cabinets and distributors in mechanical engineering and plant construction

Product features

- Halogen-free according to IEC 60754-1
  Flame retardant according to IEC 60332-1-2
  No flame propagation according to IEC 60332.3
- Good moisture, ozone- and UV resistance
- Abrasion and notch resistant

Approvals (Norm references)

CE RoHS

Design

- Fine strands of tinned copper wires
- Electron beam cross-linked polyolefin copolymer insulation

Technical data

Core identification code
see article table

Approvals
GL (Germanischer Lloyd)

Specific insulation resistance
>2 TOhm x cm

Conductor stranding
Fine wire according to VDE 0295, Class 5 / IEC 60228 Cl. 5 from 0.5 mm²

Minimum bending radius
Fixed installation: 4 x cable diameter

Rated voltage
Up to 1.0mm² U_0/U 300/500 V
From 1.5mm² U_0/U 450/750 V
0.6/1kV from 1.5mm² with fixed and protected installation

Test voltage
3500 V

Range of temperature
Fixed installation:
-55°C up to +125°C
Temporary: up to +145°C

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	green/yellow	black	blue	dark-blue	brown	yellow
0.25	1.6	2.4	5.0		0181001	0181002			0181005
0.5	1.9	4.8	8.0	0182000	0182001	0182002		0182003	0182005
0.75	2.2	7.2	11.0	0183000	0183001	0183002	0183114	0183003	0183005
1	2.4	9.6	14.0	0184000	0184001	0184002	0184114	0184003	0184005
1.5	3.0	14.4	21.0	0185000	0185001	0185002	0185114	0185003	0185005
2.5	3.7	24.0	33.0	0186000	0186001	0186002	0186114	0186003	0186005
4	4.2	38.4	49.0	0187000	0187001	0187002		0187003	0187005
6	4.7	57.6	67.0	0188000	0188001	0188002	0188114	0188003	0188005
10	6.1	96.0	112.0	0189000	0189001	0189002	0189114		
16	7.5	154.0	172.0	0190000	0190001	0190002			
25	9.0	240.0	262.0	0191000	0191001				
35	10.1	336.0	362.0	0192000	0192001				
50	12.7	480.0	512.0	0193000	0193001				
70	14.7	672.0	710.0	0194000	0194001				
95	16.4	912.0	937.0		0195001				
120	18.2	1,152.0	1,159.0		0196001				
150	20.9	1,440.0	1,447.0	0197000	0197001				
185	22.9	1,776.0	1,790.0		0198001				
240	25.8	2,304.0	2,318.0		0199001				

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	green	purple	orange	red	white	grey
0.25	1.6	2.4	5.0	0181006			0181104	0181105	0181106
0.5	1.9	4.8	8.0	0182006	0182007	0182009	0182104	0182105	0182106
0.75	2.2	7.2	11.0	0183006	0183007	0183009	0183104	0183105	0183106
1	2.4	9.6	14.0	0184006			0184104	0184105	0184106
1.5	3.0	14.4	21.0	0185006	0185007	0185009	0185104	0185105	0185106
2.5	3.7	24.0	33.0	0186006	0186007	0186009	0186104	0186105	0186106
4	4.2	38.4	49.0	0187006		0187009	0187104	0187105	
6	4.7	57.6	67.0				0188104	0188105	
10	6.1	96.0	112.0				0189104		

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Cross-Section 0.25mm² only available as 300 m box.Cross-Section 0.5mm² only available as 200 m box.Cross-Section 1.0 - 4mm² only available as 100 m box.
Part number index of core colours: 000 =greenyellow / 001 =black/ 002 =blue/ 114 =darkblue / 003 =brown / 005 = yellow / 006 =green / 007 =purple / 009 =orange / 104 =red / 105 =white / 106 =grey

Comparable products

- ÖLFLEX® TRAFFIC 3GKW see page 140
- X05Z-K, X07Z-K 110°C see page 208

ÖLFLEX® HEAT 180 SiF

Versatile stranded conductors with extented temperature range

Info

- **Fine wired conductor**

Application range

- Areas with high ambient temperatures where conventional core insulation materials will embrittle after a short while
- Typical fields of application
  - Switchgear cabinet building
  - Appliances and apparatus engineering
  - Electric motor industry
  - Sauna/solarium construction
  - Thermal and heating elements
  - Lighting technology
  - Ventilator engineering
  - Air-conditioning technology
  - Oven construction
  - Polymer processing
  - Generator and transformer building

Product features

- Halogen free in accordance with IEC 60754-1
- Resistant against a multitude of oils, alcohols, vegetable and animal fats and chemical media

Approvals (Norm references)

CE RoHS

Design

- Fine strands of tinned copper wires
- Silicone based insulation

Technical data

Specific insulation resistance
>200 GOhm x cm

Conductor stranding
Fine wire according VDE 0295, class 5 / IEC 60228 Cl 5 from 0,5 mm²

Minimum bending radius
Fixed installation: 6 x core diameter
One bend at end of core:
3 x cable diameter

Rated voltage
U_0/U 300/500 V

Test voltage
2000 V

Range of temperature
-50 °C up to +180 °C
(adequate ventilation provided)
Temporary: +200°C

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	green/yellow	black	blue	brown	beige	yellow	green
0.25	1.9	2.4	5.4	0047000	0047001	0047002	0047003		0047005	0047006
0.5	2.1	4.8	9.0	0048000	0048001	0048002	0048003		0048005	0048006
0.75	2.4	7.2	12.0	0049000	0049001	0049002	0049003		0049005	0049006
1	2.5	9.6	15.0	0050000	0050001	0050002	0050003	0050004	0050005	0050006
1.5	2.8	14.4	20.0	0051000	0051001	0051002	0051003		0051005	0051006
2.5	3.4	24.0	32.0	0052000	0052001	0052002	0052003		0052005	0052006
4	4.2	38.0	50.0	0053000	0053001	0053002	0053003		0053005	0053006
6	5.0	58.0	73.0	0054000	0054001	0054002	0054003	0054004	0054005	0054006
10	6.6	96.0	118.0	0055000	0055001	0055002	0055003			
16	7.4	154.0	177.0	0056000	0056001	0056002				
25	9.2	240.0	277.0	0057000	0057001	0057002				
35	10.3	336.0	374.0	0058000	0058001					
50	12.2	480.0	530.0	0059000	0059001					
70	14.2	672.0	724.0		0060001	0060002				
95	16.6	912.0	982.0	0061000	0061001					
120	18.0	1,152.0	1,219.0	0062000	0062001					
150	20.0	1,440.0	1,524.0		0063001					
185	22.5	1,776.0	1,915.0		0064001					

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	purple	Pink	orange	red	white	grey
0.25	1.9	2.4	5.4	0047007	0047008	0047009	0047104	0047105	0047106
0.5	2.1	4.8	9.0	0048007	0048008	0048009	0048104	0048105	0048106
0.75	2.4	7.2	12.0	0049007	0049008	0049009	0049104	0049105	0049106
1	2.5	9.6	15.0	0050007	0050008	0050009	0050104	0050105	0050106
1.5	2.8	14.4	20.0	0051007	0051008	0051009	0051104	0051105	0051106
2.5	3.4	24.0	32.0	0052007			0052104	0052105	0052106
4	4.2	38.0	50.0			0053009	0053104	0053105	0053106
6	5.0	58.0	73.0				0054104	0054105	0054106
10	6.6	96.0	118.0			0055009	0055104		0055106
16	7.4	154.0	177.0				0056104		0056106
25	9.2	240.0	277.0				0057104		0057106
35	10.3	336.0	374.0				0058104		
50	12.2	480.0	530.0				0059104		
95	16.6	912.0	982.0					0061105	

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Also available on large spools and non-returnable barrels.
Part number index of core colours: 000 =greenyellow / 001 =black / 002 =blue / 003 =brown / 004 =beige / 005 = yellow / 006 =green / 007 =purple / 008 =pink / 009 =orange / 104 =red / 105 =white / 106 =grey
Other colours on request

ÖLFLEX® HEAT 180 SiD

Versatile solid conductors with extended temperature range

Info

- **Solid copper conductor**

Application range

- Areas with high ambient temperatures where conventional core insulation materials will embrittle after a short while
- Typical fields of application
  - Switchgear cabinet building
  - Appliances and apparatus engineering
  - Electric motor industry
  - Sauna/solarium construction
  - Thermal and heating elements
  - Lighting technology
  - Ventilator engineering
  - Air-conditioning technology
  - Oven construction
  - Polymer processing
  - Generator and transformer building

Product features

- Halogen free in accordance with IEC 60754-1
- Resistant against a multitude of oils, alcohols, vegetable and animal fats and chemical media

Approvals (Norm references)

CE RoHS

Design

- Tinned solid copper wire conductor
- Silicone based insulation

Technical data

Specific insulation resistance
>200 GOhm x cm

Conductor stranding
Solid copper conductor

Minimum bending radius
Fixed installation: 6 x core diameter
One bend at end of core:
3 x cable diameter

Rated voltage
U_0/U 300/500 V

Test voltage
2000 V

Range of temperature
-50 °C up to +180 °C
(adequate ventilation provided)
Temporary: +200°C

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	green/yellow	black	blue	brown	beige
0.5	2.0	4.8	9.0		0068001			
0.75	2.2	7.2	12.0	0069000	0069001	0069002	0069003	
1	2.3	9.6	15.0	0070000	0070001	0070002	0070003	
1.5	2.6	14.4	20.0	0071000	0071001	0071002	0071003	0071004
2.5	3.2	24.0	32.0		0072001	0072002		
4	3.9	38.0	50.0		0073001			
6	4.6	58.0	64.5		0074001	0074002		

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	green	purple	red	white
0.5	2.0	4.8	9.0				0068105
0.75	2.2	7.2	12.0	0069006	0069007	0069104	0069105
1	2.3	9.6	15.0		0070007	0070104	0070105
1.5	2.6	14.4	20.0				0071105

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Also available on large spools and non-returnable barrels.
Part number index of core colours: 000 =greenyellow / 001 =black / 002 =blue / 003 =brown / 004 =beige / 006 =green / 007 =purple / 104 =red / 105 =white
Other colours on request

Silicone single cores (-50°C up to +180°C)

ÖLFLEX® HEAT 180 SiF/GL

Info
- With glass fibre protection braiding

ÖLFLEX® HEAT 180 SiZ

Info
- Twin conductor

ÖLFLEX® HEAT 180 FZLSi

Info
- High voltage ignition wire

Application range

- Areas with high ambient temperatures where conventional core insulation materials will embrittle after a short while
- Typical fields of application
  - Switchgear cabinet building
  - Appliances and apparatus engineering
  - Electric motor industry
  - Sauna/solarium construction
  - Thermal and heating elements
  - Lighting technology
  - Ventilator engineering
  - Air-conditioning technology
  - Oven construction
  - Polymer processing
  - Generator and transformer building

Product features

- Halogen free in accordance with IEC 60754-1
- Resistant against a multitude of oils, alcohols, vegetable and animal fats and chemical media

Approvals (Norm references)

CE RoHS

ÖLFLEX® HEAT 180 FZLSi
- Increased voltage rating underlies not the Low Voltage Directive 2006/95/EC

Design

ÖLFLEX® HEAT 180 SiF/GL
- Fine strands of tinned copper wires
- Silicone based insulation
- Impregnated glass fibre braiding

ÖLFLEX® HEAT 180 SiZ
- Fine strands of tinned copper wires
- Silicone based insulation
- Cores parallel with separating strip

ÖLFLEX® HEAT 180 FZLSi
- Fine strands of tinned copper wires
- Silicone based insulation

Technical data

Conductor stranding
Fine wire according to VDE 0295, Class 5 / IEC 60228 Cl. 5 from 0.5 mm²

Minimum bending radius
Fixed installation: 6 x core diameter
One bend at end of core:
3 x cable diameter

Rated voltage
Version SiF/GL / SiZ:
U_0/U 300/500 V
Version FZLSi:
10 kV

Test voltage
Version SiF/GL / SiZ:
2000 V
Version FZLSi:
20 kV

Range of temperature
-50 °C up to +180 °C
(adequate ventilation provided)
Temporary: +200°C

Part number	Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® HEAT 180 SiF/GL hook-up wire with glass fibre braiding				
0065102	0.5	2.5	4.8	11.0
0065103	0.75	2.8	7.2	14.0
0065104	1	2.9	9.6	17.0
0065105	1.5	3.2	14.4	23.0
0065106	2.5	3.8	24.0	36.0
0065107	4	4.6	38.0	54.0
0065108	6	5.4	58.0	80.0
0065109	10	7.6	96.0	133.0
0065110	16	8.4	154.0	198.0
0065111	25	10.2	240.0	301.0
0065112	35	11.3	336.0	401.0
0065113	50	13.4	480.0	567.0
ÖLFLEX® HEAT 180 SiZ twin conductor				
0065201	2 x 0.5	2.1 x 4.2	9.6	17.0
0065202	2 x 0.75	2.3 x 4.6	14.4	24.0
ÖLFLEX® HEAT 180 FZLSi high-voltage ignition wire				
2510001	1 (32 x 0,2)	7.0	9.6	68.0
2510005	1,5 (30 x 0,25)	7.6	14.4	83.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)
Core colours: ÖLFLEX® HEAT 180 SiF/GL = white with natural glass fibre braiding / ÖLFLEX® HEAT 180 SiZ = red / ÖLFLEX® HEAT 180 FZLSi = red

ÖLFLEX® HEAT 205 SC

For very high and low temperature requirements

Info

- **Thermal and chemical resistant**
- **Space and weight savings**
- **FEP = Fluoroethylenepropylene**

Benefits

- Thin outer diameters for maximum saving of space and weight
- Low outgassing behaviour

Application range

- Various applications in very high ambient temperatures, aggressive chemical media or tight spaces which rule out the use of conventional cores
- Typical fields of application
  - Switchgear cabinets with high heat generation
  - Measuring instruments
  - Furnaces and brickworks
  - Heating equipment and kitchen appliances
  - Electric motor building
  - Installations in the chemical industry

Product features

- ÖLFLEX® HEAT 205 made of FEP
  - Outstanding resistance against acids, solvents, lacquers, petrol, oils and many other chemical media
  - Difficult to inflame
  - High dielectric strength and high abrasion resistance
  - Low water absorption
  - Resistant to microbes
  - Adhesion free insulation
  - Weather and ozone resistant
  - Hydrophobic and dirt-repellent
  - High elongation and tear resistance
  - Resistant against hydraulic fluids

Approvals (Norm references)

CE RoHS

Design

- Fine strands of tinned copper wires
- FEP core insulation

Technical data

Specific insulation resistance
>2 TOhm x cm

Conductor stranding
Fine wire according to VDE 0295, Class 5 / IEC 60228 Cl. 5 from 0.5 mm²

Minimum bending radius
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U 300/500 V

Test voltage
2500 V

Range of temperature
Fixed installation:
-100°C up to +205°C

Conductor cross section in mm²	Outer diameter in mm approx.	Wall thickness insulation in mm approx.	Copper index kg/km	Weight kg/km approx.	green/yellow	black	blue	brown	yellow	green	purple
0.14	1.0	0.25	1.3	2.6		0080001	0080002		0080005	0080006	
0.25	1.0	0.25	1.3	2.6		0081001	0081002	0081003	0081005	0081006	
0.5	1.4	0.25	4.8	6.8	0082000	0082001	0082002	0082003	0082005	0082006	0082007
0.75	1.7	0.30	7.2	10.1	0083000	0083001	0083002	0083003	0083005	0083006	
1	1.9	0.30	9.6	12.8	0084000	0084001	0084002	0084003	0084005	0084006	0084007
1.5	2.2	0.30	14.4	18.0	0085000	0085001	0085002	0085003	0085005		
2.5	2.7	0.35	24.0	29.5	0086000	0086001	0086002	0086003			0086007
4	3.3	0.35	38.0	45.0	0087000	0087001	0087002	0087003	0087005		
6	4.1	0.40	58.0	68.0	0088000	0088001	0088002	0088003			
10	5.4	0.45	96.0	116.0	0089000	0089001	0089002	0089003			
16	6.7	0.50	154.0	175.0	0090000	0090001	0090002				

Conductor cross section in mm²	Outer diameter in mm approx.	Wall thickness insulation in mm approx.	Copper index kg/km	Weight kg/km approx.	Pink	orange	transparent	red	white	grey
0.14	1.0	0.25	1.3	2.6			0080010			
0.25	1.0	0.25	1.3	2.6		0081009	0081010	0080104	0080105	
0.5	1.4	0.25	4.8	6.8		0082009	0082010	0082104	0082105	0082106
0.75	1.7	0.30	7.2	10.1	0083008		0083010	0083104	0083105	
1	1.9	0.30	9.6	12.8			0084010	0084104	0084105	0084106
1.5	2.2	0.30	14.4	18.0			0085010	0085104	0085105	
2.5	2.7	0.35	24.0	29.5			0086010	0086104	0086105	0086106
4	3.3	0.35	38.0	45.0			0087010	0087104	0087105	
6	4.1	0.40	58.0	68.0			0088010	0088104		
10	5.4	0.45	96.0	116.0			0089010	0089104	0089105	
16	6.7	0.50	154.0	175.0				0090104		

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil 100m
Available as original coil ware only
Also available on large spools and non-returnable barrels.
Part number index of core colours: 000 =greenyellow / 001 =black / 002 =blue / 003 =brown / 005 = yellow / 006 =green / 007 =purple / 008 =pink / 009 =orange / 010 =transparent / 104 =red / 105 =white / 106 =grey
Other colours on request

Comparable products

- ÖLFLEX® HEAT 260 SC see page 190

ÖLFLEX® HEAT 260 SC

For use in most extreme conditions

Info

- **Excellent chemical, thermal and electrical performance**
- **Space and weight savings**
- **PTFE= Polytetrafluoroethylene**

Benefits

- Thin outer diameters for maximum saving of space and weight
- Low outgassing behaviour

Application range

- Various applications in very high ambient temperatures, aggressive chemical media or tight spaces which rule out the use of conventional cores
- Typical fields of application
  - Switchgear cabinets with high heat generation
  - Measuring instruments
  - Furnaces and brickworks
  - Heating equipment and kitchen appliances
  - Electric motor building
  - Installations in the chemical industry

Product features

- ÖLFLEX® HEAT 260 made of PTFE
  - Outstanding resistance against acids, alkalis, solvents, synthetic liquids, lacquers, petrol, oils and many other chemical media
  - Difficult to inflame
  - High dielectric strength and abrasion-proof
  - Low water absorption
  - Resistant to microbes
  - Adhesion free insulation
  - Weather and ozone resistant
  - Hydrophobic and dirt-repellent
  - High elongation resistance and tear strength
  - Resists contact with liquid nitrogen
  - Resistant against synthetic hydraulic fluids

Approvals (Norm references)

CE RoHS

Design

- Silver plated AWG copper conductor
- PTFE core insulation

Technical data

Specific insulation resistance
> 1 TOhm x cm

Conductor stranding
According to AWG, number of wires see table

Minimum bending radius
Fixed installed:
4 x outer diameter

Rated voltage
U_0/U 300/500 V

Test voltage
3400 V

Range of temperature
Fixed installation:
-190°C up to +260°C

AWG No. and wire number	Number of wires x wire-Ø in mm	Outer diameter mm	Copper index kg/km	Weight kg/km approx.	green/yellow	black	blue	brown	yellow	green	purple
28 (7)	7 x 0.13	0.8	0.9	2.0	0094000	0094001	0094002	0094003	0094005	0094006	0094007
26 (7)	7 x 0.16	0.9	1.4	2.7		0095001	0095002			0095006	0095007
26 (19)	19 x 0.1	0.9	1.5	2.9	0096000	0096001				0096006	
24 (7)	7 x 0.2	1.1	2.2	3.8		0097001	0097002	0097003			
24 (19)	19 x 0.13	1.1	2.3	4.0	0098000	0098001	0098002	0098003		0098006	
22 (7)	7 x 0.25	1.2	3.4	5.4		0099001	0099002	0099003		0099006	0099007
22 (19)	19 x 0.16	1.2	3.7	5.7		0100001	0100002	0100003	0100005		
20 (7)	7 x 0.32	1.4	5.4	7.7		0101001	0101002	0101003			
20 (19)	19 x 0.2	1.4	5.9	8.2		0102001	0102002	0102003	0102005	0102006	0102007
18 (7)	7 x 0.4	1.7	8.6	12.0		0103001					
18 (19)	19 x 0.25	1.7	9.3	12.0	0104000	0104001	0104002	0104003	0104005	0104006	0104007
16 (19)	19 x 0.28	2.0	11.8	16.0	0105000	0105001	0105002	0105003	0105005	0105006	0105007
14 (19)	19 x 0.36	2.4	18.7	23.0	0106000	0106001	0106002	0106003	0106005	0106006	
12 (19)	19 x 0.45	2.8	29.6	35.0	0107000	0107001	0107002	0107003	0107005	0107006	
10 (37)	37 x 0.4	3.4	45.6	51.0	0108000	0108001	0108002				

AWG No. and wire number	Number of wires x wire-Ø in mm	Outer diameter mm	Copper index kg/km	Weight kg/km approx.	Pink	orange	transparent	red	white	grey
28 (7)	7 x 0.13	0.8	0.9	2.0	0094008	0094009	0094010	0094104	0094105	0094106
26 (7)	7 x 0.16	0.9	1.4	2.7		0095009		0095104	0095105	0095106
26 (19)	19 x 0.1	0.9	1.5	2.9				0096104		
24 (7)	7 x 0.2	1.1	2.2	3.8				0097104	0097105	
24 (19)	19 x 0.13	1.1	2.3	4.0				0098104	0098105	0098106
22 (7)	7 x 0.25	1.2	3.4	5.4				0099104	0099105	
22 (19)	19 x 0.16	1.2	3.7	5.7		0100009		0100104	0100105	
20 (7)	7 x 0.32	1.4	5.4	7.7				0101104	0101105	
20 (19)	19 x 0.2	1.4	5.9	8.2		0102009		0102104	0102105	0102106
18 (19)	19 x 0.25	1.7	9.3	12.0		0104009	0104010	0104104	0104105	
16 (19)	19 x 0.28	2.0	11.8	16.0	0105008	0105009		0105104	0105105	
14 (19)	19 x 0.36	2.4	18.7	23.0				0106104	0106105	0106106
12 (19)	19 x 0.45	2.8	29.6	35.0					0107105	
10 (37)	37 x 0.4	3.4	45.6	51.0				0108104	0108105	

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Packaging size: Coil 100m
Available as original coil ware only
Also available on large spools and non-returnable barrels.
Part number index of core colours: 000 =greenyellow / 001 =black / 002 =blue / 003 =brown / 005 = yellow / 006 =green / 007 =purple / 008 =pink / 009 =orange / 010 =transparent / 104 =red / 105 =white / 106 =grey
Other colours on request

Comparable products

- ÖLFLEX® HEAT 205 SC see page 189

ÖLFLEX® HEAT 350 SC

Suitable for use in ambient temperatures between -50°C up to +350° C

Info

- **Voltage rating 230/400 V**

Benefits

- Low conductor resistance thanks to nickel-plated copper conductors

Application range

- Wide ambient temperature range offers a number of applications all around Thermal Class C range
- Blast furnaces and glass works
- Chemical and power station construction
- Motor and oven construction
- Lighting, apparatus and instrument industry

Product features

- Flame retardant according to IEC 60332-1-2
- Only suitable for installation in dry conditions
- For peak temperatures temporarily over 350°C we recommend ÖLFLEX® HEAT 1565

Approvals (Norm references)

CE RoHS

Design

- Fine strands of nickel-plated copper wires
- Core insulation: Glass fibre covering (starting at 16mm² additional mica wrapping) and impregnated fibre glass braid, core colour white (natural)

Technical data

Core identification code
Natural coloured

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Fixed installation :
5 x cable diameter

Rated voltage
U_0/U 230/400 V

Test voltage
1500 V

Range of temperature
Fixed installation:
-50°C up to +350°C
(adequate ventilation provided)

Part number	Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® HEAT 350 SC				
0091350	0.5	2.5	4.8	13.0
0091351	0.75	3.0	7.2	15.0
0091352	1	3.4	9.6	17.0
0091353	1.5	3.5	14.4	23.0
0091354	2.5	3.7	24.0	34.0
0091355	4	4.2	38.4	54.0
0091356	6	6.2	57.6	84.0
0091357	10	8.0	96.0	120.0
0091358	16	7.3	153.6	199.0
0091359	25	9.5	240.0	300.0
0091360	35	10.9	336.0	399.0
0091361	50	13.2	480.0	540.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® HEAT 1565 SC see page 192

ÖLFLEX® HEAT 1565 SC

Suitable for use in ambient temperatures between -195°C up to +400° C

Info

- **Temporary loadable up to +1565°C**

Benefits

- Low conductor resistance thanks to nickel-plated copper conductors
- Withstands temporary contact with molten metal or glass

Application range

- Maintenance of circuit even in areas with extremely high ambient temperatures
- Blast furnaces and cokery plants
- Refineries
- Glassworks
- Aluminium and steelworks

Product features

- Flame retardant
- Only suitable for installation in dry conditions

Approvals (Norm references)

CE RoHS

Design

- Fine strands of nickel-plated copper wires
- Mica tape wrapping
- Impregnated glass fibre braiding, colour red

Technical data

Core identification code
red

Conductor stranding
Fine copper wire strands

Minimum bending radius
Fixed installation :
5 x cable diameter

Rated voltage
U_0/U 300/500 V

Test voltage
2200 V

Range of temperature
-195°C up to +400 °C
(adequate ventilation provided)
Temporary loadable up to +1565°C

Part number	Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® HEAT SC 1565				
3020780	0.75	2.9	7.2	15.9
3020781	1	3.0	9.6	18.8
3013234	1.5	3.3	14.4	24.3
3020782	2.5	3.8	24.0	35.0
3018942	4	4.8	38.4	56.0
3020783	6	5.6	57.6	86.4
3016697	10	6.2	96.0	123.0
3016698	16	7.9	153.6	202.5
3016699	25	9.2	240.0	295.1
3016771	35	10.6	336.0	403.9
3017861	50	12.2	480.0	545.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

LiY

RoHS

Application range

- Stranded hook-up wires for wiring of telecommunication devices and electronic components within devices

Product features

- Flame retardant according to IEC 60332-1-2
- Spool: d1=18 mm; d2=150 mm; b=85 mm

Design

- Copper conductor
- Core insulation on PVC basis YI 2/TI 2 acc. VDE 0207-4

Technical data

Peak working voltage
500 V (0.14 sq.mm)
900 V (0.25 sq.mm)

Based on
VDE 0812

Conductor stranding
0.14 sq.mm: ≥ 18 strands (Ø each: 0.10 mm)
0.25 sq.mm: ≥ 14 strands (Ø each: 0.15 mm)

Rated voltage
working voltage < 50 VAC
UPP - peak-to-peak voltage: ≤ 250 V

Test voltage
1200 V (0.14 sq.mm)
2500 V (0.25 sq.mm)

Range of temperature
Fixed installation: -30°C up to +70°C

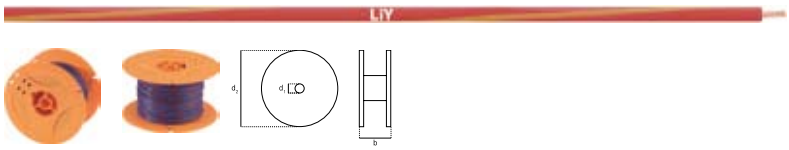
Conductor cross section in mm²	Outer diameter in mm approx.	m/Spool	Copper index kg/km	green/yellow	black	blue	dark-blue	brown
LiY								
0.14	1.1	500	1.3	4125000S	4125001S	4125002S	4125014S	4125003S
0.25	1.3	250	2.4	4126000S	4126001S	4126002S	4126014S	4126003S

Conductor cross section in mm²	Outer diameter in mm approx.	m/Spool	Copper index kg/km	beige	yellow	green	purple	Pink
LiY								
0.14	1.1	500	1.3		4125005S	4125006S	4125007S	4125008S
0.25	1.3	250	2.4	4126004S	4126005S	4126006S	4126007S	4126008S

Conductor cross section in mm²	Outer diameter in mm approx.	m/Spool	Copper index kg/km	orange	transparent	red	white	grey
LiY								
0.14	1.1	500	1.3	4125009S		4125104S	4125105S	4125106S
0.25	1.3	250	2.4	4126009S	4126010S	4126104S	4126105S	4126106S

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis‘ and ‚Metal index‘ see Appendix T17

LiY with coloured stripes



RoHS

Application range

- Stranded hook-up wires for wiring of telecommunication devices and electronic components within devices

Product features

- Flame retardant according to IEC 60332-1-2
- Spool: d1=18 mm; d2=150 mm; b=85 mm

Design

- Copper conductor
- Core insulation on PVC basis YI 2/TI 2 acc. VDE 0207-4
- Labeled with coloured stripes

Technical data

Peak working voltage
900 V (0.25 sq.mm)

Based on
VDE 0812

Conductor stranding
0.25 sq.mm: ≥ 14 strands (Ø each: 0.15 mm)

Rated voltage
working voltage < 50 VAC
UPP - peak-to-peak voltage: ≤ 250 V

Test voltage
2500 V (0.25 sq.mm)

Range of temperature
Fixed installation: -30°C up to +70°C

Conductor cross section in mm²	Outer diameter in mm approx.	m/Spool	Copper index kg/km	black/green	black/red	black/white	blue/black
LiY with coloured stripes							
0.25	1.5	250	2.4	4502202S	4502212S	4502222S	4502232S

Conductor cross section in mm²	Outer diameter in mm approx.	m/Spool	Copper index kg/km	blue/green	blue/red	blue/white	brown/black
LiY with coloured stripes							
0.25	1.5	250	2.4	4502242S	4502252S	4502262S	4502272S

Conductor cross section in mm²	Outer diameter in mm approx.	m/Spool	Copper index kg/km	brown/green	brown/white	yellow/black	yellow/red
LiY with coloured stripes							
0.25	1.5	250	2.4	4502282S	4502292S	4502302S	4502312S

Conductor cross section in mm²	Outer diameter in mm approx.	m/Spool	Copper index kg/km	yellow/white	green/black	green/white	purple/black
LiY with coloured stripes							
0.25	1.5	250	2.4	4502322S	4502332S	4502342S	4502352S

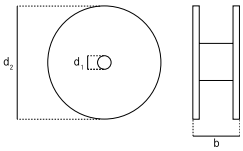
Conductor cross section in mm²	Outer diameter in mm approx.	m/Spool	Copper index kg/km	purple/yellow	purple/white	orange/black	orange/white
LiY with coloured stripes							
0.25	1.5	250	2.4	4502362S	4502372S	4502382S	4502392S

Conductor cross section in mm²	Outer diameter in mm approx.	m/Spool	Copper index kg/km	red/black	red/yellow	red/white	white/black
LiY with coloured stripes							
0.25	1.5	250	2.4	4502402S	4502412S	4502422S	4502432S

Conductor cross section in mm²	Outer diameter in mm approx.	m/Spool	Copper index kg/km	white/blue	white/red	grey/black
LiY with coloured stripes						
0.25	1.5	250	2.4	4502442S	4502462S	4502472S

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17

H05V-K



Application range

- Internal wiring of devices
- Protected laying in and on lights
- Signal systems in and on plaster in tubes

Product features

- Flame retardant according to IEC 60332-1-2
- Spool: d1=18mm; d2=200 mm; b=85 mm

Design

- Fine-wired core with bare copper strands
- Core insulation: Based on PVC

Technical data

Approvals
HD 21/VDE 0281

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Acc. to HD 516 S2, table 6 (a), at 10 °C - 30 °C cable temperature
4 x outer diameter (OD), if used conventionally; 2xOD at cautious bending

Rated voltage
U_0/U: 300/500 V

Test voltage
2000 V

Current rating
VDE 0298 Part 4
HD 516

Range of temperature
Static:
-30°C up to +80°C

Conductor cross section in mm²	Outer diameter in mm approx.	m/Coil	m/Spool	Copper index kg/km	green/yellow	black	blue	dark-blue	brown
H05V-K									
0.5	2.1	100		4.8	4510001	4510011	4510021	4510141	4510031
0.75	2.4	100		7.2	4510002	4510012	4510022	4510142	4510032
1	2.6	100		9.6	4510003	4510013	4510023	4510143	4510033
H05V-K									
0.5	2.1		250	4.8	4510001S	4510011S	4510021S	4510141S	4510031S
0.75	2.4		250	7.2	4510002S	4510012S	4510022S	4510142S	4510032S
1	2.6		250	9.6	4510003S	4510013S	4510023S	4510143S	4510033S

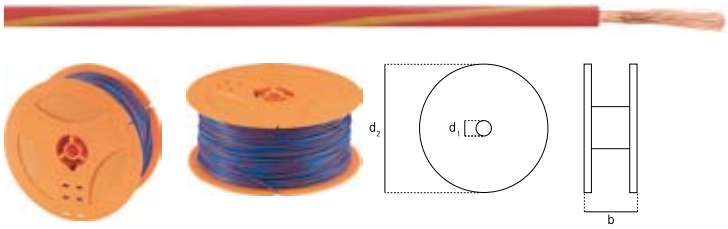
Conductor cross section in mm²	Outer diameter in mm approx.	m/Coil	m/Spool	Copper index kg/km	yellow	green	purple	Pink	orange
H05V-K									
0.5	2.1	100		4.8	4510111	4510121	4510071	4510081	
0.75	2.4	100		7.2	4510112	4510122	4510072	4510082	
1	2.6	100		9.6	4510113	4510123	4510073	4510083	
H05V-K									
0.5	2.1		250	4.8	4510111S	4510121S	4510071S	4510081S	
0.75	2.4		250	7.2	4510112S	4510122S	4510072S	4510082S	
1	2.6		250	9.6	4510113S	4510123S	4510073S	4510083S	4510093S

Conductor cross section in mm²	Outer diameter in mm approx.	m/Coil	m/Spool	Copper index kg/km	transparent	red	white	grey	ultramarine blue
H05V-K									
0.5	2.1	100		4.8	4510101	4510041	4510051	4510061	4510161
0.75	2.4	100		7.2	4510102	4510042	4510052	4510062	
1	2.6	100		9.6	4510103	4510043	4510053	4510063	4510163
H05V-K									
0.5	2.1		250	4.8	4510101S	4510041S	4510051S	4510061S	4510161S
0.75	2.4		250	7.2	4510102S	4510042S	4510052S	4510062S	4510162S
1	2.6		250	9.6	4510103S	4510043S	4510053S	4510063S	4510163S

Conductor cross section in mm²	Outer diameter in mm approx.	m/Coil	Copper index kg/km	dark-blue/ white (ring goods only)
H05V-K				
0.5	2.1	100	4.8	4510921
0.75	2.4	100	7.2	4510922
1	2.6	100	9.6	4510923

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17

X05V-K with coloured stripes



Application range

- Internal wiring of devices
- Protected laying in and on lights
- Signal systems in and on plaster in tubes

Design

- Fine-wired core with bare copper strands
- Core insulation: Based on PVC
- Labeled with coloured stripes

Product features

- Flame retardant according to IEC 60332-1-2
- Spool: d1=18mm; d2=200 mm; b=85 mm

Technical data

Based on
HD 21/VDE 0281

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
4 x outer diameter (OD) at usage defined for H05V-K; 2xOD at cautious bending

Rated voltage
U_0/U: 300/500 V

Test voltage
2000 V

Current rating
VDE 0298 Part 4
HD 516

Range of temperature
Static:
-30°C up to +80°C

Conductor cross section in mm²	Outer diameter in mm approx.	m/Spool	Copper index kg/km	dark-blue/ white (ring goods only)	black/green	black/red	black/white
X05V-K with coloured stripes							
0.5	2.1	250	4.8	4512921S	4512201S	4512211S	4512221S
0.75	2.4	250	7.2	4512922S	4512202S	4512212S	4512222S
1	2.6	250	9.6	4512923S	4512203S	4512213S	4512223S

Conductor cross section in mm²	Outer diameter in mm approx.	m/Spool	Copper index kg/km	blue/black	blue/green	blue/red	blue/white
X05V-K with coloured stripes							
0.5	2.1	250	4.8	4512231S	4512241S	4512251S	4512261S
0.75	2.4	250	7.2	4512232S	4512242S	4512252S	4512262S
1	2.6	250	9.6	4512233S	4512243S	4512253S	4512263S

Conductor cross section in mm²	Outer diameter in mm approx.	m/Spool	Copper index kg/km	brown/black	brown/green	brown/white	yellow/black
X05V-K with coloured stripes							
0.5	2.1	250	4.8	4512271S	4512281S	4512291S	4512301S
0.75	2.4	250	7.2	4512272S	4512282S	4512292S	4512302S
1	2.6	250	9.6	4512273S	4512283S	4512293S	4512303S

Conductor cross section in mm²	Outer diameter in mm approx.	m/Spool	Copper index kg/km	yellow/red	yellow/white	green/black	green/white
X05V-K with coloured stripes							
0.5	2.1	250	4.8	4512311S	4512321S	4512331S	4512341S
0.75	2.4	250	7.2	4512312S	4512322S	4512332S	4512342S
1	2.6	250	9.6	4512313S	4512323S	4512333S	4512343S

Conductor cross section in mm²	Outer diameter in mm approx.	m/Spool	Copper index kg/km	purple/black	purple/yellow	purple/white	orange/black
X05V-K with coloured stripes							
0.5	2.1	250	4.8	4512351S	4512361S	4512371S	4512381S
0.75	2.4	250	7.2	4512352S	4512362S	4512372S	4512382S
1	2.6	250	9.6	4512353S	4512363S	4512373S	4512383S

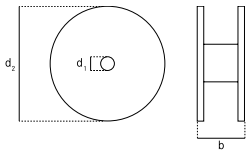
Conductor cross section in mm²	Outer diameter in mm approx.	m/Spool	Copper index kg/km	orange/white	red/black	red/yellow	red/white
X05V-K with coloured stripes							
0.5	2.1	250	4.8	4512391S	4512401S	4512411S	4512421S
0.75	2.4	250	7.2	4512392S	4512402S	4512412S	4512422S
1	2.6	250	9.6	4512393S	4512403S	4512413S	4512423S

Conductor cross section in mm²	Outer diameter in mm approx.	m/Spool	Copper index kg/km	white/black	white/blue	white/brown	white/red
X05V-K with coloured stripes							
0.5	2.1	250	4.8	4512431S	4512441S	4512451S	4512461S
0.75	2.4	250	7.2	4512432S	4512442S	4512452S	4512462S
1	2.6	250	9.6	4512433S	4512443S	4512453S	4512463S

Conductor cross section in mm²	Outer diameter in mm approx.	m/Spool	Copper index kg/km	grey/black
X05V-K with coloured stripes				
0.5	2.1	250	4.8	4512471S
0.75	2.4	250	7.2	4512472S
1	2.6	250	9.6	4512473S

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17

H07V-K



Technical data

Approvals
HD 21/VDE 0281

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Acc. to HD 516 S2, table 6 (a), at 10 °C - 30 °C cable temperature
OD≤8mm: 4xOD*/2xOD**; 8<OD≤12mm: 5xOD*/3xOD**; OD>12mm: 6xOD*/4xOD**

Rated voltage
U_0/U: 450/750 V

Test voltage
2500 V

Current rating
VDE 0298 Part 4
HD 516

Range of temperature
Static:
-30°C up to +80°C

Application range

- Laying in tubes, exposed and buried in plaster and in closed installation ducts
- For direct laying on racks, troughs and tubes only as equipotential binding conductor

Product features

- Flame retardant according to IEC 60332-1-2
- Spool: d1=18mm; d2=200 mm; b=85 mm

Design

- Fine-wired core with bare copper strands
- Core insulation: Based on PVC

Conductor cross section in mm²	Outer diameter in mm approx.	m/Coil	m/Spool	Copper index kg/km	green/yellow	black	blue	dark-blue	brown
H07V-K									
1.5	3.0		150	14.4	4520001S	4520011S	4520021S	4520141S	4520031S
2.5	3.7		100	24.0	4520002S	4520012S	4520022S	4520142S	4520032S
1.5	3.0	100		14.4	4520001	4520011	4520021	4520141	4520031
2.5	3.7	100		24.0	4520002	4520012	4520022	4520142	4520032
4	4.3	100		38.0	4520003	4520013	4520023	4520143	4520033
6	4.9	100		58.0	4520004	4520014	4520024	4520144	4520034
10	6.5	100		96.0	4520005	4520015	4520025	4520145	4520035
16	8.0	100		153.6	4520006	4520016	4520026	4520146	4520036
25	9.8	100		240.0	4521001	4521011	4521021	4521141	4521031
35	11.0	50		336.0	4521002	4521012	4521022	4521142	4521032
50	13.0	50		480.0	4521003	4521013	4521023		4521033
70	15.5	50		672.0	4521004	4521014	4521024		4521034
95	17.0			912.0	4521005	4521015	4521025		
120	19.7			1,152.0	4521006	4521016	4521026		
150	21.3			1,440.0	4521007	4521017			
185	23.5			1,776.0	4521008	4521018	4521028		
240	27.4			2,304.0	4521009	4521019			

Conductor cross section in mm²	Outer diameter in mm approx.	m/Coil	m/Spool	Copper index kg/km	yellow	green	purple	Pink	orange
H07V-K									
1.5	3.0		150	14.4	4520111S	4520121S	4520071S		
2.5	3.7		100	24.0	4520112S	4520122S			
1.5	3.0	100		14.4	4520111	4520121	4520071	4520081	
2.5	3.7	100		24.0	4520112	4520122	4520072	4520082	
4	4.3	100		38.0	4520113	4520123	4520073		
6	4.9	100		58.0	4520114	4520124	4520074		4520094
10	6.5	100		96.0		4520125	4520075		4520095
16	8.0	100		153.6		4520126	4520076		4520096
25	9.8	100		240.0		4521121			4521091
35	11.0	50		336.0		4521122			4521092
50	13.0	50		480.0					4521093

Conductor cross section in mm²	Outer diameter in mm approx.	m/Coil	m/Spool	Copper index kg/km	red	white	grey	ultramarine blue
H07V-K								
1.5	3.0		150	14.4	4520041S	4520051S	4520061S	
2.5	3.7		100	24.0	4520042S	4520052S	4520062S	
1.5	3.0	100		14.4	4520041	4520051	4520061	4520161
2.5	3.7	100		24.0	4520042	4520052	4520062	4520162
4	4.3	100		38.0	4520043	4520053	4520063	4520163
6	4.9	100		58.0	4520044	4520054	4520064	4520164
10	6.5	100		96.0	4520045	4520055	4520065	4520165
16	8.0	100		153.6	4520046	4520056	4520066	4520166
25	9.8	100		240.0	4521041	4521051	4521061	
35	11.0	50		336.0	4521042		4521062	
50	13.0	50		480.0	4521043		4521063	
70	15.5	50		672.0	4521044			
120	19.7			1,152.0	4521046			4521166

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17

Comparable products

- Multi-Standard SC 2.1 see page 203
- Multi-Standard SC 2.2 see page 206

Accessories

- Mobile crimp tool crimping pliers see page 937
- DIN-assorted boxes conductor end sleeves see page 915
- PWE 8.87 crimping pliers see page 920
- FLEXIMARK® Collar Snap-on see page 854

X07V-K with coloured stripes

Application range

- Laying in tubes, exposed and buried in plaster and in closed installation ducts
- For direct laying on racks, troughs and tubes only as equipotential binding conductor

Product features

- Flame retardant according to IEC 60332-1-2
- Spool: d1=18mm; d2=200 mm; b=85 mm

Design

- Fine-wired core with bare copper strands
- Core insulation: Based on PVC
- Labeled with coloured stripes

Technical data

Based on
HD 21/VDE 0281

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
4 x outer diameter (OD) at usage defined for H07V-K; 2xOD at cautious bending

Rated voltage
U_0/U: 450/750 V

Test voltage
2500 V

Current rating
VDE 0298 Part 4
HD 516

Range of temperature
Static:
-30°C up to +80°C

Conductor cross section in mm²	Outer diameter in mm approx.	m/Spool	Copper index kg/km	dark-blue/ white (ring goods only)	black/green	black/red	black/white	blue/black	blue/green	blue/red
X07V-K with coloured stripes										
1.5	3.0	150	14.4	4522921S	4522201S	4522211S	4522221S	4522231S	4522241S	4522251S
2.5	3.7	100	24.0	4522922S		4522212S	4522222S	4522232S	4522242S	4522252S

Conductor cross section in mm²	Outer diameter in mm approx.	m/Spool	Copper index kg/km	blue/white	brown/black	brown/green	brown/white	yellow/black	yellow/red	yellow/white
X07V-K with coloured stripes										
1.5	3.0	150	14.4	4522261S	4522271S	4522281S	4522291S	4522301S	4522311S	4522321S
2.5	3.7	100	24.0	4522262S	4522272S		4522292S	4522302S	4522312S	4522322S

Conductor cross section in mm²	Outer diameter in mm approx.	m/Spool	Copper index kg/km	green/black	green/white	purple/yellow	purple/white	orange/black	orange/white	red/black
X07V-K with coloured stripes										
1.5	3.0	150	14.4	4522331S	4522341S	4522361S	4522371S	4522381S	4522391S	4522401S
2.5	3.7	100	24.0	4522332S	4522342S	4522362S	4522372S		4522392S	4522402S

Conductor cross section in mm²	Outer diameter in mm approx.	m/Spool	Copper index kg/km	red/yellow	red/white	white/black	white/blue	white/brown	white/red	grey/black
X07V-K with coloured stripes										
1.5	3.0	150	14.4	4522411S	4522421S	4522431S	4522441S	4522451S	4522461S	4522471S
2.5	3.7	100	24.0	4522412S	4522422S	4522432S	4522442S	4522452S	4522462S	4522472S

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis‘ and ‚Metal index‘ see Appendix T17

Comparable products

- X05V-K with coloured stripes see page 196

Accessories

- FLEXIPRINT LF Single core marking see page 878
- DIN-assorted boxes conductor end sleeves see page 915
- EASY STRIP 2 stripping and cutting tool see page 906
- PWE 8.87 crimping pliers see page 920

S07V-K numbered

Simplified and safer assignment during wiring through numbered insulation

Info
- **Numbered insulation**

Benefits
- Safe assignment of several cores in the control cabinet
- Much easier work at wiring

Application range
- Control cabinet wiring
- Laying in tubes, exposed and buried in plaster and in closed installation ducts

Product features
- Flame retardant according to IEC 60332-1-2

Approvals (Norm references)
CE RoHS

Design
- Fine-wired core with bare copper strands
- Core insulation: Based on PVC
- Printed numbers, Digits 1 to 3

Technical data
Based on
HD 21/VDE 0281

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
OD≤8mm: 4xOD*/2xOD**; 8<OD≤12mm: 5xOD*/3xOD**

Rated voltage
U0/U: 450/750 VAC,
in protected and fixed installations:
U0/U: 600/1000 V

Test voltage
2500 V

Current rating
VDE 0298 Part 4
HD 516

Range of temperature
Static:
-30°C up to +80°C

Part number	Conductor cross section in mm²	Outer diameter in mm approx.	Colour	Number	Copper index kg/km	Weight kg/km approx.
S07V-K						
4800000	10	6.5	BK	1	96.0	120.0
4800001	10	6.5	BK	2	96.0	120.0
4800002	10	6.5	BK	3	96.0	120.0
4800003	10	6.5	BN	1	96.0	120.0
4800004	10	6.5	BN	2	96.0	120.0
4800005	10	6.5	BN	3	96.0	120.0
4800006	16	8.0	BK	1	154.0	180.0
4800007	16	8.0	BK	2	154.0	180.0
4800008	16	8.0	BK	3	154.0	180.0
4800009	16	8.0	BN	1	154.0	180.0
4800010	16	8.0	BN	2	154.0	180.0
4800011	16	8.0	BN	3	154.0	180.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg, otherwise drum
*at usage defined for H07V-K; **at cautious bending; "OD" = outer diameter

Comparable products
- H07V-K see page 197
- Multi-Standard SC 2.1 see page 203

Accessories
- DIN-assorted boxes conductor end sleeves see page 915
- EASY STRIP 2 stripping and cutting tool see page 906
- PWE 8.87 crimping pliers see page 920

Multi-Standard SC 1

UL-recognized (AWM) + CSA AWM I A/B + <HAR> H05V-K, tinned copper strands

Info

- **Formerly: Multi-Standard single core UL-CSA-HAR 1007/1569**

Multi-Standard SC 1

Benefits

- Usage on the most important global markets
- Reduced technical documentation expense
- Easier storage
- Increased economy in the production process

Application range

- Factory wiring
- Internal wiring of devices
- Control cabinet wiring

Product features

- Flame retardant according to IEC 60332-1-2
- Flame retardant according to UL VW1 / CSA FT1
- Oil resistant

Approvals (Norm references)

- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Fine-wired core of tinned copper strands
- Special PVC based core insulation

Technical data

Approvals
H05V-K: HD 21
UL: AWM Style 1007, 1569
CSA AWM I A/B

Specific insulation resistance
> 10 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
4 x outer diameter (OD), if used conventionally; 2xOD at cautious bending

Rated voltage
HAR / IEC: U_0/U: 300/500 V
UL (AWM): U: 300 V
CSA AWM I A/B: U: 300 V

Test voltage
2000 V

Range of temperature
Fixed installation:
HAR / IEC: -40°C up to +70°C
UL (AWM): -40°C up to +105°C

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	green/yellow	black	blue
Multi-Standard SC 1						
0.5	2.2	4.8	9.0	4180400	4180401	4180402
0.75	2.4	7.2	13.0	4180500	4180501	4180502
1	2.5	9.6	15.0	4180600	4180601	4180602

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	dark-blue	brown	yellow
Multi-Standard SC 1						
0.5	2.2	4.8	9.0	4180414	4180403	4180410
0.75	2.4	7.2	13.0	4180514	4180503	4180510
1	2.5	9.6	15.0	4180614	4180603	4180610

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	green	purple	orange
Multi-Standard SC 1						
0.5	2.2	4.8	9.0		4180407	4180409
0.75	2.4	7.2	13.0		4180507	
1	2.5	9.6	15.0	4180611	4180607	4180609

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	red	white	grey
Multi-Standard SC 1						
0.5	2.2	4.8	9.0	4180404	4180405	4180406
0.75	2.4	7.2	13.0	4180504	4180505	4180506
1	2.5	9.6	15.0	4180604	4180605	4180606

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17

Comparable products

- H05V-K see page 195
- Multi-Standard SC 2.1 see page 203

Accessories

- DIN-assorted boxes conductor end sleeves see page 915
- EASY STRIP 2 stripping and cutting tool see page 906
- PWE 8.87 crimping pliers see page 920
- FLEXIMARK® Collar Snap-on see page 854

Multi-Standard SC 2.1

USA: UL-listed (MTW), Canada: CSA (TEW), Europe: <HAR> H07V-K, tinned copper strands

Info

- **Formerly: Multi-Standard single core UL(MTW)-CSA-HAR 1015**
- **The all-rounder for many markets**

Multi-Standard SC 2.1

Benefits

- Usage on the most important global markets
- Reduced technical documentation expense
- Easier storage
- Increased economy in the production process

Application range

- Internal wiring of devices
- Control cabinet wiring
- Field wiring

Product features

- Flame retardant according to IEC 60332-1-2
- Flame retardant according to UL VW1 / CSA FT1
- Oil resistant

Approvals (Norm references)

- NFPA 79 Edition 2007 conform
- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Fine-wired core of tinned copper strands
- Special PVC based core insulation

Technical data

Approvals
H07V-K: HD 21
UL: AWM Style 1015
UL: MTW 1063
CSA: TEW

Specific insulation resistance
> 10 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
OD≤8mm: 4xOD*/2xOD**; 8<OD≤12mm: 5xOD*/3xOD**; OD>12mm: 6xOD*/4xOD**

Rated voltage
HAR / IEC: U_0/U: 450/750 V
UL (AWM): U: 600 V
UL (MTW): U: 600 V
CSA (TEW): U: 600 V

Test voltage
2500 V

Range of temperature
Fixed installation:
HAR / IEC: -40°C up to +70°C
UL (AWM): -40°C up to +105°C
UL (MTW): -40°C to +90°C
CSA (TEW): -40°C to +105°C

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	Box capacity in m	green/yellow	black
Multi-Standard SC 2.1						
0.5	2.5	4.8	10.0		4160100	4160101
0.75	2.7	7.2	13.9		4160200	4160201
1	2.9	9.6	17.0		4160300	4160301
1.5	3.2	14.4	20.0		4160400	4160401
2.5	3.7	24.0	31.0		4160500	4160501
4	4.3	38.4	49.0		4160600	4160601
6	4.8	58.0	68.0		4160700	4160701
10	6.9	96.0	116.0		4160800	4160801
16	8.9	154.0	185.0		4160900	4160901
25	10.1	240.0	260.0		4161000	4161001
35	11.4	336.0	360.0		4161100	4161101
50	14.0	480.0	535.0		4161200	4161201
70	15.8	672.0	735.0		4161300	4161301
95	18.1	912.0	930.0		4161400	4161401
120	19.4	1,152.0	1,160.0		4161500	4161501
Multi-Standard SC 2.1 in one-way cardboard						
0.5	2.5	4.8	32.2	3,000		4160101K
0.75	2.7	7.2	30.0	2,500	4160200K	4160201K
1	2.9	9.6	34.2	2,000	4160300K	4160301K
1.5	3.1	14.4	32.2	1,500	4160400K	4160401K
2.5	3.7	24.0	33.3	900	4160500K	4160501K
4	4.4	38.4	29.2	600	4160600K	4160601K
6	4.9	58.0	27.8	400	4160700K	4160701K

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	Box capacity in m	blue	dark-blue
Multi-Standard SC 2.1						
0.5	2.5	4.8	10.0		4160102	4160114
0.75	2.7	7.2	13.9		4160202	4160214
1	2.9	9.6	17.0		4160302	4160314
1.5	3.2	14.4	20.0		4160402	4160414
2.5	3.7	24.0	31.0		4160502	4160514
4	4.3	38.4	49.0		4160602	4160614
6	4.8	58.0	68.0		4160702	4160714
10	6.9	96.0	116.0		4160802	4160814
16	8.9	154.0	185.0		4160902	4160914
25	10.1	240.0	260.0		4161002	4161014
35	11.4	336.0	360.0		4161102	
50	14.0	480.0	535.0		4161202	
70	15.8	672.0	735.0		4161302	
95	18.1	912.0	930.0		4161402	
120	19.4	1,152.0	1,160.0		4161502	

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17

Power and control cables

LAPP GROUP

Control Cabinet Single Cores

Harmonized and approved

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	Box capacity in m	blue	dark-blue
Multi-Standard SC 2.1 in one-way cardboard						
0.5	2.5	4.8	32.2	3,000	4160102K	4160114K
0.75	2.7	7.2	30.0	2,500	4160202K	4160214K
1	2.9	9.6	34.2	2,000	4160302K	4160314K
1.5	3.1	14.4	32.2	1,500	4160402K	4160414K
2.5	3.7	24.0	33.3	900	4160502K	4160514K
4	4.4	38.4	29.2	600	4160602K	
6	4.9	58.0	27.8	400	4160702K	4160714K

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	Box capacity in m	brown	yellow
Multi-Standard SC 2.1						
0.5	2.5	4.8	10.0		4160103	4160110
0.75	2.7	7.2	13.9		4160203	4160210
1	2.9	9.6	17.0		4160303	4160310
1.5	3.2	14.4	20.0		4160403	4160410
2.5	3.7	24.0	31.0		4160503	4160510
4	4.3	38.4	49.0		4160603	4160610
6	4.8	58.0	68.0		4160703	4160710
10	6.9	96.0	116.0		4160803	4160810
16	8.9	154.0	185.0		4160903	4160910
25	10.1	240.0	260.0		4161003	4161010
35	11.4	336.0	360.0			4161110
50	14.0	480.0	535.0			4161210
70	15.8	672.0	735.0			4161310
Multi-Standard SC 2.1 in one-way cardboard						
0.5	2.5	4.8	32.2	3,000	4160103K	
0.75	2.7	7.2	30.0	2,500	4160203K	
1	2.9	9.6	34.2	2,000	4160303K	
1.5	3.1	14.4	32.2	1,500	4160403K	4160410K
2.5	3.7	24.0	33.3	900	4160503K	4160510K
4	4.4	38.4	29.2	600	4160603K	

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	Box capacity in m	green	purple
Multi-Standard SC 2.1						
0.5	2.5	4.8	10.0		4160111	4160107
0.75	2.7	7.2	13.9		4160211	4160207
1	2.9	9.6	17.0		4160311	4160307
1.5	3.2	14.4	20.0		4160411	4160407
2.5	3.7	24.0	31.0		4160511	4160507
4	4.3	38.4	49.0		4160611	4160607
6	4.8	58.0	68.0		4160711	4160707
10	6.9	96.0	116.0		4160811	
16	8.9	154.0	185.0		4160911	
25	10.1	240.0	260.0		4161011	
35	11.4	336.0	360.0		4161111	
50	14.0	480.0	535.0		4161211	
70	15.8	672.0	735.0		4161311	
Multi-Standard SC 2.1 in one-way cardboard						
0.5	2.5	4.8	32.2	3,000	4160111K	4160107K
0.75	2.7	7.2	30.0	2,500		4160207K
1	2.9	9.6	34.2	2,000	4160311K	4160307K
1.5	3.1	14.4	32.2	1,500		4160407K
2.5	3.7	24.0	33.3	900		4160507K

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	Box capacity in m	Pink	orange
Multi-Standard SC 2.1						
0.5	2.5	4.8	10.0		4160108	4160109
0.75	2.7	7.2	13.9		4160208	4160209
1	2.9	9.6	17.0		4160308	4160309
1.5	3.2	14.4	20.0		4160408	4160409
2.5	3.7	24.0	31.0			4160509
4	4.3	38.4	49.0			4160609
6	4.8	58.0	68.0			4160709
10	6.9	96.0	116.0			4160809
16	8.9	154.0	185.0			4160909
25	10.1	240.0	260.0			4161009
35	11.4	336.0	360.0			4161109
0.75	2.7	7.2	30.0	2,500		4160209K
1	2.9	9.6	34.2	2,000		4160309K
1.5	3.1	14.4	32.2	1,500		4160409K
2.5	3.7	24.0	33.3	900		4160509K
4	4.4	38.4	29.2	600		4160609K
6	4.9	58.0	27.8	400		4160709K

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	Box capacity in m	red	white
Multi-Standard SC 2.1						
0.5	2.5	4.8	10.0		4160104	4160105
0.75	2.7	7.2	13.9		4160204	4160205
1	2.9	9.6	17.0		4160304	4160305
1.5	3.2	14.4	20.0		4160404	4160405
2.5	3.7	24.0	31.0		4160504	4160505
4	4.3	38.4	49.0		4160604	4160605
6	4.8	58.0	68.0		4160704	4160705
10	6.9	96.0	116.0		4160804	4160805
16	8.9	154.0	185.0		4160904	4160905
25	10.1	240.0	260.0		4161004	4161005
35	11.4	336.0	360.0		4161104	4161105
120	19.4	1,152.0	1,160.0			4161505
Multi-Standard SC 2.1 in one-way cardboard						
0.5	2.5	4.8	32.2	3,000	4160104K	4160105K
0.75	2.7	7.2	30.0	2,500	4160204K	4160205K
1	2.9	9.6	34.2	2,000	4160304K	4160305K
1.5	3.1	14.4	32.2	1,500	4160404K	4160405K
2.5	3.7	24.0	33.3	900	4160504K	4160505K
4	4.4	38.4	29.2	600	4160604K	
6	4.9	58.0	27.8	400	4160704K	4160705K

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	Box capacity in m	grey	blue/white
Multi-Standard SC 2.1						
0.5	2.5	4.8	10.0		4160106	4160126
0.75	2.7	7.2	13.9		4160206	4160226
1	2.9	9.6	17.0		4160306	4160326
1.5	3.2	14.4	20.0		4160406	4160426
2.5	3.7	24.0	31.0		4160506	4160526
4	4.3	38.4	49.0		4160606	4160626
6	4.8	58.0	68.0		4160706	4160726
10	6.9	96.0	116.0		4160806	4160826
16	8.9	154.0	185.0		4160906	
25	10.1	240.0	260.0		4161006	
35	11.4	336.0	360.0		4161106	
70	15.8	672.0	735.0		4161306	
95	18.1	912.0	930.0		4161406	
Multi-Standard SC 2.1 in one-way cardboard						
0.5	2.5	4.8	32.2	3,000	4160106K	4160126K
1	2.9	9.6	34.2	2,000	4160306K	4160326K
1.5	3.1	14.4	32.2	1,500	4160406K	4160426K

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	Box capacity in m	white/blue
Multi-Standard SC 2.1					
0.5	2.5	4.8	10.0		4160144
0.75	2.7	7.2	13.9		4160244
1	2.9	9.6	17.0		4160344
1.5	3.2	14.4	20.0		4160444
2.5	3.7	24.0	31.0		4160544
4	4.3	38.4	49.0		4160644
6	4.8	58.0	68.0		4160744
10	6.9	96.0	116.0		4160844
16	8.9	154.0	185.0		4160944
Multi-Standard SC 2.1 in one-way cardboard					
0.5	2.5	4.8	32.2	3,000	4160144K
0.75	2.7	7.2	30.0	2,500	4160244K
1	2.9	9.6	34.2	2,000	4160344K
1.5	3.1	14.4	32.2	1,500	4160444K
2.5	3.7	24.0	33.3	900	4160544K

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Packaging size: Coil ≤ 30 kg, otherwise drum
Cross sections not harmonised: 0.5 sq.mm, 0.75 sq.mm, 1 sq.mm, 16 sq.mm, 25 sq.mm, 35 sq.mm
*at conventional usage, **at cautious bending; "OD" = outer diameter

Comparable products

- H07V-K see page 197
- Multi-Standard SC 2.2 see page 206

Accessories

- DIN-assorted boxes conductor end sleeves see page 915
- PWE 8.87 crimping pliers see page 920

Multi-Standard SC 2.2

UL-listed (MTW), CSA (TEW), <HAR> H07V2-K: max. +90°C, UL (AWM): Umax = 1 kV, tinned copper strands

Multi-Standard SC 2.2

Info

- **Formerly: Multi-Standard single core UL(MTW)-CSA-HAR 10269**
- **Higher temperature range H07V2-K**
- **Higher voltage range according to UL**

Benefits

- Usage on the most important global markets
- Reduced technical documentation expense
- Easier storage
- Increased economy in the production process

Application range

- Frequency converter power supply
- Internal wiring of devices
- Control cabinet wiring
- Field wiring

Product features

- Flame retardant according to IEC 60332-1-2
- Flame retardant according to UL VW1 / CSA FT1
- Oil resistant

Approvals (Norm references)

- NFPA 79 Edition 2007 conform
- Multi standard cables have conductor strands with nominal sizes in mm²**or** AWG/kcmil nominal sizes. The master size is mentioned in the table below, the equivalent size of the other system can be found in the catalogue appendix T16. For this related secondary size the conductor cross-section mostly works out greater than the specified nominal value.

Design

- Fine-wired core of tinned copper strands
- Special PVC based core insulation

Technical data

Approvals
H07V2-K: HD 21
UL: AWM Style 10269
UL: MTW 1063
CSA: TEW

Specific insulation resistance
> 10 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
OD≤8mm: 4xOD*/2xOD**; 8<OD≤12mm: 5xOD*/3xOD**; OD>12mm: 6xOD*/4xOD**

Rated voltage
HAR / IEC: U_0/U: 450/750 V
UL (AWM): U: 1000 V
UL (MTW): U: 600 V
CSA (TEW): U: 600 V

Test voltage
IEC: 2500 V AC
UL: 4000 V AC

Range of temperature
Fixed installation:
HAR / IEC: -40°C up to +90°C
UL (AWM): -40°Cup to +105°C
UL (MTW): -40°C to +90°C
CSA (TEW): -40°C to +105°C

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	green/yellow	black	blue
Multi-Standard SC 2.2						
0.5	2.5	4.8	10.0	4150100	4150101	4150102
0.75	2.7	7.2	14.0	4150200	4150201	4150202
1	2.9	9.6	16.0	4150300	4150301	4150302
1.5	3.1	14.4	20.0	4150400	4150401	4150402
2.5	3.7	24.0	37.0	4150500	4150501	4150502
4	4.4	38.4	45.0	4150600	4150601	4150602
6	4.9	58.0	63.0	4150700	4150701	4150702
10	6.8	96.0	120.0	4150800	4150801	4150802
16	8.9	154.0	185.0	4150900	4150901	4150902
25	10.1	240.0	260.0	4151000	4151001	4151002
35	11.4	336.0	360.0	4151100	4151101	4151102
50	14.0	480.0	535.0		4151201	
70	15.8	672.0	735.0		4151301	
95	18.1	912.0	930.0		4151401	
120	19.4	1,152.0	1,160.0	4151500		

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	dark-blue	brown	yellow
Multi-Standard SC 2.2						
0.5	2.5	4.8	10.0	4150114	4150103	
0.75	2.7	7.2	14.0	4150214	4150203	
1	2.9	9.6	16.0		4150303	
1.5	3.1	14.4	20.0	4150414	4150403	4150410
2.5	3.7	24.0	37.0	4150514	4150503	
4	4.4	38.4	45.0	4150614	4150603	4150610
6	4.9	58.0	63.0		4150703	
10	6.8	96.0	120.0		4150803	
25	10.1	240.0	260.0		4151003	
35	11.4	336.0	360.0		4151103	

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Packaging size: Coil ≤ 30 kg, otherwise drum
Cross sections not harmonised: 0.5 sq.mm, 0.75 sq.mm, 1 sq.mm, 16 sq.mm, 25 sq.mm, 35 sq.mm, 50 sq.mm, 70 sq.mm, 95 sq.mm, 120 sq.mm
*at conventional usage, **at cautious bending; "OD" = outer diameter

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	purple	orange	red
Multi-Standard SC 2.2						
0.5	2.5	4.8	10.0			4150104
0.75	2.7	7.2	14.0			4150204
1	2.9	9.6	16.0	4150307	4150309	4150304
1.5	3.1	14.4	20.0		4150409	4150404
2.5	3.7	24.0	37.0		4150509	4150504
4	4.4	38.4	45.0			4150604
6	4.9	58.0	63.0			4150704
10	6.8	96.0	120.0			4150804
16	8.9	154.0	185.0			4150904

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	white	grey	blue/white
Multi-Standard SC 2.2						
0.5	2.5	4.8	10.0	4150105	4150106	
0.75	2.7	7.2	14.0	4150205	4150206	
1	2.9	9.6	16.0	4150305	4150306	4150326
1.5	3.1	14.4	20.0	4150405	4150406	4150426
2.5	3.7	24.0	37.0	4150505	4150506	
4	4.4	38.4	45.0	4150605	4150606	
6	4.9	58.0	63.0	4150705	4150706	
10	6.8	96.0	120.0		4150806	
16	8.9	154.0	185.0		4150906	
35	11.4	336.0	360.0		4151106	

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	white/blue
1	2.9	9.6	16.0	4150344
1.5	3.1	14.4	20.0	4150444

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Packaging size: Coil ≤ 30 kg, otherwise drum
Cross sections not harmonised: 0.5 sq.mm, 0.75 sq.mm, 1 sq.mm, 16 sq.mm, 25 sq.mm, 35 sq.mm, 50 sq.mm, 70 sq.mm, 95 sq.mm, 120 sq.mm
*at conventional usage, **at cautious bending; "OD" = outer diameter

Comparable products

- Multi-Standard SC 2.1 see page 203

Accessories

- DIN-assorted boxes conductor end sleeves see page 915
- EASY STRIP 2 stripping and cutting tool see page 906
- PWE 8.87 crimping pliers see page 920
- FLEXIMARK® Collar Snap-on see page 854

H05Z-K, H07Z-K 90°C / X05Z-K, X07Z-K 110°C

Harmonised; Halogen-free for the protection of human life, environment and material assets

Info

- **Halogen-free**
- **Harmonised (HAR)**

H05Z-K, H07Z-K 90°C

Benefits

- The insulation material is halogen-free and free of other materials which could release corrosive gases in the event of fire
- Protection of human life and the environment caused by the formation of acid in case of fire

Application range

- For wiring of lamps, devices, switchgear cabinets and distribution boxes
- For installation in tubes, on, in and under plaster as well as in closed installation ducts
- In buildings with a high concentration of people or valuables
- For use in dry rooms

Product features

H05Z-K, H07Z-K 90°C

- Flame retardant according to IEC 60332-2-2 (H05Z-K)

X05Z-K, X07Z-K 110°C

- Flame retardant according to IEC 60332-1-2 (H07Z-K)
- Low corrosivity of the gases in case of fire
- Low smokes

X05Z-K, X07Z-K 110°C

- Flame retardant according to IEC 60332-1-2
- Low corrosivity of the gases in case of fire
- Low smokes

Approvals (Norm references)

CE HAR RoHS

X05Z-K, X07Z-K 110°C

- 110°C version isn't harmonised (no HAR sign)

Design

- Fine-wired core with bare copper strands
- Core insulation: Halogen-free

Technical data

Approvals
H05Z-K, H07Z-K 90°C
H05Z-K & H07Z-K: HD 22.9

Based on
X05Z-K, X07Z-K 110°C
H05Z-K & H07Z-K: HD 22.9

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
H05Z-K, H07Z-K 90°C
Acc. to HD 516 S2, table 6 (a), at 10 °C - 30 °C cable temperature
OD≤8mm: 4xOD*/2xOD**; 8<OD≤12mm: 5xOD*/3xOD**; OD>12mm: 6xOD*/4xOD**
X05Z-K, X07Z-K 110°C
OD≤8mm: 4xOD*/2xOD**; 8<OD≤12mm: 5xOD*/3xOD**; OD>12mm: 6xOD*/4xOD**

Rated voltage
H05Z-K, H07Z-K 90°C
H05Z-K: U_0/U: 300/500 V
H07Z-K: U_0/U: 450/750 V
X05Z-K, X07Z-K 110°C
X05Z-K: U0/U: 300/500 V
X07Z-K: U0/U: 450/750 V

Test voltage
H05Z-K, H07Z-K 90°C
H05Z-K: 2000 VAC
H07Z-K: 2500 VAC
X05Z-K, X07Z-K 110°C
X05Z-K: 2000 VAC
X07Z-K: 2500 VAC

Current rating
VDE 0298-4
HD 516

Range of temperature
H05Z-K, H07Z-K 90°C
Fixed installation: -15°C up to +90°C
X05Z-K, X07Z-K 110°C
Fixed installation: -40°C up to +110°C

H05Z-K, H07Z-K 90°C

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	green/yellow	black	blue	dark-blue
H05Z-K 90°C							
0.5	2.1	4.8	9.0	4725001	4725011	4725021	4725141
0.75	2.3	7.2	14.0	4725002	4725012	4725022	4725142
1	2.5	9.6	14.0	4725003	4725013	4725023	4725143
H07Z-K 90°C							
1.5	3.2	14.4	20.0	4726001	4726011	4726021	4726141
2.5	3.7	24.0	32.0	4726002	4726012	4726022	4726142
4	4.2	38.4	45.0	4726003	4726013	4726023	4726143
6	4.9	58.0	65.0	4726004	4726014	4726024	4726144
10	6.2	96.0	110.0	4726005	4726015	4726025	4726145
16	7.5	154.0	170.0	4726006	4726016	4726026	4726146
25	9.3	240.0	290.0	4726007	4726017	4726027	4726147
35	10.5	336.0	380.0	4726008	4726018	4726028	4726148
50	12.6	480.0	530.0	4726009	4726019	4726029	4726149
70	14.5	672.0	750.0	4727001	4727011	4727021	4727141
95	16.9	912.0	1,000.0	4727002	4727012	4727022	4727142
H05Z-K 90°C in one-way cardboards							
0.5	2.1	4.8	9.0	4725001K	4725011K	4725021K	4725141K
0.75	2.3	7.2	14.0	4725002K	4725012K	4725022K	4725142K
1	2.5	9.6	14.0	4725003K	4725013K	4725023K	4725143K
H07Z-K 90°C in one-way cardboards							
1.5	3.2	14.4	20.0	4726001K	4726011K	4726021K	4726141K
2.5	3.7	24.0	32.0	4726002K	4726012K	4726022K	4726142K
4	4.2	38.4	45.0	4726003K	4726013K	4726023K	4726143K
6	4.9	58.0	65.0		4726014K	4726024K	4726144K

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Packaging size: Coil ≤ 30 kg, otherwise drum
*at conventional usage, **at cautious bending; "OD" = outer diameter

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	brown	yellow	green	purple
H05Z-K 90°C							
0.5	2.1	4.8	9.0	4725031	4725111	4725121	4725071
0.75	2.3	7.2	14.0	4725032	4725112	4725122	4725072
1	2.5	9.6	14.0	4725033	4725113	4725123	4725073
H07Z-K 90°C							
1.5	3.2	14.4	20.0	4726031	4726111	4726121	4726071
2.5	3.7	24.0	32.0	4726032	4726112	4726122	4726072
4	4.2	38.4	45.0	4726033	4726113	4726123	4726073
6	4.9	58.0	65.0	4726034	4726114	4726124	4726074
10	6.2	96.0	110.0	4726035	4726115	4726125	4726075
16	7.5	154.0	170.0	4726036	4726116	4726126	4726076
25	9.3	240.0	290.0	4726037	4726117	4726127	4726077
35	10.5	336.0	380.0	4726038	4726118	4726128	4726078
50	12.6	480.0	530.0	4726039	4726119	4726129	4726079
70	14.5	672.0	750.0	4727031	4727111	4727121	4727071
95	16.9	912.0	1,000.0	4727032	4727112	4727122	4727072
H05Z-K 90°C in one-way cardboards							
0.5	2.1	4.8	9.0		4725111K	4725121K	4725071K
0.75	2.3	7.2	14.0	4725032K	4725112K	4725122K	4725072K
1	2.5	9.6	14.0	4725033K	4725113K	4725123K	4725073K
H07Z-K 90°C in one-way cardboards							
1.5	3.2	14.4	20.0	4726031K	4726111K	4726121K	4726071K
2.5	3.7	24.0	32.0	4726032K	4726112K	4726122K	4726072K
4	4.2	38.4	45.0	4726033K	4726113K	4726123K	4726073K
6	4.9	58.0	65.0	4726034K	4726114K	4726124K	4726074K

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	Pink	orange	red	white
H05Z-K 90°C							
0.5	2.1	4.8	9.0	4725081	4725091	4725041	4725051
0.75	2.3	7.2	14.0	4725082	4725092	4725042	4725052
1	2.5	9.6	14.0	4725083	4725093	4725043	4725053
H07Z-K 90°C							
1.5	3.2	14.4	20.0	4726081	4726091	4726041	4726051
2.5	3.7	24.0	32.0	4726082	4726092	4726042	4726052
4	4.2	38.4	45.0	4726083	4726093	4726043	4726053
6	4.9	58.0	65.0	4726084	4726094	4726044	4726054
10	6.2	96.0	110.0	4726085	4726095	4726045	4726055
16	7.5	154.0	170.0	4726086	4726096	4726046	4726056
25	9.3	240.0	290.0	4726087	4726097	4726047	4726057
35	10.5	336.0	380.0	4726088	4726098	4726048	4726058
50	12.6	480.0	530.0	4726089	4726099	4726049	4726059
70	14.5	672.0	750.0	4727081	4727091	4727041	4727051
95	16.9	912.0	1,000.0	4727082	4727092	4727042	4727052
H05Z-K 90°C in one-way cardboards							
0.5	2.1	4.8	9.0	4725081K	4725091K	4725041K	4725051K
0.75	2.3	7.2	14.0	4725082K	4725092K	4725042K	4725052K
1	2.5	9.6	14.0	4725083K		4725043K	4725053K
H07Z-K 90°C in one-way cardboards							
1.5	3.2	14.4	20.0	4726081K	4726091K	4726041K	4726051K
2.5	3.7	24.0	32.0	4726082K	4726092K	4726042K	4726052K
4	4.2	38.4	45.0	4726083K	4726093K	4726043K	4726053K
6	4.9	58.0	65.0	4726084K	4726094K	4726044K	4726054K

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	grey
H05Z-K 90°C				
0.5	2.1	4.8	9.0	4725061
0.75	2.3	7.2	14.0	4725062
1	2.5	9.6	14.0	4725063
H07Z-K 90°C				
1.5	3.2	14.4	20.0	4726061
2.5	3.7	24.0	32.0	4726062
4	4.2	38.4	45.0	4726063
6	4.9	58.0	65.0	4726064
10	6.2	96.0	110.0	4726065
16	7.5	154.0	170.0	4726066
25	9.3	240.0	290.0	4726067
35	10.5	336.0	380.0	4726068
50	12.6	480.0	530.0	4726069
70	14.5	672.0	750.0	4727061
95	16.9	912.0	1,000.0	4727062
H05Z-K 90°C in one-way cardboards				
0.5	2.1	4.8	9.0	4725061K
0.75	2.3	7.2	14.0	4725062K
1	2.5	9.6	14.0	4725063K
H07Z-K 90°C in one-way cardboards				
1.5	3.2	14.4	20.0	4726061K
2.5	3.7	24.0	32.0	4726062K
4	4.2	38.4	45.0	4726063K
6	4.9	58.0	65.0	4726064K

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Packaging size: Coil ≤ 30 kg, otherwise drum
*at conventional usage, **at cautious bending; "OD" = outer diameter

Power and control cables

LAPP GROUP

Control Cabinet Single Cores

halogen-free

X05Z-K, X07Z-K 110°C

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	green/yellow	black	blue	dark-blue
X05Z-K 110°C							
0.5	1.9	4.8	9.0	4710001	4710011	4710021	4710141
0.75	2.4	7.2	14.0	4710002	4710012	4710022	4710142
1	2.6	9.6	14.0	4710003	4710013	4710023	4710143
X07Z-K 110°C							
1.5	3.5	14.4	20.0	4720001	4720011	4720021	4720141
2.5	3.8	24.0	30.0	4720002	4720012	4720022	4720142
4	4.4	38.4	47.0	4720003	4720013	4720023	4720143
6	5.4	58.0	65.0	4720004	4720014	4720024	4720144
10	6.5	96.0	110.0	4720005	4720015	4720025	4720145
16	8.4	154.0	170.0	4720006	4720016	4720026	4720146
25	10.2	240.0	290.0	4720007	4720017	4720027	
35	11.6	336.0	400.0	4720008	4720018	4720028	
50	13.7	480.0	550.0	4720009	4720019		
70	15.8	672.0	770.0	4721001	4721011		
95	18.2	912.0	1,160.0		4721012		

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	brown	yellow	green	purple
X05Z-K 110°C							
0.5	1.9	4.8	9.0	4710031	4710111	4710121	4710071
0.75	2.4	7.2	14.0	4710032	4710112	4710122	4710072
1	2.6	9.6	14.0	4710033	4710113	4710123	4710073
X07Z-K 110°C							
1.5	3.5	14.4	20.0	4720031	4720111	4720121	4720071
2.5	3.8	24.0	30.0	4720032	4720112	4720122	4720072
4	4.4	38.4	47.0	4720033		4720123	4720073
6	5.4	58.0	65.0	4720034	4720114	4720124	
10	6.5	96.0	110.0	4720035			
16	8.4	154.0	170.0	4720036			

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	Pink	orange	red	white
X05Z-K 110°C							
0.5	1.9	4.8	9.0	4710081	4710091	4710041	4710051
0.75	2.4	7.2	14.0	4710082	4710092	4710042	4710052
1	2.6	9.6	14.0	4710083	4710093	4710043	4710053
X07Z-K 110°C							
1.5	3.5	14.4	20.0	4720081	4720091	4720041	4720051
2.5	3.8	24.0	30.0	4720082	4720092	4720042	4720052
4	4.4	38.4	47.0		4720093	4720043	4720053
6	5.4	58.0	65.0	4720084	4720094	4720044	4720054
10	6.5	96.0	110.0	4720085	4720095	4720045	4720055
16	8.4	154.0	170.0	4720086		4720046	4720056
25	10.2	240.0	290.0	4720087		4720047	
35	11.6	336.0	400.0	4720088		4720048	
50	13.7	480.0	550.0	4720089			
70	15.8	672.0	770.0	4721081			
95	18.2	912.0	1,160.0	4721082			

Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.	grey
X05Z-K 110°C				
0.5	1.9	4.8	9.0	4710061
0.75	2.4	7.2	14.0	4710062
1	2.6	9.6	14.0	4710063
X07Z-K 110°C				
1.5	3.5	14.4	20.0	4720061
2.5	3.8	24.0	30.0	4720062
4	4.4	38.4	47.0	4720063
6	5.4	58.0	65.0	4720064
10	6.5	96.0	110.0	4720065
16	8.4	154.0	170.0	4720066

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Packaging size: Coil ≤ 30 kg, otherwise drum
*at conventional usage, **at cautious bending; "OD" = outer diameter

LiYCY

Shielded, PVC-based wiring single core

Li2YCY

Low-capacitance, shielded wiring single core with PVC-based outer sheath

Li5YC5Y

Single core, silvered copper braid + screen, advanced chemical and temperature resistance (PTFE)

Benefits

- Prevention of electromagnetic interferences on other components

Application range

- Wiring of measuring instruments, switch cabinets, electrical components and transmitter and receiver units
- In EMC critical environments

Product features

LiYCY

- Flame retardant according to IEC 60332-1-2

Li2YCY

- Flame retardant according to IEC 60332-1-2
- Low cable capacitance, short signal transmission time

Li5YC5Y

- Flame retardant according to IEC 60332-1-2
- High chemical resistance
- High temperature resistance

Approvals (Norm references)

RoHS

Design

LiYCY

- Strands of tinned copper wires
- Core insulation: Based on PVC
- Tinned copper braid
- PVC based outer sheath, transparent

Li2YCY

- Strands of tinned copper wires
- Core insulation: Polyethylene (PE)
- Wrapped screening made from tinned copper wire
- PVC based outer sheath, transparent

Li5YC5Y

- Strands of silver plated copper wires
- PTFE core insulation
- Screen braiding made from silver-plated, soft-annealed copper wire
- PTFE outer sheath, white

Technical data

Peak working voltage
LiYCY
350 V (not for power purpose)
Li2YCY
500 V (not for power purpose)
Li5YC5Y
600 V (not for power purpose)

Based on
LiYCY
VDE 0812
Li2YCY
VDE 0812
Li5YC5Y
VDE 0881

Specific insulation resistance
LiYCY
10 GOhm x cm
Li2YCY
2 GOhm x cm
Li5YC5Y
20 GOhm x cm

Test voltage
LiYCY
800 V
Li2YCY
1200 V
Li5YC5Y
1200 V

Range of temperature
LiYCY
Occasional flexing: -5°C up to +70°C
Static:
-30°C up to +80°C
Li2YCY
Occasional flexing: -5°C up to +70°C
Static:
-30°C up to +80°C
Li5YC5Y
Fixed installation: -190°C up to +260°C

Part number	Conductor cross-section mm²	Number of wires x wire-Ø in mm	Outer diameter in mm approx.	Conductor resistance approx. Ohm/km	Capacity pf/m +/- 10 %	Copper index kg/km	Weight kg/km approx.
LiYCY							
4530101	0.14	18 x 0.10	2.6	142.0	220	1.3	13.0
4530102	0.25	14 x 0.15	3.1	82.0	240	2.4	18.0
4530103	0.5	16 x 0.20	3.4	40.1	255	4.8	20.0
4530104	0.75	24 x 0.20	3.7	26.7	280	7.2	31.0
4530105	1	32 x 0.20	4.5	20.0	295	9.6	35.9
4530106	1.5	30 x 0.25	4.9	13.7	320	14.4	39.0
4530107	2.5	50 x 0.25	5.8	8.2	355	24.0	55.3
Li2YCY							
4550115	0.14	18 x 0.10	2.1	142.0	160	1.3	10.0
4550116	0.25	14 x 0.15	2.3	82.0	180	2.4	15.0
4550117	0.5	16 x 0.20	2.9	40.1	200	4.8	19.5
4550118	0.75	24 x 0.20	3.1	26.7	215	7.2	28.0
4550119	1	32 x 0.20	3.3	20.0	245	9.6	30.0
Li5YC5Y							
4550120	24 / AWG 24 (7)	7 x 0.20	2.3	89.2	150	99.2	11.0
4550114	20 / AWG 20 (19)	19 x 0.20	2.7	34.5	230	6.1	22.2

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil

ÖLFLEX® STATIC CY black

Closely shielded, doubly insulated PVC single conductor for fix laying

Info
- **Flexible alternative to NYY**
- **EMC optimised**

Benefits
- Low-cost, double-insulated single core for fixed installation indoors and outdoors
- High degree of the screens coverage offers very good EMC performance
- No additional protection such as a closed cable duct or protective conduit is required in free installation

Application range
- Especially suitable for power circuits as external connection or for internal wiring of electric and electronic equipment
- In dry and damp rooms at low mechanical stress
- Can be used in the photovoltaic sector indoors as flexible connection to the frequency converter
- Outdoor use is possible under consideration of the temperature range

Approvals (Norm references)
CE RoHS

Design
- Fine-wired core with bare copper strands
- Core insulation: Based on PVC
- Nonwoven wrapping
- Tinned copper braid
- PVC based outer sheath

Technical data
Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Fixed installation: 6 x outer diameter
Flexible use: 12.5 x outer diameter

Rated voltage
U_0/U: 600/1000 V

Test voltage
Core/screen: 2000 V

Range of temperature
Static:
-30°C up to +80°C

Part number	Conductor cross section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
ÖLFLEX® STATIC CY black				
4600023	16	10.3	177.0	275
4600024	25	12.7	267.0	396
4600025	35	14.3	384.0	542
4600026	50	16.9	537.0	752
4600027	70	18.7	763.0	1,004
4600028	95	21.7	1,012.0	1,368
4600029	120	24.7	1,264.0	1,719

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- ÖLFLEX® FD 90 see page 123
- ÖLFLEX® FD 90 CY see page 124

Accessories

- KS 20 cable shears see page 904

NYM-J

Standard cable for plaster, brickwork and unmoved concrete

Info

- **Standard cable for plaster and brickwork**

Application range

- For laying in, on and under the plaster
- In brickwork and concrete, except direct embedding in vibrated or compressed concrete
- In dry, wet and damp interiors
- Also suitable for outdoor use if protected against direct sunlight

Product features

- Flame retardant according to IEC 60332-1-2

Approvals (Norm references)

CE, VDE, RoHS

Design

- Strands of bare copper wires
- Core insulation: Based on PVC
- Filling compound over the core assembly
- PVC based outer sheath

Technical data

Core identification code
Up to 5 cores: according to VDE 0293-308 (appendix T9)
Starting at 6 cores: Black with white numbers

Approvals
VDE 0250 Part 204

Conductor stranding
Single or multi-wire

Minimum bending radius
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
For installation: +5°C up to +60°C
Fixed installation: -40°C up to +70°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
1600008	1 G 2.5	6.0	24.0	60
1600009	1 G 4	6.7	38.0	85
1600010	1 G 6	7.2	58.0	105
1600011	1 G 10	8.6	96.0	160
1600012	1 G 16	9.6	154.0	220
16000003	3 G 1.5	8.4	43.0	120
16000013	4 G 1.5	9.2	58.0	150
16000023	5 G 1.5	9.9	72.0	175
1600003	7 G 1.5	11.6	101.0	235
16000213	3 G 2.5	9.6	72.0	170
16000053	4 G 2.5	10.6	96.0	210
16000063	5 G 2.5	11.5	120.0	290
1600071	7 G 2.5	13.7	168.0	380
16010223	3 G 4	11.3	115.0	250
16000313	4 G 4	12.7	154.0	315
16000513	5 G 4	14.0	192.0	370
16010233	3 G 6	12.8	173.0	335
16000323	4 G 6	13.8	230.0	410
16000523	5 G 6	15.5	288.0	500
16000333	4 G 10	18.0	384.0	680
16000533	5 G 10	19.5	480.0	810
16000543	5 G 16	23.0	768.0	1,200
16000353	4 G 25	26.0	960.0	1,500
16000553	5 G 25	28.0	1,200.0	1,800

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- NYY-J, NYY-O see page 215
- NHXMH see page 214

Accessories

- STAR STRIP stripping tool see page 908
- KS 20 cable shears see page 904

NHXMH

Halogen-free; for plaster, brickwork, unmoved concrete; at high concentration of life and material assets

Info

- **Halogen-free alternative to the PVC installation cable NYM**

Benefits

- Due to halogen-free materials, the formation of toxic dioxins and furanes is considerably reduced in the event of fire
- Prevents expensive damage to buildings and equipment caused by acid fumes produced during combustion

Application range

- For laying in, on and under the plaster
- In brickwork and concrete, except direct embedding in vibrated or compressed concrete
- In dry, wet and damp interiors
- For buildings or industrial plants with a high concentration of persons or valuable properties

Product features

- Flame retardant according to IEC 60332-1-2
- No flame propagation acc. to IEC 60332-3-24

Approvals (Norm references)

CE, VDE, RoHS

Design

- Strands of bare copper wires
- Core insulation: Polyethylene (PE)
- Filling compound over the core assembly
- Outer sheath of halogen-free polymer compound

Technical data

Core identification code
Up to 5 cores: according to VDE 0293-308 (appendix T9)
Starting at 6 cores: Black with white numbers

Based on
VDE 0250 Part 214

Conductor stranding
Single or multi-wire

Minimum bending radius
Fixed installation: 4 x cable diameter

Rated voltage
U_0/U: 300/500 V

Test voltage
2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Maximum conductor temperature: +70°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
NHXMH				
16020003	3 G 1.5	8.5	43.2	120
16020013	4 G 1.5	9.3	58.0	145
16020023	5 G 1.5	10.0	72.0	170
1602003	7 G 1.5	10.8	101.0	210
16020103	3 G 2.5	9.4	72.0	160
16020123	5 G 2.5	11.0	120.0	230

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- NYM-J see page 213
- ÖLFLEX® CLASSIC 130 H see page 55

Accessories

- STAR STRIP stripping tool see page 908

NYY-J, NYY-O

Fixed, buried PVC cable with different application areas

Application range

- As a fixed installation power and control cable for the following applications:
- For indoor- and outdoor use
- Direct burial
- In concrete
- In water

Product features

- Flame retardant according to IEC 60332-1-2
- Power rating acc. to HD 603 part 3G for outdoor laying and as per VDE 0298 part 4 (see also appendix T12) for laying in and on buildings

Approvals (Norm references)

CE, VDE, RoHS

Design

- Conductor of bare copper wires
- Core insulation: Based on PVC
- Filling compound over the core assembly
- PVC based outer sheath

Technical data

Core identification code
Up to 5 cores: according to VDE 0293-308 (appendix T9)
Starting at 6 cores: Black with white numbers

Approvals
VDE 0276 Part 603 (for 1-5 cores)
VDE 0276 Part 627 (from 7 cores)

Conductor stranding
Single or multi-wire

Minimum bending radius
Single core: 15 x outer diameter
multi-core: 12 x outer diameter

Rated voltage
U_0/U: 0,6/1,0 kV

Test voltage
4000 V

Range of temperature
For installation: +5°C up to +50°C
Fixed installation: -40°C up to +70°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
NYY-J				
1550030	1 x 25,0 rm	13.0	240.0	380
1550038	1 x 35,0 rm	14.0	336.0	447
1550032	1 x 50,0 rm	15.0	480.0	650
1550033	1 x 70,0 rm	17.0	672.0	864
1550037	1 x 185,0 rm	26.0	1,776.0	2,000
15500013	3 x 1,5 re	12.0	43.0	223
15500023	4 x 1,5 re	13.0	58.0	256
15500033	5 x 1,5 re	14.0	72.0	293
1550004	7 x 1,5 re	15.0	101.0	360
1550005	10 x 1,5 re	18.0	144.0	520
1550006	12 x 1,5 re	19.0	173.0	560
1550084	14 x 1,5 re	20.0	202.0	620
1550007	16 x 1,5 re	21.0	230.0	680
1550008	19 x 1,5 re	22.0	274.0	760
1550009	24 x 1,5 re	24.0	346.0	900
1550086	30 x 1,5 re	26.0	432.0	1,100
15500103	3 x 2,5 re	13.0	72.0	272
15500113	4 x 2,5 re	14.0	96.0	316
15500123	5 x 2,5 re	15.0	120.0	323
1550013	7 x 2,5 re	16.0	168.0	450
1550090	10 x 2,5 re	20.0	240.0	630
1550091	12 x 2,5 re	20.0	288.0	680
1550092	14 x 2,5 re	21.0	336.0	790
1550094	19 x 2,5 re	23.0	456.0	990
1550096	24 x 2,5 re	26.0	576.0	1,300
1550097	30 x 2,5 re	28.0	720.0	1,400
15500583	3 x 4,0 re	15.0	115.0	373
15500203	4 x 4,0 re	16.0	154.0	439
15500263	5 x 4,0 re	17.0	192.0	510
15500593	3 x 6,0 re	16.0	173.0	466
15500213	4 x 6,0 re	17.0	230.0	547
15500273	5 x 6,0 re	19.0	288.0	640
15500603	3 x 10,0 re	18.0	288.0	629
15500223	4 x 10,0 re	19.0	384.0	743
15500823	5 x 10,0 re	21.0	480.0	899
15500613	3 x 16,0 re	20.0	461.0	850
15500233	4 x 16,0 re	22.0	614.0	1,039
15500833	5 x 16,0 re	23.0	768.0	1,240
15500713	3 x 25,0 rm/ 16,0 re	25.0	874.0	1,595
15500243	4 x 25,0 rm	27.0	960.0	1,620
15500153	3 x 35,0 sm/ 16,0 re	27.0	1,162.0	1,718
15500753	4 x 35,0 sm	27.0	1,344.0	1,916
15500163	3 x 50,0 sm/ 25,0 rm	31.0	1,680.0	2,383
15500253	4 x 50,0 sm	31.0	1,920.0	2,639
15500173	3 x 70,0 sm/ 35,0 sm	33.0	2,352.0	3,196
15500763	4 x 70,0 sm	35.0	2,688.0	3,576
15500183	3 x 95,0 sm/ 50,0 sm	38.0	3,216.0	4,271
15500773	4 x 95,0 sm	40.0	3,648.0	4,746
15500723	3 x 120,0 sm/ 70,0 sm	41.0	4,128.0	5,281
15500783	4 x 120,0 sm	43.0	4,608.0	5,813
15500733	3 x 150,0 sm/ 70,0 sm	46.0	4,992.0	6,408
15500793	4 x 150,0 sm	48.0	5,760.0	7,263
15500743	3 x 185,0 sm/ 95,0 sm	50.0	6,240.0	7,909
15500803	4 x 185,0 sm	53.0	7,104.0	8,905

Copper price basis: Excluding Copper; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17

Power and control cables

LAPP GROUP

Building Installation

Cables for direct burial

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
15500193	3 x 240,0 sm/ 120,0 sm	57.0	8,064.0	10,162
15500813	4 x 240,0 sm	60.0	9,216.0	11,430
NYY-O				
1550205	1 x 10,0 re	10.0	96.0	176
1550206	1 x 16,0 re	11.0	154.0	239
1550207	1 x 25,0 rm	13.0	240.0	380
1550208	1 x 35,0 rm	14.0	336.0	447
1550209	1 x 50,0 rm	15.0	480.0	650
1550210	1 x 70,0 rm	17.0	672.0	864
1550211	1 x 95,0 rm	19.0	912.0	1,132
1550212	1 x 120,0 rm	21.0	1,152.0	1,405
1550213	1 x 150,0 rm	22.0	1,440.0	1,710
1550214	1 x 185,0 rm	24.0	1,776.0	2,086
1550215	1 x 240,0 rm	27.0	2,304.0	2,669
1550216	1 x 300,0 rm	30.0	2,880.0	3,305
1550218	1 x 500,0 rm	39.0	4,800.0	5,400
15502003	2 x 1,5 re	11.0	29.0	210
15502193	2 x 2,5 re	12.0	48.0	250
15502203	2 x 4,0 re	14.0	77.0	360
15502213	2 x 6,0 re	15.0	115.0	400
15502223	2 x 10,0 re	17.0	192.0	500
15502533	4 x 16,0 re	22.0	614.0	1,039
15502543	4 x 25,0 rm	27.0	960.0	1,620
15502563	4 x 50,0 sm	31.0	1,920.0	2,639
15502573	4 x 70,0 sm	35.0	2,688.0	3,576
15502583	4 x 95,0 sm	40.0	3,648.0	4,746

Copper price basis: Excluding Copper; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products

- NYCY see page 217
- NYCWY see page 217
- NAYY-J see page 218

Accessories

- V 1311 pressing pliers, hydraulic see page 935
- STAR STRIP stripping tool see page 908
- Cable shears KT 4 and KT 5 see page 904

NYCY

Fixedly installed, buried PVC cable with concentric copper conductor + counter spiral

NYCWY

Fixedly installed, buried PVC cable with concentric copper conductor + counter spiral

Benefits
- Concentric conductor above all as PE

Application range
- As a fixed installation power and control cable for the following applications:
- For indoor- and outdoor use
- Direct burial
- In concrete
- In water

Product features
- Power rating acc. to HD 603 part 3G for outdoor laying and as per VDE 0298 part 4 (see also appendix T12) for laying in and on buildings

Approvals (Norm references)
CE, DVE, RoHS

Design
- Conductor of bare copper wires
- Core insulation: Based on PVC
- Filling compound over the core assembly
- Concentric outside conductor of bare copper wires with copper band counter spiral
- PVC based outer sheath

Technical data
Core identification code
Up to 5 cores: according to VDE 0293-308 (appendix T9)
Starting at 6 cores: Black with white numbers

Approvals
VDE 0276 Part 603 (for 1-5 cores)
VDE 0276 Part 627 (from 7 cores)

Conductor stranding
Single or multi-wire

Minimum bending radius
Fixed installation: 12 x outer diameter

Rated voltage
U_0/U: 0,6/1,0 kV

Test voltage
4000 V

Range of temperature
For installation: +5°C up to +50°C
Fixed installation: -40°C up to +70°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
NYCY				
15503003	2 x 1,5 re/ 1,5	14.0	52.0	245
15503103	3 x 1,5 re/ 1,5	14.0	66.0	280
15503203	4 x 1,5 re/ 1,5	15.0	81.0	302
1550330	7 x 1,5 re/ 2,5	17.0	133.0	450
1550332	12 x 1,5 re/ 2,5	20.0	205.0	580
1550337	24 x 1,5 re/ 6,0	26.0	413.0	1,100
15503113	3 x 2,5 re/ 2,5	15.0	104.0	316
15503213	4 x 2,5 re/ 2,5	16.0	128.0	360
1550350	7 x 2,5 re/ 2,5	18.0	200.0	530
1550355	16 x 2,5 re/ 6,0	23.0	451.0	950
15503223	4 x 4,0 re/ 4,0	18.0	200.0	485
15503233	4 x 6,0 re/ 6,0	19.0	297.0	616
NYCWY				
15505003	2 x 10,0 re/ 10,0	19.0	312.0	610
15505263	3 x 10,0 re/ 10,0	20.0	408.0	775
15505403	4 x 10,0 re/ 10,0	21.0	504.0	897
15505273	3 x 16,0 re/ 16,0	22.0	643.0	1,066
15505413	4 x 16,0 re/ 16,0	24.0	796.0	1,250
15505283	3 x 25,0 rm/ 25,0	26.0	1,003.0	1,584
15505423	4 x 25,0 rm/ 16,0	28.0	1,142.0	1,822
15505303	3 x 35,0 sm/ 35,0	26.0	1,402.0	1,710
15505433	4 x 35,0 sm/ 16,0	29.0	1,526.0	2,146
15505163	3 x 50,0 sm/ 50,0	30.0	2,000.0	2,368
15505443	4 x 50,0 sm/ 25,0	33.0	2,203.0	3,031
15505453	4 x 70,0 sm/ 35,0	38.0	3,082.0	4,056
15505143	3 x 95,0 sm/ 50,0	38.0	3,296.0	4,256
15505323	3 x 95,0 sm/ 95,0	39.0	3,791.0	4,600
15505463	4 x 95,0 sm/ 50,0	43.0	4,208.0	5,364
15505153	3 x 120,0 sm/ 70,0	41.0	4,236.0	5,314
15505473	4 x 120,0 sm/ 70,0	46.0	5,388.0	6,748
15505353	3 x 150,0 sm/ 70,0	45.0	5,100.0	6,344
15505483	4 x 150,0 sm/ 70,0	51.0	6,540.0	8,159
15505173	3 x 185,0 sm/ 95,0	50.0	6,383.0	8,054

Copper price basis: Excluding Copper; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: Coil ≤ 30 kg and ≤ 250 m, otherwise drum
Please specify the desired packaging size (e.g. 1 x 500 m drum or 5 x 100 m coils)

Comparable products
- NYY-J, NYY-O see page 215

Accessories
NYCWY
- V 1311 pressing pliers, hydraulic see page 935
- Cable shears KT 4 and KT 5 see page 904

NAYY-J

Fixedly installed, buried PVC cable with solid aluminium conductors

Application range

- As a fixed installation power and control cable for the following applications:
- For indoor- and outdoor use
- Direct burial
- In concrete
- In water

Product features

- Flame retardant according to IEC 60332-1-2
- Maximum tensile load for aluminium conductors is 30 N/mm²
- Power rating acc. to HD 603 part 3G for outdoor laying and as per VDE 0298 part 4 (see also appendix T12) for laying in and on buildings

Approvals (Norm references)

CE DVE RoHS

Design

- Conductor of aluminium
- Core insulation: Based on PVC
- Filling compound over the core assembly
- PVC based outer sheath

Technical data

Core identification code
According to VDE 0293-308 (table T9)

Approvals
VDE 0276 Part 603

Conductor stranding
Single wire

Minimum bending radius
Fixed installation: 12 x outer diameter

Rated voltage
U_0/U: 0,6/1,0 kV

Test voltage
4000 V

Range of temperature
For installation: +5°C up to +50°C
Fixed installation: -30°C to +70°C

Part number	Number of cores and mm² per conductor	Outer diameter in mm approx.	Alu index kg/km	Weight kg/km approx.
NAYY-J				
1552010	4 x 35,0 re	28.2	406.0	1,170
1552011	4 x 50,0 se	29.8	580.0	1,305
1552012	4 x 70,0 se	34.2	812.0	1,730
1552013	4 x 95,0 se	38.6	1,102.0	2,205
1552014	4 x 120,0 se	41.9	1,392.0	2,655
1552015	4 x 150,0 se	45.6	1,740.0	3,150
1552016	4 x 185,0 se	50.8	2,146.0	3,925
1552017	4 x 240,0 se	59.6	2,784.0	4,880

Aluminium price basis: Excluding Aluminium; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths

Comparable products

- NYY-J, NYY-O see page 215

Accessories

- V 1311 pressing pliers, hydraulic see page 935
- STAR STRIP stripping tool see page 908
- Tube Cable lugs and other connectors made of aluminium or bimetall AlCu are available on request

Servo harnessing according to SIEMENS® 6FX5002-

Benefits

- This cable to SIEMENS® Standard 6FX5002 is the high-quality yet more economical version of the highly flexible 6FX8002 version
- 100% compatible with SIEMENS® systems
- The oil-resistant PVC sheath allows them to be used particularly in industrial areas
- For fixed / static installation.

Application range

- Plant engineering
- Servo drives and Servo harnessings

Approvals (Norm references)

RoHS

Design

- Design according to SIEMENS® standard 6FX 5002.
- Outer sheath: special PVC vinyl compound, flame-retardant according to IEC 332.1,

Note

- Maximum length of the cables must agree with the manufacturers' instructions of the servo drives
- Afterwards the Technical Data of the used cables

Design

- Further versions and lengths can be delivered quickly.

Technical data

Approvals
Power cables:
VDE-registered
UL/CSA AWM style 2570
Signal cables:
UL/CSA AWM style 2502

Conductor stranding
Extra fine strands of plain copper wires according to VDE 0295 Class 6 / IEC 60228 Class 6

Minimum bending radius
Fixed installation: 5 x outer diameter
Flexible: 12 x outside diameter

Rated voltage
Signal cables:
- 30 V AC/DC (UL/CSA)
- 250 V AC (IEC)
Power cables:
Cores:
1000 V (UL/CSA)
600 / 1000 V (IEC)
Control cores:
750 V (UL/CSA)
30 V AC (IEC)

Range of temperature
Fixed installation: -20°C up to +80°C
Flexible: 0°C up to +60°C

Part number	Length in m	SIEMENS® assembly designation	SIEMENS® cable designation	Copper index kg/1000 pcs.	Further dimensions	PU
Harnessings for signal transmission systems						
74305559	10.0	6FX5002-2AD00-1BA0	6FX5008-1BD41	630.0	other lengths available	1
74305659	10.0	6FX5002-2AD04-1BA0	6FX5008-1BD41	630.0	other lengths available	1
74305759	10.0	6FX5002-2AH00-1BA0	6FX5008-1BD21	770.0	other lengths available	1
74305859	10.0	6FX5002-2CA11-1BA0	6FX5008-1BD21	630.0	other lengths available	1
74306059	10.0	6FX5002-2CA31-1BA0	6FX5008-1BD51	690.0	other lengths available	1
74306159	10.0	6FX5002-2CA34-1BA0	6FX5008-1BD51	690.0	other lengths available	1
74306659	10.0	6FX5002-2CF01-1BA0	6FX5008-1BD41	630.0	other lengths available	1
74306759	10.0	6FX5002-2CF02-1BA0	6FX5008-1BD41	630.0	other lengths available	1
74306859	10.0	6FX5002-2CH00-1BA0	6FX5008-1BD41	630.0	other lengths available	1
74307059	10.0	6FX5002-2EQ10-1BA0	6FX5008-1BD51	690.0	other lengths available	1
74307159	10.0	6FX5002-2EQ14-1BA0	6FX5008-1BD51	690.0	other lengths available	1
70430150	10.0	6FX5002-2DC00-1BA0	6FX2008-1DC00	370.0	other lengths available	1
70430069	10.0	6FX5002-2DC10-1BA0	6FX2008-1DC00	370.0	other lengths available	1
70430151	10.0	6FX5002-2DC20-1BA0	6FX2008-1DC00	370.0	other lengths available	1
Harnessings for servo drives without break						
74307259	10.0	6FX5002-5CA01-1BA0	6FX5008-1BB11	880.0	other lengths available	1
74307459	10.0	6FX5002-5CA05-1BA0	6FX5008-1BB11	880.0	other lengths available	1
74308259	10.0	6FX5002-5CA31-1BA0	6FX5008-1BB21	1,320.0	other lengths available	1
74308559	10.0	6FX5002-5CA41-1BA0	6FX5008-1BB31	1,950.0	other lengths available	1
74308659	10.0	6FX5002-5CA51-1BA0	6FX5008-1BB41	2,800.0	other lengths available	1
70430003	10.0	6FX5002-5CS01-1BA0	6FX5008-1BB11	880.0	other lengths available	1
70430004	10.0	6FX5002-5CS11-1BA0	6FX5008-1BB21	1,940.0	other lengths available	1
Harnessings for servo drives with break						
74308959	10.0	6FX5002-5DA01-1BA0	6FX5008-1BA11	1,500.0	other lengths available	1
74309159	10.0	6FX5002-5DA05-1BA0	6FX5008-1BA11	1,500.0	other lengths available	1
74309960	10.0	6FX5002-5DA31-1BA0	6FX5008-1BA21	1,940.0	other lengths available	1
74313361	10.0	6FX5002-5DA41-1BA0	6FX5008-1BA31	2,720.0	other lengths available	1
74313661	10.0	6FX5002-5DA51-1BA0	6FX5008-1BA41	3,510.0	other lengths available	1
70430001	10.0	6FX5002-5DS01-1BA0	6FX5008-1BA11	1,460.0	other lengths available	1
70430002	10.0	6FX5002-5DS11-1BA0	6FX5008-1BA21	1,940.0	other lengths available	1

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Siemens part designations (6FX5002/5008, 6FX7002/7008, 6FX8002/8008) are registered trademarks of Siemens AG and for comparing purpose only. DESINA® is a registered trademark of the Association of German Machine Tool Manufacturers
Part number refers to genuine LAPP part

Servo harnessing according to SIEMENS® 6FX 8002-

Benefits

- Highly flexible servomotor and sensor cables, especially for use in power chains
- 100% compatible with SIEMENS® systems
- The oil-resistant, PUR sheath enables use particularly in industrial areas

Application range

- Plant engineering
- Servo drives and Servo harnessings

Approvals (Norm references)

Design

- Design according to SIEMENS® standard 6FX 8002.
- Outer sheath: PUR 11Y (in accordance with DIN VDE 0250, Part 405)

Note

- Please comply with the assembly guidelines for cables in power chain systems.
- Maximum length of the cables must agree with the manufacturers' instructions of the servo drives
- Afterwards the Technical Data of the used cables

Design

- Further versions and lengths can be delivered quickly.

Technical data

Approvals
Power cables: UL/CSA AWM Style 20234
VDE Reg No.: 7733
Sensor leads: UL/CSA AWM Style 20236

Minimum bending radius
Fixed installation: 7.5 x outer diameter
Flexible: 10 x outer diameter, (more than 4mm²: 12 x outer diameter)

Rated voltage
Signal cables:
- 30 V AC/DC (UL/CSA)
- 250 V AC (IEC)
Power cables:
Cores:
600 / 1000 V (IEC)
1000 V (UL/CSA)
Control cores:
250 V AC (IEC)
1000 V (UL/CSA)

Range of temperature
Fixed installation: -50°C up to +80°C
Flexible: -10°C to +60°C

Part number	Length in m	SIEMENS® assembly designation	SIEMENS® cable designation	Copper index kg/1000 pcs.	Further dimensions	PU
Harnessings for signal transmission systems						
70301549	10.0	6FX8002-2AD00-1BA0	6FX8008-1BD41	660.0	other lengths available	1
74303559	10.0	6FX8002-2AD04-1BA0	6FX8008-1BD41	660.0	other lengths available	1
70389020	10.0	6FX8002-2AH00-1BA0	6FX8008-1BD41	660.0	other lengths available	1
70301550	10.0	6FX8002-2CA11-1BA0	6FX8008-1BD21	770.0	other lengths available	1
70301553	10.0	6FX8002-2CA31-1BA0	6FX8008-1BD51	860.0	other lengths available	1
70301554	10.0	6FX8002-2CA34-1BA0	6FX8008-1BD51	860.0	other lengths available	1
70301563	10.0	6FX8002-2CG00-1BA0	6FX8008-1BD21	770.0	other lengths available	1
70301564	10.0	6FX8002-2CH00-1BA0	6FX8008-1BD41	660.0	other lengths available	1
70301567	10.0	6FX8002-2EQ10-1BA0	6FX8008-1BD51	860.0	other lengths available	1
70391522	10.0	6FX8002-2EQ14-1BA0	6FX8008-1BD51	860.0	other lengths available	1
70301568	10.0	6FX8002-2CF01-1BA0	6FX8008-1BD41	660.0	other lengths available	1
70301569	10.0	6FX8002-2CF02-1BA0	6FX8008-1BD41	660.0	other lengths available	1
70301575	10.0	6FX8002-4AA21-1BA0	6FX8008-1BD61	342.5	other lengths available	1
70430149	10.0	6FX8002-2DC00-1BA0	6FX8008-2DC00	410.0	other lengths available	1
70431018	10.0	6FX8002-2DC10-1BA0	6FX8008-2DC00	410.0	other lengths available	1
70430096	10.0	6FX8002-2DC20-1BA0	6FX8008-2DC00	410.0	other lengths available	1
Harnessings for servo drives without break						
70301578	10.0	6FX8002-5CA01-1BA0	6FX8008-1BB11	960.0	other lengths available	1
70301601	10.0	6FX8002-5CA05-1BA0	6FX8008-1BB11	960.0	other lengths available	1
70301583	10.0	6FX8002-5CA31-1BA0	6FX8008-1BB21	1,350.0	other lengths available	1
70301585	10.0	6FX8002-5CA41-1BA0	6FX8008-1BB31	2,055.0	other lengths available	1
70301586	10.0	6FX8002-5CA51-1BA0	6FX8008-1BB41	2,703.0	other lengths available	1
70430007	10.0	6FX8002-5CS01-1BA0	6FX8008-1BB11	960.0	other lengths available	1
70430008	10.0	6FX8002-5CS11-1BA0	6FX8008-1BB21	1,350.0	other lengths available	1
Harnessings for servo drives with break						
70301588	10.0	6FX8002-5DA01-1BA0	6FX8008-1BA11	1,430.0	other lengths available	1
70301600	10.0	6FX8002-5DA05-1BA0	6FX8008-1BA11	1,430.0	other lengths available	1
70301594	10.0	6FX8002-5DA31-1BA0	6FX8008-1BA21	1,860.0	other lengths available	1
70301597	10.0	6FX8002-5DA41-1BA0	6FX8008-1BA31	2,610.0	other lengths available	1
70301598	10.0	6FX8002-5DA51-1BA0	6FX8008-1BA41	3,300.0	other lengths available	1
70430005	10.0	6FX8002-5DS01-1BA0	6FX8008-1BA11	1,430.0	other lengths available	1
70430006	10.0	6FX8002-5DS11-1BA0	6FX8008-1BA21	1,860.0	other lengths available	1

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Siemens part designations (6FX5002/5008, 6FX7002/7008, 6FX8002/8008) are registered trademarks of Siemens AG and for comparing purpose only. DESINA® is a registered trademark of the Association of German Machine Tool Manufacturers
Part number refers to genuine LAPP part
Other construction designs/lengths on request

Servo harnessing according to INDRAMAT® IKG / RKL

Benefits
- Highly flexible servo motor cable, especially suitable for use in power chains.
- 100% compatible with INDRAMAT® systems.
- The oil-resistant, PUR sheath enables use particularly in industrial areas

Application range
- Plant engineering
- Servo drives and Servo harnessings

Approvals (Norm references)

Design
- In accordance with Indramat standard IKG/ RKL

Note
- Please comply with the assembly guidelines for cables in power chain systems.
- Maximum length of the cables must agree with the manufacturers' instructions of the servo drives
- Afterwards the Technical Data of the used cables

Design
- Further versions and lengths can be delivered quickly.

Technical data
Approvals
UL/CSA AWM Style 20234

Minimum bending radius
Fixed installed: 6 x outer diameter
Flexible: 10 x outside diameter

Rated voltage
Cores:
- 1000 V (UL/CSA)
- 600/1000 V (IEC)
- Control cores:
250 V AC (IEC)
1000 V (UL/CSA)

Range of temperature
Fixed installation: -50°C up to +80°C
flexible: -30°C to +60 °C

Part number	Length in m	INDRAMAT® ordering designation	Cable designation	Copper index kg/1000 pcs.	Further dimensions	PU
Harnessings to INDRAMAT standard IKG						
70345476	10.0	IKG4009-010	INK0653	1,700.0	other lengths available	1
70345503	10.0	IKG4087-010	INK0603	3,090.0	other lengths available	1
70345521	10.0	IKG4163-010	INK0605	5,620.0	other lengths available	1
70345522	10.0	IKG4170-010	INK0605	5,650.0	other lengths available	1
70345541	10.0	IKG4020-010	INK0653	1,700.0	other lengths available	1
70345542	10.0	IKG4018-010	INK0653	1,700.0	other lengths available	1
70345543	10.0	IKG4016-010	INK0653	1,700.0	other lengths available	1
70345545	10.0	IKG4050-010	INK0650	1,890.0	other lengths available	1
Harnessings to INDRAMAT standard RKL						
70410000	10.0	RKL4330-010	INK0606	6,700.0	other lengths available	1
70392839	10.0	RKL4302-010	INK0653	1,700.0	other lengths available	1
70410001	10.0	RKL4303-010	INK0653	1,700.0	other lengths available	1

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Indramat part designations (IKG, IKS, INK, INS, RKL und RKG) are registered trademarks of Bosch Rexroth AG and for comparing purpose only
Part number refers to genuine LAPP part
Other construction designs/lengths on request

Servo harnessing according to INDRAMAT® IKS / RKG

Benefits

- Highly flexible feedback cables, especially for use in power chains
- 100% compatible with INDRAMAT® systems.
- The oil-resistant, PUR sheath enables use particularly in industrial areas

Application range

- Plant engineering
- Servo drives and Servo harnessings

Approvals (Norm references)

Design

- In accordance with Indramat standard IKS/RKG

Note

- Please comply with the assembly guidelines for cables in power chain systems.
- Maximum length of the cables must agree with the manufacturers' instructions of the servo drives
- Afterwards the Technical Data of the used cables

Design

- Further versions and lengths can be delivered quickly.

Technical data

Approvals
UL/CSA AWM Style 20236

Minimum bending radius
Fixed installation: 5 x outer diameter
Flexible: 10 x outside diameter

Rated voltage
300 V

Range of temperature
Fixed installation: -30°C up to +90°C
Flexible: -30°C to +80 °C

Part number	Length in m	INDRAMAT® ordering designation	Cable designation	Copper index kg/1000 pcs.	Further dimensions	PU
Harnessings to INDRAMAT standard IKS						
70335583	10.0	IKS4374-010	INK0448	700.0	other lengths available	1
70335584	10.0	IKS4376-010	INK0448	700.0	other lengths available	1
70335595	10.0	IKS4103-010	INK0448	700.0	other lengths available	1
70335596	10.0	IKS4153-010	INK0448	700.0	other lengths available	1
Harnessings to INDRAMAT standard RKG						
70392984	10.0	RKG4200-010	INK0448	700.0	other lengths available	1
70410002	10.0	RKG4201-010	INK0448	700.0	other lengths available	1

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Indramat part designations (IKG, IKS, INK, INS, RKL und RKG) are registered trademarks of Bosch Rexroth AG and for comparing purpose only
Part number refers to genuine LAPP part
Other construction designs/lengths on request

Servo harnessing according to LENZE®

Benefits

- Servo motors, resolvers and encoder cables for fixed installation or application in power chains
- 100% compatible with specific drive systems
- Outer sheath makes them particularly suitable for use in industrial areas

Application range

- Plant engineering
- Servo drives and Servo harnessings

Approvals (Norm references)

Design

- Design according to specific drive systems:
- Models for fixed installation: PVC vinyl outer sheath, flame-retardant according to IEC 332.1, PVC vinyl core insulation UL/CSA approved.
- Models for highly flexible use: oil-resistant PUR sheath according to VDE472-803 Part B, flame-retardant according to IEC 60332.1-2, TPE core insulation.

Note

- For the highly flexible version, please observe the assembly guidelines for cables in power chain systems.
- Maximum length of the cables must agree with the manufacturers' instructions of the servo drives
- Afterwards the Technical Data of the used cables

Design

- Further versions and lengths can be delivered quickly.

Technical data

Approvals
Resolver and encoder cable:
UL AWM style 2464 for fixed installation versions, style 20940 for high flexibility applications.
Motor cable:
UL AWM style 2570 for fixed installation version, style 20940 for high flexibility use.

Minimum bending radius
Fixed installation: 7.5 x outer diameter
Flexible: 10 x outside diameter

Rated voltage
Resolver and encoder cable:
30 V (VDE), 300 V (UL/CSA)
Motor cable:
- Power cores: 600V/1000 V (VDE), 600 V (UL/CSA).

Test voltage
Resolver and encoder cable:
1.5 kV
Motor cable:
- Power cores: 4 kV
- Control cores: 2 kV

Range of temperature
Fixed installation: -25°C up to +80°C
Flexible: -5°C to +70°C

Part number	Length in m	LENZE® item designation	Static	Highly flex.	Number of cores and mm² per conductor	Copper index kg/1000 pcs.	Further dimensions	PU
Servo cables								
74320320	10.0	EWLM-010GM-015	•		4 G 1,5+(2x0,5)	1,060.0	other lengths available	1
74320499	10.0	EWLM-010GM-025	•		4 G 2,5+(2x0,5)	1,560.0	other lengths available	1
74321272	10.0	EWLM-010GMS-015		•	4 G 1,5+(2x0,5)	1,060.0	other lengths available	1
74321426	10.0	EWLM-010GMS-025		•	4 G 2,5+(2x0,5)	1,530.0	other lengths available	1
70415002	10.0	EYP-0003-A-0100-M01-A00	•		4 G 1.5	1,060.0	other lengths available	1
Fan cables								
74322480	10.0	EWLL-010GM	•		5 G 0.5	240.0	other lengths available	1
74322629	10.0	EWLL-010GMS		•	5 G 0.5	240.0	other lengths available	1
70415001	10.0	EYL-0001-V-0100L02-J02		•	5 G 0.75	360.0	other lengths available	1
Resolver cables								
74320540	10.0	EWLR-010GM-T	•		3x (2x0,14) + 1x (2x0,5)	430.0	other lengths available	1
74323073	10.0	EWLR-010GMS-T		•	3x (2x0,14) + 1x (2x0,5)	430.0	other lengths available	1
70415005	10.0	EYF-0020-A-0100-F01-S04		•	3x (2x0,14) + 3x 0,14	370.0	other lengths available	1
Encoder cables								
74323522	10.0	EWLE-010GM-T	•		4x (2x0,14) + 1x (2x1,0)	650.0	other lengths available	1
74323672	10.0	EWLE-010GMS-T		•	4x (2x0,14) + 1x (2x1,0)	650.0	other lengths available	1

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Lenze® part designations (EWLM_, EWLR_, EWLE_, EWLL_, EYL und EYP) are registered trademarks of Lenze® AG used for comparing purposes only. DESINA® is a registered trademark of the Association of German Machine Tool Manufacturers
Part number refers to genuine LAPP part

New

Servo harnessing according to SEW®

Benefits

- Servo motors, resolvers and encoder cables for fixed installation or application in power chains
- Outer sheath makes them particularly suitable for use in industrial areas

Application range

- Plant engineering
- Servo drives and Servo harnessings

Approvals (Norm references)

CE RoHS

Design

- Design according to specific drive systems:
- Flame retardant according to IEC 60332-1-2

Note

- For the highly flexible version, please observe the assembly guidelines for cables in power chain systems.
- Maximum length of the cables must agree with the manufacturers' instructions of the servo drives
- Afterwards the Technical Data of the used cables

Design

- Further versions and lengths can be delivered quickly.

Technical data

Approvals
Power cable: UL AWM-Style 2587

Minimum bending radius
Power cable occasional flexing:
15x cable diameter
Signal cable for flexible installation:
15 x outer diameter

Rated voltage
Powercable: Power cores: IEC 750V, UL 600V
Signal cores: IEC 350V, UL 600V
Signal cable: 250V

Test voltage
Power cable: 2 KV
Signal cable: 1,5 KV

Range of temperature
Power cable flexing: -10°C to +80°C
Signal cable flexing: -5°C to +70°C

Part number	Length in m	SEW item designation	Static	Highly flex.	Number of cores and mm² per conductor	Copper index kg/1000 pcs.	Further dimensions	PU
Motor cables								
70430251	10.0	05904544	•		4G 1,5	880.0	other lengths available	1
70430250	10.0	13324853	•		4G1,5+3x1	1,510.0	other lengths available	1
Harnessings for signal transmission systems								
70430249	10.0	13324535	•		6x2x0,25	695.0	other lengths available	1
70430252	10.0	1995405		•	6x2x0,25	718.0	other lengths available	1

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Lenze® part designations (EWLM_, EWLR_, EWLE_, EWLL_, EYL und EYP) are registered trademarks of Lenze® AG used for comparing purposes only. DESINA® is a registered trademark of the Association of German Machine Tool Manufacturers
Part number refers to genuine LAPP part

ÖLFLEX® TRUCK SPIRAL ABS

ÖLFLEX® TRUCK SPIRAL EBS

Application range

- These spirals are used to connect tractor and trailer or semi-trailer
- 5 way ABS connector system according to ISO 7638
- ADR/GGVS-approbation - also for transport of hazardous goods

Product features

- Designed according to ISO 4141 and ISO 6722
- High number of cycles in the flexural fatigue test
- High reset forces
- Degree of protection: IP69k

Design

ÖLFLEX® TRUCK SPIRAL ABS

- 5pol.: 2x4,0mm² + 3x1,5mm²
- Working length: 2.250 mm, Max. length: max. 4.000 mm
- Insulation material Economy (small windings) core: PP, outer sheath: PUR Classic (big windings): core: PP, outer sheath: TPE-E

ÖLFLEX® TRUCK SPIRAL EBS

- 7pol.: 2x4,0mm² + 3x1,5mm² + 1x(2x1,5mm²)
- Working length: 2.250 mm, Max. length: max. 4.000 mm
- Insulation material Economy (small windings) core: PP, outer sheath: PUR Classic (big windings): core: PP, outer sheath: TPE-E

Note

- Afterwards the Technical Data of the used cables

Technical data

Core identification code
ISO 4141-3
In accordance with ISO 4141 part 1-4 and ISO 6722

Insulation resistance
10 MOhm x km

Conductor stranding
Fine wire according to ISO 6722

Test voltage
5 kV root mean square value at least 5 min.

Range of temperature
Area of application, Class A

Part number	Article designation	Spiral length extended in mm max.	Sheath colour	Copper index kg/1000 pcs.	Weight kg/1000 pieces	PU
ÖLFLEX® TRUCK SPIRAL ABS 5pol.: 2x4,0mm² + 3x1,5mm²						
70274000	ÖLFLEX TRUCK SPIRAL ABS Economy 5pol.4m	4,000	black	636	1,800	1
70274001	ÖLFLEX TRUCK SPIRAL ABS Classic 5pol.4m	4,000	black	648	1,800	1
ÖLFLEX® TRUCK SPIRAL EBS 7pol.: 2x4,0mm² + 3x1,5mm² +1x(2x1,5mm²)						
70274002	ÖLFLEX TRUCK SPIRAL EBS Economy 7pol.4m	4,000	black	785	2,000	1
70274003	ÖLFLEX TRUCK SPIRAL EBS Classic 7pol.4m	4,000	black	804	2,000	1

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis‘ and ‚Metal index‘ see Appendix T17

ÖLFLEX® TRUCK SPIRAL 15-pole

ÖLFLEX® TRUCK SPIRAL 7-pole

Application range

ÖLFLEX® TRUCK SPIRAL 15-pole

- These spirals are used to connect tractor and trailer or semi-trailer
- 15pol. connector system acc. ISO 12098
- ADR/GGVS-approbation - also for transport of hazardous goods

ÖLFLEX® TRUCK SPIRAL 7-pole

- These spirals are used to connect tractor and trailer or semi-trailer
- 7pol. connector-system acc. ISO 1185 (24N), acc. ISO 3731 (24S)
- ADR/GGVS-approbation - also for transport of hazardous goods

Product features

- Designed according to ISO 4141 and ISO 6722
- High number of cycles in the flexural fatigue test
- High reset forces
- Degree of protection: IP69k

Design

ÖLFLEX® TRUCK SPIRAL 15-pole

- 15pol.: 3x2,5mm² + 10x1,5mm² + 1x(2x1,5mm²)
  or
  13pol.: 3x2,5mm² + 8x1,5mm² + 4x1,5mm²
- Working length: 2.250 mm,
  Max. length: max. 4.000 mm
- Insulation material Economy (small windings) core: PP, outer sheath: PUR
  Classic (big windings): core: PP, outer sheath: TPE-E

ÖLFLEX® TRUCK SPIRAL 7-pole

- 7pol.: 1x2,5mm² + 6x1,5mm²
- Working length: 2.250 mm,
  Max. length: max. 4.000 mm
- Insulation: core: PP, outer sheath: PUR

Note

- Afterwards the Technical Data of the used cables

Technical data

Core identification code
ÖLFLEX® TRUCK SPIRAL 15-pole
15-pole white cores with black numbers acc. to DIN 72570
ÖLFLEX® TRUCK SPIRAL 7-pole
ISO 4141-3

In accordance with ISO 4141 part 1-4 and ISO 6722

Insulation resistance
10 MOhm x km

Conductor stranding
Fine wire according to ISO 6722

Test voltage
5 kV root mean square value at least 5 min.

Range of temperature
Area of application, Class A

Part number	Article designation	Spiral length extended in mm max.	Sheath colour	Copper index kg/1000 pcs.	Weight kg/1000 pieces	PU
ÖLFLEX® TRUCK SPIRAL 15pole						
70274004	ÖLFLEX TRUCK SPIRAL Economy 15pol.4m	4,000	black	1,298	2,500	1
70274005	ÖLFLEX TRUCK SPIRAL Classic 15pol.4m	4,000	black	1,322	2,500	1
70274006	ÖLFLEX TRUCK SPIRAL Classic 13pol.4m	4,000	black	1,322	2,500	1
ÖLFLEX® TRUCK SPIRAL 7pole						
70274007	ÖLFLEX TRUCK SPIRAL 24N Economy 7pol.,4m	4,000	black	583	1,300	1
70274008	ÖLFLEX TRUCK SPIRAL 24S Economy 7pol.,4m	4,000	black	583	1,300	1

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17

TRUCK adapters and cables

TRUCK Cables for batterie-charging

Application range

TRUCK adapters and cables

- These spirals are used to connect tractor and trailer or semi-trailer
- These adapters are necessary, if the trailers are equipped with different connector-systems

Product features

TRUCK adapters and cables

- Designed according to ISO 6722
- High number of cycles in the flexural fatigue test
- High reset forces
- Degree of protection: IP69k
- Short adapter: 15pole plug (male contacts) to 2x7pole receptacle (male contacts)

TRUCK Cables for batterie-charging

- Designed according to ISO 6722
- Connectors: 2pole cable connector (male contacts) and 2pole receptacle (female contacts)

Design

TRUCK adapters and cables

- 15pole cable coupler (female contacts) to 2x7pole cable connector (female contacts) 1x2,5mm² + 6x1,5mm², black
- Working length: 2.250 mm, Max. length: max. 4.000 mm
- Insulation: core: PP, outer sheath: PUR

TRUCK Cables for batterie-charging

- Working length: 3.500 mm
- 2 x 35 mm², black and red
- Insulation: core: PVC, outer sheath: PUR

Note

TRUCK adapters and cables

- Other lengths and cable end versions on request
- Afterwards the Technical Data of the used cables

Technical data

Core identification code
TRUCK adapters and cables
ISO 4141-3

TRUCK adapters and cables
In accordance with ISO 4141 part 1-4 and ISO 6722

Insulation resistance
TRUCK adapters and cables
10 MOhm x km

Conductor stranding
TRUCK adapters and cables
Fine wire according to ISO 6722

Test voltage
TRUCK adapters and cables
5 kV root mean square value at least 5 min.

Range of temperature
Area of application, Class A

Part number	Article designation	Sheath colour	Copper index kg/1000 pcs.	Weight kg/1000 pieces	PU
ÖLFLEX® TRUCK adapter cables					
70274009	ÖLFLEX® TRUCK SPIRAL Adapterwendel,4m	black	1,166	2,100	1
70270251	TRUCK short adapter 15/7/7 24V S/N				1
70270602	TRUCK connector 24V/2pol 35mm²				1
70270603	TRUCK receptacle 24V/2pol 50²				1
ÖLFLEX® TRUCK battery charging cables					
70270026	ÖLFLEX® TRUCK SPIRAL 2x35 PUR/PVC oSt/5,0	black-red	3,495	3,994	1

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis‘ and ‚Metal index‘ see Appendix T17

TRUCK connectors ABS

TRUCK connectors EBS

TRUCK connectors 15pol.

Product features

- Connector for harnessing with crimp termination

Technical data

TRUCK connectors ABS
5 way ABS connector system according to ISO 7638
TRUCK connectors EBS
7 way EBS connector system according to ISO 7638
TRUCK connectors 15pol.
15 way connector system according to ISO 12098

Part number	Article designation	PU
TRUCK connectors ABS		
70270301	TRUCK ABS connector 24V Sp/VI	1
70270304	TRUCK ABS receptacle 24V V VI	1
TRUCK connectors EBS		
70270360	TRUCK EBS connector 24V Sp/VI	1
70270364	TRUCK EBS receptacle 24V VI	1
TRUCK connectors 15pole		
70270250	TRUCK connector 24V/15pol Sp/VI	1
70270254	TRUCK receptacle 24V/15pol straight	1

ÖLFLEX® SPIRAL 400 P

PUR spiral cable with increased chemical resistance

Info

- **Higher resistance to benzols, benzines and further substances according to appendix T1**

Benefits

- High recoiling forces and extension lengths up to 3 times the unextended spiral length

Application range

- As control and power cables on machines
- Mechanical engineering
- Apparatus construction

Product features

- Resistant against microbes, hydrolysis and almost all mineral oils
- Highly chemical resistant to benzols, benzenes and other agents according to Selection Table T1 in Appendix

Approvals (Norm references)

CE RoHS

Design

- Fine-wired core with bare copper strands
- Core insulation: Special PVC P8/1
- Special polyurethane outer sheath
- Length of straight ends:
- First end: 200 mm long
- 2nd end: 600 mm long

Technical data

Core identification code
Black with white numbers acc. to VDE 0293

Based on
Core: VDE 0812/0281
Sheath: VDE 0250/0282

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Rated voltage
U_0/U: 300/500 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexible use: +5°Cup to +50°C

Part number	Number of cores and mm² per conductor	Spiral length extended in mm max.	Spiral length unextended in mm	Cable diameter, in mm approx.	Spiral outer diameter approx. mm	Copper index kg/1000 pcs.
ÖLFLEX® SPIRAL 400 P						
70002622	2 X 0.75	1,500	500	5.4	19.5	64.80
70002623	2 X 0.75	3,000	1,000	5.4	19.5	123.84
70002624	2 X 0.75	4,500	1,500	5.4	19.5	170.64
70002625	2 X 0.75	6,000	2,000	5.4	19.5	234.72
70002628	3 G 0.75	1,500	500	5.7	20.0	101.52
70002629	3 G 0.75	3,000	1,000	5.7	20.0	172.80
70002630	3 G 0.75	4,500	1,500	5.7	20.0	261.36
70002631	3 G 0.75	6,000	2,000	5.7	20.0	326.16
70002634	4 G 0.75	1,500	500	6.2	21.0	123.84
70002635	4 G 0.75	3,000	1,000	6.2	21.0	221.76
70002636	4 G 0.75	4,500	1,500	6.2	21.0	322.56
70002637	4 G 0.75	6,000	2,000	6.2	21.0	453.60
70002640	5 G 0.75	1,500	500	6.7	24.0	154.80
70002641	5 G 0.75	3,000	1,000	6.7	24.0	306.00
70002642	5 G 0.75	4,500	1,500	6.7	24.0	439.20
70002643	5 G 0.75	6,000	2,000	6.7	24.0	594.00
70002726	7 G 0.75	1,500	500	7.3	27.0	245.00
70002727	7 G 0.75	3,000	1,000	7.3	27.0	525.00
70002728	7 G 0.75	4,500	1,500	7.3	27.0	660.00
70002729	7 G 0.75	6,000	2,000	7.3	27.0	1,025.00
70002731	12 G 0.75	1,500	500	9.9	35.0	371.52
70002732	12 G 0.75	3,000	1,000	9.9	35.0	682.56
70002734	18 G 0.75	1,500	500	11.7	40.0	699.84
70002735	18 G 0.75	3,000	1,000	11.7	40.0	1,127.52
70002646	2 X 1	1,500	500	5.7	20.0	88.32
70002647	2 X 1	3,000	1,000	5.7	20.0	161.28
70002648	2 X 1	4,500	1,500	5.7	20.0	230.40
70002649	2 X 1	6,000	2,000	5.7	20.0	272.64
70002651	3 G 1	1,500	500	6.0	21.0	129.60
70002652	3 G 1	3,000	1,000	6.0	21.0	244.80
70002653	3 G 1	4,500	1,500	6.0	21.0	350.50
70002654	3 G 1	6,000	2,000	6.0	21.0	417.60
70002656	4 G 1	1,500	500	6.5	24.0	176.64
70002657	4 G 1	3,000	1,000	6.5	24.0	322.56
70002658	4 G 1	4,500	1,500	6.5	24.0	503.04
70002659	4 G 1	6,000	2,000	6.5	24.0	587.52
70002661	5 G 1	1,500	500	7.1	25.0	220.80
70002662	5 G 1	3,000	1,000	7.1	25.0	408.00
70002663	5 G 1	4,500	1,500	7.1	25.0	600.00
70002664	5 G 1	6,000	2,000	7.1	25.0	744.00
70002666	7 G 1	1,250	500	8.0	30.0	328.30
70002667	7 G 1	2,500	1,000	8.0	30.0	562.80
70002668	7 G 1	3,750	1,500	8.0	30.0	770.50
70002669	7 G 1	5,000	2,000	8.0	30.0	1,175.18
70002670	12 G 1	1,500	500	10.5	37.0	598.00
70002671	12 G 1	3,000	1,000	10.5	37.0	1,012.00
70002672	18 G 1	1,500	500	12.7	45.0	891.00
70002673	18 G 1	3,000	1,000	12.7	45.0	1,402.50
70002681	2 X 1.5	1,500	500	6.3	23.0	142.10
70002682	2 X 1.5	3,000	1,000	6.3	23.0	266.80
70002683	2 X 1.5	4,500	1,500	6.3	23.0	379.90
70002684	2 X 1.5	6,000	2,000	6.3	23.0	493.00
70002687	3 G 1.5	1,500	500	6.7	24.0	210.70
70002688	3 G 1.5	3,000	1,000	6.7	24.0	365.50

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17

Harnessed cables

Spiralized

Part number	Number of cores and mm² per conductor	Spiral length extended in mm max.	Spiral length unextended in mm	Cable diameter, in mm approx.	Spiral outer diameter approx. mm	Copper index kg/1000 pcs.
70002689	3 G 1.5	4,500	1,500	6.7	24.0	498.80
70002690	3 G 1.5	6,000	2,000	6.7	24.0	662.20
70002699	5 G 1.5	1,250	500	8.1	30.0	338.40
70002700	5 G 1.5	2,500	1,000	8.1	30.0	597.60
70002701	5 G 1.5	3,750	1,500	8.1	30.0	864.00
70002702	5 G 1.5	5,000	2,000	8.1	30.0	1,173.60
70002705	7 G 1.5	1,250	500	8.9	31.0	454.50
70002706	7 G 1.5	2,500	1,000	8.9	31.0	808.00
70002707	7 G 1.5	3,750	1,500	8.9	31.0	1,111.00
70002708	7 G 1.5	5,000	2,000	8.9	31.0	1,504.90
70002709	12 G 1.5	1,500	500	12.0	46.0	968.80
70002710	12 G 1.5	3,000	1,000	12.0	46.0	1,660.80
70002711	18 G 1.5	1,500	500	13.4	52.0	1,261.40
70002712	18 G 1.5	3,000	1,000	13.4	52.0	2,261.00
70002716	3 G 2.5	1,250	500	8.1	28.5	338.40
70002717	3 G 2.5	2,500	1,000	8.1	28.5	640.80
70002718	3 G 2.5	3,750	1,500	8.1	28.5	885.60
70002719	3 G 2.5	5,000	2,000	8.1	28.5	1,072.80
70002721	5 G 2.5	1,250	500	10.0	37.0	624.00
70002722	5 G 2.5	2,500	1,000	10.0	37.0	1,068.00
70002723	5 G 2.5	3,750	1,500	10.0	37.0	1,489.20
70002724	5 G 2.5	5,000	2,000	10.0	37.0	1,980.00

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17

Comparable products

- ÖLFLEX® SPIRAL 540 P see page 232

Accessories

- SKINTOP® CLICK / CLICK-R see page 643

New

SPIRAL H07BQ-F BLACK

Black, robust PUR spiral cable with high recoiling forces

Info

- **Black**
- **Heavy construction type, well-priced**
- **Outer PUR sheath, high recoiling forces**

Benefits

- Robust
- Broad application range
- Cost-saving

Application range

- Construction of engines and appliances with flexible power connections as well as at dockyards
- Construction machines and powered doors
- Process measuring and control technology
- Any commercial/ industrial/ agricultural facility: Connection of tools, appliances and mobile motors
- Increased tensile and abrasion requirements as well as in damp and wet environments either (no submersion)

Product features

- Black, robust outer PUR sheath
- Increased tensile strength and abrasion resistance
- High recoiling forces
- Resistant to microbes, solvents and certain fuels
- Hydrolysis-resistant

Approvals (Norm references)

CE RoHS

Design

- Tinned copper conductor with class 5 according to IEC 60228/ VDE 0295
- Core insulation: EI 6 rubber according to HD 22.1 & EN 50363-1; coloured according to HD 308; VDE and HAR marking
- Available core quantities: 3, 4 and 5; application of talcum
- Black, outer PUR sheath made of TMPU according to HD 22.10/ VDE 0282-10; marking "H07BQ-F ..."
- 4 available basic lengthes, see article table below
- End lengths: 200 mm at the first end / 600 mm at the other end
- Radial outflow of the cable

Technical data

Core identification code
Coloured acc. HD 308 (Appendix T9)

Approvals
HD 22.10 H07BQ-F (unspiralled)

Based on
HD 22.10 H07BQ-F

Conductor stranding
fine-wired acc. to IEC 60228/ VDE 0295, class 5
tinned strands

Minimum bending radius
Flexible use: 12.5 x outer diameter

Rated voltage
U_0/U: 450/750 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE

Range of temperature
-25 °C to +50 °C (spiralled)

Part number	Number of cores and mm² per conductor	Spiral length extended in mm max.	Spiral length unextended in mm	Cable diameter, in mm approx.	Spiral outer diameter approx. mm	Copper index kg/1000 pcs.
70002750	3 G 1.5	1,500	500	9.0	31.0	207.36
70002751	3 G 1.5	3,000	1,000	9.0	31.0	371.52
70002752	3 G 1.5	4,500	1,500	9.0	31.0	535.68
70002753	3 G 1.5	6,000	2,000	9.0	31.0	699.84
70002754	4 G 1.5	1,500	500	10.0	38.0	305.28
70002755	4 G 1.5	3,000	1,000	10.0	38.0	547.20
70002756	4 G 1.5	4,500	1,500	10.0	38.0	789.12
70002757	4 G 1.5	6,000	2,000	10.0	38.0	1,031.04
70002758	5 G 1.5	1,500	500	11.0	40.0	367.20
70002759	5 G 1.5	3,000	1,000	11.0	40.0	655.20
70002760	5 G 1.5	4,500	1,500	11.0	40.0	936.00
70002761	5 G 1.5	6,000	2,000	11.0	40.0	1,231.20

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Each piece is packed in a plastic bag individually.

Comparable products

- ÖLFLEX® SPIRAL 400 P see page 229
- ÖLFLEX® SPIRAL 540 P see page 232
- ÖLFLEX® SPIRAL 400 P
- ÖLFLEX® SPIRAL 540 P

Accessories

- SKINTOP® BS see page 709
- SKINTOP® BS-M see page 645
- SKINTOP® BT see page 709
- SKINTOP® CLICK BS see page 646
- SKINTOP® CLICK / CLICK-R see page 643

ÖLFLEX® SPIRAL 540 P

Robust, flame-retardant PUR spiral cable with high recoiling forces

Benefits

- Extension lengths of up to 3.5 times the unextended spiral length and especially high recoiling forces
- Safety colour yellow

Application range

- Harsh use conditions
- Mechanical engineering
- Construction industry
- Medical equipment
- In damp rooms or outdoors

Product features

- Good resistance of the outer sheath to cutting and abrasion
- High resistance to oil, low temperatures, microbes and hydrolysis
- Special, flame-retardant polyurethane sheath compound

Approvals (Norm references)

CE RoHS

Design

- Strands of tinned copper wires
- Core insulation: TPE
- Special polyurethane outer sheath
- Length of straight ends:
- First end: 200 mm long
- 2nd end: 600 mm long

Technical data

Core identification code
Up to 5 cores: according to VDE 0293-308 (appendix T9)
Starting at 6 cores: Black with white numbers

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Rated voltage
0,75 - 1,0 mm²: U_0/U: 300/500 V
1,5 - 10,0 mm²: U_0/U: 450/750 V

Test voltage
3000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexible use: -30°C up to +50°C

Part number	Number of cores and mm² per conductor	Spiral length extended in mm max.	Spiral length unextended in mm	Cable diameter, in mm approx.	Spiral outer diameter approx. mm	Copper index kg/1000 pcs.
ÖLFLEX® SPIRAL 540 P U0/U: 300/500 V						
73220107	2 X 0.75	1,000	300	6.6	23.0	46.08
73220108	2 X 0.75	2,000	600	6.6	23.0	73.44
73220109	2 X 0.75	3,500	1,000	6.6	23.0	116.64
73220110	2 X 0.75	5,000	1,500	6.6	23.0	158.40
73220111	3 G 0.75	1,000	300	7.0	24.0	60.48
73220112	3 G 0.75	2,000	600	7.0	24.0	103.68
73220113	3 G 0.75	3,500	1,000	7.0	24.0	159.84
73220114	3 G 0.75	5,000	1,500	7.0	24.0	220.32
71220115	4 G 0.75	1,000	300	7.6	29.0	100.80
71220116	4 G 0.75	2,000	600	7.6	29.0	177.12
71220117	4 G 0.75	3,500	1,000	7.6	29.0	270.72
71220118	4 G 0.75	5,000	1,500	7.6	29.0	368.64
71220119	5 G 0.75	1,000	300	8.5	31.0	118.80
71220120	5 G 0.75	2,000	600	8.5	31.0	210.96
71220121	5 G 0.75	3,500	1,000	8.5	31.0	298.80
71220122	5 G 0.75	5,000	1,500	8.5	31.0	439.20
73220123	2 X 1	1,000	300	7.0	24.0	59.52
73220124	2 X 1	2,000	600	7.0	24.0	101.95
73220125	2 X 1	3,500	1,000	7.0	24.0	156.67
73220126	2 X 1	5,000	1,500	7.0	24.0	218.88
73220127	3 G 1	1,000	300	7.4	29.0	104.40
73220128	3 G 1	2,000	600	7.4	29.0	182.70
73220129	3 G 1	3,500	1,000	7.4	29.0	275.50
73220130	3 G 1	5,000	1,500	7.4	29.0	391.50
71220131	4 G 1	1,000	300	8.2	30.0	135.94
71220132	4 G 1	2,000	600	8.2	30.0	222.72
71220133	4 G 1	3,500	1,000	8.2	30.0	349.44
71220134	4 G 1	5,000	1,500	8.2	30.0	491.52
71220135	5 G 1	1,000	300	9.0	32.0	161.28
71220136	5 G 1	2,000	600	9.0	32.0	268.80
71220137	5 G 1	3,500	1,000	9.0	32.0	419.52
71220138	5 G 1	5,000	1,500	9.0	32.0	556.80
73220139	7 G 1	1,000	350	10.9	40.0	238.00
73220140	7 G 1	2,000	700	10.9	40.0	435.20
73220141	7 G 1	3,500	1,200	10.9	40.0	700.40
73220142	7 G 1	5,000	1,700	10.9	40.0	918.00
U_0/U: 450/750 V						
73220143	2 X 1.5	1,000	300	8.4	31.0	100.34
73220144	2 X 1.5	2,000	600	8.4	31.0	169.94
73220145	2 X 1.5	3,500	1,000	8.4	31.0	262.74
73220146	2 X 1.5	5,000	1,500	8.4	31.0	378.74
73220147	3 G 1.5	1,000	300	8.9	32.0	145.34
73220148	3 G 1.5	2,000	600	8.9	32.0	232.20
73220149	3 G 1.5	3,500	1,000	8.9	32.0	365.50
73220150	3 G 1.5	5,000	1,500	8.9	32.0	516.00
71220151	5 G 1.5	1,000	350	10.9	40.0	281.52
71220152	5 G 1.5	2,000	700	10.9	40.0	446.40
71220153	5 G 1.5	3,500	1,200	10.9	40.0	779.04
71220154	5 G 1.5	5,000	1,700	10.9	40.0	1,072.08
73220155	7 G 1.5	1,000	350	13.5	52.0	383.80
73220156	7 G 1.5	2,000	700	13.5	52.0	676.70
73220157	7 G 1.5	3,500	1,200	13.5	52.0	1,153.42
73220158	7 G 1.5	5,000	1,700	13.5	52.0	1,588.73
73220159	3 G 2.5	1,000	350	10.6	40.0	273.60
73220160	3 G 2.5	2,000	700	10.6	40.0	460.80
73220161	3 G 2.5	3,500	1,200	10.6	40.0	770.40
73220162	3 G 2.5	5,000	1,700	10.6	40.0	1,022.40
71220163	5 G 2.5	1,000	350	13.4	51.0	498.00
71220164	5 G 2.5	2,000	700	13.4	51.0	867.60
71220165	5 G 2.5	3,500	1,200	13.4	51.0	1,380.00
71220166	5 G 2.5	5,000	1,700	13.4	51.0	1,884.00

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17

Comparable products

- ÖLFLEX® SPIRAL 400 P see page 229
- ÖLFLEX® SPIRAL 540 P with angular plug see page 233

Accessories

- SKINTOP® CLICK / CLICK-R see page 643

ÖLFLEX® SPIRAL 540 P with angular plug

Robust, VDE-registered spiral cable with high recoiling forces and angular plug

Info

- **Robust**
- **High recoiling forces**
- **With shock-proof angular plug**

Benefits

- Extension lengths of up to 3.5 times the unextended spiral length and especially high recoiling forces
- VDE approval for cable and connector
- Safety colour yellow

Application range

- Harsh use conditions
- Mechanical engineering
- Construction industry
- Medical equipment
- In damp rooms or outdoors

Product features

- Good resistance of the outer sheath to cutting and abrasion
- High resistance to oil, low temperatures, microbes and hydrolysis
- Special, flame-retardant polyurethane sheath compound

Approvals (Norm references)

CE, DVE, RoHS

Design

- Strands of tinned copper wires
- Core insulation: TPE
- Special polyurethane outer sheath
- Length of straight ends:
- First end : 200 mm with angular shock-proof plug
- 2nd end: 600 mm long 30 mm sheath stripped

Technical data

Core identification code
Up to 5 cores: according to VDE 0293-308 (appendix T9)

Approvals
No. 57126 acc. to VDE 0620

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Rated voltage
0,75 - 1,0 mm²: U_0/U: 300/500 V
1,5 - 10,0 mm²: U_0/U: 450/750 V

Test voltage
2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexible use: -30°C up to +50°C

Part number	Number of cores and mm² per conductor	Spiral length extended in mm max.	Spiral length unextended in mm	Cable diameter, in mm approx.	Spiral outer diameter approx. mm	Copper index kg/1000 pcs.
ÖLFLEX® SPIRAL 540 P with angular plug U0/U: 300/500V						
73220852	3 G 0.75	1,000	300	7.0	24.0	70.10
73220853	3 G 0.75	2,000	600	7.0	24.0	122.80
73220854	3 G 0.75	3,500	1,000	7.0	24.0	193.20
73220855	3 G 1	1,000	300	7.4	29.0	110.00
73220856	3 G 1	2,000	600	7.4	29.0	196.70
73220863	3 G 1	3,500	1,000	7.4	29.0	312.30
U_0/U: 450/750 V						
73220860	3 G 1.5	1,000	300	8.9	32.0	148.60
73220861	3 G 1.5	2,000	600	8.9	32.0	262.80
73220862	3 G 1.5	3,500	1,000	8.9	32.0	415.10

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
1 piece in polyester bag

Comparable products

- ÖLFLEX® SPIRAL 540 P see page 232

UNITRONIC® SPIRAL

Spiral cable with outer PUR sheath and over-all shielding for exact impulse transmission

Info

- **Secure against electrical disturbance**

Benefits

- Overall screening prevents high frequency interference and guarantees accurate pulse transmission
- Extended lengths of up to 4 times the unextended spiral length

Application range

- In measurement and controlling engineering
- Used wherever screened cables with smallest dimensions are required

Product features

- Abrasion and cut resistant
- Very high flexibility

Approvals (Norm references)

RoHS

Design

- Strands of bare copper wires
- Core insulation: Based on PVC
- Screening by copper wrapping
- Outer sheath: Polyurethane (PUR) compound
- Length of straight ends:
- First end: 200 mm long
- 2nd end: 600 mm long

Technical data

Core identification code
DIN 47100

Peak working voltage
250 V (not for power applications)

Specific insulation resistance
> 10 GOhm x cm

Conductor stranding
Extra fine wire according to VDE 0295 Class 6 / IEC 60228 Class 6

Test voltage
1200 V

Range of temperature
Flexible use: -5°C up to +50°C

Part number	Number of cores and mm² per conductor	Spiral length extended in mm max.	Spiral length unextended in mm	Cable diameter, in mm approx.	Spiral outer diameter approx. mm	Copper index kg/1000 pcs.
UNITRONIC® SPIRAL						
73220200	2 x 0.14	400	100	4.0	15.0	16.51
73220201	2 x 0.14	800	200	4.0	15.0	23.81
73220202	2 x 0.14	1,200	300	4.0	15.0	29.76
73220203	2 x 0.14	1,600	400	4.0	15.0	36.96
73220204	2 x 0.14	2,000	500	4.0	15.0	48.00
73220205	3 x 0.14	400	100	4.2	18.0	21.01
73220206	3 x 0.14	800	200	4.2	18.0	30.80
73220207	3 x 0.14	1,200	300	4.2	18.0	43.56
73220208	3 x 0.14	1,600	400	4.2	18.0	54.89
73220209	3 x 0.14	2,000	500	4.2	18.0	63.80
73220210	4 x 0.14	400	100	4.4	19.0	23.40
73220211	4 x 0.14	800	200	4.4	19.0	33.60
73220212	4 x 0.14	1,200	300	4.4	19.0	45.84
73220213	4 x 0.14	1,600	400	4.4	19.0	58.68
73220214	4 x 0.14	2,000	500	4.4	19.0	67.20
73220215	5 x 0.14	400	100	5.1	20.0	24.48
73220216	5 x 0.14	800	200	5.1	20.0	38.16
73220217	5 x 0.14	1,200	300	5.1	20.0	50.40
73220218	5 x 0.14	1,600	400	5.1	20.0	60.48
73220219	5 x 0.14	2,000	500	5.1	20.0	72.00
73220220	6 x 0.14	400	100	5.4	21.0	31.15
73220221	6 x 0.14	800	200	5.4	21.0	44.88
73220222	6 x 0.14	1,200	300	5.4	21.0	56.32
73220223	6 x 0.14	1,600	400	5.4	21.0	77.97
73220224	6 x 0.14	2,000	500	5.4	21.0	73.92
73220225	7 x 0.14	400	100	5.4	21.0	32.75
73220226	7 x 0.14	800	200	5.4	21.0	49.03
73220227	7 x 0.14	1,200	300	5.4	21.0	59.20
73220228	7 x 0.14	1,600	400	5.4	21.0	64.75
73220229	7 x 0.14	2,000	500	5.4	21.0	94.35
73220230	12 x 0.14	400	100	7.0	27.0	56.44
73220231	12 x 0.14	800	200	7.0	27.0	95.28
73220232	12 x 0.14	1,200	300	7.0	27.0	118.19
73220233	12 x 0.14	1,600	400	7.0	27.0	161.02
73220234	12 x 0.14	2,000	500	7.0	27.0	179.28
73220235	18 x 0.14	400	100	7.8	29.0	75.14
73220236	18 x 0.14	800	200	7.8	29.0	110.50
73220237	18 x 0.14	1,200	300	7.8	29.0	150.28
73220238	18 x 0.14	1,600	400	7.8	29.0	198.90
73220239	18 x 0.14	2,000	500	7.8	29.0	221.00

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17

Accessories

- SKINTOP® CLICK / CLICK-R see page 643

ÖLFLEX® PLUG H03VV-F / H05VV-F Net Connection Cable

PVC Net Connection Cable for electrical devices and machines

Info

- **Other colours and designs are available on request**

ÖLFLEX® PLUG H03VV-F / H05VV-F Net Connection Cable

Benefits

- Approvals of most of the European countries according to the following chart

Application range

- Electrical devices
- Appliances and machinery

Product features

- For additional information regarding international plugs, please visit our cable configurator at www.lappkabel.de

Approvals (Norm references)

RoHS

Design

- First end: injection moulded, angular shock-proof plug with double shock-proof contact
- 2nd end: straight socket injection moulded
- Alternatively
- First end: injection moulded, angular shock-proof plug with double shock-proof contact
- 2nd end: 30 mm stripped, with conductor end sleeves

Technical data

Core identification code
According to VDE 0293-308 (table T9)

Approvals
see above

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Rated voltage
U_0/U: 250 V

Test voltage
2000 V

Protective conductor
G = with protective conductor GN/YE

Range of temperature
Flexible use: -5°Cup to +70°C

Part number	Number of cores and mm² per conductor	Colour	Cable diameter, in mm approx.	Length in m	Copper index kg/1000 pcs.
First end: injection moulded angular shock-proof connector with shock-proof contact Second end: injection moulded straight female connector H05VV-F					
73222334	3 G 1	black	6.8 - 8.4	2.5	72.50
73222336	3 G 1	grey	6.8 - 8.4	2.5	72.50
First end: injection moulded angular shock-proof connector with shock-proof contact Second end: 30 mm stripped with conductor end sleeves H03VV-F					
70261131	3 G 0.75	black	5.4 - 6.8	2.0	43.20
70261132	3 G 0.75	black	5.4 - 6.8	3.0	64.80
70261137	3 G 0.75	grey	5.4 - 6.8	2.0	43.20
70261138	3 G 0.75	grey	5.4 - 6.8	3.0	64.80
H05VV-F					
70261140	3 G 1	black	6.8 - 8.4	2.0	58.00
70261141	3 G 1	black	6.8 - 8.4	3.0	87.00
70261146	3 G 1	grey	6.8 - 8.4	2.0	58.00
70261147	3 G 1	grey	6.8 - 8.4	3.0	87.00
H05VV-F					
70261149	3 G 1.5	black	8.0 - 9.8	2.0	86.00
70261150	3 G 1.5	black	8.0 - 9.8	3.0	129.00
70261155	3 G 1.5	grey	8.0 - 9.8	2.0	86.00
70261156	3 G 1.5	grey	8.0 - 9.8	3.0	129.00

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
10 pieces in polyester bag

ÖLFLEX® PLUG 540 P Connection Cable

Robust, VDE-registered connection cable with international connector plugs

Info

- **Available with international plugs**
- **Safety colour: Yellow**

Benefits

- VDE approval for cable and connector
- Safety colour yellow

Application range

- Harsh use conditions
- Mechanical engineering
- Construction industry
- Medical equipment
- In damp rooms or outdoors

Product features

- Good resistance of the outer sheath to cutting and abrasion
- High resistance to oil, low temperatures, microbes and hydrolysis
- Special, flame-retardant polyurethane sheath compound
- The illustrated products are also available for Switzerland, Australia and the UK. For further information, visit our cable configurator at www.lappkabel.de

Approvals (Norm references)

CE, DVE, RoHS

Design

- Strands of tinned copper wires
- Core insulation: TPE
- Special polyurethane outer sheath
- First end: injection moulded, straight contour or shock-proof connector
- 2nd end: 30 mm stripped, with conductor end sleeves

Technical data

Core identification code
According to VDE 0293-308 (table T9)

Approvals
Reg. no.: 6583 - 300/500 V up to 1.0 mm²
Reg. no.: 6584 - 450/750 V from 1.5 mm²

Specific insulation resistance
> 20 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Rated voltage
0,75 - 1,0 mm²: U_0/U: 300/500 V
1,5 - 10,0 mm²: U_0/U: 450/750 V

Test voltage
2000 V

Protective conductor
G = with protective conductor GN/YE
X = without protective conductor

Range of temperature
Flexible use: -40°C up to +80 °C

Part number	Number of cores and mm² per conductor	Cable diameter, in mm approx.	Length in m	Copper index kg/1000 pcs.
ÖLFLEX® 540 P VDE-REG.-No. 6583, U0/U: 300/500 V, with contour plug				
73220842	2 X 1	7.0	2.0	38.40
73220843	2 X 1	7.0	3.5	67.20
73220844	2 X 1	7.0	5.0	96.00
ÖLFLEX® 540 P VDE-REG.-No. 6584, U0/U: 450/750 V, with contour plug				
73221558	2 X 1.5	8.4	2.0	58.00
73221559	2 X 1.5	8.4	3.0	101.50
73221560	2 X 1.5	8.4	5.0	145.00
ÖLFLEX® 540 P VDE-REG.-No. 6583, U0/U: 300/500 V, with shock-proof plug				
73220846	3 G 0.75	7.0	2.0	43.20
73220847	3 G 0.75	7.0	3.5	75.60
73220848	3 G 0.75	7.0	5.0	108.00
ÖLFLEX® 540 P VDE-REG.-No. 6584, U0/U: 300/500 V, with shock-proof plug				
73221561	3 G 1	7.4	2.0	58.00
73221562	3 G 1	7.4	3.5	101.50
73221563	3 G 1	7.4	5.0	145.00
ÖLFLEX® 540 P VDE-REG.-No. 6584, U0/U: 450/750 V, with shock-proof plug				
73220849	3 G 1.5	8.9	2.0	86.00
73220850	3 G 1.5	8.9	3.5	150.60
73220851	3 G 1.5	8.9	5.0	215.00

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
1 piece in polyester bag

Accessories

- SKINTOP® CLICK / CLICK-R see page 643

ÖLFLEX® PLUG Extension Cable

Configurable earthing-type extension cable with upright plug and coupling

ÖLFLEX® PLUG Extension Cable

Application range

- Mechanical engineering
- Construction industry
- Agricultural equipment
- In damp rooms or outdoors

Product features

- Other length, colours, customised versions, cable types and plug versions available on request
- Customised printing on request

Approvals (Norm references)

CE RoHS

Design

- Shock-proof straight plug attached (16 amp., 250 V, solid rubber, colour: black) in accordance to DIN 49440/441, protection type: IP 44
- Mounted, straight shock-proof coupling with rubber-cover (16 Ampere, 250 V, solid rubber, colour: black) according to DIN 49440/441, protection type: IP 44

Part number	Number of cores and mm² per conductor	Cable diameter, in mm approx.	Length in m	Copper index kg/1000 pcs.
ÖLFLEX® 540 P protection yellow				
73222322	3 G 1.5	8.9	10.0	430.00
73222323	3 G 1.5	8.9	25.0	1,075.00
73222324	3 G 1.5	8.9	50.0	2,150.00
73222325	3 G 2.5	10.6	10.0	720.00
73222326	3 G 2.5	10.6	25.0	1,800.00
73222327	3 G 2.5	10.6	50.0	3,600.00
H07RN-F				
73222329	3 G 1.5	9.6 - 12.5	25.0	1,075.00
73222330	3 G 1.5	9.6 - 12.5	50.0	2,150.00
73222332	3 G 2.5	11.5 - 14.5	25.0	1,800.00
73222333	3 G 2.5	11.5 - 14.5	50.0	3,600.00

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis‘ and ‚Metal index‘ see Appendix T17

ÖLFLEX® PLUG CEE Connection/ Extension Cable

Configurable, H07RN-F-based connection and extension cable for three-phase current

ÖLFLEX® PLUG CEE Connection/ Extension Cable

Info

- **Formerly: ÖLFLEX PLUG CEE (400 V) Connection / Extension Cable**

Application range

- For connections to any three-phase A.C. consumers
- Machines and systems on building sites
- Dry and damp interiors, as well as outdoor use

Product features

- Also with phase shifter available (engine direction can be changed)
- Other dimensions, lengths, connectors, and customised versions available on request
- Customised printing on request

Approvals (Norm references)

CE RoHS

Design

- Mounted CEE plug 5-pin, 400 V, red, 6 o'clock accordance to VDE 0623/ EN 60309-2 splash-proof IP 44
- 80 mm stripped, with conductor end sleeves
- Mounted CEE coupling 5-pin, 400 V, red, 6 o'clock accordance to VDE 0623/ EN 60309-2 splash-proof IP 44

Technical data

Core identification code
According to VDE 0293-308 (table T9)

Approvals
H07RN-F
VDE 0282 Part 4 / HD 22.4 S4

Based on
VDE 0282

Specific insulation resistance
1 GOhm x cm

Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5

Minimum bending radius
Flexible use: 15 x cable diameter

Rated voltage
U_0/U: 450/750 V

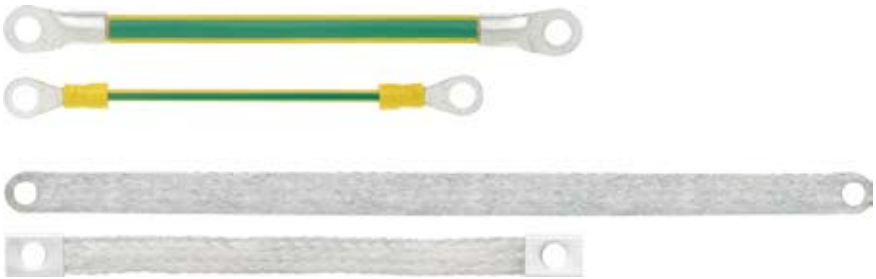
Test voltage
2500 V

Range of temperature
Flexible use: -25°C up to +60°C

Part number	Plug Ampere	Number of cores and mm² per conductor	Cable diameter, in mm approx.	Length in m	Copper index kg/1000 pcs.
ÖLFLEX® PLUG CEE (400 V) connection cable					
Without phase shifter					
71222231	16	5 G 1.5	11.2 - 14.4	2.5	180.00
71002837	16	5 G 1.5	11.2 - 14.4	3.5	252.00
71222239	16	5 G 1.5	11.2 - 14.4	5.0	360.00
71222232	16	5 G 2.5	13.3 - 17.0	2.5	300.00
71002840	16	5 G 2.5	13.3 - 17.0	3.5	420.00
71222240	16	5 G 2.5	13.3 - 17.0	5.0	600.00
71222241	32	5 G 2.5	13.3 - 17.0	5.0	600.00
71222234	32	5 G 4	15.6 - 19.9	2.5	480.00
71222242	32	5 G 4	15.6 - 19.9	5.0	960.00
71222243	32	5 G 6	17.5 - 22.2	5.0	1,440.00
With phase shifter					
71002843	16	5 G 1.5	11.2 - 14.4	3.5	252.00
71002844	16	5 G 1.5	11.2 - 14.4	5.0	360.00
71002846	16	5 G 2.5	13.3 - 17.0	3.5	420.00
71002847	16	5 G 2.5	13.3 - 17.0	5.0	600.00
ÖLFLEX® PLUG CEE (400 V) extension Cable					
Without phase shifter					
71222292	16	5 G 1.5	11.2 - 14.4	10.0	720.00
71222295	16	5 G 2.5	13.3 - 17.0	10.0	1,200.00
71222296	16	5 G 2.5	13.3 - 17.0	25.0	3,000.00
71222298	32	5 G 2.5	13.3 - 17.0	10.0	1,200.00
71222299	32	5 G 2.5	13.3 - 17.0	25.0	3,000.00
71222301	32	5 G 4	15.6 - 19.9	10.0	1,920.00
71222302	32	5 G 4	15.6 - 19.9	25.0	4,800.00
71222304	32	5 G 6	17.5 - 22.2	10.0	2,880.00
71222305	32	5 G 6	17.5 - 22.2	25.0	7,200.00

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17

Ground Straps / Flat Ground Straps



Application range

- Switch cabinet building
- The protective earth safety measure is prescribed by standard
- Fixed and moving metal parts such as doors in switch cabinet building must be earthed

Product features

- Fixed-lengths for M6 and M8 screws

Approvals (Norm references)

CE RoHS

Design

- Ground Straps:
  - Strands of bare copper wires
  - PVC based core insulation
  - Harnessed with ring cable lugs
- Flat Ground Straps with sleeves:
  - Strands of tinned copper wires
  - Harnessed with pressed contact sleeves
- Flat Ground Straps with sleeves:
  - Strands of tinned copper wires
  - Welded ends

Technical data

Core identification code
Harnessed Ground Straps
green/yellow

Conductor stranding
Harnessed Ground Straps
IEC 60 228 Class 6
Harnessed Flat Ground Straps
IEC 60 228 Class 6, tinned
Extra fine wire

Minimum bending radius
Harnessed Ground Straps
7 x outer diameter
Harnessed Flat Ground Straps
5 x outer diameter

Test voltage
Harnessed Ground Straps
2500 V

Range of temperature
Harnessed Ground Straps
-30°C to +70°C
Harnessed Flat Ground Straps
-5°C to +70°C

Artikelnummer	Cross-section in mm²	Article designation	For	Length in mm	Copper index kg/1000 pcs.	PU
Harnessed ground straps						
4571120	4	Ground Strap 4X4/M6/ 170mm	M6	170	6.5	25
4571121	16	SZ 2565.000/EB	M6	170	26.2	25
4571122	25	SZ 2566.000/EB	M6	170	40.8	25
4571123	4	SZ 2567.000/EB	M8	300	11.4	25
4571124	16	SZ 2568.000/EB	M8	300	46.2	25
4571125	25	SZ 2569.000/EB	M8	300	72.0	25
Harnessed Flat Ground Straps welded ends						
4571132	10	SZ 2412.210/FEP	M6	200	18.0	25
4571133	16	SZ 2412.216/FEP	M8	200	29.0	25
4571134	25	SZ 2412.225/FEP	M8	200	45.0	25
4571135	10	SZ 2412.310/FEP	M6	300	27.0	25
4571136	16	SZ 2412.316/FEP	M8	300	43.5	25
4571137	25	SZ 2412.325/FEP	M8	300	67.5	25
Harnessed Flat Ground Straps with sleeves						
4571126	10	SZ 2412.210/FEH	M6	200	18.0	25
4571127	16	SZ 2412.216/FEH	M8	200	29.0	25
4571128	25	SZ 2412.225/FEH	M8	200	45.0	25
4571129	10	SZ 2412.310/FEH	M6	300	27.0	25
4571130	16	SZ 2412.316/FEH	M8	300	43.5	25
4571131	25	SZ 2412.325/FEH	M8	300	67.5	25

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17

Pre-wired front plug for PLC SIMATIC® S7-300

Info

- **In addition to our standard types, different versions such as UNITRONIC® LiYCY or spring version or other colours are available on request**
- **We will be glad, to help you to find solutions for your individual needs**

Benefits

- Pre-assembled and pre-wired front plugs for *SIMATIC® S7, the leading supplier of programmable controllers (PLCs) around the world
- Single cores used are extra thin and allow space saving installation

Product features

- Original Siemens-connectors are used exclusively
- Outer diameter is smaller than a H05V-K single core (0,5 mm2)

Approvals (Norm references)

RoHS

- For more information on multi-standard single cores, see UL(MTW)-CSA-HAR Style 1015

Design

- The front plugs are completely contacted with single cores of 0,75 mm² or AWG 22 in dark blue (RAL 5010), cores numbered in white according to the allocation in the plug, spacing approx. 20 mm, opposite end cleanly cut
- On request, also available with conductor end sleeves or other contacts on the second end

Note

- Previously, cutting, marking, stripping, crimping and screwing were all separate operations but the pre-wired front plug for *SIMATIC® S7 provides you with the following advantages:
- Customised construction simply by removing the cores
- Quick wiring
- Error minimisation:
  Confusions of single cores are ruled out

Part number	Colour	mm²	Length in m	Copper index kg/1000 pcs.	Weight kg/1000 pieces
Pre-wired front plug for PLC SIMATIC® S7-300 (392-1AJ00-0AA0) 20-pole, screw-on version					
70268724	deep blue RAL 5010	0.75	1.0	144.0	350
70268409	deep blue RAL 5010	0.75	2.0	288.0	500
70267059	deep blue RAL 5010	0.75	3.0	432.0	700
70262618	deep blue RAL 5010	0.75	4.0	576.0	900
70267060	deep blue RAL 5010	0.75	5.0	720.0	1,150
Pre-wired front plug for PLC SIMATIC® S7-300 (392-1AM00-0AA0) 40-pole, screw-on version					
70268725	deep blue RAL 5010	0.75	1.0	288.0	800
70268410	deep blue RAL 5010	0.75	2.0	576.0	1,000
70268411	deep blue RAL 5010	0.75	3.0	864.0	1,400
70260001	deep blue RAL 5010	0.75	4.0	1,152.0	1,800
70268412	deep blue RAL 5010	0.75	5.0	1,440.0	2,250
70260018	dark blue RAL 5010 - with UL(MTW) single cores	0.50 / AWG22	2.0	384.0	1,000
70260021	dark blue RAL 5010 - with UL(MTW) single cores	0.50 / AWG22	5.0	960.0	2,250

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
Siemens part designations (SIMATIC®, ...) are registered trademarks of Siemens AG and for comparing purpose only
Part number refers to genuine LAPP part

Pre-wired front plug for PLC SIMATIC® S7-400

Info

- **Crimp, screw, and spring model for SIMATIC® S7-400**
- **We will be glad, to help you to find solutions for your individual needs**

Pre-wired front plug for PLC SIMATIC® S7-400

Benefits

- Single cores used are extra thin and allow space saving installation

Product features

- Original Siemens-connectors are used exclusively
- Outer diameter is smaller than a H05V-K single core (0,5 mm2)

Approvals (Norm references)

RoHS

- For more information on multi-standard single cores, see UL(MTW)-CSA-HAR Style 1015

Design

- The front plugs are completely contacted with single cores of 0,75 mm² or AWG 22 in dark blue (RAL 5010), cores numbered in white according to the allocation in the plug, spacing approx. 20 mm, opposite end cleanly cut
- On request, also available with conductor end sleeves or other contacts on the second end

Part number	Colour	mm²	Length in m	Copper index kg/1000 pcs.	Weight kg/1000 pieces
Pre-wired front plug for PLC SIMATIC® S7-400 (492-1CL00-0AA0) 48-pole, crimp version					
70268421	deep blue RAL 5010	0.75	5.0	1,695.0	2,500
Pre-wired front plug for PLC SIMATIC® S7-400 (492-1AL00-0AA0) 48-pole, screw-on version					
70268423	deep blue RAL 5010	0.75	3.0	1,017.0	1,600
70268424	deep blue RAL 5010	0.75	5.0	1,695.0	2,500
Pre-wired front plug for PLC SIMATIC® S7-400 (492-1BL00-0AA0) 48-pole, spring version					
70260046	deep blue RAL 5010	0.75	4.0	1,356.0	2,000
70268427	deep blue RAL 5010	0.75	5.0	1,695.0	2,500
70260053	dark blue RAL 5010 - with UL(MTW) single cores	0.50 / AWG22	2.0	442.0	1,100

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis‘ and ‚Metal index‘ see Appendix T17
SIMATIC® is a registered trademark of Siemens AG
Part number refers to genuine LAPP part

Bunched single cores SPS SIMATIC® S7

Benefits

- The single cores used are extra thin and allow a space-saving installation with a diameter of approx. 1.8 mm

Application range

- The single cores are especially suited for the SIMATIC® S7 front plug.

Product features

- Available with 20-, 40-, 46-cores
- The diameter is less than that of a single wire H05V-K with the cross section 0.5mm² or 0.75mm²

Approvals (Norm references)

CE RoHS

Design

- Colour: dark blue (RAL 5010),cores numbered in white according to the allocation in the front plug, spacing approx. 20 mm

Part number	Cross-section in mm²	Outer diameter in mm approx.	Copper index kg/km	Weight kg/km approx.
Bunched single cores for PLC SIMATIC® S7 0.5 mm² version				
35000791	20 x 0.5	10.0	96.0	288.0
35000793	40 x 0.5	14.0	192.0	576.0
35000794	46 x 0.5	15.0	221.0	662.0
0,75 mm² Version				
35000792	20 x 0.75	10.5	144.0	432.0
35000305	40 x 0.75	14.5	288.0	864.0
35000795	46 x 0.75	15.3	331.0	994.0

Copper price basis: EUR 150 / 100 kg; For utilization and definition of ‚Metal price basis' and ‚Metal index' see Appendix T17
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