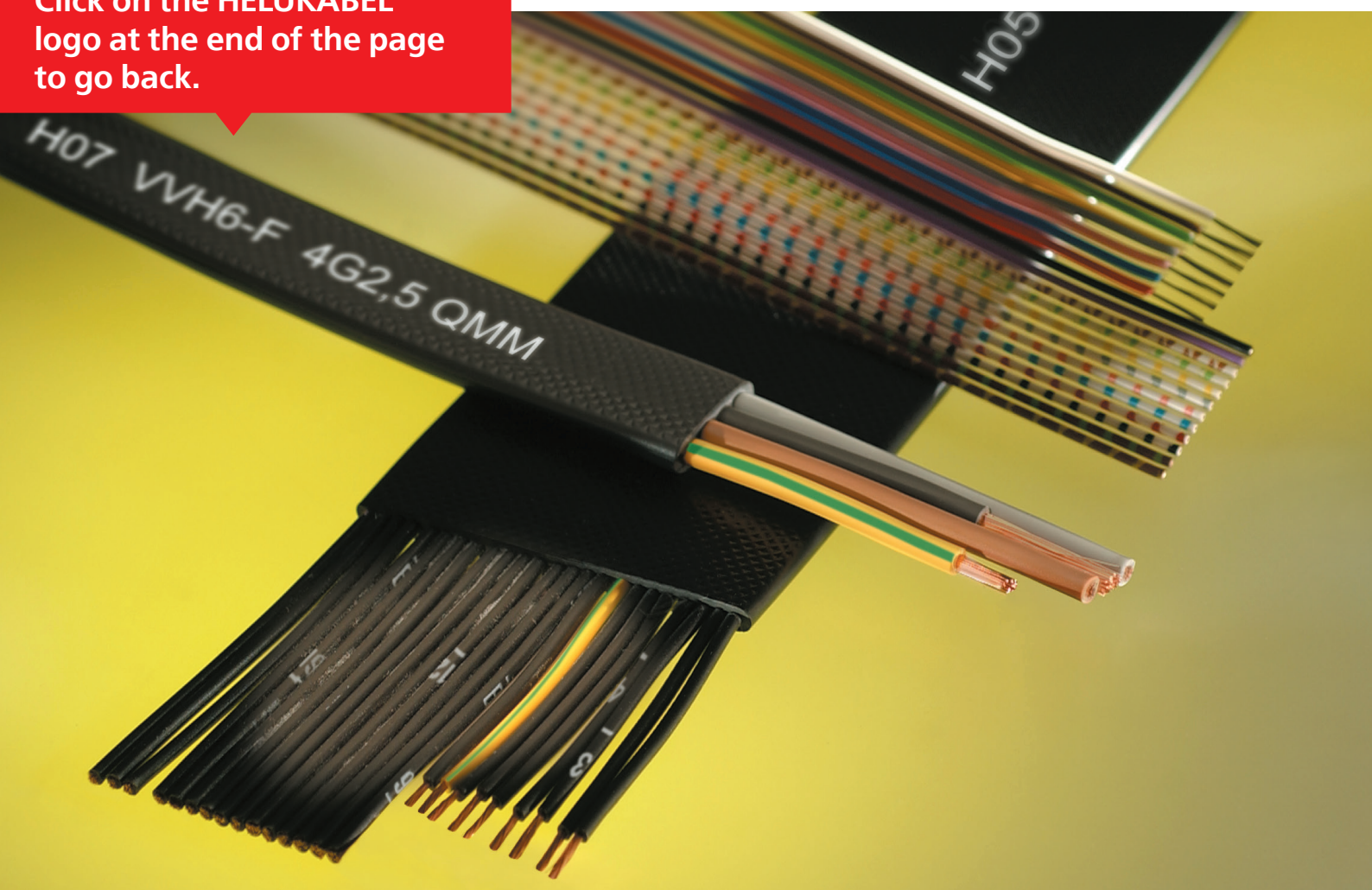


Just click on the products
in the selection table.
Click on the HELUKABEL
logo at the end of the page
to go back.



HELUKABEL®



 Cables & Wires

Selection table for flat & ribbon cables

■ FLAT & RIBBON CABLES

Temperature (°C) - flexing

Temperature (°C) - fixed

Nominal voltage U₀/U

Bending radius - flexing x Ø

Bending radius - fixed x Ø

Halogen-free

UV-resistant

Outdoor use

Drag Chain

Colored cores/VDE 0293

Screened/shielded

HAR/VDE REG no./VDE
UL/CSA

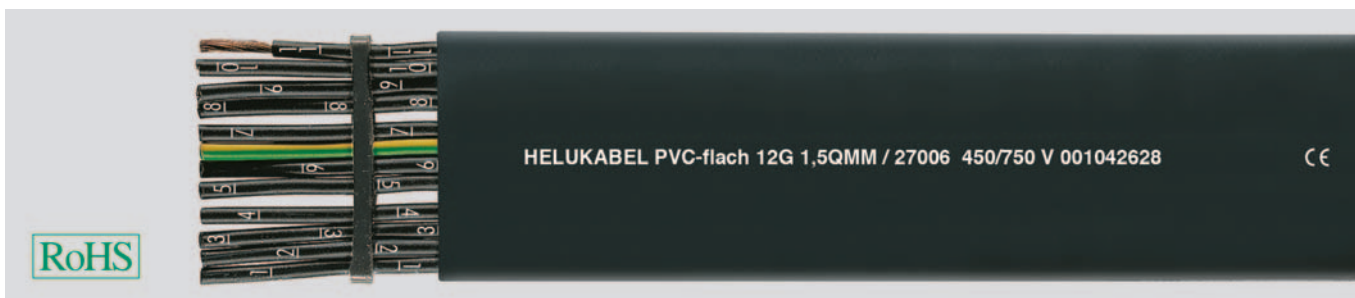
Page

Flat & ribbon cables														
	Temperature (°C) - flexing	Temperature (°C) - fixed	Nominal voltage U ₀ /U	Bending radius - flexing x Ø	Bending radius - fixed x Ø	Halogen-free	UV-resistant	Outdoor use	Drag Chain	Colored cores/VDE 0293	Screened/shielded	HAR/VDE REG no./VDE	UL/CSA	Page
PVC-flat	-5 to +70	-40 to +80	300/500	10x	10x					X				276
NEO-flat	-30 to +80	-40 to +80	300/500	10x	10x				X	X				277
PVC-flat-CY	-5 to +70	-40 to +80	300/500	15x	15x					X	X			278
NEO-flat-C	-30 to +80	-40 to +80	300/500	15x	15x		X			X	X			279
Ribbon	-5 to +70	-5 to +70	350/600							X				280
TUBEFLEX-Y	-20 to +80	-20 to +80	300	15x	15x									281
TUBEFLEX-(St)-CY	-20 to +80	-20 to +80	300	15x	15x						X			282

The selection table is intended as an initial orientation.
Please see the relevant page of the catalogue for detailed information on the product properties.

J

PVC-flat 300/500 V and 450/750 V



Technical data

- Special PVC-flat cable adapted to EN 50214 / DIN VDE 0283-2
- **Temperature range**
flexing -5°C to +70°C
fixed installation -40°C to +80°C
- **Nominal voltage**
up to 1 mm² U₀/U 300/500 V
from 1,5 mm² U₀/U 450/750 V
- **Test voltage**
up to 1 mm² 2000 V
from 1,5 mm² 2500 V
- **Minimum bending radius**
10x cable thickness
- **Radiation resistance**
up to 80x106 cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of PVC compound type T12 to DIN VDE 0207-363-3 / DIN EN 50363-3
- Core identification to DIN VDE 0293 - up to 5 cores coloured - from 7 cores, black with continuous white numbering
- Cores laying parallel
- GN-YE conductor
- Outer sheath of special PVC compound type TM2 to DIN VDE 0207-363-4-1/DIN EN 50363-4-1
- Sheath colour black (RAL 9005)

Properties

- Extensively oil resistant, oil-/ chemical Resistance - see table Technical Informations
 - Extremely small bending radius
 - High flexibility
 - Minimum waste of space
 - Packaging possibility
 - The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- Tests**
- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- Part no. 27012 (6x4).
- G = with green-yellow conductor
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².

Application

PVC type of flat cables are used mainly as trailing cable for crane installations, floor conveyer systems and shelf control units.

Installation notes

Cables reels with flat cables must be transported in standing position on the flange. A bending flexibility can be achieved on a plane surface. For this purpose, the corresponding fitting instructions should be followed.

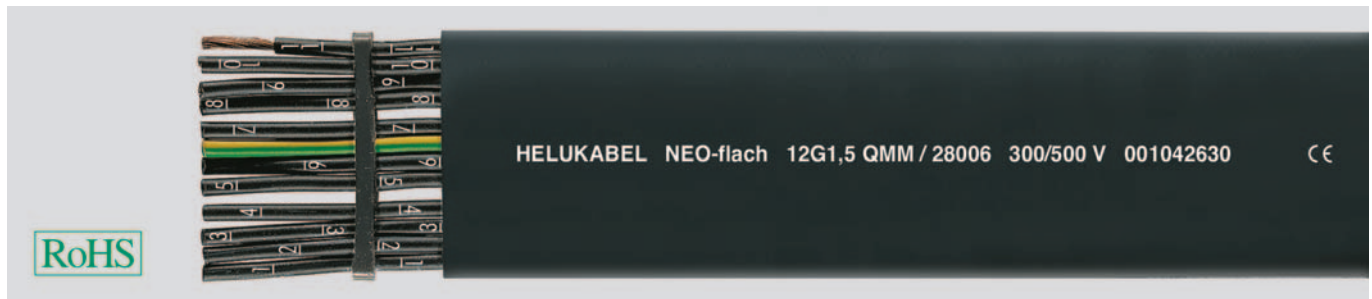
- Put the cable trolly on the guiding rail or upon carrier beam and push them together at the starting point. The distance between the bedding surface of two cable trollys must be wider than the double thickness of a cable-packet.
- During the packeting performance, it must be started with the smaller cross-section which lays on the bedding surface and will be builded successively so that the biggest cross-section is laying on the top.
- Further, be careful of a symmetrical load distribution.
- In case of multicore flat cables with small cross-section, smaller than 2,5 mm², is very critical due to its low tensile stress. In such case, you should add 10% reserve wire for calculation.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No.cores x cross-sec. mm ²	Outer dimension approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
26980	4 G 0,75	4,3 x 12,6	28,8	90,0	19
26981	5 G 0,75	4,3 x 16,1	36,0	115,0	19
26982	6 G 0,75	4,3 x 19,4	43,2	141,0	19
26983	9 G 0,75	4,3 x 26,4	64,8	198,0	19
26984	10 G 0,75	4,3 x 30,1	72,0	224,0	19
26985	12 G 0,75	4,3 x 33,8	84,4	258,0	19
26986	16 G 0,75	4,3 x 44,4	115,2	340,0	19
26987	18 G 0,75	4,3 x 49,2	129,6	380,0	19
26988	20 G 0,75	4,3 x 55,0	144,0	424,0	19
26989	24 G 0,75	4,3 x 65,6	172,8	509,0	19
26990	3 G 1	4,5 x 10,8	28,8	80,0	18
26991	4 G 1	4,5 x 13,4	38,4	104,0	18
26992	5 G 1	4,5 x 16,0	48,0	134,0	18
26993	6 G 1	4,5 x 20,6	57,6	161,0	18
26994	9 G 1	4,5 x 28,4	86,4	230,0	18
26995	10 G 1	4,5 x 30,0	96,0	256,0	18
26996	12 G 1	4,5 x 36,2	115,2	298,0	18
26997	16 G 1	4,5 x 47,6	153,6	395,0	18
26998	18 G 1	4,5 x 52,8	172,8	441,0	18
26999	20 G 1	4,5 x 59,0	192,0	495,0	18
27000	24 G 1	4,5 x 70,4	230,4	590,0	18
27001	4 G 1,5	4,5 x 13,7	58,0	133,0	16
27002	5 G 1,5	4,5 x 17,9	72,0	169,0	16
27003	7 G 1,5	4,5 x 23,5	101,0	235,0	16
27004	8 G 1,5	4,5 x 26,8	115,0	265,0	16
27005	10 G 1,5	4,5 x 33,5	144,0	332,0	16

Part no.	No.cores x cross-sec. mm ²	Outer dimension approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
27006	12 G 1,5	4,5 x 38,9	173,0	421,0	16
27028	16 G 1,5	4,5 x 51,5	230,4	555,0	16
27030	24 G 1,5	4,5 x 83,0	346,0	820,0	16
27007	4 G 2,5	5,5 x 17,0	96,0	205,0	14
27008	5 G 2,5	5,5 x 21,5	120,0	256,0	14
27009	7 G 2,5	5,5 x 30,3	168,0	344,0	14
27010	8 G 2,5	5,5 x 31,9	192,0	389,0	14
27011	12 G 2,5	5,8 x 47,1	288,0	580,0	14
27029	16 G 2,5	5,8 x 55,1	384,0	674,0	14
27012	24 G 2,5	15,0 x 63,0	604,0	950,0	14
27027	24 G 2,5	5,8 x 120,0	604,0	950,0	14
27013	4 G 4	7,0 x 21,8	154,0	344,0	12
27014	5 G 4	7,0 x 27,4	192,0	428,0	12
27015	7 G 4	7,9 x 36,6	269,0	590,0	12
27016	4 G 6	8,2 x 24,8	230,0	424,0	10
27017	5 G 6	8,2 x 31,8	288,0	530,0	10
27018	7 G 6	8,2 x 42,6	403,0	760,0	10
27019	4 G 10	10,0 x 29,6	384,0	710,0	8
27020	4 G 16	11,2 x 34,4	614,0	1014,0	6
27025	5 G 16	13,0 x 46,6	768,0	1370,0	6
27021	4 G 25	13,7 x 42,6	960,0	1365,0	4
27026	5 G 25	15,5 x 55,5	1200,0	2000,0	4
27022	4 G 35	15,4 x 47,6	1344,0	2100,0	2
27023	4 G 50	18,2 x 57,0	1920,0	2940,0	1
27024	4 G 70	20,0 x 64,2	2688,0	4090,0	2/0

Dimensions and specifications may be changed without prior notice. (RJ01)



Technical data

- Special Neoprene-flat cable adapted to DIN VDE 0250 part 809
- **Temperature range**
flexing -30°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** U_0/U 300/500 V
- **Test voltage** 3000 V
- **Minimum bending radius**
10x cable thickness
- **Radiation resistance**
up to 50×10^6 cJ/kg (up to 50 Mrad)

Cable structure

- Copper-conductor bare or tinned to DIN VDE 0295, BS 6360, IEC 60228
- Conductor construction
35-120 mm² class 5: fine-wire
1,5-25 mm² class 6 col.4: extra-fine-wire
- Special rubber core insulation
- Core identification to DIN VDE 0293
- up to 5 cores coloured
- from 7 cores, black with continuous white numbering
- Cores laying parallel
- GN-YE conductor
- Outer sheath of special rubber 5GM3, to DIN VDE 0207 part 2 1
- Sheath colour black

Properties

- Special rubber outer sheath, cold-resistant
- Extensively oil resistant, oil-/chemical resistance see table Technical Informations
- Extremely small bending radius
- High flexibility
- Minimum waste of space
- Packeting possibility
- Outdoor application

Tests

- **Behaviour in fire**
to DIN VDE 0482-332-1-2
DIN EN 60332-2-1, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- G = with green-yellow conductor
- Part no. 28007 and 28013 (6x4).
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².

Application

Neoprene type of flat cables are used mainly as trailing cable for crane installations, floor conveyer systems and shelf control units. These cables are also available for export with UL-approval on request.

Installation notes

Cables reels with flat cables must be transported in standing position on the flange. A bending flexibility can be achieved on a plane surface. For this purpose, the corresponding fitting instructions should be followed.

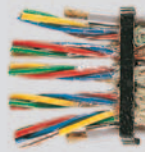
- Put the cable trolly on the guiding rail or upon carrier beam and push them together at the starting point. The distance between the bedding surface of two cable trollys must be wider than the double thickness of a cable-packet.
- During the packeting performance, it must be started with the smaller cross-section which lays on the bedding surface and will be builded successively so that the biggest cross-section is laying on the top.
- Further, be careful of a symmetrical load distribution.
- In case of multicore flat cables with small cross-section, smaller than 2,5 mm², is very critical due to its low tensile stress. In such case, you should add 10% reserve wire for calculation.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer dimension approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No. cores x cross-sec. mm ²	Outer dimension approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
28001	4 G 1,5	5,9 x 16,2	58,0	234,0	16	28022	4 G 16	11,6 x 35,6	614,0	1430,0	6
28002	5 G 1,5	5,9 x 23,7	72,0	304,0	16	28023	5 G 16	12,2 x 48,2	768,0	1590,0	6
28003	7 G 1,5	5,9 x 30,5	101,0	391,0	16	28024	4 G 25	14,1 x 45,8	960,0	1890,0	4
28004	8 G 1,5	5,9 x 34,0	115,0	441,0	16	28025	5 G 25	14,7 x 58,3	1200,0	2215,0	4
28005	10 G 1,5	5,9 x 43,5	144,0	460,0	16	28026	7 G 25	15,3 x 78,7	1680,0	3000,0	4
28006	12 G 1,5	6,5 x 50,4	173,0	646,0	16	28027	4 G 35	15,8 x 50,8	1344,0	2460,0	2
28007	24 G 1,5 (6 x 4)	13,0 x 56,0	346,0	1290,0	16	28028	5 G 35	16,4 x 64,4	1680,0	2880,0	2
28008	4 G 2,5	7,2 x 19,6	96,0	316,0	14	28029	7 G 35	16,4 x 86,4	2352,0	4100,0	2
28009	5 G 2,5	7,2 x 27,8	120,0	391,0	14	28030	4 G 50	18,6 x 60,2	1920,0	3385,0	1
28010	7 G 2,5	7,2 x 36,1	168,0	533,0	14	28031	4 G 70	21,0 x 68,0	2688,0	4480,0	2/0
28011	8 G 2,5	7,2 x 40,2	192,0	602,0	14	28032	4 G 95	24,1 x 78,6	3648,0	5990,0	3/0
28012	12 G 2,5	7,8 x 59,4	288,0	890,0	14	28033	4 G 120	25,5 x 84,2	4608,0	7240,0	4/0
28013	24 G 2,5 (6 x 4)	15,5 x 66,8	576,0	1480,0	14						
28014	4 G 4	8,8 x 24,2	154,0	506,0	12						
28015	5 G 4	8,8 x 33,4	192,0	621,0	12						
28016	7 G 4	8,8 x 42,5	269,0	851,0	12						
28017	4 G 6	9,6 x 27,4	230,0	661,0	10						
28018	5 G 6	9,6 x 37,4	288,0	740,0	10						
28019	7 G 6	9,6 x 47,2	403,0	1004,0	10						
28020	4 G 10	10,4 x 30,8	384,0	1027,0	8						
28021	5 G 10	10,4 x 41,6	480,0	1171,0	8						

Dimensions and specifications may be changed without prior notice. (RJ01)

PVC-flat-CY screened, EMC-preferred type



HELUKABEL PVC-flach-CY 5x4x0,5 QMM / 27101 300/500 V 001042630



Technical data

- Special PVC-flat cable, screened, adapted to DIN VDE 0283 part 2
- **Temperature range**
flexing -5°C to +70°C
fixed installation -40°C to +80°C
- **Nominal voltage** U_0/U 300/500 V
- **Test voltage** 3000 V
- **Breakdown voltage**
min. 6000 V
- **Minimum bending radius**
15x cable thickness
- **Radiation resistance**
up to 80×10^6 cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC
- Core identification see table below
- Cores screened individually or in bunches
- Copper screened braiding, approx. 85% coverage
- Outer sheath of special PVC
- Sheath colour black (RAL 9005)

Properties

- Extensively oil resistant
- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- G = with green-yellow conductor
- x = without green-yellow conductor
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².

Application

PVC screened flat cables are used mainly as trailing cable for crane installations, floor conveyer systems and shelf control units.

Installation notes

Cables reels with flat cables must be transported in standing position on the flange. A bending flexibility can be achieved on a plane surface. For this purpose, the corresponding fitting instructions should be followed.

- Put the cable trolly on the guiding rail or upon carrier beam and push them together at the starting point. The distance between the bedding surface of two cable trollys must be wider than the double thickness of a cable-packet.
- During the packeting performance, it must be started with the smaller cross-section which lays on the bedding surface and will be builded successively so that the biggest cross-section is laying on the top.
- Further, be careful of a symmetrical load distribution.
- In case of multicore flat cables with small cross-section, smaller than 2,5 mm², is very critical due to its low tensile stress. In such case, you should add 10% reserve wire for calculation.

EMC = Electromagnetic compatibillity

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Core marking	Outer dimension approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
27100	5 G 0,5	Colour coded, DIN VDE 0293	21,0 x 3,4	64,0	140,0	20
27101	5 x 4 x 0,5	Colour coded, (blue, red, green, yellow)	37,4 x 7,2	175,0	280,0	20
27102	8 x 7 x 0,5	Cont. white numbering, DIN VDE 0293	68,6 x 11,7	480,0	1180,0	20
27090	4 G 0,75	Colour coded, DIN VDE 0293	15,0 x 5,0	70,0	147,0	19
27103	4 x 4 G 1	Cont. white numbering	33,5 x 11,0	310,0	625,0	18
26754	4 x 4 x 1	Colour coded, (blue, red, green, yellow)	33,5 x 11,0	310,0	625,0	18
27091	4 G 1,5	Colour coded, DIN VDE 0293	18,7 x 5,9	116,0	210,0	16
27092	8 G 1,5	Cont. white numbering	35,6 x 5,9	217,0	400,0	16
27093	12 G 1,5	Cont. white numbering	52,1 x 5,9	266,0	610,0	16
27094	4 G 2,5	Colour coded, DIN VDE 0293	21,0 x 6,9	170,0	270,0	14
27104	6 G 2,5	Cont. white numbering, DIN VDE 0293	37,4 x 7,2	240,0	320,0	14
27095	4 G 4	Colour coded, DIN VDE 0293	24,5 x 7,7	225,0	400,0	12
27096	4 G 6	Colour coded, DIN VDE 0293	30,1 x 9,2	328,0	520,0	10
27097	4 G 10	Colour coded, DIN VDE 0293	35,8 x 10,5	525,0	840,0	8
27098	4 G 16	Colour coded, DIN VDE 0293	41,3 x 12,6	788,0	1280,0	6
27099	4 G 25	Colour coded, DIN VDE 0293	48,4 x 14,4	1170,0	1800,0	4

Dimensions and specifications may be changed without prior notice. (RJ01)



Suitable accessories can be found in Chapter X.

- Cable Gland - STK-F
- Cable Gland - STS-F

NEO-Flat-C (MCHÖU) screened, EMC-preferred type



Technical data

- Special-Neoprene-flat cable, screened, adapted to DIN VDE 0250 part 809
- **Temperature range**
flexing -30°C bis +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 3000 V
- **Minimum bending radius**
15x cable thickness
- **Radiation resistance**
up to 50x10⁶ cJ/kg (up to 50 Mrad)

Cable structure

- Copper-conductor bare or tinned to DIN VDE 0295 cl.6, extra fine-wire, BS 6360 cl.6, IEC 60228 cl.6
- Core insulation of special rubber
- Core identification to DIN VDE 0293
- up to 5 cores coloured
- from 7 cores, black with continuous white numbering
- GN-YE conductor
- Cores screened individually
- Cores laying parallel
- Copper screened braiding, approx. 85% coverage
- Outer sheath of special Neoprene
- Outer sheath colour black (RAL 9005)

Properties

- Outer sheath cold resistant
- Extensively oil resistant
- Extremely small bending radius
- High flexibility
- Minimum waste of space
- Packeting possibility
- The high degree of screening density assures disturbance-free transmission of all signal and impulses
- Outdoor application

Tests

- **Behaviour in fire**
to DIN VDE 0482-332-1-2
DIN EN 60332-2-1, IEC 60332-1 (equivalent
DIN VDE 0472 part 804 test method B)

Note

- G = with green-yellow conductor
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².

Application

Neoprene screened flat cables are used mainly as trailing cable for crane installations, floor conveyer systems and shelf control units. These cables are also available for export with UL-approval on request.

Installation notes

Cables reels with flat cables must be transported in standing position on the flange. A bending flexibility can be achieved on a plane surface. For this purpose, the corresponding fitting instructions should be followed.

- Put the cable trolly on the guiding rail or upon carrier beam and push them together at the starting point. The distance between the bedding surface of two cable trollys must be wider than the double thickness of a cable-packet.
- During the packeting performance, it must be started with the smaller cross-section which lays on the bedding surface and will be builded successively so that the biggest cross-section is laying on the top.
- Further, be careful of a symmetrical load distribution.
- In case of multicore flat cables with small cross-section, smaller than 2,5 mm², is very critical due to its low tensile stress. In such case, you should add 10% reserve wire for calculation.

EMC = Electromagnetic compatibillity

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No.cores x cross-sec. mm ²	Outer dimension approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
28100	8 G 1,5	7,9 x 42,0	231,0	520,0	16
28101	12 G 1,5	7,9 x 61,0	346,0	790,0	16
28102	4 G 2,5	8,5 x 25,5	164,0	420,0	14

Part no.	No.cores x cross-sec. mm ²	Outer dimension approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
28103	6 G 2,5	8,5 x 34,5	247,0	540,0	14
28104	12 G 2,5	8,9 x 68,0	494,0	1000,0	14
28302	4 G 2,5	16,0 x 51,0	1116,0	1650,0	4

Dimensions and specifications may be changed without prior notice. (RJ01)



Suitable accessories can be found in Chapter X.

- Cable Gland - STK-F
- Cable Gland - STS-F

Ribbon Cables

Type L, Type L AWG 28, Type D



Technical data

Type L (stranded wire)

- Pitch 2,54 mm
- **Nominal voltage**
0,14 mm² = 350 V
0,25 to 0,75 mm² = 600 V
- **Test voltage**
0,14 mm² = 1200 V
0,25 to 0,75 mm² = 2000 V

Type L AWG 28 (stranded wire)

- Pitch 1,27 mm
- **Heat-resistance** up to 105°C
- **Nominal voltage** 300 V
- **Test voltage** 2000 V

Type D (solid)

- Pitch 2,5 mm
- **Nominal voltage** 500 V
- **Test voltage** 1500 V

Cable structure

Type L (stranded wire)

- Tinned copper, fine wire stranded to DIN VDE 0295 cl.5, BS 6360 cl.5
- Core insulation of PVC, flame retardant
- Cores colour coded

Type L AWG 28 (stranded wire)

- Tinned copper 7x0,127
- Core insulation of PVC, flame retardant
- Cores single coloured, edge marking on one side
- Cores moulded, can be separated easily

Type D (solid)

- Cu-solid, tinned 0,5 mm Ø
- Core insulation of PVC
- Cores moulded, can be separated easily
- Cores colour coded

Properties

Type L AWG 28 (stranded wire)

- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- Pitch
(Distance between centre point)

Application

Ribbon cables are used as connecting and control cables wherever there is a need to install quickly and with a minimum waste of space. These cables offer an excellent degree of flexibility.

☒ The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Typ L (colour coded)

Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
44001	2 x 0,14	3,9 x 1,4	2,7	7,0	26
44002	3 x 0,14	6,4 x 1,4	4,0	11,0	26
44003	4 x 0,14	8,9 x 1,4	5,4	14,0	26
44004	5 x 0,14	11,3 x 1,4	6,7	18,0	26
44005	6 x 0,14	13,9 x 1,4	8,1	21,0	26
44006	7 x 0,14	16,4 x 1,4	9,4	25,0	26
44007	8 x 0,14	18,9 x 1,4	10,7	28,0	26
44008	9 x 0,14	21,4 x 1,4	13,4	32,0	26
44009	10 x 0,14	23,9 x 1,4	14,4	35,0	26
44010	11 x 0,14	26,4 x 1,4	15,3	39,0	26
44011	12 x 0,14	28,9 x 1,4	16,1	42,0	26
44012	16 x 0,14	38,9 x 1,4	21,5	56,0	26
44013	20 x 0,14	48,9 x 1,4	27,0	70,0	26
44014	4 x 0,25	9,1 x 1,6	9,6	21,0	24
44015	5 x 0,25	11,6 x 1,6	12,0	26,0	24
44016	6 x 0,25	14,1 x 1,6	14,4	31,0	24
44017	7 x 0,25	16,6 x 1,6	16,8	36,0	24
44018	8 x 0,25	19,1 x 1,6	19,2	42,0	24
44019	10 x 0,25	24,1 x 1,6	24,0	52,0	24
44020	12 x 0,25	29,1 x 1,6	28,8	62,0	24
44021	16 x 0,25	39,1 x 1,6	38,4	83,0	24
44022	20 x 0,25	49,1 x 1,6	48,0	104,0	24
44023	4 x 0,5	9,0 x 2,0	19,2	38,0	20
44024	5 x 0,5	12,0 x 2,0	24,0	48,0	20
44025	6 x 0,5	15,0 x 2,0	28,8	57,0	20
44026	7 x 0,5	17,0 x 2,0	33,6	66,0	20
44027	8 x 0,5	20,0 x 2,0	38,4	76,0	20
44028	10 x 0,5	23,0 x 2,0	48,0	95,0	20
44029	12 x 0,5	30,0 x 2,0	58,0	114,0	20
44030	16 x 0,5	40,0 x 2,0	77,0	151,0	20
44031	20 x 0,5	50,0 x 2,0	101,0	190,0	20
44032	4 x 0,75	10,6 x 2,5	29,0	52,0	19
44033	5 x 0,75	13,3 x 2,5	36,0	64,0	19
44034	6 x 0,75	16,0 x 2,5	43,2	77,0	19
44035	7 x 0,75	18,7 x 2,5	50,0	90,0	19
44036	8 x 0,75	21,4 x 2,5	58,0	103,0	19
44037	10 x 0,75	26,8 x 2,5	72,0	130,0	19
44038	12 x 0,75	32,2 x 2,5	86,0	155,0	19
44039	16 x 0,75	43,0 x 2,5	112,0	206,0	19
44040	20 x 0,75	53,4 x 2,5	151,0	260,0	19

Typ L AWG 28 (single coloured, edge marking on one side)

Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
44041	10 x 0,08	12,7 x 0,9	13,4	30,0	28
44042	14 x 0,08	17,8 x 0,9	18,0	50,0	28
44043	16 x 0,08	20,3 x 0,9	20,0	53,0	28
44044	20 x 0,08	25,4 x 0,9	25,0	65,0	28
44045	26 x 0,08	33,0 x 0,9	32,0	75,0	28
44046	34 x 0,08	43,2 x 0,9	43,0	90,0	28
44047	40 x 0,08	50,8 x 0,9	48,0	125,0	28
44048	48 x 0,08	61,0 x 0,9	59,0	145,0	28

Typ D (colour coded)

Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
44049	2 x 0,5	3,9 x 1,4	10,0	10,0	20
44050	3 x 0,5	6,4 x 1,4	14,0	14,0	20
44051	4 x 0,5	8,9 x 1,4	19,0	17,0	20
44052	5 x 0,5	11,4 x 1,4	24,0	21,0	20
44053	6 x 0,5	13,9 x 1,4	29,0	25,0	20
44054	7 x 0,5	16,4 x 1,4	34,0	29,0	20
44055	8 x 0,5	18,9 x 1,4	38,0	33,0	20
44056	9 x 0,5	21,4 x 1,4	42,0	37,0	20
44057	10 x 0,5	23,9 x 1,4	48,0	41,0	20
44058	11 x 0,5	26,4 x 1,4	56,0	47,0	20

Standard-colour-code (not to DIN 47100)

1 white	12 white-green	23 brown-blue
2 brown	13 white-yellow	24 brown-red
3 green	14 white-grey	25 brown-black
4 yellow	15 white-pink	26 green-grey
5 grey	16 white-blue	27 green-pink
6 pink	17 white-red	28 green-blue
7 blue	18 white-black	29 green-red
8 red	19 brown-green	30 green-black
9 black	20 brown-yellow	31 yellow-grey
10 violet	21 brown-grey	32 yellow-pink
11 white-brown	22 brown-pink	33 yellow-blue

Dimensions and specifications may be changed without prior notice. (RJ01)

TUBEFLEX-Y roundshaped flat ribbon cable for IDC-technique, pitch 1,27 mm



Technical data

- Roundshaped special Flat Ribbon Cable
- **Conductor resistance** at 20°C
max. 230 Ohm/km
- **Temperature range**
-20°C up to +80°C
- **Voltage rating**
max. 300 V
- **Test voltage**
core/core 2000 V
- **Dielectric strength, Spark-test**
3000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Capacitance** (side cores)
ca. 75 pF/m
- **Impedance** 115 Ohm
- **Minimum bending radius**
15x cable Ø
- **Radiation resistance**
up to 80x10⁶ cJ/kg (up to 80 Mrad)

Cable structure

- Stranded tinned copper conductor, size AWG 28
7x0,127 mm = 0,09 mm²
- Core insulation of special PVC
- Cores colour grey, edge marking on one side
- Cores laying parallel and adjacent, alternately spliced or separated and periodically slotted
- Roundshaped flat ribbon cable, folded
- Taping
- Outer sheath of special PVC
- Outer sheath Colour grey

Properties

- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- **Very interesting for cable pre-assemblers!**
- **Tests**
- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Application

TUBEFLEX-Y Flat ribbon cable, due to its roundshape offers considerable advantages compared with other flat ribbon cables during the installation and assembly. This roundshaped cable bids enormous profits by using the quick and economical possibilities under continuance with the efficient connection in IDC-technique. All conductors can be contacted at one working procedure without stripping the insulation. The accurate to size pitch-image of the ribbon cable is obtained due to an adapted backshaping before the plug installation.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x AWG-No.	Flat ribbon dimension Width mm	Outer sheath nominal wall-thickness mm	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km
45130	9 x 28	11,43	0,8	6,1	8,7	35,0
45131	10 x 28	12,70	0,8	6,2	9,7	36,0
45132	14 x 28	17,78	0,8	7,2	13,6	48,0
45133	16 x 28	20,30	0,8	7,2	15,5	51,0
45134	20 x 28	25,40	0,8	7,3	19,4	57,0
45135	24 x 28	30,48	0,8	8,6	23,2	66,0
45136	25 x 28	31,75	0,8	8,6	24,2	69,0
45137	26 x 28	33,02	0,8	8,6	25,2	70,0
45138	30 x 28	38,10	0,8	9,0	29,0	81,0
45139	34 x 28	43,20	0,8	10,0	32,9	87,0
45140	36 x 28	45,72	0,8	10,2	34,9	91,0
45141	37 x 28	47,00	1,0	10,3	35,8	93,0
45142	40 x 28	50,80	1,0	10,7	38,7	101,0
45143	50 x 28	63,50	1,0	11,1	48,4	118,0
45144	60 x 28	76,20	1,0	12,5	58,1	135,0
45145	64 x 28	81,30	1,0	13,0	62,0	147,0

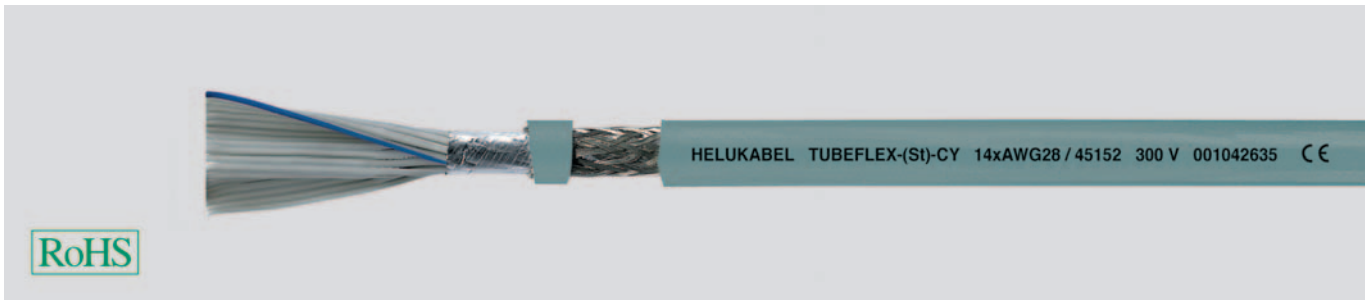
Dimensions and specifications may be changed without prior notice. (RJ01)



Suitable accessories can be found in Chapter X.

- Cable Gland - STK-F
- Cable Gland - STS-F

TUBEFLEX-(St)-CY roundshaped flat ribbon cable, screened, for IDC-technique, pitch 1,27mm, EMC-preferred type



Technical data

- Roundshaped special Flat Ribbon Cable, screened
- **Conductor resistance** at 20°C
max. 230 Ohm/km
- **Temperature range**
-20°C up to +80°C
- **Voltage rating**
max. 300 V
- **Test voltage**
core/core 2000 V
core/screen 2000 V
- **Dielectric strength, Spark-test**
3000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Capacitance** (side cores)
ca. 75 pF/m
- **Impedance** 115 Ohm
- **Minimum bending radius**
15x cable Ø
- **Radiation resistance**
up to 80×10^6 cJ/kg (up to 80 Mrad)

Cable structure

- Stranded tinned copper conductor, size AWG 28
 $7 \times 0,127 \text{ mm} = 0,09 \text{ mm}^2$
- Core insulation of special PVC
- Cores colour grey, edge marking on one side
- Cores laying parallel and adjacent, alternately spliced or separated and periodically slotted
- Roundshaped flat ribbon cable, folded
- Dual shielding:
(St) - plastic coated Alu-foil and
C - tinned copper wire braiding with optimal surface coverage
- Outer sheath of special PVC
- Outer sheath Colour grey

Properties

- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- **Very interesting for cable pre-assemblers!**
- The dual shielding with plastic coated aluminium foil (St) and the additional tinned copper wire braiding (C) protects against high frequency interference and ensures disturbance-free signal and impuls transfer.

Tests

- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Application

TUBEFLEX-(St)-CY Flat ribbon cable, due to its roundshape offers considerable advantages compared with other flat ribbon cables during the installation and assembly. This roundshaped cable bids enormous profits by using the quick and economical possibilities under continuance with the efficient connection in IDC-technique. All conductors can be contacted at one working procedure without stripping the insulation. The accurate to size pitch-image of the ribbon cable is obtained due to an adapted backshaping before the plug installation.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x AWG-No.	Flat ribbon dimension Width mm	Outer sheath nominal wall-thickness mm	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km
45150	9 x 28	11,43	0,8	6,3	30,9	56,0
45151	10 x 28	12,70	0,8	6,4	31,9	57,0
45152	14 x 28	17,78	0,8	7,2	35,6	70,0
45153	16 x 28	20,30	0,8	7,4	42,0	75,0
45154	20 x 28	25,40	0,8	7,8	45,8	83,0
45155	24 x 28	30,48	0,8	9,0	54,3	97,0
45156	25 x 28	31,75	0,8	9,0	55,2	100,0
45157	26 x 28	33,02	0,8	9,0	60,0	101,0
45158	30 x 28	38,10	0,8	9,2	60,4	113,0
45159	34 x 28	43,20	0,8	10,2	68,1	122,0
45160	36 x 28	45,72	0,8	10,4	70,1	126,0

Part no.	No. cores x AWG-No.	Flat ribbon dimension Width mm	Outer sheath nominal wall-thickness mm	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km
45161	37 x 28	47,00	1,0	10,5	71,1	128,0
45162	40 x 28	50,80	1,0	11,3	74,1	135,0
45163	50 x 28	63,50	1,0	11,6	88,3	160,0
45164	60 x 28	76,20	1,0	12,9	98,7	172,0
45165	64 x 28	81,30	1,0	13,3	107,2	192,0

Dimensions and specifications may be changed without prior notice. (RJ01)



Suitable accessories can be found in Chapter X.

- Cable Gland - STK-F
- Cable Gland - STS-F



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