

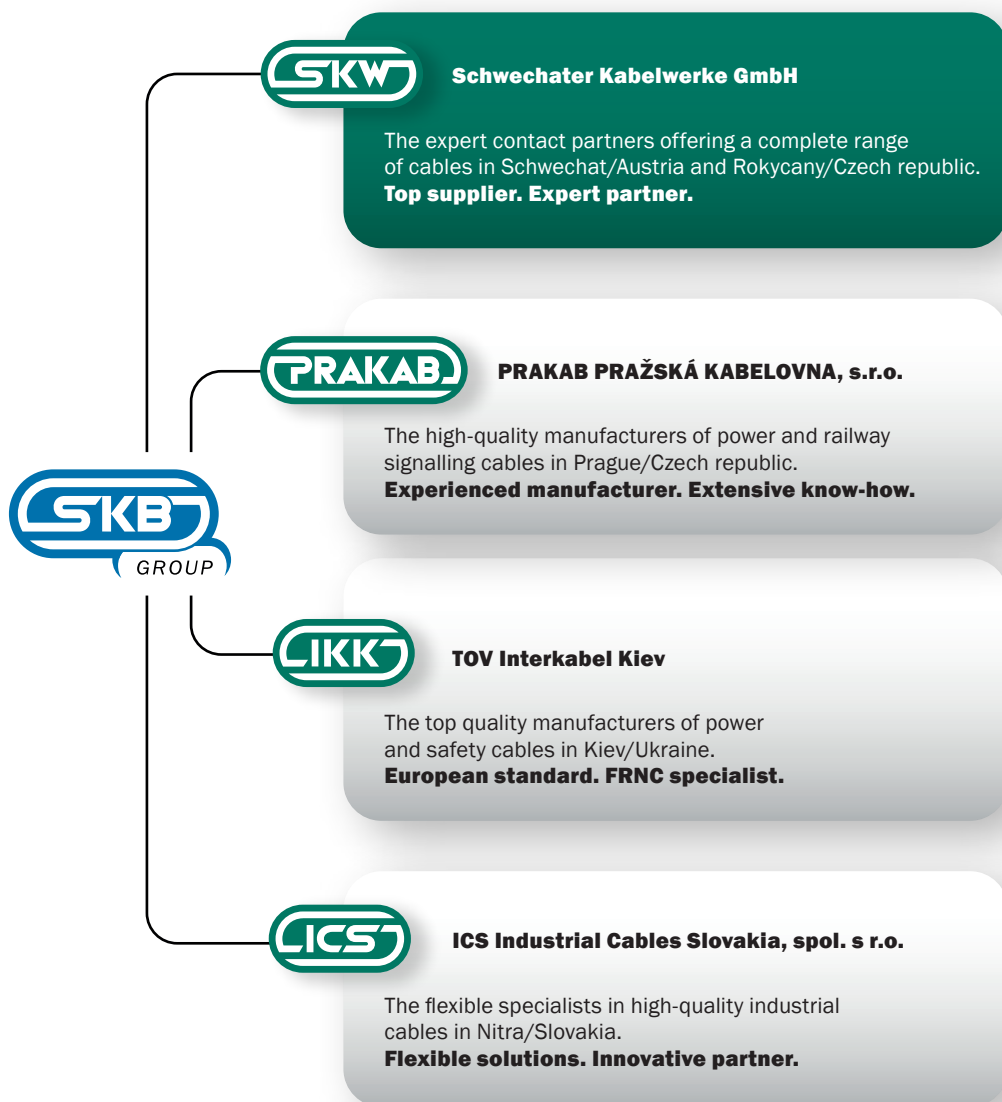


SCHWECHATER KABELWERKE



PRODUCT CATALOGUE

2023



A GROUP OF **PASSION AND SKILLS**



SCHWECHATER KABELWERKE

SKW – your expert contact partners offering a complete range of cables

When a company has been successful for over 130 years it is a clear sign of expertise and continuity. Yet it means more than that: it is proof of our **passion** and **enthusiasm** for our business. That is something we're keen to demonstrate to you. Today as in the past, SKW owes its success to its expert staff and its **uncompromising commitment to quality standards** in combination with **customer oriented logistics**.

As an expert contact partner offering a **wide range of cables**, it is our goal to deliver excellent high quality products and to offer **individual customized solutions**. Our customers appreciate our successful **project management** and our extensive **technical expertise** as well as the rapid **availability** provided by our large stock volume. This is what makes SKW such a successful customer and logistics centre. Our permanent stock includes around 3000 types of **power, communication and industrial cables**, which are all available for 'just in time' delivery as required.

Reliability is a quality which defines both our products and our team - driven by excellence day to day.

Make our commitment your advantage.

Your SKW Team

Scan this QR code to download the latest version of our catalogue.
You can also take a look at the products supplied by other subsidiaries of the SKB GROUP.





SCHWECHATER KABELWERKE

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H05V-U (YSe)

PVC Insulated wire, single core

DESIGN



- 1 | Copper conductor, solid wire (-U)
- 2 | Core insulation (PVC)

APPLICATION

For fixed and protected installation within appliances as well as in and on luminaires. Permissible for installation in conduits on and under plaster but only for control and signal circuits.

TECHNICAL DATA



Standard:
EN 50525-2-31



Rated voltage:
300/500 V (U₀/U)



Test voltage:
2 kV / 50 Hz



Temperature range:
laying temperature: min. 5 °C
operating temperature: -30 °C up to 70 °C
conductor temperature: max. 70 °C
short circuit temperature: max. 160 °C/5 s



Bending radius (min.):
4 x Ø of wire



Core identification:
according to EN 50525-1: black (bk), brown (bn), red (rd), orange (og), yellow (ye), green (gn), blue (bu), violet (vt), grey (gy), white (wh), pink (pk), green-yellow (gnye)



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}

Nominal cross-section (mm ²)	Core colours	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
H05V-U (YSe)					
0.5	bk, bu, rd	36	2.0	8	100 R
0.75	bk, bn, rd, bu, wh	24.5	2.1	12	100 R
1	bk, bu, vt, gy, wh, gnye	18.1	2.3	14	100 R

Technical changes reserved. All figures are therefore without guarantee.

H05V-K (YSf)

PVC insulated wire, fine core

DESIGN



- 1 | Copper conductor, fine wire (-K)
- 2 | Core insulation (PVC)

APPLICATION

For fixed and protected installation within appliances as well as in and on luminaires. Permissible for installation in conduits on and under plaster but only for control and signal circuits.

TECHNICAL DATA



Standard:
EN 50525-2-31



Rated voltage:
300/500 V (U₀/U)



Test voltage:
2 kV / 50 Hz



Temperature range:
laying temperature: min. 5 °C
operating temperature: -30 °C up to 70 °C
conductor temperature: max. 70 °C
short circuit temperature: max. 160 °C/5 s



Bending radius (min.):
3 x Ø of wire (fixed installed)
5 x Ø of wire (free motion)



Core identification:
according to EN 50525-1: black (bk), brown (bn), red (rd), orange (og), yellow (ye), green (gn), blue (bu), violet (vt), grey (gy), white (wh), pink (pk), green-yellow (gnye)



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}

Nominal cross-section (mm ²)	Core colours	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
H05V-K (YSf)					
0.5	bk, bn, bu, vt, rd, og, ye, gy, gn, wh, gnye	39	2.1	9	100 R
0.75	bk, bn, rd, bu, wh	26	2.2	12	100 R
1	bk, bn, bu, vt, rd, og, ye, gy, gn, wh, gnye	19.5	2.4	14	100 R

Technical changes reserved. All figures are therefore without guarantee.

H07V-U (Ye)

PVC Insulated wire, single core

DESIGN



- 1 | Copper conductor, solid wire (-U)
- 2 | Core insulation (PVC)

APPLICATION

For fixed installation in conduits on or under plaster. Suitable for protected installation in and on lighting facilities or control devices for voltages up to 750 V AC or 1000 V DC against ground.

TECHNICAL DATA



Standard:
EN 50525-2-31



Rated voltage:
450/750 V (U_o/U)



Test voltage:
2.5 kV / 50 Hz



Temperature range:
laying temperature: min. 5 °C
operating temperature: -30 °C up to 70 °C
conductor temperature: max. 70 °C
short circuit temperature: max. 160 °C/5 s



Bending radius (min.):
4 x Ø of wire



Core identification:
according to EN 50525-1: black (bk), brown (bn), red (rd), orange (og), yellow (ye), green (gn), blue (bu), violet (vt), grey (gy), white (wh), pink (pk), green-yellow (gnye)



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}

Nominal cross-section (mm ²)	Core colours	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
H07V-U (Ye)					
1.5	bk, bn, rd, og, ye, gn, bu, vt, gy, wh, pk, gnye	12.1	2.8	20	100 R
2.5	bk, bn, rd, og, ye, gn, bu, vt, gy, wh, pk, gnye	7.41	3.4	30	100 R
4	bk, bn, rd, og, ye, gn, bu, vt, gy, gnye	4.61	3.8	50	100 R
6	bk, bn, rd, ye, gn, bu, vt, gy, gnye	3.08	4.2	65	100 R
10	bk, bn, ye, gn, bu, vt, gnye	1.83	5.5	105	100 R
16	bk, gnye	1.15	6.3	163	100 R

Technical changes reserved. All figures are therefore without guarantee.

H07V-R (Ym)

PVC insulated wire, stranded core

DESIGN



- 1 | Copper conductor, stranded wire (-R)
- 2 | Core insulation (PVC)

APPLICATION

For fixed installation in conduits on or under plaster. Suitable for protected installation in and on lighting facilities or control devices for voltages up to 750 V AC or 1000 V DC against ground.

TECHNICAL DATA



Standard:
EN 50525-2-31



Rated voltage:
450/750 V (U₀/U)



Test voltage:
2.5 kV / 50 Hz



Temperature range:
laying temperature: min. 5 °C
operating temperature: -30 °C up to 70 °C
conductor temperature: max. 70 °C
short circuit temperature: max. 160 °C/5 s



Bending radius (min.):
4 x Ø up to 8 mm
5 x Ø 8 up to 12 mm
6 x Ø over 12 mm



Core identification:
according to EN 50525-1: black (bk), brown (bn), red (rd), orange (og), yellow (ye), green (gn), blue (bu), violet (vt), grey (gy), white (wh), pink (pk), green-yellow (gnye)



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}

Nominal cross-section (mm ²)	Core colours	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
H07V-R (Ym)					
6	bk, bu, gnye	3.08	4.4	64	100 R, 500 Sp
10	bk, bn, bu, gnye	1.83	6.0	120	100 R, 500 Sp
16	bk, bn, bu, gnye	1.15	6.9	170	100 R, 500 Sp
25	bk, bn, bu, gnye	0.727	8.9	270	100 R, 500 Sp
35	bk, bn, bu, gnye	0.524	9.8	370	500 Sp, 1000 Sp
50	bk, bu, gnye	0.387	11.2	515	500 Sp, 1000 Sp
70	bk, bu, gnye	0.268	13.3	710	500 D, 1000 D
95	bk, gnye	0.193	15.0	955	500 D, 1000 D
120	bk, bu, gnye	0.153	16.6	1205	500 D, 1000 D
150	bk, gnye	0.124	18.0	1480	500 D, 1000 D
185	bk, gnye	0.0991	21.4	1741	500 D, 1000 D
240	bk, gnye	0.0754	24.4	2278	500 D, 1000 D
300	bk, gnye	0.0601	27.1	3050	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

H07V-K (Yf)

PVC insulated wire, fine core

DESIGN



- 1 | Copper conductor, fine wire (-K)
- 2 | Core insulation (PVC)

APPLICATION

For fixed installation in conduits on or under plaster. Suitable for protected installation.

TECHNICAL DATA



Standard:
EN 50525-2-31



Rated voltage:
450/750 V (U₀/U)



Test voltage:
2.5 kV / 50 Hz



Temperature range:
laying temperature: min. 5 °C
operating temperature: -30 °C up to 70 °C
conductor temperature: max. 70 °C
short circuit temperature: max. 160 °C/5 s



Bending radius (min.):
3 x Ø up to 12 mm (fixed installed)
4 x Ø over 12 mm (fixed installed)
5 x Ø up to 12 mm (free motion)
6 x Ø over 12 mm (free motion)



Core identification:
according to EN 50525-1: black (bk), brown (bn), red (rd), orange (og), yellow (ye), green (gn), blue (bu), violet (vt), grey (gy), white (wh), pink (pk), green-yellow (gnye)



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}

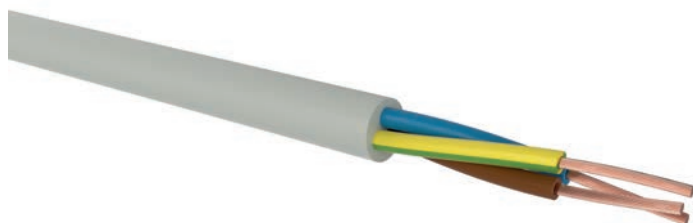
Nominal cross-section (mm ²)	Core colours	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
H07V-K (Yf)					
1.5	bk, bn, bu, gnye	13.3	3.1	21	100 R
2.5	bk, bn, bu, gnye	7.98	3.8	33	100 R
4	bk, bn, bu, gnye	4.95	4.4	48	100 R, 500 Sp
6	bk, bn, bu, gnye	3.3	4.9	66	100 R, 500 Sp
10	bk, bn, bu, gnye	1.91	6.4	112	100 R, 500 Sp
16	bk, bn, bu, gnye	1.21	7.4	167	100 R, 500 Sp
25	bk, bn, bu, gnye	0.78	9.1	254	100 R, 500 Sp
35	bk, bu, gnye	0.554	10.4	340	100 R, 500 Sp
50	bk, bu, gnye	0.386	12.4	485	500 D, 1000 D
70	bk, bu, gnye	0.272	13.6	674	500 D, 1000 D
95	bk, gnye	0.206	15.8	894	500 D, 1000 D
120	bk, gnye	0.161	17.4	1110	500 D, 1000 D
150	bk, gnye	0.129	19.8	1400	500 D, 1000 D
185	bk, gnye	0.106	21.6	1700	500 D, 1000 D
240	bk, gnye	0.0801	24.6	2230	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

H03VV-F (YML)

PVC flexible cable, light-duty

DESIGN



- 1 | Copper conductor, fine wire (-F)
- 2 | Core insulation (PVC)
- 3 | Sheath (PVC grey, black, white, brown or special colour)

APPLICATION

Suitable for low mechanical stress in households and offices as well for household appliances. Not suitable for outdoor installation, in commercial establishments or for the connection of commercially used power tools.

TECHNICAL DATA



Standard:
EN 50525-2-11



Rated voltage:
300/300 V (U₀/U)



Test voltage:
2 kV / 50 Hz



Temperature range:
laying temperature: min. 5 °C
operating temperature: 5 °C up to 50 °C
conductor temperature: max. 60 °C
short circuit temperature: max. 150 °C/5 s



Bending radius (min.):
3 x Ø of cable



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}

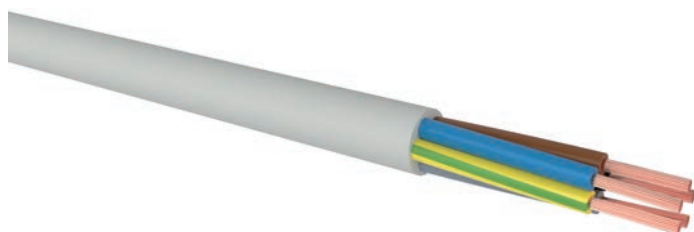
Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
H03VV-F (YML)				
2 x 0.5	39	4.7	39	50 R, 100 R
3 G 0.5	39	5.0	46	50 R, 100 R
5 G 0.5	39	6.5	65	50 R, 100 R
2 x 0.75	26	5.3	46	50 R, 100 R
3 G 0.75	26	5.5	55	50 R, 100 R, 500 Sp
4 G 0.75	26	6.1	70	50 R, 100 R
5 G 0.75	26	6.8	83	50 R, 100 R
2 x 1	19.5	5.5	51	50 R, 100 R, 500 Sp
3 x 1	19.5	5.9	62	50 R, 100 R
3 G 1	19.5	5.9	62	50 R, 100 R
4 G 1	19.5	6.5	75	500 Sp, 1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

H05VV-F (YMM)

PVC Control cable, medium duty

DESIGN



- 1 | Copper conductor, fine wire (–F)
- 2 | Core insulation (PVC)
- 3 | Sheath (PVC grey RAL 7035 or special colour)

APPLICATION

Suitable for medium mechanical stress in households and offices as well for household appliances (also in damp rooms). Not suitable for outdoor installation, in commercial establishments or for the connection of commercially used power tools.

TECHNICAL DATA



Standard:
EN 50525-2-11



Rated voltage:
300/500 V (U₀/U)



Test voltage:
2 kV / 50 Hz



Temperature range:
laying temperature: min. 5 °C
operating temperature: 5 °C up to 50 °C
conductor temperature: max. 60 °C
short circuit temperature: max. 150 °C/5 s



Bending radius (min.):
3 x Ø of cable



Core identification:
colours according to CENELEC HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
H05VV-F (YMM)				
2 x 0.75	26	5.8	57	500 Sp, 1000 Sp
3 G 0.75	26	6.2	67	500 Sp, 1000 Sp
4 G 0.75	26	6.7	79	500 Sp, 1000 Sp
5 G 0.75	26	7.7	97	500 Sp, 1000 Sp
7 G 0.75	26	8.5	130	500 D, 1000 D
10 G 0.75	26	11.0	200	500 D, 1000 D
12 G 0.75	26	11.5	230	500 D, 1000 D
14 G 0.75	26	12.0	260	500 D, 1000 D
16 G 0.75	26	13.0	290	500 D, 1000 D
19 G 0.75	26	14.0	340	500 D, 1000 D
2 x 1	19.5	6.2	64	500 Sp, 1000 Sp
3 G 1	19.5	6.6	76	500 Sp, 1000 Sp
4 G 1	19.5	7.4	96	500 Sp, 1000 Sp
5 G 1	19.5	8.1	112	500 Sp, 1000 Sp
7 G 1	19.5	9.0	136	500 D, 1000 D
10 G 1	19.5	11.7	210	500 D, 1000 D
12 G 1	19.5	12.1	233	500 D, 1000 D
14 G 1	19.5	13.0	300	500 D, 1000 D
16 G 1	19.5	13.9	307	500 D, 1000 D

H05VV-F (YMM)

PVC Control cable, medium duty

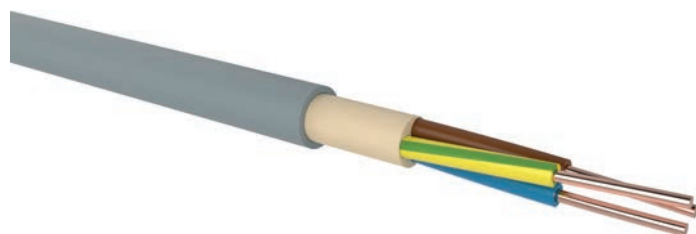
Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
H05VV-F (YMM)				
19 G 1	19.5	14.5	349	500 D, 1000 D
2 x 1.5	13.3	7.1	86	500 Sp, 1000 Sp
3 x 1.5	13.3	7.6	107	500 Sp, 1000 Sp
3 G 1.5	13.3	7.6	107	500 Sp, 1000 Sp
4 G 1.5	13.3	8.5	132	500 Sp, 1000 Sp
5 G 1.5	13.3	9.5	165	500 Sp, 1000 Sp
7 G 1.5	13.3	10.6	189	500 D, 1000 D
10 G 1.5	13.3	13.7	286	500 D, 1000 D
14 G 1.5	13.3	14.9	363	500 D, 1000 D
16 G 1.5	13.3	16.0	463	500 D, 1000 D
19 G 1.5	13.3	16.4	480	500 D, 1000 D
2 x 2.5	7.98	8.8	129	500 Sp, 1000 Sp
3 x 2.5	7.98	9.3	154	500 Sp, 1000 Sp
3 G 2.5	7.98	9.3	154	500 Sp, 1000 Sp
4 G 2.5	7.98	10.4	195	500 Sp, 1000 Sp
5 G 2.5	7.98	11.7	239	500 Sp, 1000 Sp
7 G 2.5	7.98	13.0	294	500 D, 1000 D
10 G 2.5	7.98	16.5	431	500 D, 1000 D
12 G 2.5	7.98	17.5	564	500 D, 1000 D
14 G 2.5	7.98	18.3	570	500 D, 1000 D
16 G 2.5	7.98	20.0	750	500 D, 1000 D
19 G 2.5	7.98	21.0	850	500 D, 1000 D
4 G 4	4.95	12.0	283	500 Sp, 1000 Sp
5 G 4	4.95	13.3	320	500 Sp, 1000 Sp
4 G 6	3.3	14.7	379	500 Sp, 1000 Sp
5 G 6	3.3	16.0	470	500 Sp, 1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

AT-H05VV-U or -R (YM)

PVC installation cable

DESIGN



- 1 | Copper conductor, round solid (RE) resp. round stranded (RM)
- 2 | Core insulation (PVC)
- 3 | Inner covering (EPDM)
- 4 | Sheath (PVC grey RAL 7035 or special colour)

APPLICATION

For fixed installation in dry and damp premises. Not suitable for unprotected installation in the open air or directly in tamped concrete.

TECHNICAL DATA



Standard:
ÖVE/ÖNORM E 8242



Rated voltage:
300/500 V (U₀/U)



Test voltage:
2 kV / 50 Hz



Temperature range:
laying temperature: min. 5 °C
operating temperature: -40 °C up to 70 °C
conductor temperature: max. 70 °C
short circuit temperature: max. 160 °C/5 s



Bending radius (min.):
4 x Ø of cable



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Fire load (kWh/m)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
AT-H05VV-U or -R (YM)					
2 x 1.5 RE	12.1	0.42	8.3	98	50 R, 100 R, 500 Sp, 1000 Sp
3 x 1.5 RE	12.1	0.44	8.5	117	50 R, 100 R, 500 Sp, 1000 Sp
4 x 1.5 RE	12.1	0.52	9.4	134	50 R, 100 R, 500 Sp, 1000 Sp
5 x 1.5 RE	12.1	0.58	10.2	163	50 R, 100 R, 500 Sp, 1000 Sp
7 x 1.5 RE	12.1	0.67	11.4	197	50 R, 100 R, 500 Sp, 1000 Sp
10 x 1.5 RE	12.1	1.05	14.5	307	100 R, 500 Sp, 1000 Sp
12 x 1.5 RE	12.1	1.17	14.9	346	100 R, 500 Sp, 1000 Sp
2 x 2.5 RE	7.41	0.53	9.6	125	50 R, 100 R, 500 Sp, 1000 Sp
3 x 2.5 RE	7.41	0.58	10.1	165	50 R, 100 R, 500 Sp, 1000 Sp
4 x 2.5 RE	7.41	0.67	11.0	204	500 Sp, 1000 Sp
5 x 2.5 RE	7.41	0.75	12.0	245	50 R, 100 R, 500 Sp, 1000 Sp

AT-H05VV-U or -R (YM)

PVC installation cable

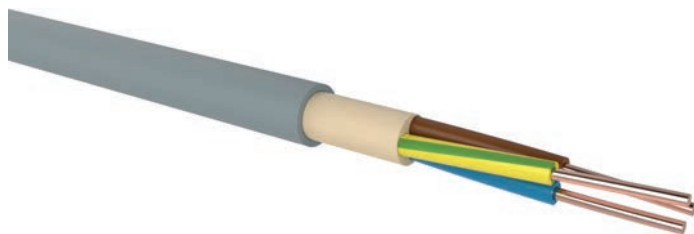
Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Fire load (kWh/m)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
AT-H05VV-U or -R (YM)					
7 x 2.5 RE	7.41	0.88	12.8	314	100 R, 500 Sp
2 x 4 RE	4.61	0.72	9.4	173	50 R, 100 R, 500 Sp, 1000 Sp
3 x 4 RE	4.61	0.72	11.7	237	50 R, 100 R, 500 Sp, 1000 Sp
4 x 4 RE	4.61	0.92	12.7	294	50 R, 100 R, 500 Sp, 1000 Sp
5 x 4 RE	4.61	1.11	13.8	352	50 R, 100 R, 500 Sp, 1000 Sp
3 x 6 RE	3.08	0.92	14.4	332	50 R, 100 R, 500 Sp, 1000 Sp
4 x 6 RE	3.08	1.08	14.6	405	500 D, 1000 D
5 x 6 RE	3.08	1.28	15.9	496	50 R, 100 R, 500 Sp, 1000 Sp
3 x 10 RE	1.83	1.28	17.3	619	500 D, 1000 D
4 x 10 RE	1.83	1.5	19.1	756	500 D, 1000 D
4 x 10 RM	1.83	1.5	19.1	756	500 D, 1000 D
5 x 10 RE	1.83	1.83	21.0	860	500 D, 1000 D
5 x 10 RM	1.83	1.83	21.0	860	500 D, 1000 D
4 x 16 RM	1.15	1.86	21.7	972	500 D, 1000 D
5 x 16 RM	1.15	2.31	23.6	1201	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

NYM-J or -O

PVC installation cable

DESIGN



- 1 | Copper conductor, round solid (RE) resp. round stranded (RM)
- 2 | Core insulation (PVC)
- 3 | Inner covering (EPDM)
- 4 | Sheath (PVC grey RAL 7035 or special colour)

APPLICATION

For fixed installation in dry and damp premises. Not suitable for unprotected installation in the open air or directly in tamped concrete.

TECHNICAL DATA



Standard:
DIN VDE 0250-204



Rated voltage:
300/500 V (U₀/U)



Test voltage:
2 kV / 50 Hz



Temperature range:
laying temperature: min. 5 °C
operating temperature: -40 °C up to 70 °C
conductor temperature: max. 70 °C
short circuit temperature: max. 160 °C/5 s



Bending radius (min.):
4 x Ø of cable



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}



Certificate:
VDE Germany

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Fire load (kWh/m)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
NYM-J or -O					
2 x 1.5 RE	12.1	0.42	8.8	115	100 R, 500 Sp
3 x 1.5 RE	12.1	0.44	8.5	120	100 R, 500 Sp
4 x 1.5 RE	12.1	0.53	9.3	145	100 R, 500 Sp
5 x 1.5 RE	12.1	0.58	10.2	170	100 R, 500 Sp
7 x 1.5 RE	12.1	0.67	12.3	235	1000 D
10 x 1.5 RE	12.1	1.05	14.3	330	500 Sp, 1000 Sp
12 x 1.5 RE	12.1	1.17	14.4	400	100 R, 500 Sp
3 x 2.5 RE	7.41	0.58	9.9	165	100 R, 500 Sp
4 x 2.5 RE	7.41	0.67	10.7	205	100 R, 500 Sp
5 x 2.5 RE	7.41	0.72	11.7	245	100 R, 500 Sp
7 x 2.5 RE	7.41	0.88	14.5	335	1000 D
3 x 4 RE	4.61	0.72	10.8	265	1000 D
4 x 4 RE	4.61	0.92	12.8	305	1000 D
5 x 4 RE	4.61	1.11	13.9	370	1000 D
5 x 6 RE	3.08	1.28	15.1	460	1000 D

NYM-J or -O

PVC installation cable

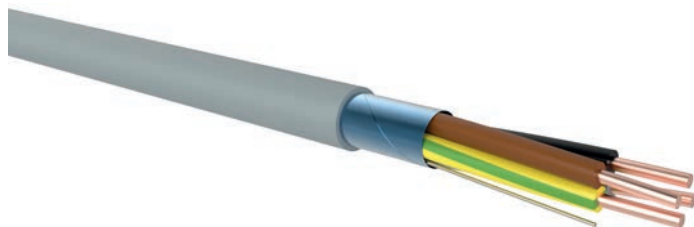
Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Fire load (kWh/m)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
NYM-J or -O					
3 x 10 RE	1.83	1.28	14.7	465	1000 D
4 x 10 RE	1.83	1.5	18.6	670	1000 D
5 x 10 RE	1.83	1.83	20.2	800	1000 D
1 x 16 RM	1.15	0.42	9.1	230	1000 D
4 x 16 RM	1.15	1.86	19.2	1025	1000 D
5 x 16 RM	1.15	2.31	23.6	1275	1000 D
4 x 25 RM	0.727	2.89	24.0	1580	1000 D
5 x 25 RM	0.727	3.42	28.5	1945	1000 D

Technical changes reserved. All figures are therefore without guarantee.

(N)YM(ST)-J

PVC cable with sheath, screened

DESIGN



- 1 | Copper conductor, round solid (RE)
- 2 | Core insulation (PVC)
- 3 | Screen (plastic tape laminated with aluminium foil and with tinned drain wire)
- 4 | Sheath (PVC grey)

APPLICATION

For installing in dry, damp and wet environments. Outdoor use only when protected from direct sunlight possible.

TECHNICAL DATA



Standard:
according to DIN VDE 0250-204



Rated voltage:
300/500 V (U₀/U)



Test voltage:
2 kV / 50 Hz



Temperature range:
laying temperature: min. 5 °C
fixed: -20 °C up to 70 °C
moved: -5 °C up to 70 °C
conductor temperature: max. 70 °C
short circuit temperature: max. 160 °C/5 s



Bending radius (min.):
4 x Ø of cable



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}

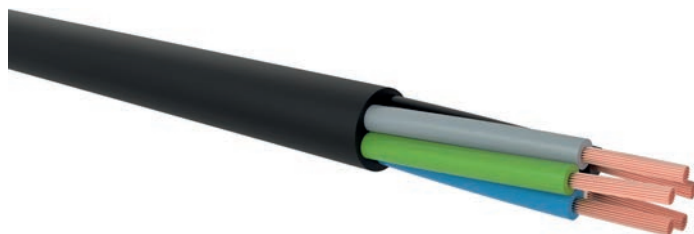
Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Fire load (kWh/m)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
(N)YM(ST)-J						
3 x 1.5/1.5 RE	12.1	15	0.44	10.5	174	500 D, 1000 D
4 x 1.5/1.5 RE	12.1	14	0.53	11.5	184	500 D, 1000 D
5 x 1.5/1.5 RE	12.1	14	0.58	12.0	228	500 D, 1000 D
7 x 1.5/1.5 RE	12.1	14	0.67	13.0	263	500 D, 1000 D
3 x 2.5/1.5 RE	12.1	18	0.58	12.0	217	500 D, 1000 D
4 x 2.5/1.5 RE	7.41	18	0.67	13.0	256	500 D, 1000 D
5 x 2.5/1.5 RE	7.41	18	0.75	13.5	296	500 D, 1000 D
3 x 4/1.5 RE	4.61	24	0.72	11.5	290	500 D, 1000 D
3 x 6/1.5 RE	3.08	31	0.92	15.0	379	500 D, 1000 D
5 x 6/1.5 RE	3.08	31	1.28	15.5	567	500 D, 1000 D
5 x 10/1.5 RE	1.83	41	1.83	18.0	863	500 D, 1000 D
5 x 16/1.5 RE	1.15	55	2.31	26.0	1347	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

H05RR-F (GML)

Light flexible rubber cable

DESIGN



- 1 | Copper conductor, fine wire (–F)
- 2 | Core insulation (EPR-rubber)
- 3 | Sheath (EPR-rubber black)

APPLICATION

For use with light to moderate mechanical stressing in households and office premises for light electrical equipment. Not suitable for continuous use in the open air or for use in premises used industrially.

TECHNICAL DATA



Standard:
EN 50525-2-21



Rated voltage:
300/500 V (U₀/U)



Test voltage:
2 kV / 50 Hz



Temperature range:
laying temperature: min. -25 °C
operating temperature: -25 °C up to 50 °C
conductor temperature: max. 60 °C
short circuit temperature: max. 200 °C/5 s



Bending radius (min.):
4 x Ø of cable



Core identification:
HD 308 S2



Fire properties:
CPR classification: F_{ca}



Certificate:
VDE Germany

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
H05RR-F (GML)				
2 x 0.75	26.7	7.0	61	500 Sp, 1000 Sp
3 x 0.75	26.7	7.5	74	100 R, 500 Sp, 1000 Sp
4 x 0.75	26.7	8.0	90	500 Sp, 1000 Sp
5 x 0.75	26.7	8.5	110	500 Sp, 1000 Sp
2 x 1	20	7.7	71	500 Sp, 1000 Sp
3 G 1	20	8.0	83	100 R, 500 Sp, 1000 Sp
4 G 1	20	8.5	105	500 Sp, 1000 Sp
5 G 1	20	9.5	140	500 Sp, 1000 Sp
2 x 1.5	13.7	8.5	110	500 Sp, 1000 Sp
3 G 1.5	13.7	9.0	125	100 R, 500 Sp, 1000 Sp
4 G 1.5	13.7	10.0	160	100 R, 500 Sp, 1000 Sp
5 G 1.5	13.7	11.5	195	100 R, 500 Sp, 1000 Sp
2 x 2.5	8.2	10.5	150	100 R, 500 Sp, 1000 Sp
3 G 2.5	8.2	11.0	180	100 R, 500 Sp, 1000 Sp
4 G 2.5	8.2	12.0	240	100 R, 500 Sp, 1000 Sp
5 G 2.5	8.2	13.0	290	100 R, 500 Sp, 1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

H01N2-D (NSLFFöu)

Rubber welding cable

DESIGN



- 1 | Copper conductor, superfine-wire (-D standard flexibility)
- 2 | Separator film (fleece tape)
- 3 | Sheath (polychloroprene, cold, oil and UV-resistant, black)

APPLICATION

Singel core cable for connection to electrofusion units as hand-held electrode cable or as ground cable for use in dry, damp rooms and outdoors. H01N2-E (finest wire) on request.

TECHNICAL DATA



Standard:
EN 50525-2-81
CENELEC HD 22.6 S2



Rated voltage:
100/100 V (U₀/U)



Test voltage:
1 kV / 50 Hz



Temperature range:
laying temperature: min. -20 °C
operating temperature: -20 °C up to 80 °C
conductor temperature: max. 85 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
4 x Ø of cable



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}



Certificate:
VDE Germany

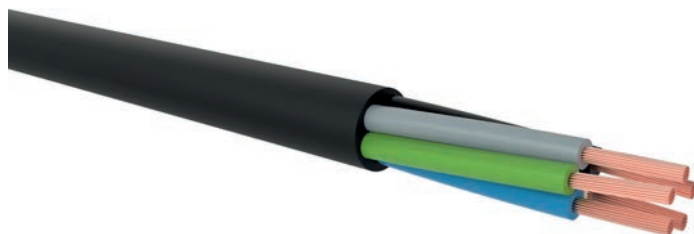
Nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Diameter of wire (mm) max.	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
H01N2-D (NSLFFöu)					
10	1.91	0.21	8.5	150	500 D, 1000 D
16	1.21	0.21	10.0	220	500 D, 1000 D
25	0.78	0.21	11.5	300	500 D, 1000 D
35	0.554	0.21	13.0	410	500 D, 1000 D
50	0.368	0.21	15.0	560	500 D, 1000 D
70	0.272	0.21	17.0	770	500 D, 1000 D
95	0.206	0.21	19.5	1050	500 D, 1000 D
120	0.161	0.51	22.0	1290	500 D, 1000 D
150	0.129	0.51	23.5	1590	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

H07RN-F

Heavy flexible rubber cable, oil resistant

DESIGN



- 1 | Copper conductor, fine wire (–F)
- 2 | Core insulation (EPR-rubber)
- 3 | Sheath (chloropren-rubber black, oil and abrasion resistant)

APPLICATION

Usable under medium to heavy mechanical stress in dry and wet rooms, in free ambient or rooms subject to explosion hazards. Permissible for fixed installation on hoisting equipments, machinery etc. and for rated voltages up to 1000 V if installed protected in tubes or inside of devices and as motor power supply cable.

TECHNICAL DATA



Standard:
EN 50525-2-21



Rated voltage:
450/750 V (U₀/U)



Test voltage:
2.5 kV / 50 Hz



Temperature range:
laying temperature: min. -25 °C
operating temperature: -25 °C up to 50 °C
conductor temperature: max. 60 °C
short circuit temperature: max. 200 °C/5 s



Bending radius (min.):
4 x Ø of cable



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}



Certificate:
VDE Germany

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
H07RN-F				
2 x 1	20	9.0	100	500 Sp, 1000 Sp
3 G 1	20	9.5	120	500 Sp, 1000 Sp
4 G 1	20	11.5	190	500 Sp, 1000 Sp
5 G 1	20	11.5	180	500 Sp, 1000 Sp
2 x 1.5	13.7	9.5	130	500 Sp, 1000 Sp
3 G 1.5	13.7	10.5	150	100 R, 500 Sp, 1000 Sp
4 G 1.5	13.7	11.5	190	100 R, 500 Sp, 1000 Sp
5 G 1.5	13.7	12.5	230	100 R, 500 Sp, 1000 Sp
7 G 1.5	13.7	15.5	330	500 D, 1000 D
9 G 1.5	13.7	17.0	428	500 D, 1000 D
12 G 1.5	13.7	20.0	470	500 D, 1000 D
19 G 1.5	13.7	23.0	620	500 D, 1000 D
24 G 1.5	13.7	25.5	1000	500 D, 1000 D
27 G 1.5	13.7	27.0	1077	500 D, 1000 D
37 G 1.5	13.7	33.0	1290	500 D, 1000 D
2 x 2.5	8.21	11.5	190	500 Sp, 1000 Sp

H07RN-F

Heavy flexible cable, oil resistant

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
H07RN-F				
3 G 2.5	8.21	12.5	220	100 R, 500 Sp, 1000 D
4 G 2.5	8.21	14.0	280	100 R, 500 Sp, 1000 D
5 G 2.5	8.21	15.5	340	100 R, 500 Sp, 1000 D
7 G 2.5	8.21	17.5	470	500 D, 1000 D
12 G 2.5	8.21	23.0	650	500 D, 1000 D
19 G 2.5	8.21	28.0	1100	500 D, 1000 D
24 G 2.5	8.21	32.5	1260	500 D, 1000 D
27 G 2.5	8.21	36.0	1577	500 D, 1000 D
1 x 4	5.09	8.0	105	500 D, 1000 D
2 x 4	5.09	13.5	240	500 D, 1000 D
3 G 4	5.09	14.5	305	500 D, 1000 D
4 G 4	5.09	16.0	390	500 D, 1000 D
5 G 4	5.09	17.5	470	500 D, 1000 D
7 G 4	5.09	20.0	703	500 D, 1000 D
12 G 4	5.09	26.5	1020	500 D, 1000 D
1 x 6	3.39	9.0	140	500 D, 1000 D
2 x 6	3.39	15.0	290	500 D, 1000 D
3 x 6	3.39	16.0	495	500 D, 1000 D
3 G 6	3.39	16.0	495	500 D, 1000 D
4 G 6	3.39	17.5	520	500 D, 1000 D
5 G 6	3.39	19.0	640	500 D, 1000 D
1 x 10	1.95	11.0	210	500 D, 1000 D
2 x 10	1.95	21.0	620	500 D, 1000 D
3 G 10	1.95	22.0	880	500 D, 1000 D
4 G 10	1.95	24.0	950	500 D, 1000 D
5 G 10	1.95	26.0	1150	500 D, 1000 D
1 x 16	1.24	12.0	290	500 D, 1000 D
3 G 16	1.21	24.5	1260	500 D, 1000 D
4 G 16	1.24	27.0	1400	500 D, 1000 D
5 G 16	1.24	30.0	1700	500 D, 1000 D
1 x 25	0.795	13.5	410	500 D, 1000 D
3 G 25	0.795	28.5	1457	500 D, 1000 D
4 G 25	0.795	32.5	1950	500 D, 1000 D
5 G 25	0.795	36.0	2400	500 D, 1000 D
1 x 35	0.565	16.0	560	500 D, 1000 D
3 G 35	0.565	29.6	1850	500 D, 1000 D
4 G 35	0.565	37.0	2700	500 D, 1000 D
5 G 35	0.565	38.0	3000	500 D
1 x 50	0.393	17.6	740	500 D, 1000 D
1 G 50	0.393	17.6	740	500 D, 1000 D
3 G 50	0.393	36.0	3790	500 D

H07RN-F

Heavy flexible cable, oil resistant

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
H07RN-F				
4 G 50	0.393	42.0	3600	500 D
5 G 50	0.393	44.5	3950	500 D
1 x 70	0.277	21.0	1050	500 D, 1000 D
4 G 70	0.277	49.5	4900	500 D
1 x 95	0.21	23.0	1300	500 D, 1000 D
4 G 95	0.21	55.5	6200	500 D
1 x 120	0.164	25.0	1560	500 D, 1000 D
4 G 120	0.164	60.0	7800	500 D
1 x 150	0.132	28.0	2000	500 D, 1000 D
4 G 150	0.132	65.0	9700	500 D
5 G 150	0.132	73.0	10500	500 D
1 x 185	0.108	31.0	2300	500 D, 1000 D
4 G 185	0.108	65.0	9700	500 D
1 x 240	0.082	34.0	3000	500 D, 1000 D
4 G 240	0.082	74.0	13120	500 D
1 x 300	0.0641	34.1	3600	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

NSGAFÖU (Ghöuf)

Special rubber single core cable

DESIGN



- 1 | Tinned copper conductor, fine wire
- 2 | Taping (Al-PET foil)
- 3 | Core insulation (EPR-rubber)
- 4 | Sheath (polychloroprene black, oil and abrasion resistant)

APPLICATION

For application in busses and railborn vehicles, in dry rooms, if used in distribution or switching appliances up to 1000 V, it is considered to be short circuit proof. NSGAFÖU 3.6/6 kV on request.

TECHNICAL DATA



Standard:
DIN VDE 0250-602



Rated voltage:
1.8/3 kV (U₀/U)



Test voltage:
6 kV / 50 Hz



Temperature range:
laying temperature: min. -25 °C
fixed: -40 °C up to 80 °C
moved: -25 °C up to 80 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 200 °C/5 s



Bending radius (min.):
6 x Ø of cable (fixed installed)
10 x Ø of cable (free motion)



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}



Certificate:
VDE Germany

Nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
NSGAFÖU (Ghöuf)					
1.5	13.7	30	6.3	51	500 Sp, 1000 Sp
2.5	8.21	41	6.7	63	500 Sp, 1000 Sp
4	5.09	55	7.4	82	500 Sp, 1000 Sp
6	3.39	70	7.9	103	500 Sp, 1000 Sp
10	1.95	98	9.5	159	500 Sp, 1000 Sp
16	1.24	132	10.5	219	500 D, 1000 D
25	0.795	176	12.8	335	500 D, 1000 D
35	0.565	218	14.1	435	500 D, 1000 D
50	0.393	276	15.9	582	500 D, 1000 D
70	0.277	347	17.8	757	500 D, 1000 D
95	0.21	416	20.1	1040	500 D, 1000 D
120	0.164	488	22.0	1289	500 D, 1000 D
150	0.132	566	24.0	1581	500 D, 1000 D
185	0.108	644	26.3	1895	500 D, 1000 D
240	0.0817	775	29.6	2452	500 D, 1000 D
300	0.0654	879	32.2	2998	500 D, 1000 D
400	0.0486	1060	40.5	4200	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

YSLY-JZ or -OZ

PVC control cable, unscreened

DESIGN



- 1 | Copper conductor, fine wire
- 2 | Core insulation (PVC), cores stranded in layers
- 3 | Sheath (PVC grey RAL 7001 or blue RAL 5012 for intrinsically safe installation, conditional oil resistant)

APPLICATION

For the electrical connection of components of production machines and machine tools. Shows some resistance to all-purpose mineral oil and is not designed for permanent usage in oil baths. The cable is designed for use in buildings and should be installed with mechanical protection.

TECHNICAL DATA



Standard:
based on VDE 0281



Rated voltage:
300/500 V (U₀/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
laying temperature: min. 5 °C
fixed: -50 °C up to 70 °C
moved: -5 °C up to 70 °C
conductor temperature: max. 60 °C
short circuit temperature: max. 150 °C/5 s



Bending radius (min.):
4 x Ø of cable (fixed installed)
15 x Ø of cable (free motion)



Core identification:
black with number printing, with one core green-yellow (JZ), without (OZ)



Fire properties:
EN 60332-1-2: self-extinguishing and flame retardant
CPR classification: E_{ca}

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
YSLY-JZ or -OZ				
2 x 0.5	39	4.8	32	100 R, 500 Sp
3 x 0.5	39	5.1	39	100 R, 500 Sp
4 x 0.5	39	5.5	47	100 R, 500 Sp
5 x 0.5	39	6.0	55	100 R, 500 Sp
7 x 0.5	39	6.7	81	100 R, 500 Sp
10 x 0.5	39	8.4	101	500 Sp, 1000 Sp
12 x 0.5	39	8.7	115	500 Sp, 1000 Sp
14 x 0.5	39	9.1	131	500 Sp, 1000 Sp
16 x 0.5	39	10.3	151	500 Sp, 1000 Sp
18 x 0.5	39	10.3	166	500 Sp, 1000 Sp
21 x 0.5	39	11.7	197	500 D, 1000 D
25 x 0.5	39	12.5	228	500 D, 1000 D
30 x 0.5	39	12.9	264	500 D, 1000 D
34 x 0.5	39	13.9	296	500 D, 1000 D
40 x 0.5	39	15.4	452	500 D, 1000 D
50 x 0.5	39	17.5	510	500 D, 1000 D
61 x 0.5	39	19.1	670	500 D, 1000 D

YSLY-JZ or -OZ

PVC control cable, unscreened

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
YSLY-JZ or -OZ				
2 x 0.75	26	5.2	40	50 R, 100 R, 500 Sp, 1000 Sp
3 x 0.75	26	5.5	48	500 D, 1000 D
4 x 0.75	26	6.0	59	500 D, 1000 D
5 x 0.75	26	6.5	70	100 R, 500 Sp
6 x 0.75	26	7.3	85	500 D, 1000 D
7 x 0.75	26	7.3	94	500 D, 1000 D
10 x 0.75	26	9.4	133	500 D, 1000 D
12 x 0.75	26	9.7	153	500 D, 1000 D
15 x 0.75	26	11.2	229	500 D, 1000 D
16 x 0.75	26	10.7	195	500 D, 1000 D
18 x 0.75	26	11.5	221	500 D, 1000 D
21 x 0.75	26	12.4	256	500 D, 1000 D
25 x 0.75	26	13.7	297	500 D, 1000 D
34 x 0.75	26	15.3	388	500 D, 1000 D
41 x 0.75	26	17.0	668	500 D, 1000 D
42 x 0.75	26	16.6	467	500 D, 1000 D
50 x 0.75	26	19.8	730	500 D, 1000 D
61 x 0.75	26	21.2	890	500 D, 1000 D
80 x 0.75	26	26.0	1165	500 D, 1000 D
2 x 1	19.5	5.6	47	500 D, 1000 D
3 x 1	19.5	5.9	58	500 D, 1000 D
4 x 1	19.5	6.5	71	500 D, 1000 D
5 x 1	19.5	7.3	88	500 D, 1000 D
7 x 1	19.5	7.9	113	500 D, 1000 D
10 x 1	19.5	10.2	160	500 D, 1000 D
12 x 1	19.5	10.5	185	500 D, 1000 D
14 x 1	19.5	11.1	211	500 D, 1000 D
16 x 1	19.5	11.9	242	500 D, 1000 D
18 x 1	19.5	12.5	268	500 D, 1000 D
21 x 1	19.5	14.0	310	500 D, 1000 D
25 x 1	19.5	14.9	361	500 D, 1000 D
30 x 1	19.5	15.5	421	500 D, 1000 D
41 x 1	19.5	19.2	715	500 D, 1000 D
50 x 1	19.5	21.1	843	500 D, 1000 D
61 x 1	19.5	22.5	1080	500 D, 1000 D
2 x 1.5	13.3	6.0	58	500 D, 1000 D
3 x 1.5	13.3	6.4	72	500 Sp, 1000 Sp
4 x 1.5	13.3	7.2	93	500 D, 1000 D
5 x 1.5	13.3	7.8	111	500 D, 1000 D
6 x 1.5	13.3	8.5	129	500 D, 1000 D

YSLY-JZ or -OZ

PVC control cable, unscreened

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
YSLY-JZ or -OZ				
7 x 1.5	13.3	8.5	144	500 D, 1000 D
10 x 1.5	13.3	11.0	205	500 D, 1000 D
12 x 1.5	13.3	11.6	243	500 D, 1000 D
14 x 1.5	13.3	12.1	278	500 D, 1000 D
16 x 1.5	13.3	12.8	312	500 D, 1000 D
18 x 1.5	13.3	13.5	346	500 D, 1000 D
21 x 1.5	13.3	15.1	400	500 D, 1000 D
25 x 1.5	13.3	16.2	467	500 D, 1000 D
32 x 1.5	13.3	19.2	820	500 D, 1000 D
34 x 1.5	13.3	19.7	860	500 D, 1000 D
50 x 1.5	13.3	23.7	1296	500 D, 1000 D
61 x 1.5	13.3	25.4	1502	500 D, 1000 D
2 x 2.5	7.98	7.1	85	500 D, 1000 D
3 x 2.5	7.98	7.5	108	500 D, 1000 D
4 x 2.5	7.98	8.3	135	500 D, 1000 D
5 x 2.5	7.98	9.0	162	500 D, 1000 D
7 x 2.5	7.98	10.1	219	500 D, 1000 D
10 x 2.5	7.98	13.0	310	500 D, 1000 D
12 x 2.5	7.98	13.4	361	500 D, 1000 D
16 x 2.5	7.98	14.9	467	500 D, 1000 D
18 x 2.5	7.98	15.8	519	500 D, 1000 D
25 x 2.5	7.98	18.9	705	500 D, 1000 D
34 x 2.5	7.98	24.6	1513	500 D, 1000 D
2 x 4	4.95	8.6	127	500 D, 1000 D
3 x 4	4.95	9.4	167	500 D, 1000 D
4 x 4	4.95	10.3	209	500 D, 1000 D
5 x 4	4.95	11.3	252	500 D, 1000 D
7 x 4	4.95	13.9	488	500 D, 1000 D
2 x 6	3.3	10.0	179	500 D, 1000 D
3 x 6	3.3	10.7	232	500 D, 1000 D
4 x 6	3.3	11.9	298	500 D, 1000 D
5 x 6	3.3	13.1	360	500 D, 1000 D
3 x 10	1.91	14.3	407	500 D, 1000 D
4 x 10	1.91	15.8	514	500 D, 1000 D
5 x 10	1.91	17.4	623	500 D, 1000 D
3 x 16	1.21	16.9	605	500 D, 1000 D
4 x 16	1.21	18.7	769	500 D, 1000 D
5 x 16	1.21	20.6	950	500 D, 1000 D
7 x 16	1.21	23.9	1779	500 D, 1000 D
4 x 25	0.78	22.5	1165	500 D, 1000 D
7 x 25	0.78	31.2	2597	500 D, 1000 D

YSLY-JZ or -OZ

PVC control cable, unscreened

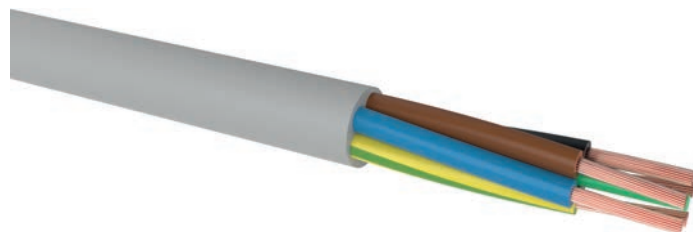
Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
YSLY-JZ or -OZ				
4 x 35	0.554	24.9	1549	500 D, 1000 D
5 x 35	0.554	33.0	2635	500 D, 1000 D
4 x 50	0.368	29.3	2151	500 D, 1000 D
5 x 50	0.368	33.0	2671	500 D, 1000 D
4 x 70	0.272	42.2	4050	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

YSLY-JB or -OB

PVC control cable, unscreened

DESIGN



- 1 | Copper conductor, fine wire
- 2 | Core insulation (PVC), cores stranded in layers
- 3 | Sheath (PVC grey RAL 7001 or blue RAL 5012 for intrinsically safe installation, conditional oil resistant)

APPLICATION

For the electrical connection of components of production machines and machine tools. Shows some resistance to all-purpose mineral oil and is not designed for permanent usage in oil baths. The cable is designed for use in buildings and should be installed with mechanical protection.

TECHNICAL DATA



Standard:
based on VDE 0281



Rated voltage:
300/500 V (U₀/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
laying temperature: min. 5 °C
fixed: -50 °C up to 70 °C
moved: -5 °C up to 70 °C
conductor temperature: max. 60 °C
short circuit temperature: max. 150 °C/5 s



Bending radius (min.):
4 x Ø of cable (fixed installed)
15 x Ø of cable (free motion)



Core identification:
coloured according to HD 308 S2, with one core green-yellow (JB), without (OB)



Fire properties:
EN 60332-1-2: self-extinguishing and flame retardant
CPR classification: E_{ca}

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
YSLY-JB or -OB				
4 x 1	19.5	6.5	71	500 D, 1000 D
3 x 1.5	13.3	6.4	72	500 D, 1000 D
4 x 1.5	13.3	7.2	93	500 D, 1000 D
5 x 1.5	13.3	7.8	111	500 D, 1000 D
3 x 2.5	7.98	7.5	108	500 D, 1000 D
4 x 2.5	7.98	8.3	135	500 D, 1000 D
5 x 2.5	7.98	9.0	162	500 D, 1000 D
2 x 4	4.95	8.6	127	500 D, 1000 D
4 x 4	4.95	10.3	209	500 D, 1000 D
2 x 6	3.3	10.0	179	500 D, 1000 D
5 x 6	3.3	13.1	360	500 D, 1000 D
5 x 10	1.91	17.4	623	500 D, 1000 D
5 x 35	0.554	33.0	2635	500 D, 1000 D
4 x 50	0.368	29.3	2151	500 D, 1000 D
5 x 50	0.368	33.0	2671	500 D, 1000 D
4 x 70	0.272	42.2	4050	500 D, 1000 D
5 x 70	0.272	46.3	5122	500 D, 1000 D
4 x 95	0.206	46.7	5626	500 D, 1000 D

YSLY-JB or -OB

PVC control cable, unscreened

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
YSLY-JB or -OB				
5 x 95	0.206	50.2	6266	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

YSLCY-JZ or -OZ

PVC control cable, screened

DESIGN



- 1 | Copper conductor, fine wire
- 2 | Core insulation (PVC), cores stranded in layers
- 3 | Inner covering (plastic tape)
- 4 | Screen (braided screen, tinned copper wires)
- 5 | Sheath (PVC grey RAL 7001 or blue RAL 5012 for intrinsically safe installation, conditional oil resistant)

APPLICATION

For the electrical connection of components of production machines and machine tools. Shows some resistance to all-purpose mineral oil and is not designed for permanent usage in oil baths. The cable is designed for use in buildings and should be installed with mechanical protection.

TECHNICAL DATA



Standard:
based on VDE 0281



Rated voltage:
300/500 V (U₀/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
laying temperature: min. 5 °C
fixed: -20 °C up to 50 °C
moved: 5 °C up to 50 °C
conductor temperature: max. 60 °C
short circuit temperature: max. 150 °C/5 s



Bending radius (min.):
4 x Ø of cable (fixed installed)
15 x Ø of cable (free motion)



Core identification:
black with number printing, with one core green-yellow (JZ), without (OZ)



Fire properties:
EN 60332-1-2: self-extinguishing and flame retardant
CPR classification: E_{ca}

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
YSLCY-JZ or -OZ				
2 x 0.5	39	5.4	41	500 Sp, 1000 Sp
3 x 0.5	39	5.7	50	500 Sp, 1000 Sp
4 x 0.5	39	6.1	59	500 Sp, 1000 Sp
5 x 0.5	39	6.6	72	500 Sp, 1000 Sp
7 x 0.5	39	7.1	85	500 Sp, 1000 Sp
10 x 0.5	39	9.1	123	500 Sp, 1000 Sp
12 x 0.5	39	9.4	138	500 Sp, 1000 Sp
14 x 0.5	39	10.0	159	500 Sp, 1000 Sp
16 x 0.5	39	10.5	175	500 Sp, 1000 Sp
21 x 0.5	39	12.5	230	500 D, 1000 D
25 x 0.5	39	13.2	260	500 D, 1000 D
30 x 0.5	39	15.3	363	500 D, 1000 D
34 x 0.5	39	16.3	420	500 D, 1000 D
40 x 0.5	39	17.3	465	500 D, 1000 D
50 x 0.5	39	19.6	575	500 D, 1000 D
61 x 0.5	39	20.8	675	500 D, 1000 D
2 x 0.75	26	6.0	53	500 D, 1000 D
3 x 0.75	26	6.1	60	500 Sp, 1000 Sp

YSLCY-JZ or -OZ

PVC control cable, screened

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
YSLCY-JZ or -OZ				
4 x 0.75	26	6.6	73	500 Sp, 1000 Sp
5 x 0.75	26	7.6	95	500 D, 1000 D
7 x 0.75	26	7.9	110	500 Sp, 1000 Sp
8 x 0.75	26	8.8	138	500 Sp, 1000 Sp
10 x 0.75	26	10.0	155	500 Sp, 1000 Sp
12 x 0.75	26	10.3	175	500 D, 1000 D
16 x 0.75	26	11.5	220	500 Sp, 1000 Sp
21 x 0.75	26	13.6	290	500 D, 1000 D
25 x 0.75	26	14.4	325	500 D, 1000 D
44 x 0.75	26	19.2	600	500 D, 1000 D
50 x 0.75	26	20.6	695	500 D, 1000 D
61 x 0.75	26	23.0	720	500 D, 1000 D
2 x 1	19.5	6.3	56	500 D, 1000 D
3 x 1	19.5	6.6	70	500 D, 1000 D
4 x 1	19.5	7.2	85	500 D, 1000 D
5 x 1	19.5	8.0	105	500 D, 1000 D
7 x 1	19.5	8.7	130	500 D, 1000 D
11 x 1	19.5	11.0	190	500 D, 1000 D
12 x 1	19.5	11.3	215	500 D, 1000 D
14 x 1	19.5	12.2	250	500 D, 1000 D
16 x 1	19.5	12.8	280	500 D, 1000 D
18 x 1	19.5	13.5	315	500 D, 1000 D
21 x 1	19.5	15.0	360	500 D, 1000 D
25 x 1	19.5	16.0	410	500 D, 1000 D
30 x 1	19.5	17.6	530	500 D, 1000 D
34 x 1	19.5	19.1	604	500 D, 1000 D
50 x 1	19.5	22.6	849	500 D, 1000 D
2 x 1.5	13.3	6.7	67	500 D, 1000 D
3 x 1.5	13.3	7.0	85	500 D, 1000 D
4 x 1.5	13.3	7.9	106	500 D, 1000 D
5 x 1.5	13.3	8.6	130	500 D, 1000 D
7 x 1.5	13.3	9.2	165	500 D, 1000 D
8 x 1.5	13.3	10.5	215	500 D, 1000 D
10 x 1.5	13.3	12.1	245	500 D, 1000 D
12 x 1.5	13.3	12.5	280	500 D, 1000 D
14 x 1.5	13.3	13.1	315	500 D, 1000 D
16 x 1.5	13.3	13.8	350	500 D, 1000 D
18 x 1.5	13.3	14.5	395	500 D, 1000 D
21 x 1.5	13.3	15.6	440	500 D, 1000 D
25 x 1.5	13.3	16.7	510	500 D, 1000 D
32 x 1.5	13.3	22.3	817	500 D, 1000 D

YSLCY-JZ or -OZ

PVC control cable, screened

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
YSLCY-JZ or -OZ				
34 x 1.5	13.3	23.3	874	500 D, 1000 D
44 x 1.5	13.3	26.5	1139	500 D, 1000 D
50 x 1.5	13.3	27.8	1269	500 D, 1000 D
61 x 1.5	13.3	29.4	1490	500 D, 1000 D
2 x 2.5	7.98	7.9	95	500 D, 1000 D
3 x 2.5	7.98	8.4	125	500 D, 1000 D
4 x 2.5	7.98	9.1	155	500 D, 1000 D
5 x 2.5	7.98	10.1	190	500 D, 1000 D
7 x 2.5	7.98	11.0	245	500 D, 1000 D
10 x 2.5	7.98	14.1	350	500 D, 1000 D
12 x 2.5	7.98	14.6	405	500 D, 1000 D
18 x 2.5	7.98	18.2	570	500 D, 1000 D
50 x 2.5	7.98	32.9	1898	500 D, 1000 D
3 x 4	4.95	9.9	175	500 D, 1000 D
4 x 4	4.95	10.8	220	500 D, 1000 D
5 x 4	4.95	11.7	270	500 D, 1000 D
7 x 4	4.95	14.8	440	500 D, 1000 D
2 x 6	3.3	10.5	180	500 D, 1000 D
4 x 6	3.3	12.5	310	500 D, 1000 D
5 x 6	3.3	13.6	385	500 D, 1000 D
7 x 6	3.3	17.3	604	500 D, 1000 D
4 x 10	1.91	16.3	523	500 D, 1000 D
5 x 10	1.91	17.9	637	500 D, 1000 D
7 x 10	1.91	24.4	1079	500 D, 1000 D
4 x 16	1.21	23.5	954	500 D, 1000 D
5 x 16	1.21	26.2	1217	500 D, 1000 D
7 x 16	1.21	28.8	1587	500 D, 1000 D
4 x 25	0.78	23.0	1128	500 D, 1000 D
5 x 25	0.78	25.4	1384	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

YSLYCY-JZ or -OZ 600

PVC control cable, oil resistant, screened

DESIGN



- 1 | Copper conductor, fine wire
- 2 | Core insulation (PVC)
- 3 | Inner sheath (PVC black)
- 4 | Screen (braided screen, tinned copper wires)
- 5 | Sheath (PVC black, UV and oil resistant)

APPLICATION

Flexible power, process control and instrumentation cable for industry and machinery environment with specific EMC (electromagnetic compatibility) requirements. The cable is resistant to UV-irradiation, to most commonly used chemicals and to oil and grease. For indoor and outdoor application.

TECHNICAL DATA



Standard:
based on VDE 0281



Rated voltage:
0.6/1 kV (U₀/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
fixed: -40 °C up to 70 °C
moved: 5 °C up to 70 °C
conductor temperature: max. 70 °C



Bending radius (min.):
5 x Ø of cable (fixed installed)
10 x Ø of cable (free motion)



Core identification:
black with number printing, with one core green-yellow (JZ), without (OZ)



Fire properties:
EN 60332-1-2: self-extinguishing and flame retardant
CPR classification: E_{ca}

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
YSLYCY-JZ or -OZ 600				
2 x 0.75	26	8.7	143	500 Sp, 1000 Sp
2 x 1	19.5	9.0	162	500 Sp, 1000 Sp
2 x 1.5	13.3	10.5	174	500 Sp, 1000 Sp
3 x 0.75	26	9.3	155	500 Sp, 1000 Sp
3 x 1	19.5	10.0	196	500 Sp, 1000 Sp
3 x 1.5	13.3	10.9	187	500 D, 1000 D
3 x 2.5	7.98	13.0	326	500 D, 1000 D
4 x 0.75	26	10.2	214	500 D, 1000 D
4 x 1	19.5	10.7	231	500 D, 1000 D
4 x 1.5	13.3	12.2	265	500 D, 1000 D
4 x 2.5	7.98	14.0	379	500 D, 1000 D
4 x 4	4.95	15.8	557	500 D, 1000 D
4 x 16	1.21	26.0	1763	500 D, 1000 D
4 x 25	0.78	31.0	2750	500 D, 1000 D
5 x 0.75	26	11.0	250	500 D, 1000 D
5 x 1	19.5	11.5	270	500 D, 1000 D
5 x 1.5	13.3	13.0	256	500 D, 1000 D
5 x 2.5	7.98	15.7	372	500 D, 1000 D
5 x 6	3.3	18.9	984	500 D, 1000 D

YSLYCY-JZ or -OZ 600

PVC control cable, oil resistant, screened

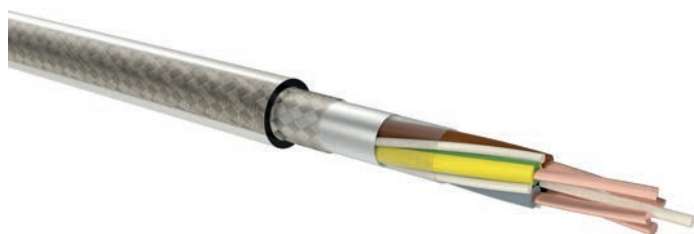
Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
YSLYCY-JZ or -OZ 600				
7 x 0.75	26	12.0	319	500 D, 1000 D
7 x 1.5	19.5	14.0	416	500 D, 1000 D
7 x 2.5	13.3	16.1	590	500 D, 1000 D
12 x 1.5	13.3	17.0	641	500 D, 1000 D
12 x 2.5	7.98	21.5	737	500 D, 1000 D
18 x 0.75	26	17.5	588	500 D, 1000 D
25 x 0.75	26	20.7	746	500 D, 1000 D
25 x 1	19.5	21.0	870	500 D, 1000 D
25 x 1.5	13.3	25.0	1211	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

2YSL(St)CY-J 0.6/1 kV EMV

PE/PVC motor power supply cable, screened

DESIGN



- 1 | Copper conductor, fine wire
- 2 | Core insulation (PE), cores are stranded together with optimal lay-length
- 3 | Taping (plastic foil, optional)
- 4 | Screen (plastic laminated aluminium tape and braided with tinned copper wires green)
- 5 | Sheath (PVC, transparent 2YSL(St)CY-J or black 2YSL(St)CYK-J)

APPLICATION

Double screened 2YSL(St)CY-J cables were designed as supply and connecting cables, for medium mechanical stress, fixed installation and occasionally non-guided movements, in dry, damp and wet rooms. UV-resistant black sheath is designed for outdoor applications. Double screening considerably improves electromagnetic compatibility (EMC) in buildings and plants.

TECHNICAL DATA



Standard:
DIN VDE 0276-603



Rated voltage:
0.6/1 kV (U₀/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
laying temperature: min. 5 °C
fixed: -30 °C up to 80 °C
moved: -5 °C up to 70 °C
conductor temperature: max. 70 °C
short circuit temperature: max. 160 °C/5 s



Bending radius (min.):
5 x Ø of cable (fixed installed)
15 x Ø of cable (free motion)



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: self-extinguishing and flame retardant
CPR classification: E_{ca}

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
2YSL(St)CY-J 0.6/1 kV EMV				
4 G 1.5	13.3	10.6	244	500 D, 1000 D
4 G 2.5	7.98	12.3	300	500 D, 1000 D
4 G 4	4.95	14.0	515	500 D, 1000 D
4 G 6	3.3	16.1	670	500 D, 1000 D
4 G 10	1.91	19.7	914	500 D, 1000 D
4 G 16	1.21	23.0	1367	500 D, 1000 D
4 G 25	0.78	27.3	1970	500 D, 1000 D
4 G 35	0.554	30.3	2763	500 D, 1000 D
4 G 50	0.386	35.0	3126	500 D, 1000 D
4 G 70	0.272	40.0	4182	500 D, 1000 D
4 G 95	0.206	45.0	5725	500 D, 1000 D
4 G 120	0.161	51.9	6504	500 D
4 G 150	0.129	57.5	7043	300 D
4 G 185	0.106	61.1	8384	300 D
4 G 240	0.801	70.0	12500	300 D

Technical changes reserved. All figures are therefore without guarantee.

2YSL(St)CY-J 0.6/1 kV EMV-3 PLUS

PE/PVC motor power supply cable, screened

DESIGN



- 1 | Copper conductor, fine wire
- 2 | Core insulation (PE), cores are stranded together with optimal lay-length
- 3 | Screen (plastic laminated aluminium tape and braided with tinned copper wires screen)
- 4 | Sheath (PVC, transparent 2YSL(St)CY-J or black 2YSL(St)CYK-J)

APPLICATION

Double screened 2YSL(St)CY-J cables were designed as supply and connecting cables, for medium mechanical stress, fixed installation and occasionally non-guided movements, in dry, damp and wet rooms. UV-resistant black sheath is designed for outdoor applications. Double screening considerably improves electromagnetic compatibility (EMC) in buildings and plants.

TECHNICAL DATA



Standard:
DIN VDE 0276-603



Rated voltage:
0.6/1 kV (U_o/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
laying temperature: min. 5 °C
fixed: -30 °C up to 80 °C
moved: -5 °C up to 70 °C
conductor temperature: max. 70 °C
short circuit temperature: max. 160 °C/5 s



Bending radius (min.):
5 x Ø of cable (fixed installed)
15 x Ø of cable (free motion)



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: self-extinguishing and flame retardant
CPR classification: E_{ca}

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
2YSL(St)CY-J 0.6/1 kV EMV-3 PLUS				
3 x 1.5 + 3 G 0.25	13.3/79	10.2	212	1000 D
3 x 2.5 + 3 G 0.5	7.98/39	11.8	276	1000 D
3 x 4 + 3 G 0.75	4.95/26	13.4	446	1000 D
3 x 6 + 3 G 1	3.3/19.5	15.3	582	1000 D
3 x 10 + 3 G 1.5	1.91/13.3	18.6	794	1000 D
3 x 16 + 3 G 2.5	1.21/7.98	21.5	1188	1000 D
3 x 25 + 3 G 4	0.78/4.95	25.5	1713	1000 D
3 x 35 + 3 G 6	0.554/3.3	28.3	2402	1000 D
3 x 50 + 3 G 10	0.386/1.91	33.0	2718	1000 D
3 x 70 + 3 G 10	0.272/1.91	37.0	3636	1000 D
3 x 95 + 3 G 16	0.206/1.21	41.0	4978	1000 D
3 x 120 + 3 G 16	0.161/1.21	43.8	5077	1000 D
3 x 150 + 3 G 25	0.129/0.78	53.5	6128	1000 D
3 x 185 + 3 G 35	0.106/0.554	59.5	7450	1000 D
3 x 240 + 3 G 50	0.0801/0.386	70.0	10800	1000 D

Technical changes reserved. All figures are therefore without guarantee.

H05VV5-F

PVC control cable, oil resistant, unscreened

DESIGN



- 1 | Copper conductor, fine wire (–F)
- 2 | Core insulation (PVC), cores stranded in layers
- 3 | Sheath (PVC grey RAL 7001, oil resistant)

APPLICATION

PVC control cable with increased oil resistant outer sheath for use as control and connecting cable for fixed laying and flexible applications in electrical devices, without tensile stress and/or guided movements. The cables are intended for indoor applications in dry, damp and wet rooms.

TECHNICAL DATA



Standard:
EN 50525-2-51



Rated voltage:
300/500 V (U₀/U)



Test voltage:
2 kV / 50 Hz



Temperature range:
laying temperature: min. 5 °C
fixed: -30 °C up to 70 °C
moved: -5 °C up to 70 °C
conductor temperature: max. 70 °C
short circuit temperature: max. 150 °C/5 s



Bending radius (min.):
3 x Ø up to 12 mm (fixed installed)
4 x Ø over 12 mm (fixed installed)
5 x Ø up to 12 mm (free motion)
6 x Ø over 12 mm (free motion)



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: self-extinguishing and flame retardant
CPR classification: E_{ca}

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
H05VV5-F				
2 x 0.5	39	5.9	46	500 Sp, 1000 Sp
3 G 0.5	39	6.2	54	500 Sp, 1000 Sp
4 G 0.5	39	6.7	65	500 Sp, 1000 Sp
5 G 0.5	39	7.4	80	500 Sp, 1000 Sp
7 G 0.5	39	9.1	119	500 Sp, 1000 Sp
10 G 0.5	39	10.8	166	500 Sp, 1000 Sp
12 G 0.5	39	11.2	186	500 Sp, 1000 Sp
14 G 0.5	39	11.7	215	500 Sp, 1000 Sp
18 G 0.5	39	13.0	251	500 Sp, 1000 Sp
25 G 0.5	39	16.0	349	500 Sp, 1000 Sp
34 G 0.5	39	17.7	480	500 Sp, 1000 Sp
2 x 0.75	26	6.3	52	500 Sp, 1000 Sp
3 G 0.75	26	6.7	68	500 Sp, 1000 Sp
4 G 0.75	26	7.3	82	500 Sp, 1000 Sp
5 G 0.75	26	8.3	107	500 Sp, 1000 Sp
6 G 0.75	26	9.0	132	500 Sp, 1000 Sp
7 G 0.75	26	9.7	145	500 Sp, 1000 Sp

H05VV5-F

PVC control cable, oil resistant, unscreened

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
H05VV5-F				
12 G 0.75	26	12.1	231	500 Sp, 1000 Sp
18 G 0.75	26	14.0	313	500 Sp, 1000 Sp
18 G 0.75	26	17.0	427	500 Sp, 1000 Sp
2 x 1	19.5	6.6	66	500 Sp, 1000 Sp
3 G 1	19.5	7.0	78	500 Sp, 1000 Sp
4 G 1	19.5	7.6	104	500 Sp, 1000 Sp
5 G 1	19.5	8.7	123	500 Sp, 1000 Sp
7 G 1	19.5	10.2	183	500 Sp, 1000 Sp
12 G 1	19.5	13.0	269	500 Sp, 1000 Sp
14 G 1	19.5	13.3	360	500 Sp, 1000 Sp
18 G 1	19.5	15.0	400	500 Sp, 1000 Sp
25 G 1	19.5	18.0	546	500 Sp, 1000 Sp
34 G 1	19.5	20.6	724	500 Sp, 1000 Sp
2 x 1.5	13.3	7.3	77	500 Sp, 1000 Sp
3 G 1.5	13.3	7.9	97	500 Sp, 1000 Sp
4 G 1.5	13.3	8.7	128	500 Sp, 1000 Sp
5 G 1.5	13.3	9.6	149	500 Sp, 1000 Sp
6 G 1.5	13.3	10.7	196	500 Sp, 1000 Sp
7 G 1.5	13.3	11.8	216	500 Sp, 1000 Sp
12 G 1.5	13.3	14.4	324	500 Sp, 1000 Sp
18 G 1.5	13.3	17.2	485	500 Sp, 1000 Sp
25 G 1.5	13.3	21.7	671	500 Sp, 1000 Sp
34 G 1.5	13.3	24.1	881	500 Sp, 1000 Sp
2 x 2.5	7.98	9.1	110	500 Sp, 1000 Sp
3 G 2.5	7.98	9.6	154	500 Sp, 1000 Sp
4 G 2.5	7.98	10.8	212	500 Sp, 1000 Sp
5 G 2.5	7.98	11.6	242	500 Sp, 1000 Sp
7 G 2.5	7.98	14.2	350	500 Sp, 1000 Sp
12 G 2.5	7.98	17.7	543	500 Sp, 1000 Sp
18 G 2.5	7.98	21.4	787	500 Sp, 1000 Sp
25 G 2.5	7.98	26.1	1175	500 Sp, 1000 Sp
34 G 2.5	7.98	29.5	1450	500 Sp, 1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

H05VVC4V5-K

PVC control cable, oil resistant, screened

DESIGN



- 1 | Copper conductor, fine wire (-K)
- 2 | Core insulation (PVC), cores stranded in layers
- 3 | Inner sheath (PVC grey)
- 4 | Screen (braided screen, tinned copper wires)
- 5 | Sheath (PVC grey RAL 7001)

APPLICATION

PVC control cable with increased oil resistant outer sheath for use as control and connecting cable for fixed laying and flexible applications in electrical devices, without tensile stress and/or guided movements. The cables are intended for indoor applications in dry, damp and wet rooms, especially when excellent EMC characteristics are requested.

TECHNICAL DATA



Standard:
EN 50525-2-11



Rated voltage:
300/500 V (U₀/U)



Test voltage:
2 kV / 50 Hz



Temperature range:
fixed: -30 °C up to 70 °C
moved: -5 °C up to 70 °C



Bending radius (min.):
3 x Ø up to 12 mm (fixed installed)
4 x Ø over 12 mm (fixed installed)
5 x Ø up to 12 mm (free motion)
6 x Ø over 12 mm (free motion)



Core identification:
colours according to CENELEC HD 308 S2



Fire properties:
EN 60332-1-2: self-extinguishing and flame retardant
CPR classification: E_{ca}

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
H05VVC4V5-K				
2 x 0.5	39	8.0	92	500 Sp, 1000 Sp
3 G 0.5	39	8.4	109	500 Sp, 1000 Sp
4 G 0.5	39	9.1	126	500 Sp, 1000 Sp
5 G 0.5	39	10.1	156	500 Sp, 1000 Sp
7 G 0.5	39	11.4	192	500 Sp, 1000 Sp
12 G 0.5	39	13.5	280	500 Sp, 1000 Sp
14 G 0.5	39	14.2	302	500 Sp, 1000 Sp
18 G 0.5	39	15.8	384	500 Sp, 1000 Sp
25 G 0.5	39	18.6	556	500 Sp, 1000 Sp
34 G 0.5	39	20.8	634	500 Sp, 1000 Sp
2 x 0.75	26	8.3	102	500 Sp, 1000 Sp
3 G 0.75	26	8.8	115	500 Sp, 1000 Sp
4 G 0.75	26	9.8	150	500 Sp, 1000 Sp
5 G 0.75	26	10.8	173	500 Sp, 1000 Sp
7 G 0.75	26	12.1	235	500 Sp, 1000 Sp
12 G 0.75	26	14.3	327	500 Sp, 1000 Sp
18 G 0.75	26	16.9	488	500 Sp, 1000 Sp
25 G 0.75	26	20.0	654	500 Sp, 1000 Sp
34 G 0.75	26	22.1	821	500 Sp, 1000 Sp

H05VVC4V5-K

PVC control cable, oil resistant, screened

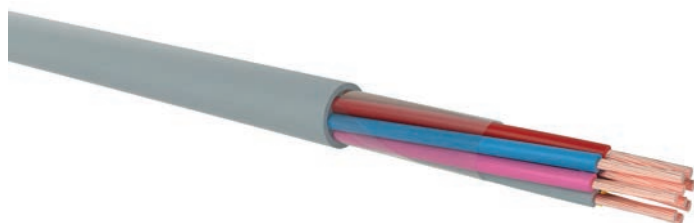
Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
H05VVC4V5-K				
2 x 1	19.5	8.6	114	500 Sp, 1000 Sp
3 G 1	19.5	9.3	142	500 Sp, 1000 Sp
4 G 1	19.5	10.2	175	500 Sp, 1000 Sp
5 G 1	19.5	11.0	205	500 Sp, 1000 Sp
7 G 1	19.5	12.9	264	500 Sp, 1000 Sp
12 G 1	19.5	15.6	420	500 Sp, 1000 Sp
14 G 1	19.5	15.7	433	500 Sp, 1000 Sp
18 G 1	19.5	17.4	561	500 Sp, 1000 Sp
25 G 1	19.5	21.1	766	500 Sp, 1000 Sp
34 G 1	19.5	24.1	996	500 Sp, 1000 Sp
2 x 1.5	13.3	9.1	146	500 Sp, 1000 Sp
3 G 1.5	13.3	10.2	176	500 Sp, 1000 Sp
4 G 1.5	13.3	10.9	207	500 Sp, 1000 Sp
5 G 1.5	13.3	11.6	235	500 Sp, 1000 Sp
7 G 1.5	13.3	13.5	314	500 Sp, 1000 Sp
12 G 1.5	13.3	16.8	500	500 Sp, 1000 Sp
18 G 1.5	13.3	20.0	707	500 Sp, 1000 Sp
25 G 1.5	13.3	24.2	950	500 Sp, 1000 Sp
34 G 1.5	13.3	26.3	1204	500 Sp, 1000 Sp
2 x 2.5	7.98	11.4	190	500 Sp, 1000 Sp
3 G 2.5	7.98	11.7	243	500 Sp, 1000 Sp
4 G 2.5	7.98	12.8	280	500 Sp, 1000 Sp
5 G 2.5	7.98	13.9	342	500 Sp, 1000 Sp
7 G 2.5	7.98	15.9	439	500 Sp, 1000 Sp
12 G 2.5	7.98	20.6	760	500 Sp, 1000 Sp
18 G 2.5	7.98	24.3	1052	500 Sp, 1000 Sp
25 G 2.5	7.98	29.0	1375	500 Sp, 1000 Sp
34 G 2.5	7.98	33.0	1892	500 Sp, 1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

LiYY

Electronic control cable, unscreened

DESIGN



- 1 | Copper conductor, fine wire
- 2 | Core insulation (PVC), cores stranded in layers
- 3 | Inner covering (plastic tape)
- 4 | Sheath (PVC grey RAL 7001)

APPLICATION

In the electronics of measuring and control devices for the transmission of signals in the range of milliamperes.

TECHNICAL DATA



Standard:
adapted to DIN VDE 0812



Operating voltage:
max. 350 V_{ss} (0.14 mm)
max. 500 V_{ss} (≥ 0.25 mm)



Test voltage:
800 V_{eff} (0.14 mm) / 50 Hz
1200 V_{eff} (≥ 0.25 mm) / 50 Hz



Temperature range:
laying temperature: min. -5 °C
fixed: -30 °C up to 70 °C
moved: -5 °C up to 70 °C
conductor temperature: max. 70 °C



Bending radius (min.):
4 x Ø of cable



Core identification:
DIN 47100



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.14	0.25	0.34	0.5	0.75
Conductor resistance, max. at 20 °C	(Ω/km)	148	79.9	57.4	39	26
Insulation resistance, min. at 20 °C	(MΩ.km)	200	200	200	200	200
Mutual capacitance (approx. value), at 800 Hz	(nF/km)	120	120	120	150	150

Number of cores x conductor diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
LiYY			
2 x 0.14	3.2	12	1000 Sp
3 x 0.14	3.4	15	1000 Sp
4 x 0.14	3.6	17	1000 Sp
5 x 0.14	3.9	22	1000 Sp
6 x 0.14	4.2	25	1000 Sp
7 x 0.14	4.3	26	1000 Sp
8 x 0.14	4.5	29	1000 Sp
10 x 0.14	5.2	35	1000 Sp
12 x 0.14	5.6	43	1000 Sp
14 x 0.14	5.8	48	1000 Sp
16 x 0.14	6.1	52	1000 Sp
18 x 0.14	6.9	65	1000 Sp

LiYY

Electronic control cable, unscreened

Number of cores x conductor diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
LiYY			
21 x 0.14	6.9	79	1000 Sp
24 x 0.14	7.6	89	1000 Sp
25 x 0.14	7.7	91	1000 Sp
27 x 0.14	7.8	106	1000 Sp
30 x 0.14	8.8	106	1000 Sp
32 x 0.14	8.3	112	1000 Sp
36 x 0.14	8.6	120	1000 Sp
2 x 0.25	3.8	25	1000 Sp
3 x 0.25	4.0	29	1000 Sp
5 x 0.25	4.7	38	1000 Sp
6 x 0.25	5.1	42	1000 Sp
8 x 0.25	5.7	54	1000 Sp
10 x 0.25	6.8	65	1000 Sp
12 x 0.25	7.0	75	1000 Sp
14 x 0.25	7.3	89	1000 Sp
16 x 0.25	7.7	95	1000 Sp
18 x 0.25	8.1	99	1000 Sp
20 x 0.25	8.5	115	1000 Sp
24 x 0.25	9.4	143	1000 Sp
30 x 0.25	10.3	172	1000 Sp
36 x 0.25	11.1	196	1000 Sp
2 x 0.34	4.2	28	1000 Sp
3 x 0.34	4.4	30	1000 Sp
4 x 0.34	4.8	40	1000 Sp
5 x 0.34	5.5	44	1000 Sp
6 x 0.34	5.9	53	1000 Sp
7 x 0.34	5.9	60	1000 Sp
8 x 0.34	6.4	65	1000 Sp
10 x 0.34	7.6	77	1000 Sp
12 x 0.34	7.8	97	1000 Sp
14 x 0.34	9.1	135	1000 Sp
16 x 0.34	8.7	114	1000 Sp
18 x 0.34	9.1	135	1000 Sp
21 x 0.34	10.3	151	1000 Sp
24 x 0.34	11.0	171	1000 Sp
30 x 0.34	11.6	207	1000 Sp
32 x 0.34	12.1	223	1000 Sp
36 x 0.34	12.5	244	1000 Sp
2 x 0.5	4.7	25	1000 Sp
3 x 0.5	5.0	35	1000 Sp
4 x 0.5	5.6	42	1000 Sp

LiYY

Electronic control cable, unscreened

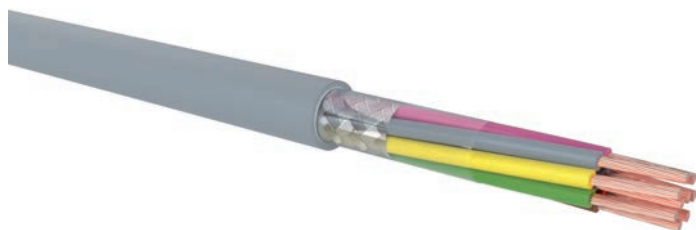
Number of cores x conductor diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
LiYY			
5 x 0.5	6.1	49	1000 Sp
6 x 0.5	6.9	65	1000 Sp
7 x 0.5	6.9	73	1000 Sp
8 x 0.5	7.4	83	1000 Sp
10 x 0.5	8.6	120	1000 Sp
12 x 0.5	9.0	130	1000 Sp
16 x 0.5	10.2	152	1000 Sp
18 x 0.5	10.2	159	1000 Sp
24 x 0.5	12.5	250	1000 Sp
30 x 0.5	13.5	267	1000 Sp
36 x 0.5	14.5	315	1000 Sp
2 x 0.75	5.1	44	1000 Sp
3 x 0.75	5.6	64	1000 Sp
4 x 0.75	6.1	66	1000 Sp
5 x 0.75	6.9	77	1000 Sp
7 x 0.75	7.5	95	1000 Sp
8 x 0.75	8.0	122	1000 Sp
12 x 0.75	10.1	188	1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

LiYCY

Electronic control cable, screened

DESIGN



- 1 | Copper conductor, fine wire
- 2 | Core insulation (PVC), cores stranded in layers
- 3 | Taping (plastic foil)
- 4 | Braided screen (copper wires, tinned)
- 5 | Sheath (PVC grey RAL 7001)

APPLICATION

In the electronics of measuring and control devices for the transmission of signals in the range of milliamperes, protected against crosstalks between the circuits and against external electrical influences.

TECHNICAL DATA



Standard:
adapted to DIN VDE 0812



Operating voltage:
max. 350 V_{ss} (0.14 mm)
max. 500 V_{ss} (≥ 0.25 mm)



Test voltage:
800 V_{eff} (0.14 mm) / 50 Hz
1200 V_{eff} (≥ 0.25 mm) / 50 Hz



Temperature range:
laying temperature: min. -5 °C
fixed: -30 °C up to 70 °C
moved: -5 °C up to 70 °C
conductor temperature: max. 70 °C



Bending radius (min.):
4 x Ø of cable



Core identification:
DIN 47100



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.14	0.25	0.34	0.5	0.75	1	1.5	2.5
Conductor resistance, max. at 20 °C	(Ω/km)	148	79.9	75.4	39	26	19.5	13.3	
Insulation resistance, min. at 20 °C	(MΩ.km)	200	200	200	200	200	200	200	
Mutual capacitance (approx. value), at 800 Hz	(nF/km)	120	120	120	150	150	150	150	

Number of cores x conductor diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
LiYCY			
2 x 0.14	3.5	20	1000 Sp
3 x 0.14	4.0	40	1000 Sp
4 x 0.14	4.1	43	1000 Sp
5 x 0.14	4.8	47	1000 Sp
6 x 0.14	4.9	52	1000 Sp
7 x 0.14	5.0	54	1000 Sp
8 x 0.14	5.3	58	1000 Sp
10 x 0.14	6.4	76	1000 Sp
12 x 0.14	6.7	81	1000 Sp
14 x 0.14	6.9	89	1000 Sp
16 x 0.14	7.3	97	1000 Sp
20 x 0.14	7.8	116	1000 Sp

LiYCY

Electronic control cable, screened

Number of cores x conductor diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
LiYCY			
24 x 0.14	9.1	158	1000 Sp
25 x 0.14	9.2	165	1000 Sp
32 x 0.14	10.0	198	1000 Sp
36 x 0.14	10.2	231	1000 Sp
40 x 0.14	10.5	252	1000 Sp
50 x 0.14	12.0	327	1000 Sp
2 x 0.25	3.9	28	1000 Sp
3 x 0.25	4.3	34	1000 Sp
4 x 0.25	4.5	40	1000 Sp
5 x 0.25	5.1	47	1000 Sp
6 x 0.25	5.5	54	1000 Sp
7 x 0.25	5.9	61	1000 Sp
8 x 0.25	5.9	66	1000 Sp
10 x 0.25	6.4	80	1000 Sp
12 x 0.25	6.5	91	1000 Sp
14 x 0.25	8.0	120	1000 Sp
16 x 0.25	9.6	135	1000 Sp
18 x 0.25	10.0	150	1000 Sp
20 x 0.25	10.2	157	1000 Sp
24 x 0.25	12.1	212	1000 Sp
25 x 0.25	12.1	220	1000 Sp
32 x 0.25	13.0	256	1000 Sp
40 x 0.25	14.1	302	1000 Sp
50 x 0.25	16.0	461	1000 Sp
2 x 0.34	4.6	31	1000 Sp
3 x 0.34	4.7	38	1000 Sp
4 x 0.34	5.2	46	1000 Sp
5 x 0.34	5.6	54	1000 Sp
6 x 0.34	5.8	62	1000 Sp
7 x 0.34	5.9	70	1000 Sp
8 x 0.34	6.2	76	1000 Sp
10 x 0.34	8.9	114	1000 Sp
12 x 0.34	7.2	128	1000 Sp
14 x 0.34	9.5	141	1000 Sp
16 x 0.34	10.0	155	1000 Sp
18 x 0.34	10.7	186	1000 Sp
20 x 0.34	10.9	195	1000 Sp
24 x 0.34	13.0	244	1000 Sp
36 x 0.34	14.3	325	1000 Sp
2 x 0.5	5.0	36	1000 Sp
3 x 0.5	5.4	45	1000 Sp

LiYCY

Electronic control cable, screened

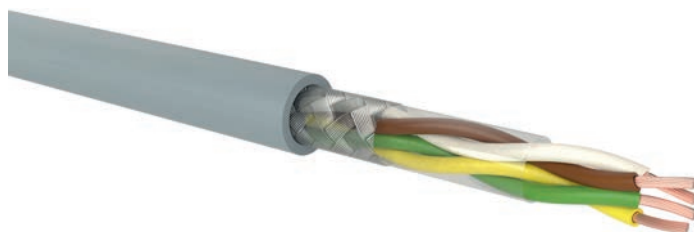
Number of cores x conductor diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
LiYCY			
4 x 0.5	5.9	54	1000 Sp
5 x 0.5	6.6	67	1000 Sp
6 x 0.5	7.1	76	1000 Sp
7 x 0.5	7.2	84	1000 Sp
8 x 0.5	7.6	107	1000 Sp
10 x 0.5	8.8	134	1000 Sp
12 x 0.5	8.9	155	1000 Sp
16 x 0.5	10.7	186	1000 Sp
18 x 0.5	11.0	217	1000 Sp
20 x 0.5	11.6	239	1000 Sp
24 x 0.5	13.3	300	1000 Sp
2 x 0.75	5.6	62	1000 Sp
3 x 0.75	6.0	73	1000 Sp
4 x 0.75	6.6	92	1000 Sp
5 x 0.75	7.0	110	1000 Sp
6 x 0.75	7.7	128	1000 Sp
7 x 0.75	7.8	145	1000 Sp
8 x 0.75	9.4	151	1000 Sp
10 x 0.75	9.8	182	1000 Sp
12 x 0.75	9.9	216	1000 Sp
2 x 1	6.0	74	1000 Sp
3 x 1	6.4	89	1000 Sp
4 x 1	6.9	107	1000 Sp
5 x 1	7.5	132	1000 Sp
7 x 1	8.3	158	1000 Sp
12 x 1	10.4	254	1000 Sp
2 x 1.5	6.6	86	1000 Sp
3 x 1.5	7.0	107	1000 Sp
4 x 1.5	7.9	129	1000 Sp
5 x 1.5	8.9	150	1000 Sp
2 x 2.5	8.5	140	1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

LiYCY-P

Electronic control cable, screened

DESIGN



- 1 | Copper conductor, fine wire
- 2 | Core insulation (PVC), cores pair stranded, pairs stranded in layers
- 3 | Taping (plastic foil)
- 4 | Braided screen (copper wires, tinned)
- 5 | Sheath (PVC grey RAL 7032)

APPLICATION

In the electronics of measuring and control devices for the transmission of signals in the range of milliamperes, protected against crosstalks between the circuits and against external electrical influences.

TECHNICAL DATA



Standard:
adapted to DIN VDE 0812



Operating voltage:
max. 350 V_{ss} (0.14 mm)
max. 500 V_{ss} (≥ 0.25 mm)



Test voltage:
800 V_{eff} (0.14 mm) / 50 Hz
1200 V_{eff} (≥ 0.25 mm) / 50 Hz



Temperature range:
laying temperature: min. -5 °C
fixed: -30 °C up to 70 °C
moved: -5 °C up to 70 °C
conductor temperature: max. 70 °C



Bending radius (min.):
4 x Ø of cable



Core identification:
DIN 47100



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.14	0.25	0.34	0.5	0.75	1
Conductor resistance, max. at 20 °C	(Ω/km)	148	79.9	75.4	39	26	19.5
Insulation resistance, min. at 20 °C	(MΩ.km)	200	200	200	200	200	200
Mutual capacitance (approx. value), at 800 Hz	(nF/km)	100	100	100	150	150	150

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
LiYCY-P			
2 x 2 x 0.14	5.0	44	1000 Sp
3 x 2 x 0.14	5.6	53	1000 Sp
4 x 2 x 0.14	6.1	60	1000 Sp
5 x 2 x 0.14	6.5	80	1000 Sp
6 x 2 x 0.14	7.2	85	1000 Sp
7 x 2 x 0.14	6.6	74	1000 Sp
8 x 2 x 0.14	8.3	115	1000 Sp
10 x 2 x 0.14	9.0	130	1000 Sp
12 x 2 x 0.14	9.4	160	1000 Sp
14 x 2 x 0.14	11.0	180	1000 Sp
16 x 2 x 0.14	11.3	220	1000 Sp
18 x 2 x 0.14	11.9	240	1000 Sp

LiYCY-P

Electronic control cable, screened

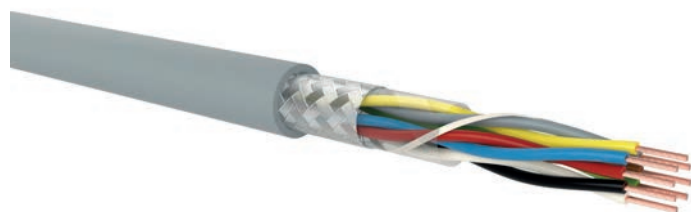
Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
LiYCY-P			
20 x 2 x 0.14	12.2	260	1000 Sp
2 x 2 x 0.25	5.5	54	1000 Sp
3 x 2 x 0.25	6.2	66	1000 Sp
4 x 2 x 0.25	6.5	81	1000 Sp
5 x 2 x 0.25	9.4	98	1000 Sp
6 x 2 x 0.25	7.2	115	1000 Sp
7 x 2 x 0.25	8.7	112	1000 Sp
8 x 2 x 0.25	10.5	130	1000 Sp
10 x 2 x 0.25	11.8	158	1000 Sp
12 x 2 x 0.25	11.0	190	1000 Sp
14 x 2 x 0.25	11.6	171	1000 Sp
16 x 2 x 0.25	15.1	238	1000 Sp
25 x 2 x 0.25	19.4	344	1000 Sp
2 x 2 x 0.34	6.3	74	1000 Sp
3 x 2 x 0.34	8.0	98	1000 Sp
4 x 2 x 0.34	8.3	114	1000 Sp
12 x 2 x 0.34	14.3	272	1000 Sp
2 x 2 x 0.5	7.1	93	1000 Sp
3 x 2 x 0.5	7.9	129	1000 Sp
4 x 2 x 0.5	8.9	146	1000 Sp
5 x 2 x 0.5	10.2	171	1000 Sp
6 x 2 x 0.5	10.8	198	1000 Sp
8 x 2 x 0.5	11.7	259	1000 Sp
12 x 2 x 0.5	13.8	354	1000 Sp
16 x 2 x 0.5	17.3	459	1000 Sp
2 x 2 x 0.75	7.7	106	1000 Sp
3 x 2 x 0.75	8.6	140	1000 Sp
4 x 2 x 0.75	9.6	179	1000 Sp
5 x 2 x 0.75	11.8	208	1000 Sp
6 x 2 x 0.75	11.9	246	1000 Sp
12 x 2 x 0.75	15.8	390	1000 Sp
4 x 2 x 1	10.4	226	1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

JE-LiYCY...Bd

Control cable for industrial electronics, screened

DESIGN



- 1 | Copper conductor, fine wire
- 2 | Core insulation (PVC), cores stranded to pairs, pairs stranded in groups
- 3 | Taping (plastic foil)
- 4 | Screen (braided screen, tinned copper wires)
- 5 | Sheath (PVC grey RAL 7001)

APPLICATION

In the electronics of measuring and control devices for the transmission of signals in the range of milliamperes, protected against crosstalks between the circuits and against external electrical influences.

TECHNICAL DATA



Standard:
DIN VDE 0815



Operating voltage:
max. 225 Vss



Test voltage:
500 V (core/core) / 50 Hz
2 kV (core/screen) / 50 Hz



Temperature range:
laying temperature: min. -5 °C
fixed: -30 °C up to 70 °C
moved: -5 °C up to 70 °C
conductor temperature: max. 70 °C



Bending radius (min.):
7.5 x Ø of cable



Core identification:
DIN VDE 0815



Fire properties:
EN 60332-1-2: flame retardant

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.5
Conductor resistance, max. at 20 °C	(Ω/km)	78.4
Insulation resistance, min. at 20 °C	(MΩ.km)	100
Mutual capacitance, max. at 800 Hz	(nF/km)	100
Capacitance unbalance K, max. at 800 Hz	(pF/100m)	200

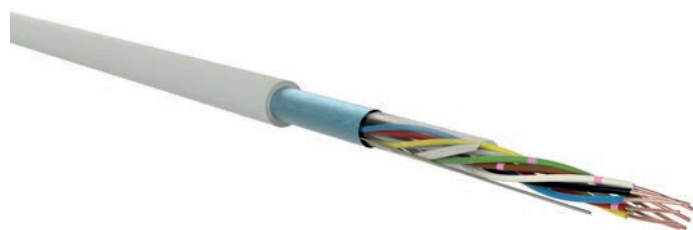
Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
JE-LiYCY...Bd			
2 x 2 x 0.5	7.0	70	500 D, 1000 D
4 x 2 x 0.5	8.9	112	500 D, 1000 D
8 x 2 x 0.5	12.9	210	500 D, 1000 D
12 x 2 x 0.5	13.8	265	500 D, 1000 D
16 x 2 x 0.5	14.9	333	500 D, 1000 D
20 x 2 x 0.5	16.1	392	500 D, 1000 D
24 x 2 x 0.5	17.4	451	500 D, 1000 D
32 x 2 x 0.5	20.7	606	500 D, 1000 D
40 x 2 x 0.5	22.7	726	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

JE-Y(St)Y...Bd

Control cable for industrial electronics, screened

DESIGN



- 1 | Copper conductor, round solid
- 2 | Core insulation (PVC), cores stranded to pairs, pairs stranded in groups
- 3 | Taping (plastic foil)
- 4 | Screen (plastic laminated aluminium tape with drain wire)
- 5 | Sheath (PVC grey RAL 7032)

APPLICATION

For use in the electronics of control and regulating equipment. Preferably for use in dry and wet premises. Not suitable for power installation purposes and direct burial.

TECHNICAL DATA



Standard:
DIN VDE 0815



Rated voltage:
max. 225 Vss



Test voltage:
500 V (core/core) / 50 Hz
2 kV (core/screen) / 50 Hz



Temperature range:
laying temperature: min. -5 °C
fixed: -30 °C up to 70 °C
moved: -5 °C up to 50 °C



Bending radius (min.):
7.5 x Ø of cable



Core identification:
DIN VDE 0815



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}



Certificate:
VDE Germany

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.8
Loop resistance, max.	(Ω/km)	73.2
Insulation resistance, min. at 20 °C	(MΩ.km)	100
Mutual capacitance, max. at 800 Hz	(nF/km)	100
Capacitance unbalance K, max. at 800 Hz	(pF/100m)	200

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
JE-Y(St)Y...Bd			
2 x 2 x 0.8	5.9	54	500 D, 1000 D
4 x 2 x 0.8	7.8	88	500 D, 1000 D
8 x 2 x 0.8	10.7	153	500 D, 1000 D
12 x 2 x 0.8	11.3	203	500 D, 1000 D
16 x 2 x 0.8	13.0	270	500 D, 1000 D
20 x 2 x 0.8	13.9	322	500 D, 1000 D
24 x 2 x 0.8	15.1	377	500 D, 1000 D
32 x 2 x 0.8	19.5	518	500 D, 1000 D
40 x 2 x 0.8	20.1	617	500 D, 1000 D



SCHWECHATER KABELWERKE

JE-Y(St)Y...Bd

Control cable for industrial electronics, screened

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
JE-Y(St)Y...Bd			
80 x 2 x 0.8	27.9	1174	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

L-Y(St)Y EIB

MSR installation cable for EIB-Bus, halogen-free, screened

DESIGN



- 1 | Copper conductor, round solid
- 2 | Core insulation (PVC), cores star quaded
- 3 | Screen (plastic tape laminated with aluminium foil with drain wire)
- 4 | Sheath (PVC grey RAL 7035 or green RAL 6018)

APPLICATION

For installation on and under plaster in dry, damp and wet locations, as a BUS cable (EIB installation bus) and as a measuring and control cable in power installations.

TECHNICAL DATA



Standard:
adapted to DIN VDE 0815



Operating voltage:
250 V



Test voltage:
800 V (core/core) / 50 Hz
4 kV (core/screen) / 50 Hz



Temperature range:
laying temperature: min. -5 °C
fixed: -30 °C up to 70 °C
moved: -5 °C up to 50 °C
conductor temperature: max. 70 °C



Bending radius (min.):
7.5 x Ø of cable



Core identification:
1st. circuite: red (a), black (b) 2nd. circuite: white (a), yellow (b)



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.8
Loop resistance, max.	(Ω/km)	73.2
Insulation resistance, min. at 20 °C	(MΩ.km)	100
Mutual capacitance, max. at 800 Hz	(nF/km)	100
Capacitance unbalance, max. at 800 Hz (100% of values)	(pF/100m)	200

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
L-Y(St)Y EIB			
2 x 2 x 0.8	6.2	64	50 R, 100 R, 500 Sp, 1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

PROFIBUS

Profibus cable

DESIGN



- 1 | Copper conductor, round solid
- 2 | Core insulation (PE), cores stranded to pair
- 3 | Taping (plastic foil)
- 4 | Screen (plastic laminated aluminium tape and braided with tinned copper wires sreen)
- 5 | Sheath (PVC violet RAL 4001)

APPLICATION

Connecting cable in machine controls, e.g. as a connecting cable between bus segments.

TECHNICAL DATA



Standard:
EN 50170



Operating voltage:
max. 250 V



Test voltage:
1.5 kV / 50 Hz



Temperature range:
laying temperature: min. -10 °C up to 80 °C
operating temperature: -30 °C up to 80 °C



Bending radius (min.):
75 mm



Core identification:
red, green



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.64
Loop resistance, max.	(Ω/km)	133
Insulation resistance, min. at 20 °C	(MΩ.km)	1000
Mutual capacitance	(nF/km)	appr. 30
Characteristic impedance, ± 10%	(Ω)	150

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
1 x 2 x 0.64	7.9	57	1000 Sp

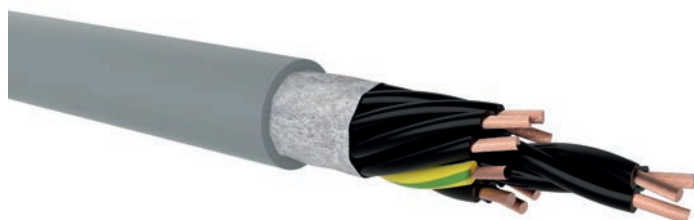
Technical changes reserved. All figures are therefore without guarantee.

PROFIBUS

FLEXICS® 11

PVC/PUR control cable, unscreened

DESIGN



- 1 | Copper conductor, fine wire
- 2 | Core insulation (PVC), cores stranded in layers
- 3 | Non-woven tape (optional)
- 4 | Sheath (PUR grey RAL 7001)

APPLICATION

Power, control and connecting cable for fixed laying and flexible applications, especially in wet areas of machine tools and transfer lines without mechanical stress and guided movements. Outdoor use only when protected from direct exposure to sunlight in accordance with the indicated temperature range.

TECHNICAL DATA



Standard:
based on VDE 0285



Rated voltage:
300/500 V (U₀/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
fixed: -40 °C up to 80 °C
moved: -5 °C up to 70 °C



Bending radius (min.):
4 x Ø of cable (fixed installed)
12.5 x Ø of cable (free motion)



Core identification:
black (continuously numbered), from 3 cores
with green/yellow ground conductor

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
FLEXICS® 11				
2 x 0.5	39	4.8	45	1000 Sp
3 G 0.5	39	5.1	55	1000 Sp
4 G 0.5	39	5.7	62	1000 Sp
5 G 0.5	39	6.2	75	1000 Sp
7 G 0.5	39	7.2	90	1000 Sp
10 G 0.5	39	8.8	120	1000 Sp
12 G 0.5	39	9.1	135	1000 Sp
18 G 0.5	39	10.7	205	1000 Sp
25 G 0.5	39	13.2	270	1000 Sp
34 G 0.5	39	14.7	380	1000 Sp
42 G 0.5	39	15.8	415	1000 Sp
2 x 0.75	26	5.4	44	1000 Sp
3 G 0.75	26	5.7	53	1000 Sp
4 G 0.75	26	6.2	64	1000 Sp
5 G 0.75	26	6.8	76	1000 Sp
7 G 0.75	26	8.1	96	1000 Sp
10 G 0.75	26	9.6	140	1000 Sp
12 G 0.75	26	9.9	170	1000 Sp
18 G 0.75	26	11.9	260	1000 Sp
25 G 0.75	26	14.5	282	1000 Sp
34 G 0.75	26	16.3	475	1000 Sp

FLEXICS® 11

PVC/PUR control cable, unscreened

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
FLEXICS® 11				
42 G 0.75	26	17.7	600	1000 Sp
2 x 1	19.5	6.9	72	1000 Sp
3 G 1	19.5	7.3	85	1000 Sp
4 G 1	19.5	8.1	106	1000 Sp
5 G 1	19.5	9.0	130	1000 Sp
7 G 1	19.5	9.8	162	1000 Sp
10 G 1	19.5	12.8	242	1000 Sp
12 G 1	19.5	13.0	265	1000 Sp
18 G 1	19.5	15.5	386	1000 Sp
25 G 1	19.5	18.7	532	1000 Sp
34 G 1	19.5	21.5	750	1000 Sp
42 G 1	19.5	25.6	1100	1000 Sp
50 G 1	19.5	27.5	1266	1000 Sp
2 x 1.5	13.3	6.2	68	1000 Sp
3 G 1.5	13.3	6.6	87	1000 Sp
4 G 1.5	13.3	7.2	106	1000 Sp
5 G 1.5	13.3	8.2	131	1000 Sp
7 G 1.5	13.3	9.8	173	1000 Sp
12 G 1.5	13.3	12.0	293	1000 Sp
18 G 1.5	13.3	14.5	454	1000 Sp
25 G 1.5	13.3	17.8	641	1000 Sp
30 G 1.5	13.3	18.0	800	1000 Sp
2 x 2.5	7.98	7.8	110	1000 Sp
3 G 2.5	7.98	8.3	146	1000 Sp
4 G 2.5	7.98	9.2	183	1000 Sp
5 G 2.5	7.98	10.1	222	1000 Sp
7 G 2.5	7.98	12.3	293	1000 Sp
12 G 2.5	7.98	15.3	512	1000 Sp
4 G 4	4.95	11.0	291	1000 Sp
5 G 4	4.95	12.7	355	1000 Sp
7 G 4	4.95	14.0	503	1000 Sp
4 G 6	3.3	13.4	468	1000 Sp
5 G 6	3.3	14.9	570	1000 Sp
7 G 6	3.3	16.5	808	1000 Sp
4 G 10	1.91	16.9	720	1000 Sp
5 G 10	1.91	18.7	894	1000 Sp
7 G 10	1.91	20.9	1295	1000 Sp
4 G 16	1.21	19.8	1063	1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® 11C

PVC/PUR control cable, screened

DESIGN



- 1 | Copper conductor, fine wire
- 2 | Core insulation (PVC), cores stranded in layers
- 3 | Inner sheath (PVC grey)
- 4 | Cu-braiding, tinned
- 5 | Non-woven tape separation over braiding (optional)
- 6 | Sheath (PUR grey RAL 7001)

APPLICATION

Power, control and connecting cable for fixed laying and flexible applications, especially in wet areas of machine tools and transfer lines without mechanical stress and guided movements. Outdoor use only when protected from direct exposure to sunlight and in accordance with the indicated temperature range. Especially when excellent EMC behavior is requested.

TECHNICAL DATA



Standard:
based on VDE 0285



Rated voltage:
300/500 V (U₀/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
fixed: -40 °C up to 80 °C
moved: -5 °C up to 70 °C



Bending radius (min.):
6 x Ø of cable (fixed installed)
20 x Ø of cable (free motion)



Core identification:
black (continuously numbered), from 3 cores
with green/yellow ground conductor

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
FLEXICS® 11C				
2 x 0.75	26	7.4	85	1000 Sp
3 G 0.75	26	7.9	99	1000 Sp
4 G 0.75	26	8.4	114	1000 Sp
5 G 0.75	26	8.9	130	1000 Sp
7 G 0.75	26	9.7	161	1000 Sp
12 G 0.75	26	12.3	245	1000 Sp
18 G 0.75	26	14.5	354	1000 Sp
25 G 0.75	26	16.6	463	1000 Sp
34 G 0.75	26	18.9	598	1000 Sp
41 G 0.75	26	20.6	725	1000 Sp
2 x 1	19.5	7.9	97	1000 Sp
3 G 1	19.5	8.2	111	1000 Sp
4 G 1	19.5	8.7	129	1000 Sp
5 G 1	19.5	9.5	152	1000 Sp
7 G 1	19.5	10.2	184	1000 Sp
12 G 1	19.5	13.3	306	1000 Sp
18 G 1	19.5	15.5	417	1000 Sp
25 G 1	19.5	17.5	541	1000 Sp
34 G 1	19.5	20.3	735	1000 Sp

FLEXICS® 11C

PVC/PUR control cable, screened

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
FLEXICS® 11C				
41 G 1	19.5	22.0	860	1000 Sp
2 x 1.5	13.3	8.5	116	1000 Sp
3 G 1.5	13.3	8.9	135	1000 Sp
4 G 1.5	13.3	9.6	162	1000 Sp
5 G 1.5	13.3	10.3	187	1000 Sp
7 G 1.5	13.3	11.3	236	1000 Sp
12 G 1.5	13.3	14.8	392	1000 Sp
18 G 1.5	13.3	17.2	536	1000 Sp
25 G 1.5	13.3	20.1	742	1000 Sp
34 G 1.5	13.3	21.9	960	1000 Sp
41 G 1.5	13.3	24.7	1118	1000 Sp
3 G 2.5	7.98	10.3	191	1000 Sp
4 G 2.5	7.98	11.3	232	1000 Sp
5 G 2.5	7.98	12.6	282	1000 Sp
7 G 2.5	7.98	13.9	370	1000 Sp
12 G 2.5	7.98	17.2	580	1000 Sp
4 G 4	4.95	13.4	345	1000 Sp
5 G 4	4.95	14.7	412	1000 Sp
4 G 6	3.3	15.8	483	1000 Sp
5 G 6	3.3	17.3	576	1000 Sp
4 G 10	1.91	19.0	733	1000 Sp
4 G 16	1.21	22.2	1340	1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® 1111

PUR/PUR control cable, unscreened

DESIGN



- 1 | Copper conductor, fine or super fine wires
- 2 | Core insulation (PUR), cores stranded in layers
- 3 | Sheath (PUR grey RAL 7001 orange RAL 2003 or black RAL 9005)

APPLICATION

Power, control and connecting cable for flexible use as a feed cable for extension leads and static use in dry, damp and wet rooms, for increased mechanical load. Possible outdoor use under indicated temperature range.

TECHNICAL DATA



Standard:
based on VDE 0285



Rated voltage:
300/500 V (U₀/U)



Test voltage:
3 kV / 50 Hz



Temperature range:
fixed: -50 °C up to 80 °C
moved: -40 °C up to 80 °C



Bending radius (min.):
4 x Ø of cable (fixed installed)
15 x Ø of cable (free motion)



Core identification:
colours according to CENELEC HD 308 S2



Fire properties:
EN 60332-1-2: self-extinguishing and flame retardant

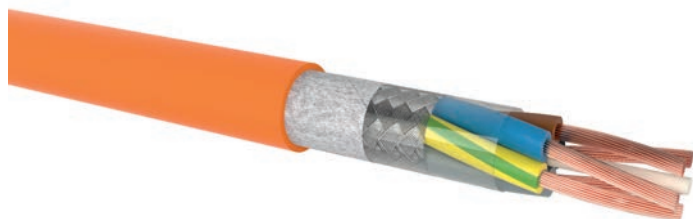
Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
FLEXICS® 1111				
2 x 1	19.5	7.2	64	1000 Sp
3 G 1	19.5	7.6	77	1000 Sp
4 G 1	19.5	8.5	96	1000 Sp
5 G 1	19.5	9.2	120	1000 Sp
2 x 1.5	13.3	8.0	81	1000 Sp
3 G 1.5	13.3	8.7	105	1000 Sp
4 G 1.5	13.3	9.6	135	1000 Sp
5 G 1.5	13.3	10.8	159	1000 Sp
3 G 2.5	7.98	10.9	173	1000 Sp
4 G 2.5	7.98	11.9	204	1000 Sp
5 G 2.5	7.98	13.2	254	1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® 1111C

PUR/PUR control cable, screened

DESIGN



- 1 | Copper conductor, fine or super fine wires
- 2 | Core insulation (PUR), core in layer stranded
- 3 | Inner covering (plastic foil)
- 4 | Screen (braided screen, tinned copper wires)
- 5 | Non-woven tape separation over braiding (optional)
- 6 | Sheath (PUR grey RAL 7001, orange RAL 2003 or black RAL 9005)

APPLICATION

Power, control and connecting cable for flexible use as a feed cable for extension leads and static use in dry, damp and wet rooms, for increased mechanical load. Possible outdoor use under indicated temperature range. Especially when excellent EMC behaviour is requested.

TECHNICAL DATA



Rated voltage:
300/500 V (U₀/U)



Test voltage:
3 kV / 50 Hz



Temperature range:
fixed: -50 °C up to 80 °C
moved: -40 °C up to 80 °C



Bending radius (min.):
4 x Ø of cable (fixed installed)
15 x Ø of cable (free motion)



Core identification:
colours according to CENELEC HD 308 S2



Fire properties:
EN 60332-1-2: self-extinguishing and flame retardant

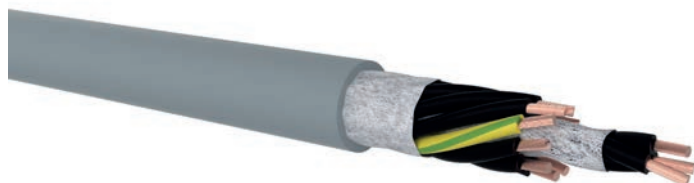
Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
FLEXICS® 1111C				
2 x 1	19.5	7.5	80	1000 Sp
4 G 1	19.5	8.8	106	1000 Sp
3 G 1	19.5	7.8	95	1000 Sp
5 G 1	19.5	9.5	149	1000 Sp
2 x 1.5	13.3	8.8	101	1000 Sp
3 G 1.5	13.3	9.0	125	1000 Sp
4 G 1.5	13.3	10.0	150	1000 Sp
5 G 1.5	13.3	10.8	159	1000 Sp
3 G 2.5	7.98	11.0	169	1000 Sp
4 G 2.5	7.98	12.2	225	1000 Sp
5 G 2.5	7.98	13.5	275	1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® CHAIN

PVC/PVC drag chain cable, unscreened

DESIGN



- 1 | Copper conductor, finest wire
- 2 | Core insulation (PVC), cores stranded in layers with short lay-lengths
- 3 | Non-woven wrapping over each stranding layer
- 4 | Sheath (PVC grey RAL 7001)

APPLICATION

Extremely flexible PVC/PVC control cable for transmission of instrumentation and control signals for machine building and plant construction purposes, especially for continuous moving machine parts, e.g. within C-tracks. FLEXICS® CHAIN cables are designed for indoor applications when exposed to medium mechanical stress.

TECHNICAL DATA



Standard:
based on VDE 0285



Rated voltage:
300/500 V (U₀/U)



Test voltage:
4 kV / 50 Hz



Bending radius (min.):
7.5 x Ø of cable (fixed installed)
10 x Ø of cable (free motion)



Core identification:
black (continuously numbered), from 3 cores
with green/yellow ground conductor



Fire properties:
EN 60332-1-2: self-extinguishing and flame
retardant



Bending cycles:
3 million
for detailed application in drag chains see
“General Technical Information” section

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
FLEXICS® CHAIN				
2 x 0.5	39	5.2	32	1000 Sp
3 G 0.5	39	5.5	41	1000 Sp
4 G 0.5	39	6.1	52	1000 Sp
5 G 0.5	39	6.6	64	1000 Sp
7 G 0.5	39	8.0	92	1000 Sp
12 G 0.5	39	9.6	128	1000 Sp
18 G 0.5	39	11.5	195	1000 Sp
25 G 0.5	39	14.2	284	1000 Sp
2 x 0.75	26	5.7	39	1000 Sp
3 G 0.75	26	6.2	51	1000 Sp
4 G 0.75	26	6.8	65	1000 Sp
5 G 0.75	26	7.4	80	1000 Sp
7 G 0.75	26	8.9	117	1000 Sp
12 G 0.75	26	10.5	169	1000 Sp
18 G 0.75	26	12.7	254	1000 Sp
25 G 0.75	26	15.8	376	1000 Sp
2 x 1	19.5	6.0	46	1000 Sp
3 G 1	19.5	6.6	60	1000 Sp
4 G 1	19.5	7.3	78	1000 Sp
5 G 1	19.5	7.9	96	1000 Sp

FLEXICS® CHAIN

PVC/PVC drag chain cable, unscreened

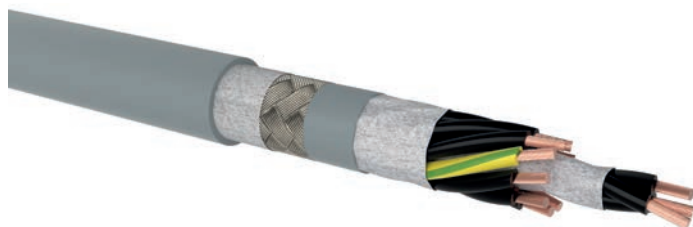
Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
FLEXICS® CHAIN				
7 G 1	19.5	9.6	144	1000 Sp
12 G 1	19.5	11.4	205	1000 Sp
18 G 1	19.5	13.9	314	1000 Sp
25 G 1	19.5	17.6	498	1000 Sp
2 x 1.5	13.3	6.7	60	1000 Sp
3 G 1.5	13.3	7.4	80	1000 Sp
4 G 1.5	13.3	8.1	102	1000 Sp
5 G 1.5	13.3	9.1	130	1000 Sp
7 G 1.5	13.3	10.8	192	1000 Sp
12 G 1.5	13.3	13.0	273	1000 Sp
18 G 1.5	13.3	15.6	417	1000 Sp
25 G 1.5	13.3	19.8	632	1000 Sp
3 G 2.5	7.98	9.0	128	1000 Sp
4 G 2.5	7.98	10.0	161	1000 Sp
5 G 2.5	7.98	11.2	205	1000 Sp
7 G 2.5	7.98	13.5	300	1000 Sp
12 G 2.5	7.98	16.0	440	1000 Sp
18 G 2.5	7.98	20.4	703	1000 Sp
25 G 2.5	7.98	24.7	1054	1000 Sp
3 G 4	4.95	10.6	176	1000 Sp
4 G 4	4.95	11.8	227	1000 Sp
5 G 4	4.95	13.5	298	1000 Sp
7 G 4	4.95	18.6	446	1000 Sp
3 G 6	3.3	13.0	280	1000 Sp
4 G 6	3.3	14.2	358	1000 Sp
7 G 6	3.3	19.8	614	1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® CHAIN C

UL recognized PVC/PVC drag chain cable, screened

DESIGN



- 1 | Copper conductor, finest wire
- 2 | Core insulation (PVC), cores stranded in layers with short lay-lengths
- 3 | Inner sheath (PVC grey)
- 4 | Non-woven tape separation over braiding (optional)
- 5 | Sheath (PVC grey RAL 7001)

APPLICATION

Extremely flexible PVC/PVC control cable for transmission of instrumentation and control signals for machine building and plant construction purposes, especially for continuous moving machine parts, e.g. within C-tracks. FLEXICS® CHAIN C cables are designed for indoor applications when exposed to medium mechanical stress, especially when excellent EMC behavior is requested.

TECHNICAL DATA



Standard:
based on VDE 0285



Rated voltage:
300/500 V (U₀/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
fixed: -30 °C up to 80 °C
moved: -5 °C up to 80 °C



Bending radius (min.):
7.5 x Ø of cable (fixed installed)
10 x Ø of cable (free motion)



Core identification:
black (continuously numbered), from 3 cores with green/yellow ground conductor



Fire properties:
EN 60332-1-2: self-extinguishing and flame retardant



Bending cycles:
3 million
for detailed application in drag chains see "General Technical Information" section

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
FLEXICS® CHAIN C				
2 x 0.5	39	6.9	73	1000 Sp
3 G 0.5	39	7.3	84	1000 Sp
4 G 0.5	39	7.9	98	1000 Sp
5 G 0.5	39	8.6	110	1000 Sp
7 G 0.5	39	9.8	141	1000 Sp
12 G 0.5	39	11.5	201	1000 Sp
18 G 0.5	39	13.4	285	1000 Sp
25 G 0.5	39	15.9	394	1000 Sp
2 x 0.75	26	7.3	85	1000 Sp
3 G 0.75	26	7.8	98	1000 Sp
4 G 0.75	26	8.4	116	1000 Sp
5 G 0.75	26	9.0	128	1000 Sp
7 G 0.75	26	10.7	178	1000 Sp
12 G 0.75	26	12.5	253	1000 Sp
18 G 0.75	26	14.9	367	1000 Sp
25 G 0.75	26	17.4	496	1000 Sp
2 x 1	19.5	7.7	97	1000 Sp

FLEXICS® CHAIN C

UL recognized PVC/PVC drag chain cable, screened

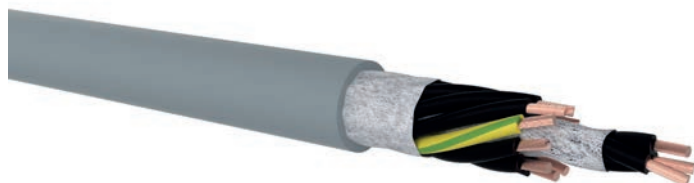
Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
FLEXICS® CHAIN C				
3 G 1	19.5	8.2	116	1000 Sp
4 G 1	19.5	8.9	134	1000 Sp
5 G 1	19.5	9.8	154	1000 Sp
7 G 1	19.5	11.4	207	1000 Sp
12 G 1	19.5	13.4	314	1000 Sp
18 G 1	19.5	16.1	443	1000 Sp
25 G 1	19.5	18.8	612	1000 Sp
2 x 1.5	13.3	8.4	117	1000 Sp
3 G 1.5	13.3	9.0	139	1000 Sp
4 G 1.5	13.3	9.9	169	1000 Sp
5 G 1.5	13.3	10.9	201	1000 Sp
7 G 1.5	13.3	12.7	262	1000 Sp
12 G 1.5	13.3	15.2	404	1000 Sp
18 G 1.5	13.3	17.8	560	1000 Sp
25 G 1.5	13.3	21.2	788	1000 Sp
3 G 2.5	7.98	11.0	206	1000 Sp
4 G 2.5	7.98	11.9	244	1000 Sp
5 G 2.5	7.98	13.2	306	1000 Sp
7 G 2.5	7.98	15.8	418	1000 Sp
12 G 2.5	7.98	20.4	690	1000 Sp
18 G 2.5	7.98	24.0	994	1000 Sp
25 G 2.5	7.98	28.2	1420	1000 Sp
4 G 4	4.95	13.7	360	1000 Sp
5 G 4	4.95	15.3	430	1000 Sp
7 G 4	4.95	20.0	670	1000 Sp
4 G 6	3.3	16.1	514	1000 Sp
7 G 6	3.3	23.0	862	1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® CHAIN 11

PVC/PUR drag chain cable, unscreened

DESIGN



- 1 | Copper conductor, finest wire
- 2 | Core insulation (PVC), cores stranded in layers with short lay-lengths
- 3 | Non-woven wrapping over each stranding layer (optional)
- 4 | Sheath (PUR grey RAL 7001)

APPLICATION

Extremely flexible PVC/PUR control cable for transmission of instrumentation and control signals for machine building and plant construction purposes, especially for continuous moving machine parts, e.g. within C-tracks. FLEXICS® CHAIN 11 cables are designed for indoor applications when exposed to medium mechanical stress. Resistant against a wide range of oils, greases, coolants and lubricants.

TECHNICAL DATA



Standard:
based on VDE 0285



Rated voltage:
300/500 V (U₀/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
fixed: -30 °C up to 80 °C
moved: -5 °C up to 70 °C



Bending radius (min.):
7.5 x Ø of cable (fixed installed)
10 x Ø of cable (free motion)



Core identification:
black (continuously numbered), from 3 cores with green/yellow ground conductor



Fire properties:
EN 60332-1-2: self-extinguishing and flame retardant



Bending cycles:
5 million
for detailed application in drag chains see "General Technical Information" section

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
FLEXICS® CHAIN 11				
2 x 0.5	39	5.3	31	1000 Sp
3 G 0.5	39	5.7	39	1000 Sp
4 G 0.5	39	6.3	51	1000 Sp
5 G 0.5	39	6.7	62	1000 Sp
7 G 0.5	39	8.0	90	1000 Sp
12 G 0.5	39	9.6	125	1000 Sp
18 G 0.5	39	11.5	191	1000 Sp
25 G 0.5	39	14.2	280	1000 Sp
2 x 0.75	26	5.7	38	1000 Sp
3 G 0.75	26	6.2	50	1000 Sp
4 G 0.75	26	6.8	64	1000 Sp
5 G 0.75	26	7.4	78	1000 Sp
7 G 0.75	26	8.9	115	1000 Sp
12 G 0.75	26	10.5	166	1000 Sp
18 G 0.75	26	12.7	249	1000 Sp
25 G 0.75	26	15.6	356	1000 Sp
2 x 1	19.5	6.0	44	1000 Sp

FLEXICS® CHAIN 11

PVC/PUR drag chain cable, unscreened

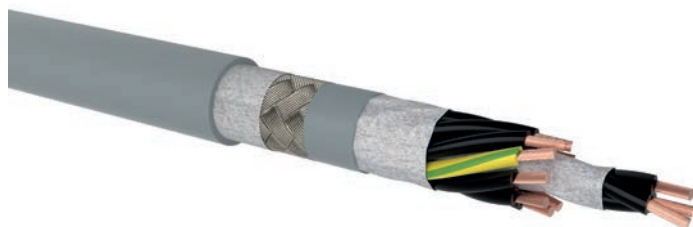
Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
FLEXICS® CHAIN 11				
3 G 1	19.5	6.6	59	1000 Sp
4 G 1	19.5	7.3	76	1000 Sp
5 G 1	19.5	7.9	94	1000 Sp
7 G 1	19.5	9.6	141	1000 Sp
12 G 1	19.5	11.4	201	1000 Sp
18 G 1	19.5	13.9	310	1000 Sp
25 G 1	19.5	17.4	490	1000 Sp
2 x 1.5	13.3	6.7	59	1000 Sp
3 G 1.5	13.3	7.4	78	1000 Sp
4 G 1.5	13.3	8.1	100	1000 Sp
5 G 1.5	13.3	9.1	128	1000 Sp
7 G 1.5	13.3	10.8	189	1000 Sp
12 G 1.5	13.3	13.0	269	1000 Sp
18 G 1.5	13.3	15.6	415	1000 Sp
25 G 1.5	13.3	19.4	628	1000 Sp
3 G 4	4.95	10.6	175	1000 Sp
4 G 4	4.95	12.0	224	1000 Sp
5 G 4	4.95	13.5	292	1000 Sp
7 G 4	4.95	18.6	440	1000 Sp
3 G 6	3.3	13.0	276	1000 Sp
4 G 6	3.3	14.2	352	1000 Sp
7 G 6	3.3	19.8	608	1000 Sp
3 G 10	1.91	16.2	660	1000 Sp
4 G 10	1.91	18.1	750	1000 Sp
5 G 10	1.91	20.3	990	1000 Sp
7 G 10	1.91	24.3	1300	1000 Sp
4 G 16	1.21	21.1	1200	1000 Sp
5 G 16	1.21	23.5	1500	1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® CHAIN 11C

PVC/PUR drag chain cable, screened

DESIGN



- 1 | Copper conductor, finest wire
- 2 | Core insulation (PVC), cores stranded in layers with short lay-lengths
- 3 | Non-woven wrapping over each stranding layer
- 4 | Inner sheath (PVC grey)
- 5 | Screen (braided screen, tinned copper wires)
- 6 | Non-woven wrapping over braiding
- 7 | Sheath (PUR grey RAL 7001)

APPLICATION

Extremely flexible PVC/PUR control cable for transmission of instrumentation and control signals for machine building and plant construction purposes, especially for continuous moving machine parts, e.g. within C-tracks. Cables are designed for indoor applications when exposed to medium mechanical stress. Resistant against a wide range of oils, greases, coolants and lubricants. Especially when excellent EMC behavior is requested.

TECHNICAL DATA



Standard:
based on VDE 0285



Rated voltage:
300/500 V (U₀/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
fixed: -30 °C up to 80 °C
moved: -5 °C up to 70 °C



Bending radius (min.):
7.5 x Ø of cable (fixed installed)
10 x Ø of cable (free motion)



Core identification:
black (continuously numbered), from 3 cores with green/yellow ground conductor



Fire properties:
EN 60332-1-2: self-extinguishing and flame retardant



Bending cycles:
5 million
for detailed application in drag chains see "General Technical Information" section

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
FLEXICS® CHAIN 11C				
2 x 0.5	39	6.9	70	1000 Sp
3 G 0.5	39	7.3	80	1000 Sp
4 G 0.5	39	7.9	94	1000 Sp
5 G 0.5	39	8.5	106	1000 Sp
7 G 0.5	39	9.8	139	1000 Sp
12 G 0.5	39	11.5	194	1000 Sp
18 G 0.5	39	13.4	182	1000 Sp
25 G 0.5	39	15.9	390	1000 Sp
2 x 0.75	26	7.3	80	1000 Sp
3 G 0.75	26	7.8	92	1000 Sp
4 G 0.75	26	8.4	112	1000 Sp
5 G 0.75	26	9.0	124	1000 Sp
7 G 0.75	26	10.7	168	1000 Sp
12 G 0.75	26	12.5	253	1000 Sp
18 G 0.75	26	14.9	356	1000 Sp
25 G 0.75	26	17.4	479	1000 Sp
2 x 1	19.5	7.7	92	1000 Sp

FLEXICS® CHAIN 11C

PVC/PUR drag chain cable, screened

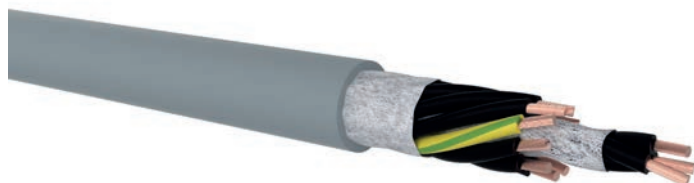
Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
FLEXICS® CHAIN 11C				
3 G 1	19.5	8.2	100	1000 Sp
4 G 1	19.5	8.9	129	1000 Sp
5 G 1	19.5	9.8	154	1000 Sp
7 G 1	19.5	11.4	198	1000 Sp
12 G 1	19.5	13.4	300	1000 Sp
18 G 1	19.5	16.1	429	1000 Sp
25 G 1	19.5	18.8	590	1000 Sp
2 x 1.5	13.3	8.4	112	1000 Sp
3 G 1.5	13.3	9.0	133	1000 Sp
4 G 1.5	13.3	9.9	162	1000 Sp
5 G 1.5	13.3	10.9	188	1000 Sp
7 G 1.5	13.3	12.7	251	1000 Sp
12 G 1.5	13.3	15.2	378	1000 Sp
18 G 1.5	13.3	17.8	536	1000 Sp
25 G 1.5	13.3	21.2	766	1000 Sp
3 G 2.5	7.98	11.0	198	1000 Sp
4 G 2.5	7.98	11.9	233	1000 Sp
5 G 2.5	7.98	13.2	294	1000 Sp
7 G 2.5	7.98	15.8	399	1000 Sp
12 G 2.5	7.98	20.4	582	1000 Sp
18 G 2.5	7.98	24.0	989	1000 Sp
25 G 2.5	7.98	28.2	1400	1000 Sp
4 G 4	4.95	13.7	348	1000 Sp
5 G 4	4.95	15.3	420	1000 Sp
7 G 4	4.95	20.0	651	1000 Sp
4 G 6	3.3	16.1	499	1000 Sp
7 G 6	3.3	23.0	844	1000 Sp
4 x 10	1.91	23.0	1140	1000 Sp
5 x 10	1.91	25.3	1310	1000 Sp
7 x 10	1.91	28.0	1630	1000 Sp
4 x 16	1.21	26.2	1391	1000 Sp
5 x 16	1.21	28.6	1810	1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® CHAIN 911

PP/PUR drag chain cable, unscreened

DESIGN



- 1 | Copper conductor, finest wire
- 2 | Core insulation (PP), cores stranded in layers with short lay-lengths
- 3 | Non-woven wrapping over each stranding layer
- 4 | Sheath (PUR grey RAL 7001)

APPLICATION

Extremely flexible PP/PUR control cable for transmission of instrumentation and control signals for machine building and plant construction purposes, especially for continuous moving machine parts, e.g. within C-tracks. FLEXICS® CHAIN 911 cables are designed for both indoor and outdoor applications when exposed to high mechanical stress. Resistant against a wide range of oils, greases, coolants and lubricants.

TECHNICAL DATA



Standard:
based on VDE 0285



Rated voltage:
300/500 V (U₀/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
fixed: -50 °C up to 80 °C
moved: -30 °C up to 80 °C



Bending radius (min.):
5 x Ø of cable (fixed installed)
7.5 x Ø of cable (free motion)



Core identification:
black (continuously numbered), from 3 cores with green/yellow ground conductor



Fire properties:
EN 60332-1-2: self-extinguishing and flame retardant



Bending cycles:
5 million
for detailed application in drag chains see "General Technical Information" section

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
FLEXICS® CHAIN 911				
2 x 0.5	39	5.0	33	1000 Sp
3 G 0.5	39	5.2	40	1000 Sp
4 G 0.5	39	6.5	54	1000 Sp
5 G 0.5	39	7.0	62	1000 Sp
7 G 0.5	39	7.7	76	1000 Sp
12 G 0.5	39	9.1	114	1000 Sp
18 G 0.5	39	11.0	165	1000 Sp
25 G 0.5	39	13.2	218	1000 Sp
2 x 0.75	26	5.6	42	1000 Sp
3 G 0.75	26	5.9	50	1000 Sp
4 G 0.75	26	6.7	61	1000 Sp
5 G 0.75	26	7.2	72	1000 Sp
7 G 0.75	26	8.8	100	1000 Sp
12 G 0.75	26	10.2	158	1000 Sp
18 G 0.75	26	12.2	219	1000 Sp
25 G 0.75	26	15.4	314	1000 Sp
2 x 1	19.5	6.0	48	1000 Sp

FLEXICS® CHAIN 911

PP/PUR drag chain cable, unscreened

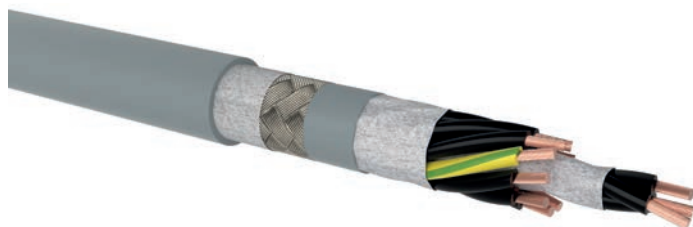
Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
FLEXICS® CHAIN 911				
3 G 1	19.5	6.5	61	1000 Sp
4 G 1	19.5	7.2	72	1000 Sp
5 G 1	19.5	7.7	93	1000 Sp
7 G 1	19.5	9.5	122	1000 Sp
12 G 1	19.5	11.2	196	1000 Sp
18 G 1	19.5	13.7	278	1000 Sp
25 G 1	19.5	17.2	385	1000 Sp
2 x 1.5	13.3	6.7	68	1000 Sp
3 G 1.5	13.3	7.3	83	1000 Sp
4 G 1.5	13.3	7.9	102	1000 Sp
5 G 1.5	13.3	9.0	128	1000 Sp
7 G 1.5	13.3	10.6	177	1000 Sp
12 G 1.5	13.3	12.5	275	1000 Sp
18 G 1.5	13.3	15.2	405	1000 Sp
25 G 1.5	13.3	19.0	562	1000 Sp
3 G 2.5	7.98	8.8	122	1000 Sp
4 G 2.5	7.98	9.8	163	1000 Sp
5 G 2.5	7.98	11.0	196	1000 Sp
7 G 2.5	7.98	13.3	268	1000 Sp
12 G 2.5	7.98	15.8	446	1000 Sp
18 G 2.5	7.98	18.8	665	1000 Sp
25 G 2.5	7.98	24.0	932	1000 Sp
4 G 4	4.95	12.8	240	1000 Sp
5 G 4	4.95	14.1	298	1000 Sp
7 G 4	4.95	16.9	418	1000 Sp
4 G 6	3.3	14.9	354	1000 Sp
7 G 6	3.3	19.0	610	1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® CHAIN 99111C

PP/PUR drag chain cable, screened

DESIGN



- 1 | Copper conductor, finest wire
- 2 | Core insulation (PP), cores stranded in layers with short lay-lengths
- 3 | Non-woven wrapping over each stranding layer
- 4 | Inner sheath (TPE)
- 5 | Screen (braided screen, tinned copper wires)
- 6 | Non-woven wrapping over braiding
- 7 | Sheath (PUR grey RAL 7001)

APPLICATION

Extremely flexible PP/PUR control cable for transmission of instrumentation and control signals for machine building and plant construction purposes, especially for continuous moving machine parts, e.g. within C-tracks. FLEXICS® CHAIN 99111C cables are designed for both indoor and outdoor applications when exposed to high mechanical stress. Resistant against a wide range of oils, greases, coolants and lubricants.

TECHNICAL DATA



Standard:
based on VDE 0285



Rated voltage:
300/500 V (U₀/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
fixed: -50 °C up to 80 °C
moved: -30 °C up to 80 °C



Bending radius (min.):
5 x Ø of cable (fixed installed)
7.5 x Ø of cable (free motion)



Core identification:
black (continuously numbered), from 3 cores with green/yellow ground conductor



Fire properties:
EN 60332-1-2: self-extinguishing and flame retardant



Bending cycles:
5 million
for detailed application in drag chains see "General Technical Information" section

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
FLEXICS® CHAIN 99111C				
2 x 0.5	39	6.9	68	1000 Sp
3 G 0.5	39	7.3	79	1000 Sp
4 G 0.5	39	7.9	94	1000 Sp
5 G 0.5	39	8.5	105	1000 Sp
7 G 0.5	39	9.8	138	1000 Sp
12 G 0.5	39	11.5	192	1000 Sp
18 G 0.5	39	13.4	182	1000 Sp
25 G 0.5	39	15.9	386	1000 Sp
2 x 0.75	26	7.3	80	1000 Sp
3 G 0.75	26	7.8	91	1000 Sp
4 G 0.75	26	8.4	112	1000 Sp
5 G 0.75	26	9.0	124	1000 Sp
7 G 0.75	26	10.7	166	1000 Sp
12 G 0.75	26	12.5	251	1000 Sp
18 G 0.75	26	14.9	352	1000 Sp
25 G 0.75	26	17.4	470	1000 Sp
2 x 1	19.5	7.7	92	1000 Sp

FLEXICS® CHAIN 99111C

PP/PUR drag chain cable, screened

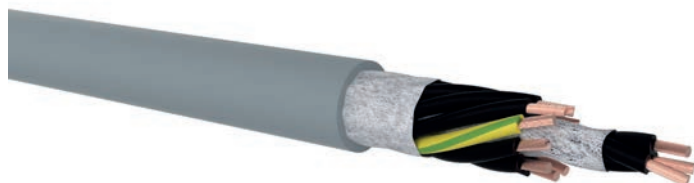
Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
FLEXICS® CHAIN 99111C				
3 G 1	19.5	8.2	101	1000 Sp
4 G 1	19.5	8.9	129	1000 Sp
5 G 1	19.5	9.8	152	1000 Sp
7 G 1	19.5	11.4	196	1000 Sp
12 G 1	19.5	13.4	298	1000 Sp
18 G 1	19.5	16.1	426	1000 Sp
25 G 1	19.5	18.8	585	1000 Sp
2 x 1.5	13.3	8.4	112	1000 Sp
3 G 1.5	13.3	9.0	133	1000 Sp
4 G 1.5	13.3	9.9	160	1000 Sp
5 G 1.5	13.3	10.9	188	1000 Sp
7 G 1.5	13.3	12.7	251	1000 Sp
12 G 1.5	13.3	15.2	377	1000 Sp
18 G 1.5	7.98	17.8	534	1000 Sp
25 G 1.5	7.98	21.2	768	1000 Sp
3 G 2.5	7.98	11.0	196	1000 Sp
4 G 2.5	7.98	11.9	233	1000 Sp
5 G 2.5	7.98	13.2	293	1000 Sp
7 G 2.5	7.98	15.8	399	1000 Sp
12 G 2.5	7.98	20.4	582	1000 Sp
18 G 2.5	7.98	24.0	989	1000 Sp
25 G 2.5	7.98	28.2	1382	1000 Sp
4 G 4	4.95	13.7	348	1000 Sp
5 G 4	4.95	15.3	420	1000 Sp
7 G 4	4.95	20.0	651	1000 Sp
4 G 6	3.3	16.1	499	1000 Sp
7 G 6	3.3	23.0	844	1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® CHAIN UL / c(UL)

UL recognized PVC/PVC drag chain cable, unshielded

DESIGN



- 1 | Copper conductor, finest wire
- 2 | Core insulation (PVC), cores stranded in layers with short lay-lengths
- 3 | Non-woven wrapping over each stranding layer
- 4 | Sheath (PVC grey RAL 7001)

APPLICATION

Extremely flexible PVC/PVC control cable for transmission of instrumentation and control signals for machine building and plant construction purposes, especially for continuous moving machine parts, e.g. within C-tracks. FLEXICS® CHAIN UL/c(UL) cables are designed for indoor applications when exposed to medium mechanical stress.

TECHNICAL DATA



Standard:
based on VDE 0285



Rated voltage:
300/500 V (U₀/U)
1000 V (UL/CSA)



Test voltage:
4 kV / 50 Hz



Temperature range:
fixed: -30 °C up to 80 °C
moved: -5 °C up to 70 °C



Bending radius (min.):
7.5 x Ø of cable (fixed installed)
10 x Ø of cable (free motion)



Core identification:
black (continuously numbered), from 3 cores with green/yellow ground conductor



Fire properties:
EN 60332-1-2: self-extinguishing and flame retardant
UL: vertical flame test VW-1, cable flame test CSA: FT1



Certificate:
UL AWM Style 20886
CSA C22.2 No. 210-11, AWM



Bending cycles:
3 million
for detailed application in drag chains see "General Technical Information" section

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
FLEXICS® CHAIN UL / c(UL)				
2 x 0.5	39	5.5	42	1000 Sp
3 G 0.5	39	5.9	52	1000 Sp
4 G 0.5	39	6.6	60	1000 Sp
5 G 0.5	39	7.2	72	1000 Sp
7 G 0.5	39	8.7	106	1000 Sp
12 G 0.5	39	10.5	150	1000 Sp
18 G 0.5	39	12.5	231	1000 Sp
25 G 0.5	39	15.0	316	1000 Sp
2 x 0.75	26	6.1	51	1000 Sp
3 G 0.75	26	6.6	63	1000 Sp
4 G 0.75	26	7.3	75	1000 Sp
5 G 0.75	26	8.0	90	1000 Sp
7 G 0.75	26	9.6	132	1000 Sp

FLEXICS® CHAIN UL / c(UL)

UL recognized PVC/PVC drag chain cable, unscreened

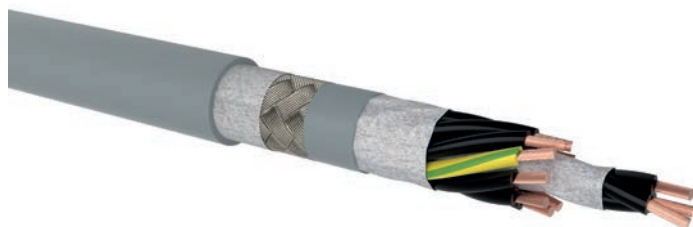
Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
FLEXICS® CHAIN UL / c(UL)				
12 G 0.75	26	11.6	201	1000 Sp
18 G 0.75	26	13.9	300	1000 Sp
25 G 0.75	26	16.6	415	1000 Sp
2 x 1	19.5	6.4	58	1000 Sp
3 G 1	19.5	7.0	72	1000 Sp
4 G 1	19.5	7.8	88	1000 Sp
5 G 1	19.5	8.5	106	1000 Sp
7 G 1	19.5	10.3	159	1000 Sp
12 G 1	19.5	12.4	237	1000 Sp
18 G 1	19.5	15.1	358	1000 Sp
25 G 1	19.5	18.3	536	1000 Sp
2 x 1.5	13.3	7.0	72	1000 Sp
3 G 1.5	13.3	7.7	93	1000 Sp
4 G 1.5	13.3	8.8	122	1000 Sp
5 G 1.5	13.3	9.6	147	1000 Sp
7 G 1.5	13.3	11.6	219	1000 Sp
12 G 1.5	13.3	13.9	322	1000 Sp
18 G 1.5	13.3	16.9	478	1000 Sp
25 G 1.5	13.3	20.1	670	1000 Sp
3 G 2.5	7.98	9.0	130	1000 Sp
4 G 2.5	7.98	10.0	165	1000 Sp
5 G 2.5	7.98	11.0	210	1000 Sp
7 G 2.5	7.98	13.4	308	1000 Sp
12 G 2.5	7.98	15.9	446	1000 Sp
18 G 2.5	7.98	20.4	718	1000 Sp
25 G 2.5	7.98	24.7	1070	1000 Sp
3 G 4	4.95	10.6	192	1000 Sp
4 G 4	4.95	11.8	243	1000 Sp
5 G 4	4.95	13.3	325	1000 Sp
7 G 4	4.95	18.5	469	1000 Sp
3 G 6	3.3	12.8	290	1000 Sp
4 G 6	3.3	14.0	368	1000 Sp
7 G 6	3.3	19.8	620	1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® CHAIN C UL/ c(UL)

UL recognized PVC/PVC drag chain cable, screened

DESIGN



- 1 | Copper conductor, finest wire
- 2 | Core insulation (PVC), cores stranded in layers with short lay-lengths
- 3 | Non-woven wrapping over each stranding layer
- 4 | Inner sheath (PVC grey)
- 5 | Screen (braided screen, tinned copper wires)
- 6 | Non-woven tape separation over braiding (optional)
- 7 | Sheath (PVC grey RAL 7001)

APPLICATION

Extremely flexible PVC/PVC control cable for transmission of instrumentation and control signals for machine building and plant construction purposes, especially for continuous moving machine parts, e.g. within C-tracks. Cables are designed for indoor applications when exposed to medium mechanical stress. Resistant against a wide range of oils, greases, coolants and lubricants. Especially when excellent EMC behavior is requested.

TECHNICAL DATA



Standard:
based on VDE 0285



Rated voltage:
300/500 V (U₀/U)
1000 V (UL/CSA)



Test voltage:
4 kV / 50 Hz



Temperature range:
fixed: -30 °C up to 80 °C
moved: -5 °C up to 70 °C



Bending radius (min.):
7.5 x Ø of cable (fixed installed)
10 x Ø of cable (free motion)



Core identification:
black (continuously numbered), from 3 cores
with green/yellow ground conductor



Fire properties:
EN 60332-1-2: self-extinguishing and flame
retardant
UL: vertical flame test VW-1, cable flame test
CSA: FT1



Certificate:
UL AWM Style 20886
CSA C22.2 No. 210-11, AWM



Bending cycles:
3 million
for detailed application in drag chains see
“General Technical Information” section

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
FLEXICS® CHAIN C UL/ c(UL)				
2 x 0.5	39	7.5	78	1000 Sp
3 G 0.5	39	7.9	89	1000 Sp
4 G 0.5	39	8.5	102	1000 Sp
5 G 0.5	39	9.2	127	1000 Sp
7 G 0.5	39	10.9	177	1000 Sp
12 G 0.5	39	12.6	234	1000 Sp
18 G 0.5	39	15.5	381	1000 Sp
25 G 0.5	39	17.7	472	1000 Sp
2 x 0.75	26	7.8	94	1000 Sp
3 G 0.75	26	8.2	105	1000 Sp
4 G 0.75	26	8.9	123	1000 Sp
5 G 0.75	26	10.0	155	1000 Sp
7 G 0.75	26	11.6	206	1000 Sp

FLEXICS® CHAIN C UL/ c(UL)

UL recognized PVC/PVC drag chain cable, screened

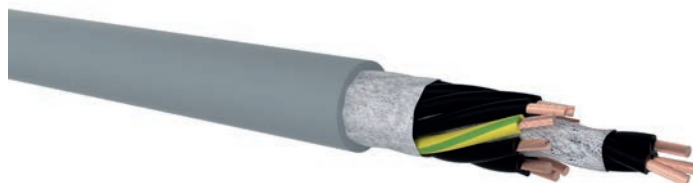
Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
FLEXICS® CHAIN C UL/ c(UL)				
12 G 0.75	26	13.8	304	1000 Sp
18 G 0.75	26	16.3	425	1000 Sp
25 G 0.75	26	18.6	548	1000 Sp
2 x 1	19.5	8.2	106	1000 Sp
3 G 1	19.5	8.6	123	1000 Sp
4 G 1	19.5	9.4	141	1000 Sp
5 G 1	19.5	10.6	178	1000 Sp
7 G 1	19.5	12.3	233	1000 Sp
12 G 1	19.5	14.6	362	1000 Sp
18 G 1	19.5	17.6	501	1000 Sp
25 G 1	19.5	20.2	667	1000 Sp
2 x 1.5	13.3	9.0	127	1000 Sp
3 G 1.5	13.3	9.7	152	1000 Sp
4 G 1.5	13.3	10.6	187	1000 Sp
5 G 1.5	13.3	11.4	218	1000 Sp
7 G 1.5	13.3	13.8	320	1000 Sp
12 G 1.5	13.3	16.3	460	1000 Sp
18 G 1.5	13.3	19.5	677	1000 Sp
25 G 1.5	13.3	23.6	926	1000 Sp
3 G 2.5	7.98	11.0	208	1000 Sp
4 G 2.5	7.98	11.8	244	1000 Sp
5 G 2.5	7.98	13.0	306	1000 Sp
7 G 2.5	7.98	15.8	428	1000 Sp
12 G 2.5	7.98	20.0	682	1000 Sp
18 G 2.5	7.98	24.0	994	1000 Sp
25 G 2.5	7.98	28.3	1422	1000 Sp
4 G 4	4.95	14.0	365	1000 Sp
5 G 4	4.95	15.3	430	1000 Sp
7 G 4	4.95	19.8	670	1000 Sp
4 G 6	3.3	16.1	514	1000 Sp
7 G 6	3.3	23.0	862	1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® CHAIN 11 UL / c(UL)

UL recognized PVC/PUR drag chain cable, unscreened

DESIGN



- 1 | Copper conductor, finest wire
- 2 | Core insulation (PVC), cores stranded in layers with short lay-lengths
- 3 | Non-woven wrapping over each stranding layer
- 4 | Sheath (PUR grey RAL 7001)

APPLICATION

Extremely flexible PVC/PUR control cable for transmission of instrumentation and control signals for machine building and plant construction purposes, especially for continuous moving machine parts, e.g. within C-tracks. FLEXICS® CHAIN 11 UL/c(UL) cables are designed for both indoor and outdoor applications when exposed to high mechanical stress. Resistant against a wide range of oils, greases, coolants and lubricants.

TECHNICAL DATA



Standard:
based on VDE 0285



Rated voltage:
300/500 V (U₀/U)
1000 V (UL/CSA)



Test voltage:
4 kV / 50 Hz



Temperature range:
fixed: -30 °C up to 80 °C
moved: -5 °C up to 70 °C



Bending radius (min.):
7.5 x Ø of cable (fixed installed)
10 x Ø of cable (free motion)



Core identification:
black (continuously numbered), from 3 cores
with green/yellow ground conductor



Fire properties:
EN 60332-1-2: self-extinguishing and flame
retardant
UL: vertical flame test VW-1, cable flame test
CSA: FT1



Certificate:
UL AWM Style 20234, 20235
CSA C22.2 No. 210-11, AWM



Bending cycles:
5 million
for detailed application in drag chains see
“General Technical Information” section

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
FLEXICS® CHAIN 11 UL / c(UL)				
2 x 0.5	39	6.5	46	1000 Sp
3 G 0.5	39	6.8	55	1000 Sp
4 G 0.5	39	7.5	69	1000 Sp
5 G 0.5	39	8.0	85	1000 Sp
7 G 0.5	39	9.8	117	1000 Sp
12 G 0.5	39	10.8	155	1000 Sp
18 G 0.5	39	12.7	224	1000 Sp
25 G 0.5	39	15.2	328	1000 Sp
2 x 0.75	26	6.8	54	1000 Sp
3 G 0.75	26	7.3	66	1000 Sp
4 G 0.75	26	8.0	82	1000 Sp
5 G 0.75	26	8.7	101	1000 Sp
7 G 0.75	26	10.7	142	1000 Sp

FLEXICS® CHAIN 11 UL / c(UL)

UL recognized PVC/PUR drag chain cable, unscreened

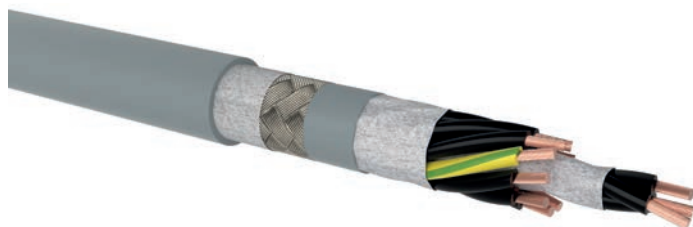
Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
FLEXICS® CHAIN 11 UL / c(UL)				
12 G 0.75	26	11.7	196	1000 Sp
18 G 0.75	26	13.9	282	1000 Sp
25 G 0.75	26	16.6	404	1000 Sp
2 x 1	19.5	7.1	60	1000 Sp
3 G 1	19.5	7.7	75	1000 Sp
4 G 1	19.5	8.5	94	1000 Sp
5 G 1	19.5	9.2	117	1000 Sp
7 G 1	19.5	11.4	168	1000 Sp
12 G 1	19.5	12.6	231	1000 Sp
18 G 1	19.5	15.1	343	1000 Sp
25 G 1	19.5	18.4	538	1000 Sp
2 x 1.5	13.3	7.7	78	1000 Sp
3 G 1.5	13.3	8.4	98	1000 Sp
4 G 1.5	13.3	9.3	125	1000 Sp
5 G 1.5	13.3	10.1	151	1000 Sp
7 G 1.5	13.3	11.9	221	1000 Sp
12 G 1.5	13.3	13.9	318	1000 Sp
18 G 1.5	13.3	16.9	484	1000 Sp
25 G 1.5	13.3	20.1	671	1000 Sp
3 G 2.5	7.98	9.3	134	1000 Sp
4 G 2.5	7.98	10.3	170	1000 Sp
5 G 2.5	7.98	11.3	205	1000 Sp
7 G 2.5	7.98	13.4	295	1000 Sp
12 G 2.5	7.98	16.0	440	1000 Sp
18 G 2.5	7.98	20.4	698	1000 Sp
25 G 2.5	7.98	24.7	1045	1000 Sp
3 G 4	4.95	10.9	190	1000 Sp
4 G 4	4.95	12.1	247	1000 Sp
5 G 4	4.95	13.5	312	1000 Sp
7 G 4	4.95	18.6	452	1000 Sp
3 G 6	3.3	13.0	288	1000 Sp
4 G 6	3.3	14.2	363	1000 Sp
7 G 6	3.3	19.8	622	1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® CHAIN 11C UL / c(UL)

UL recognized PVC/PUR drag chain cable, screened

DESIGN



- 1 | Copper conductor, finest wire
- 2 | Core insulation (PVC), cores stranded in layers with short lay-lengths
- 3 | Non-woven wrapping over each stranding layer
- 4 | Inner sheath (PVC grey)
- 5 | Screen (braided screen, tinned copper wires)
- 6 | Non-woven wrapping over braiding
- 7 | Sheath (PVC grey RAL 7001)

APPLICATION

Extremely flexible PVC/PUR control cable for transmission of instrumentation and control signals for machine building and plant construction purposes, especially for continuous moving machine parts, e.g. within C-tracks. Cables are designed for indoor applications when exposed to medium mechanical stress. Resistant against a wide range of oils, greases, coolants and lubricants. Especially when excellent EMC behavior is requested.

TECHNICAL DATA



Standard:
based on VDE 0285



Rated voltage:
300/500 V (U₀/U)
1000 V (UL/CSA)



Test voltage:
4 kV / 50 Hz



Temperature range:
fixed: -30 °C up to 80 °C
moved: -5 °C up to 70 °C



Bending radius (min.):
7.5 x Ø of cable (fixed installed)
10 x Ø of cable (free motion)



Core identification:
black (continuously numbered), from 3 cores
with green/yellow ground conductor



Fire properties:
EN 60332-1-2: self-extinguishing and flame
retardant
UL: vertical flame test VW-1, cable flame test
CSA: FT1



Certificate:
UL AWM Style 20234, 20235
CSA C22.2 No. 210-11, AWM



Bending cycles:
5 million
for detailed application in drag chains see
“General Technical Information” section

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
FLEXICS® CHAIN 11C UL / c(UL)				
2 x 0.5	39	8.1	85	1000 Sp
3 G 0.5	39	8.4	96	1000 Sp
4 G 0.5	39	9.1	112	1000 Sp
5 G 0.5	39	9.8	129	1000 Sp
7 G 0.5	39	11.6	166	1000 Sp
12 G 0.5	39	12.7	224	1000 Sp
18 G 0.5	39	14.6	215	1000 Sp
25 G 0.5	39	16.9	438	1000 Sp
2 x 0.75	26	8.4	96	1000 Sp
3 G 0.75	26	8.9	108	1000 Sp
4 G 0.75	26	9.6	130	1000 Sp
5 G 0.75	26	10.3	147	1000 Sp
7 G 0.75	26	12.5	195	1000 Sp

FLEXICS® CHAIN 11C UL / c(UL)

UL recognized PVC/PUR drag chain cable, screened

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
FLEXICS® CHAIN 11C UL / c(UL)				
12 G 0.75	26	13.7	283	1000 Sp
18 G 0.75	26	16.1	389	1000 Sp
25 G 0.75	26	18.4	527	1000 Sp
2 x 1	19.5	8.8	108	1000 Sp
3 G 1	19.5	9.3	116	1000 Sp
4 G 1	19.5	10.1	147	1000 Sp
5 G 1	19.5	11.1	177	1000 Sp
7 G 1	19.5	13.2	225	1000 Sp
12 G 1	19.5	14.6	330	1000 Sp
18 G 1	19.5	17.3	462	1000 Sp
25 G 1	19.5	19.8	638	1000 Sp
2 x 1.5	13.3	9.4	131	1000 Sp
3 G 1.5	13.3	10.0	153	1000 Sp
4 G 1.5	13.3	11.1	187	1000 Sp
5 G 1.5	13.3	11.9	215	1000 Sp
7 G 1.5	13.3	13.8	283	1000 Sp
12 G 1.5	13.3	16.1	427	1000 Sp
18 G 1.5	13.3	19.1	605	1000 Sp
25 G 1.5	13.3	21.9	809	1000 Sp
3 G 2.5	7.98	11.2	206	1000 Sp
4 G 2.5	7.98	12.2	245	1000 Sp
5 G 2.5	7.98	13.3	298	1000 Sp
7 G 2.5	7.98	15.7	399	1000 Sp
12 G 2.5	7.98	20.4	586	1000 Sp
18 G 2.5	7.98	24.0	991	1000 Sp
25 G 2.5	7.98	28.2	1403	1000 Sp
4 G 4	4.95	14.0	363	1000 Sp
5 G 4	4.95	15.4	443	1000 Sp
7 G 4	4.95	20.0	671	1000 Sp
4 G 6	3.3	16.1	510	1000 Sp
7 G 6	3.3	23.0	856	1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

NSHTöu

Trailing cable, cable for cranes

DESIGN



- 1 | Tinned copper conductor, fine wire
- 2 | Core insulation (EPR-rubber)
- 3 | Inner sheath (rubber; open textile braiding embedded in the sheath (torsion protection))
- 4 | Sheath (polychloroprene black, UV and oil resistant)

APPLICATION

As a reelable connection and control cable in conveying and transporting systems; in dry and damp rooms, as well as outdoors. Due to the textile fabric between the inner and outer sheath, frequent winding and unwinding processes with simultaneous tensile and torsional stress are possible.

TECHNICAL DATA



Standard:
DIN VDE 0250-814



Rated voltage:
0.6/1 kV (U₀/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
laying temperature: min. -25 °C
fixed: -40 °C up to 60 °C
moved: -20 °C up to 90 °C
conductor temperature: max. 60 °C
short circuit temperature: max. 200 °C/5 s



Bending radius (min.):
8 x Ø of cable



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
NSHTöu				
4 x 1.5	13.7	11.8	222	500 D, 1000 D
5 x 1.5	13.7	12.7	260	500 D, 1000 D
7 x 1.5	13.7	16.0	380	500 D, 1000 D
12 x 1.5	13.7	22.5	600	500 D, 1000 D
18 x 1.5	13.7	22.1	770	500 D, 1000 D
24 x 1.5	13.7	26.1	1000	500 D, 1000 D
30 x 1.5	13.7	29.5	1320	500 D, 1000 D
4 x 2.5	8.21	14.4	335	500 D, 1000 D
5 x 2.5	8.21	15.4	390	500 D, 1000 D
7 x 2.5	8.21	17.9	505	500 D, 1000 D
12 x 2.5	8.21	25.0	970	500 D, 1000 D
18 x 2.5	8.21	25.9	1100	500 D, 1000 D
24 x 2.5	8.21	30.8	1450	500 D, 1000 D
30 x 2.5	8.21	34.9	1950	500 D, 1000 D
4 x 4	5.09	16.0	435	500 D, 1000 D
5 x 4	5.09	17.3	520	500 D, 1000 D
4 x 6	3.39	17.4	530	500 D, 1000 D
5 x 6	3.39	19.7	690	500 D, 1000 D

NSHTöu

Trailing cable, cable for cranes

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
NSHTöu				
4 x 10	1.95	21.3	830	500 D, 1000 D
5 x 10	1.95	23.1	1000	500 D, 1000 D
4 x 16	1.24	24.7	1170	500 D, 1000 D
5 x 16	1.24	26.8	1400	500 D, 1000 D
4 x 25	0.795	31.4	1830	500 D, 1000 D
4 x 35	0.565	33.9	2280	500 D, 1000 D
5 x 35	0.565	38.3	2950	500 D, 1000 D
4 x 50	0.393	40.2	3220	500 D, 1000 D
4 x 70	0.277	44.5	4200	500 D, 1000 D
4 x 95	0.21	51.0	5530	500 D, 1000 D
4 x 120	0.164	62.0	8600	500 D, 1000 D
4 x 150	0.132	67.6	9090	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

(N)FLGöu (L-STN)

Rubber control cable with suspension element

DESIGN



- 1 | Strength member made of banded cord or plastic rope
- 2 | Copper conductor, finest wire
- 3 | Core insulation (EPR-rubber), cores stranded in layers
- 4 | Taping over each strand layer
- 5 | Sheath (chloropren-rubber black, oil resistant)

APPLICATION

Used as a flexible power and control cable for medium mechanical stress in dry, damp and wet locations and outdoors. The cable is designed for connecting movable parts of machine tools, conveyor systems and large machinery.

TECHNICAL DATA



Standard:
based on DIN VDE 0250



Rated voltage:
450/750 V (U₀/U)



Test voltage:
3 kV / 50 Hz



Temperature range:
operating temperature: -25 °C up to 60 °C
fixed: -40 °C up to 70 °C
moved: -30 °C up to 70 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
10 x Ø of cable (free motion)



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
(N)FLGöu (L-STN)				
7 x 1	19.5	14.0	220	500 D, 1000 D
12 x 1	19.5	19.0	430	500 D, 1000 D
18 x 1	19.5	20.0	510	500 D, 1000 D
24 x 1	19.5	23.0	670	500 D, 1000 D
36 x 1	19.5	26.0	900	500 D, 1000 D
48 x 1	19.5	30.0	1220	500 D, 1000 D
4 x 1.5	13.3	11.0	180	500 D, 1000 D
5 x 1.5	13.3	12.0	200	500 D, 1000 D
7 x 1.5	13.3	15.0	280	500 D, 1000 D
9 x 1.5	13.3	18.0	400	500 D, 1000 D
12 x 1.5	13.3	20.0	540	500 D, 1000 D
18 x 1.5	13.3	21.0	600	500 D, 1000 D
24 x 1.5	13.3	25.0	840	500 D, 1000 D
4 x 2.5	7.98	14.0	250	500 D, 1000 D
7 x 2.5	7.98	17.5	380	500 D, 1000 D
12 x 2.5	7.98	22.5	710	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

NGFLGöu

Rubber flat cable

DESIGN



- 1 | Copper conductor, extra-fine wire, up from 35 mm² fine wire
- 2 | Core insulation (rubber), cores lying flat and parallel next to each other, with 2-4 cores each separated by a web
- 3 | Sheath (EPR-rubber black, UV, ozon and oil resistant)

APPLICATION

For connecting movable parts of machine tools, conveyor systems and large equipment where the cable is exposed to bending in only one plane. Suitable for installation in dry, damp and wet rooms and outdoors.

TECHNICAL DATA



Standard:
DIN VDE 0250-809



Rated voltage:
300/500 V (U₀/U)



Test voltage:
3.5 kV / 50 Hz



Temperature range:
laying temperature: min. -25 °C
fixed: -50 °C up to 90 °C
moved: -35 °C up to 90 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
4 x Ø of cable (fixed installed)
5 x Ø of cable (free motion)



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant



Certificate:
VDE Germany

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer dimensions width x height (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
NGFLGöu 0.6/1 kV				
4 G 1.5	13.7	17.5 x 6.4	220	500 D, 1000 D
5 G 1.5	13.7	21.5 x 6.4	280	500 D, 1000 D
7 G 1.5	13.7	29.1 x 6.4	380	500 D, 1000 D
8 G 1.5	13.7	32 x 6.4	420	500 D, 1000 D
10 G 1.5	13.7	41.5 x 7	580	500 D, 1000 D
12 G 1.5	13.7	48.5 x 7	690	500 D, 1000 D
16 G 1.5	13.7	42 x 6.5	900	500 D, 1000 D
24 G 1.5	13.7	55 x 13	1330	500 D, 1000 D
4 G 2.5	8.21	21.2 x 8.2	350	500 D, 1000 D
5 G 2.5	8.21	25.7 x 8.2	430	500 D, 1000 D
7 G 2.5	8.21	34 x 8.2	560	500 D, 1000 D
8 G 2.5	8.21	38.5 x 8.2	630	500 D, 1000 D
10 G 2.5	8.21	47.9 x 8.2	680	500 D, 1000 D
12 G 2.5	8.21	56.8 x 8.8	1020	500 D, 1000 D
16 G 2.5	8.21	75.4 x 8.2	1135	500 D, 1000 D

NGFLGöu

Rubber flat cable

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer dimensions width x height (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
NGFLGöu 0.6/1 kV				
24 G 2.5	8.21	72.5 x 17	2300	500 D, 1000 D
4 G 4	4.95	25 x 9.6	490	500 D, 1000 D
5 G 4	4.95	31.4 x 9.9	630	500 D, 1000 D
7 G 4	4.95	40.8 x 9.6	830	500 D, 1000 D
4 G 6	3.3	27.1 x 10.3	600	500 D, 1000 D
5 G 6	3.3	34.5 x 10.3	780	500 D, 1000 D
7 G 6	3.3	44.5 x 10.3	1010	500 D, 1000 D
4 G 10	1.91	33.4 x 11.2	840	500 D, 1000 D
4 G 16	1.21	38.8 x 13.1	1150	500 D, 1000 D
5 G 10	1.91	41.5 x 11.2	1060	500 D, 1000 D
5 G 16	1.21	47.6 x 13.1	1540	500 D, 1000 D
4 G 25	0.78	48.1 x 15	1650	500 D, 1000 D
5 G 25	0.78	58.6 x 15.5	2160	500 D, 1000 D
7 G 25	0.78	79.7 x 16.1	2930	500 D, 1000 D
4 G 35	0.554	53.3 x 17	2200	500 D, 1000 D
7 G 35	0.554	88.2 x 17.1	3820	500 D, 1000 D
4 G 50	0.386	61.5 x 19.6	3000	500 D, 1000 D
4 G 70	0.272	70.5 x 22.6	4250	500 D, 1000 D
2 x 95	0.206	41.6 x 24.3	2665	500 D, 1000 D
4 G 95	0.206	78.7 x 25.2	5300	500 D, 1000 D
4 G 120	0.161	86.5 x 27.6	6500	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

H1Z2Z2-K

Solar cable, halogen-free

DESIGN



- 1 | Tinned copper conductor, fine wire (-K)
- 2 | Core insulation (cross-linked polyolefin copolymer)
- 3 | Sheath (cross-linked polymer compound black, red or blue)

APPLICATION

Solar cable belongs to solar-/photovoltaic systems, can also be laid in ground and is UV- and weather resistant.

TECHNICAL DATA



Standard:
EN 50618
EN 50575:2014 + EN 50575/A1:2016



Rated voltage:
1/1.5 kV (U_o/U)



Test voltage:
6.5 kV / 50 Hz



Temperature range:
operating temperature: -40 °C up to 90 °C
fixed: -40 °C up to 120 °C
moved: -25 °C up to 120 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 200 °C/5 s



Bending radius (min.):
4 x Ø of cable (fixed installed)
6 x Ø of cable (free motion)



Core identification:
Grey



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}

Nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
H1Z2Z2-K				
1.5	13.7	5.0	30	500 Sp, 1000 Sp
2.5	8.21	5.4	43	500 Sp, 1000 Sp
4	5.09	6.6	58	500 Sp, 1000 Sp
6	3.39	7.4	79	500 Sp, 1000 Sp
10	1.95	8.8	128	500 Sp, 1000 Sp
16	1.24	10.1	185	500 D, 1000 D
25	0.795	12.5	277	500 D, 1000 D
35	0.565	14.0	369	500 D, 1000 D
50	0.393	16.3	557	500 D, 1000 D
70	0.277	18.7	767	500 D, 1000D
95	0.21	20.8	912	500 D, 1000 D
120	0.164	24.2	1233	500 D, 1000 D
150	0.132	25.5	1540	500 D, 1000 D
185	0.108	28.5	1833	500 D, 1000 D
240	0.0817	32.1	2450	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

SiA

Silicone insulated wire

DESIGN



- 1 | Tinned copper conductor, solid
- 2 | Core insulation (silicone rubber)

APPLICATION

This wire is well suited for internal wiring in lamps, instruments, control panels and distributors for low mechanical stress particularly at high ambient temperatures.

TECHNICAL DATA



Standard:
adapted to DIN VDE 0250



Rated voltage:
300/500 V (U₀/U)



Test voltage:
2 kV / 50 Hz



Temperature range:
operating temperature: -50 °C up to 180 °C
conductor temperature: max. 180 °C
short circuit temperature: max. 350 °C/5 s



Bending radius (min.):
4 x Ø of cable



Fire properties:
EN 60332-1-2: flame retardant

Nominal cross-section (mm ²)	Core colours	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
SiA					
0.5	bk, wh	36.7	1.8	8	100 R
0.75	bk, wh	24.8	2.0	10	100 R
1	bk, wh	18.2	2.2	13	100 R
1.5	bk, wh	12.2	2.6	20	100 R
2.5	bk, wh	7.56	3.2	32	100 R
4	bk, wh	4.7	3.7	48	100 R
6	bk, rdbn	3.11	4.2	68	100 R
10	rdbn	1.84	5.9	116	100 R

Technical changes reserved. All figures are therefore without guarantee.

SiF

Silicone insulated wire

DESIGN



- 1 | Tinned copper conductor, fine wire
- 2 | Core insulation (silicone rubber)

APPLICATION

For operation at environment temperatures above 55°C, for internal wiring of lamps, heating equipment and electrical appliances as well as for switching boxes and distributions.

TECHNICAL DATA



Standard:
adapted to DIN VDE 0250



Rated voltage:
300/500 V (U₀/U)



Test voltage:
2 kV / 50 Hz



Temperature range:
operating temperature: -50 °C up to 180 °C
conductor temperature: max. 180 °C
short circuit temperature: max. 350 °C/5 s



Bending radius (min.):
4 x Ø of cable



Fire properties:
EN 60332-1-2: flame retardant

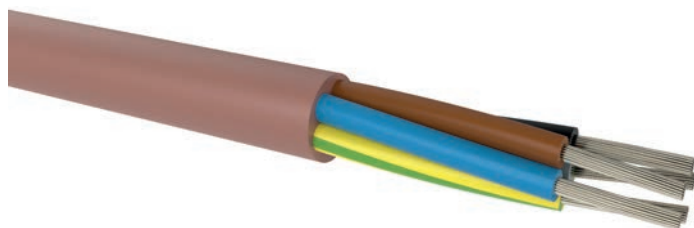
Nominal cross-section (mm²)	Core colours	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
SiF					
0.5	bk, wh	40.1	2.1	9	100 R
0.75	bk, bn, rd, bu, wh	26.7	2.4	12	100 R
1	bk, rd, bu, wh	20	2.5	14	100 R
1.5	bk, rd, gy, wh, gnye	13.7	2.8	19	100 R
2.5	bk, wh	8.21	3.4	30	100 R
4	bk, bn, rd, bu, wh	5.09	4.2	47	100 R
6	bk, rd, bu, wh, gnye	3.39	4.7	71	100 R
10	bk, bu, wh, gnye	1.95	6.2	119	100 R
16	bk, rd	1.24	7.4	188	100 R
25	bk, gnye	0.795	9.2	290	500 D, 1000 D
35	bk	0.565	10.3	398	500 D, 1000 D
70	bk	0.277	13.8	766	500 D, 1000 D
150	bk	0.132	19.6	1563	500 D, 1000 D
185	bk	0.108	22.4	1858	500 D, 1000 D
240	bk	0.082	25.0	2553	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

SiHF

Silicone sheathed cable

DESIGN



- 1 | Tinned copper conductor, fine wire
- 2 | Core insulation (silicone rubber)
- 3 | Outer sheath (silicone rubber red-brown)

APPLICATION

Used for internal wiring in dry, damp and wet locations and outdoors, for low mechanical stress. Especially suitable for high ambient temperatures.

TECHNICAL DATA



Standard:
adapted to DIN VDE 0250



Rated voltage:
300/500 V (U₀/U)



Test voltage:
2 kV / 50 Hz



Temperature range:
operating temperature: -50 °C up to 180 °C
conductor temperature: max. 180 °C
short circuit temperature: max. 350 °C/5 s



Bending radius (min.):
4 x Ø of cable



Core identification:
HD 308 S2

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
SiHF				
3 x 0.75	26.7	6.8	63	1000 Sp
4 x 0.75	26.7	7.6	83	1000 Sp
5 x 0.75	26.7	8.5	101	1000 Sp
7 x 0.75	26.7	9.2	124	100 R, 1000 Sp
2 x 1	20	6.6	59	100 R, 1000 Sp
3 x 1	20	7.0	77	1000 Sp
4 x 1	20	7.8	94	1000 Sp
5 x 1	20	8.8	115	1000 Sp
7 x 1	20	9.5	144	1000 Sp
2 x 1.5	13.7	7.6	81	100 R, 1000 Sp
3 x 1.5	13.7	8.0	98	100 R, 1000 Sp
4 x 1.5	13.7	8.8	122	100 R, 1000 Sp
6 x 1.5	13.7	10.4	173	1000 Sp
7 x 1.5	13.7	10.4	187	100 R, 1000 Sp
8 x 1.5	13.7	11.7	240	1000 D
12 x 1.5	13.7	14.8	332	1000 D
16 x 1.5	13.7	16.7	445	1000 D
24 x 1.5	13.7	21.0	723	1000 D
2 x 2.5	8.21	8.8	134	100 R, 1000 Sp
3 x 2.5	8.21	9.7	152	100 R, 1000 Sp
4 x 2.5	8.21	10.6	188	100 R, 1000 Sp
5 x 2.5	8.21	11.6	228	100 R, 1000 Sp

SiHF

Silicone sheathed cable

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
SiHF				
7 x 2.5	8.21	12.6	320	1000 Sp
12 x 2.5	8.21	18.0	573	1000 Sp
2 x 4	5.09	10.8	180	1000 Sp
3 x 4	5.09	11.4	224	1000 Sp
4 x 4	5.09	12.6	295	1000 Sp
5 x 4	5.09	14.0	359	1000 Sp
7 x 4	5.09	16.2	486	1000 D
3 x 6	3.39	12.8	270	1000 D
4 x 6	3.39	14.2	341	1000 D
5 x 6	3.39	15.8	432	1000 D
7 x 6	3.39	19.8	694	1000 D
4 x 10	1.95	18.6	644	1000 D
4 x 16	1.24	21.8	950	1000 D
4 x 25	0.795	26.8	1557	1000 D

Technical changes reserved. All figures are therefore without guarantee.

H05BQ-F (NGMH11YÖ)

PUR sheathed cable

DESIGN



- 1 | Copper wire, fine wire, tinned or not tinned
- 2 | Core insulation (EPR-rubber)
- 3 | Sheath (PUR orange, oil and abrasion resistant)

APPLICATION

For use in dry, damp or wet rooms with medium mechanical stress. The cables are primarily used in industrial enterprises and construction sites under demanding operating conditions, especially with demanding operating conditions, especially abrasive and grinding stresses.

TECHNICAL DATA



Standard:
EN 50525-2-21



Rated voltage:
300/500 V (U₀/U)



Test voltage:
2 kV / 50 Hz



Temperature range:
laying temperature: min. -40 °C
fixed: -40 °C up to 75 °C
moved: -25 °C up to 75 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 200 °C/5 s



Bending radius (min.):
3 x Ø of cable (fixed installed)
5 x Ø of cable (free motion)



Core identification:
HD 308 S2

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
H05BQ-F (NGMH11YÖ)				
2 x 0.75	26.7	6.6	46	500 Sp, 1000 Sp
3 x 0.75	26.7	7.2	59	500 Sp, 1000 Sp
3 G 0.75	26.7	7.2	59	500 Sp, 1000 Sp
4 G 0.75	26.7	7.8	81	500 Sp, 1000 Sp
5 G 0.75	26.7	8.8	90	500 Sp, 1000 Sp
2 x 1	20	7.1	53	500 Sp, 1000 Sp
3 G 1	20	7.5	67	500 Sp, 1000 Sp
4 G 1	20	8.2	84	500 Sp, 1000 Sp
5 G 1	20	10.2	107	500 Sp, 1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

H07BQ-F (NGMH11YÖ)

PUR sheathed cable

DESIGN



- 1 | Copper wire, fine wire, tinned or not tinned
- 2 | Core insulation (EPR-rubber)
- 3 | Inner covering (EPR-rubber)
- 4 | Sheath (PUR orange, oil and abrasion resistant)

APPLICATION

For use in dry, damp or wet rooms with medium mechanical stress. The cables are primarily used in industrial enterprises and construction sites under demanding operating conditions, especially with demanding operating conditions, especially abrasive and grinding stresses.

TECHNICAL DATA



Standard:
EN 50525-2-21



Rated voltage:
450/750 V (U₀/U)



Test voltage:
2.5 kV / 50 Hz



Temperature range:
laying temperature: min. -40 °C
fixed: -40 °C up to 75 °C
moved: -25 °C up to 75 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 200 °C/5 s



Bending radius (min.):
3 x Ø of cable (fixed installed)
5 x Ø of cable (free motion)



Core identification:
HD 308 S2



Fire properties:
CPR classification: E_{ca}

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
H07BQ-F (NGMH11YÖ)				
2 x 1.5	13.7	8.5	95	500 Sp, 1000 Sp
3 G 1.5	13.7	9.0	108	500 Sp, 1000 Sp
4 G 1.5	13.7	10.0	120	500 Sp, 1000 Sp
5 G 1.5	13.7	10.8	177	500 Sp, 1000 Sp
7 G 1.5	13.7	14.0	291	500 D, 1000 D
12 G 1.5	13.7	18.0	446	500 D, 1000 D
3 G 2.5	8.21	10.6	137	500 Sp, 1000 Sp
4 G 2.5	8.21	11.8	177	500 D, 1000 D
5 G 2.5	8.21	13.0	260	500 D, 1000 D
7 G 2.5	8.21	16.5	431	500 D, 1000 D
12 G 2.5	8.21	21.0	641	500 D, 1000 D
4 G 4	5.09	13.6	256	500 D, 1000 D
5 G 4	5.09	15.0	372	500 D, 1000 D
4 G 6	3.39	15.3	346	500 D, 1000 D
5 G 6	3.39	16.1	491	500 D, 1000 D
5 G 10	1.95	22.2	852	500 D, 1000 D
5 G 16	1.24	25.3	1206	500 D, 1000 D
5 G 25	0.795	33.6	2096	500 D, 1000 D

H07BQ-F (NGMH11YÖ)

PUR sheated cable

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
H07BQ-F (NGMH11YÖ)				
5 G 50	0.386	46.5	3290	500 D, 1000 D
5 G 70	0.272	53.0	5556	500 D, 1000 D
5 G 95	0.206	60.0	7274	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

XYMM K35

PVC building site cable, cold resistant

DESIGN



- 1 | Copper conductor, fine wire
- 2 | Core insulation (PVC, cold resistant)
- 3 | Sheath (PVC yellow, cold resistant), printing according to customer specification possible

APPLICATION

Suitable as flexible cable subject to moderate mechanical stress in the open air e.g. on non-professional building sites as well as in dry and damp premises.

TECHNICAL DATA



Standard:
adapted to EN 50525-2-11



Rated voltage:
450/750 V (U₀/U)



Test voltage:
2.5 kV / 50 Hz



Temperature range:
laying temperature: min. -35 °C
fixed: -40 °C up to 50 °C
moved: -35 °C up to 50 °C
conductor temperature: max. 60 °C
short circuit temperature: max. 150 °C/5 s



Bending radius (min.):
3 x Ø of cable (fixed installed)
5 x Ø of cable (free motion)



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}



Certificate:
TÜV Austria

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
XYMM K35				
3 G 1.5	13.3	8.6	98	100 R, 500 Sp, 1000 Sp
4 G 1.5	13.3	9.6	127	100 R, 500 Sp, 1000 Sp
5 G 1.5	13.3	12.0	172	100 R, 500 Sp, 1000 Sp
3 G 2.5	7.98	10.2	152	100 R, 500 Sp, 1000 Sp
4 G 2.5	7.98	11.2	192	100 R, 500 Sp, 1000 Sp
5 G 2.5	7.98	12.4	234	100 R, 500 Sp, 1000 Sp
4 G 4	4.95	13.3	281	500 D, 1000 D
5 G 4	4.95	14.9	356	500 D, 1000 D
5 G 6	3.3	16.6	480	500 D, 1000 D
5 G 10	1.91	20.7	795	500 D, 1000 D
5 G 16	1.21	23.4	1122	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

AT-N07V3V3-F K35

PVC building site cable, cold resistant

DESIGN



- 1 | Copper conductor, fine wire
- 2 | Core insulation (PVC), cores stranded in layers
- 3 | Sheath (PVC yellow, cold and oil resistant); printing according to customer specification possible

APPLICATION

Our building site cables AT-N07V3V3-F have been designed for medium and heavy mechanical stress in dry, damp and wet rooms, as well as for outdoor applications and in explosion hazardous areas, where they are used to connect machines and temporary solutions.

TECHNICAL DATA



Standard:
ÖVE/ÖNORM E 8241-55



Rated voltage:
450/750 V (U₀/U)



Test voltage:
2.5 kV / 50 Hz



Temperature range:
fixed: -40 °C up to 70 °C
moved: -35 °C up to 70 °C
conductor temperature: max. 60 °C
short circuit temperature: max. 150 °C/5 s



Bending radius (min.):
3 x Ø of cable (fixed installed)
6 x Ø of cable (free motion)



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
AT-N07V3V3-F K35				
3 G 1.5	13.3	11.9	134	100 R, 500 Sp, 1000 Sp
4 G 1.5	13.3	13.1	174	100 R, 500 Sp, 1000 Sp
5 G 1.5	13.3	14.4	211	100 R, 500 Sp, 1000 Sp
3 G 2.5	7.98	14.0	199	100 R, 500 Sp, 1000 Sp
5 G 2.5	7.98	14.7	308	100 R, 500 Sp, 1000 Sp
5 G 4	4.95	19.9	436	500 D, 1000 D
5 G 6	3.3	22.2	592	500 D, 1000 D
5 G 10	1.91	29.1	1042	500 D, 1000 D
5 G 16	1.21	33.3	1435	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

E-A2Y

PE insulated overhead line

DESIGN



- 1 Aluminium conductor with increased breaking load, round stranded compressed (RM)
- 2 Core insulation (PE black, UV-resistant); 2 or 4 cores of equal cross section are stranded together in left-hand lay, additionally 1 or 2 cores of reduced cross section can beco-stranded

APPLICATION

Used for fixed installation as overhead power lines up to 1000 V inclusive. Not suitable for direct burial.

TECHNICAL DATA



Standard:
ÖVE/ÖNORM E 8200-626 (HD 626)



Rated voltage:
0.6/1 kV (U₀/U)



Test voltage:
3.5 kV / 50 Hz



Temperature range:
laying temperature: min. -20 °C
operating temperature: -40 °C up to 70 °C
conductor temperature: max. 70 °C
short circuit temperature: max. 120 °C/5 s



Bending radius (min.):
18 x Ø of wire



Core identification:
1, 2 resp. 3 raised longitudinal ribs on the phase cores, the 4th core has a fine grooved surface (coverage 75%) and the type designation embossed.



Fire properties:
CPR classification: F_{ca}

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Min. breaking load of conductor strand (kN)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
E-A2Y						
2 x 16 RM	1.91	2.74	56	14.2	131	500 D, 1000 D
2 x 25 RM	1.2	4.05	80	17.8	210	500 D, 1000 D
4 x 25 RM	1.2	4.05	80	21.1	420	500 D, 1000 D
4 x 35 RM	0.868	5.6	100	24.3	533	500 D, 1000 D
4 x 50 RM	0.641	7.7	125	27.8	740	500 D, 1000 D
4 x 70 RM	0.443	10.95	160	32.0	1000	500 D, 1000 D
4 x 95 RM	0.32	15.15	185	36.9	1350	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

E-YY-J or -O

PVC/PVC underground cable

DESIGN



- 1 | Copper conductor, round solid (RE), round stranded (RM) resp. sector-shaped stranded (SM)
- 2 | Core insulation (PVC)
- 3 | Inner covering (EPDM or plastic foil)
- 4 | Sheath (PVC black, UV-resistant)

APPLICATION

Power distribution cables in power stations, industrial installations and switchgears, as well as in local mains. For fixed installation underground, in interior premises, cable ducts, in the open air, in water – as permitted by the local building regulations – if no risk of any mechanical damage is to be expected.

TECHNICAL DATA



Standard:
ÖVE/ÖNORM E 8200-603



Rated voltage:
0.6/1 kV (U₀/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
 laying temperature: min. -5 °C
 operating temperature: -20 °C up to 70 °C
 conductor temperature: max. 70 °C
 short circuit temperature: max. 160 °C/5 s
 (≤300 mm²)
 resp. max. 140 °C/5 s
 (>300 mm²)



Bending radius (min.):
 15 x Ø of cable (single core)
 12 x Ø of cable (multi core)



Core identification:
HD 308 S2



Fire properties:
 EN 60332-1-2: flame retardant
 CPR classification: E_{ca}

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
E-YY-J or -O						
1 x 4 RE	4.61			7.0	87	500 D, 1000 D
1 x 6 RE	3.08			7.5	106	500 D, 1000 D
1 x 10 RE	1.83	83	64	8.5	152	500 D, 1000 D
1 x 10 RM	1.83	83	64	9.3	164	500 D, 1000 D
1 x 16 RE	1.15	107	84	9.4	220	500 D, 1000 D
1 x 16 RM	1.15	107	84	9.8	225	500 D, 1000 D
1 x 25 RM	0.727	138	114	11.3	320	500 D, 1000 D
1 x 35 RM	0.524	164	139	12.4	435	500 D, 1000 D
1 x 50 RM	0.387	195	169	14.9	575	500 D, 1000 D
1 x 70 RM	0.268	238	213	17.0	795	500 D, 1000 D
1 x 95 RM	0.193	286	264	18.0	997	500 D, 1000 D
1 x 120 RM	0.153	325	307	19.7	1257	500 D, 1000 D
1 x 150 RM	0.124	366	352	21.2	1542	500 D, 1000 D
1 x 185 RM	0.0991	413	406	24.3	1944	500 D, 1000 D
1 x 240 RM	0.0754	479	483	27.1	2560	500 D, 1000 D
1 x 300 RM	0.0601	539	552	30.0	3170	500 D, 1000 D

E-YY-J or -O

PVC/PVC underground cable

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
E-YY-J or -O						
1 x 400 RM	0.047	614	646	35.0	4120	500 D, 1000 D
1 x 500 RM	0.0366	693	747	38.5	5130	500 D, 1000 D
1 x 630 RM	0.0283	777	858	42.0	6850	500 D, 1000 D
2 x 1.5 RE	12.1	32	20	10.2	121	500 Sp, 1000 Sp
2 x 2.5 RE	7.41	42	27	12.2	218	500 Sp, 1000 Sp
2 x 4 RE	4.61	54	37	13.7	300	500 Sp, 1000 Sp
2 x 6 RE	3.08	68	48	11.6	265	500 Sp, 1000 Sp
2 x 10 RE	1.83	90	66	13.5	390	500 Sp, 1000 Sp
2 x 16 RE	1.15	116	89	17.0	590	500 Sp, 1000 Sp
2 x 25 RM	0.727	132	105	19.5	1100	500 D, 1000 D
2 x 35 RM	0.524	159	129	24.2	1248	500 D, 1000 D
3 x 1.5 RE	12.1	27	19.5	9.2	133	500 Sp, 1000 Sp
3 x 2.5 RE	7.41	36	25	9.8	185	500 Sp, 1000 Sp
3 x 4 RE	4.61	46	34	12.1	264	500 D, 1000 D
3 x 6 RE	3.08	58	43	13.6	363	500 D, 1000 D
3 x 10 RE	1.83	78	59	16.1	515	500 D, 1000 D
3 x 10 RM	1.83	78	59	15.6	512	500 D, 1000 D
3 x 16 RE	1.15	101	78	17.5	729	500 D, 1000 D
3 x 16 RM	1.15	101	78	17.6	760	500 D, 1000 D
3 x 25 RM	0.727	132	105	21.5	1090	500 D, 1000 D
3 x 35 RM	0.524	159	129	24.2	1430	500 D, 1000 D
3 x 50 SM	0.387	188	157	25.9	1690	500 D, 1000 D
3 x 70 SM	0.268	232	199	29.5	2450	500 D, 1000 D
3 x 95 SM	0.193	280	246	33.0	3210	500 D, 1000 D
3 x 120 SM	0.153	318	285	36.0	4050	500 D, 1000 D
3 x 150 SM	0.124	359	326	40.3	4879	500 D, 1000 D
3 x 185 SM	0.0991	406	374	44.0	6200	500 D, 1000 D
3 x 240 SM	0.0754	473	445	52.0	8300	500 D
3 x 25 + 16 RM/RE	0.727/1.15	132	105	22.5	1370	500 D, 1000 D
3 x 35 + 16 SM/RE	0.524/1.16	159	129	23.9	1420	500 D, 1000 D
3 x 50 + 25 SM/RM	0.387/0.727	188	157	28.2	1980	500 D, 1000 D
3 x 70 + 35 SM/RM	0.268/0.524	232	199	31.9	2720	500 D, 1000 D
3 x 95 + 50 SM/RM	0.193/0.387	280	246	35.8	3630	500 D, 1000 D
3 x 95 + 50 SM/SM	0.193/0.387	280	246	37.6	3560	500 D, 1000 D
3 x 120 + 70 SM/RM	0.153/0.268	318	285	40.0	4500	500 D, 1000 D
3 x 150 + 70 SM/RM	0.124/0.268	359	326	43.0	5510	500 D, 1000 D
3 x 150 + 70 SM/SM	0.124/0.268	359	326	41.8	5456	500 D, 1000 D
3 x 240 + 120 SM/RM	0.0754/0.153	473	445	54.0	8820	500 D, 1000 D
3 x 300 + 150 SM/SM	0.0601/0.124	535	511	66.0	11900	500 D, 1000 D
4 x 1.5 RE	12.1	27	19.5	9.7	160	500 Sp, 1000 Sp

E-YY-J or -O

PVC/PVC underground cable

Number of cores x nominal cross-section (mm ²)	Max. conduc- tor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
E-YY-J or -O						
4 x 2.5 RE	7.41	36	25	10.4	215	500 Sp, 1000 Sp
4 x 4 RE	4.61	46	34	13.1	317	500 D, 1000 D
4 x 6 RE	3.08	58	43	14.0	425	500 D, 1000 D
4 x 10 RE	1.83	78	59	17.0	635	500 D, 1000 D
4 x 10 RM	1.83	78	59	17.1	628	500 D, 1000 D
4 x 16 RE	1.15	101	78	19.3	915	500 D, 1000 D
4 x 16 RM	1.15	101	78	20.0	900	500 D, 1000 D
4 x 25 RM	0.727	132	105	23.8	1412	500 D, 1000 D
4 x 35 SM	0.524	159	129	24.5	1610	500 D, 1000 D
4 x 50 RM	0.387	188	157	28.6	2259	500 D, 1000 D
4 x 70 SM	0.268	232	199	32.2	2950	500 D, 1000 D
4 x 95 SM	0.193	280	246	37.5	4110	500 D, 1000 D
4 x 120 SM	0.153	318	285	41.0	5010	500 D, 1000 D
4 x 150 SM	0.124	359	326	45.0	6070	500 D, 1000 D
4 x 240 SM	0.0754	473	445	57.0	10150	500 D, 1000 D
4 x 300 SM	0.0601	535	510	59.2	12719	500 D, 1000 D
5 x 1.5 RE	12.1	19	14	10.5	190	500 Sp, 1000 Sp
5 x 2.5 RE	7.41	25	19	12.0	265	500 Sp, 1000 Sp
5 x 4 RE	4.61	32	25.5	16.2	418	500 D, 1000 D
5 x 6 RE	3.08	41	32	15.7	510	1000 D
5 x 10 RE	1.83	55	44	19.0	780	500 Sp, 1000 Sp
5 x 10 RM	1.83	55	44	18.7	766	500 D, 1000 D
5 x 16 RE	1.15	71	59	22.0	1147	1000 D
5 x 25 RM	0.727	132	105	28.4	1770	500 D, 1000 D
5 x 35 RM	0.524	159	129	29.3	2190	500 D, 1000 D
5 x 50 RM	0.387	188	157	36.5	3200	500 D, 1000 D
5 x 50 SM	0.387	188	157	30.0	2629	500 D, 1000 D
5 x 70 SM	0.268	232	199	32.0	3664	500 D, 1000 D
5 x 95 SM	0.193	280	246	40.8	4990	500 D, 1000 D
5 x 120 SM	0.153	318	285	40.1	6167	500 D, 1000 D
5 x 150 SM	0.124	359	326	53.4	7850	500 D, 1000 D
7 x 1.5 RE	12.1	16	12.5	12.9	254	500 D, 1000 D
7 x 2.5 RE	7.41	21.5	17	14.2	326	500 D, 1000 D
7 x 4 RE	4.61	27.5	22	16.9	523	500 D, 1000 D
7 x 6 RE	3.08	35	28	18.1	681	500 D, 1000 D
10 x 1.5 RE	12.1	13.5	10.5	15.9	367	500 D, 1000 D
10 x 2.5 RE	7.41	18	14.5	17.8	488	500 D, 1000 D
12 x 1.5 RE	12.1	12.5	10	16.4	390	500 D, 1000 D
12 x 2.5 RE	7.41	17	13.5	17.8	627	500 D, 1000 D
12 x 4 RE	4.61	21.5	17.5	21.7	908	500 D, 1000 D

E-YY-J or -O

PVC/PVC underground cable

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
E-YY-J or -O						
14 x 1.5 RE	12.1	12	9.5	17.2	448	500 D, 1000 D
14 x 2.5 RE	7.41	16	13	18.6	702	500 D, 1000 D
14 x 4 RE	4.61	20.5	17	23.0	1100	500 D, 1000 D
16 x 1.5 RE	12.1	11	9	17.5	506	500 D, 1000 D
16 x 2.5 RE	7.41	15	12	20.1	829	500 D, 1000 D
19 x 1.5 RE	12.1	11	9	18.0	580	500 D, 1000 D
19 x 2.5 RE	7.41	14.5	11.5	21.2	794	500 D, 1000 D
19 x 4 RE	4.61	18.5	15.5	27.0	1300	500 D, 1000 D
21 x 1.5 RE	12.1	9.5	8	19.0	650	500 D, 1000 D
21 x 2.5 RE	7.41	12.5	10.5	22.0	980	500 D, 1000 D
24 x 1.5 RE	12.1	9.5	8	21.9	745	500 D, 1000 D
24 x 2.5 RE	7.41	12.5	10.5	25.0	975	500 D, 1000 D
24 x 4 RE	4.61	16	13.5	29.0	1549	500 D, 1000 D
30 x 1.5 RE	12.1	8	7	21.4	850	500 D, 1000 D
30 x 2.5 RE	7.41	11.5	9.5	26.1	1375	500 D, 1000 D
30 x 4 RE	4.61	15	12.5	35.0	2070	500 D, 1000 D
37 x 1.5 RE	12.1	8	7	24.0	1030	500 D, 1000 D
37 x 2.5 RE	7.41	11	9	28.0	1649	500 D, 1000 D
40 x 1.5 RE	12.1	8	6.5	25.5	1150	500 D, 1000 D
40 x 2.5 RE	7.41	10.5	8.5	28.3	1592	500 D, 1000 D
44 x 1.5 RE	12.1	7.5	6.5	26.5	1097	500 D, 1000 D
44 x 2.5 RE	7.41	10	8.5	31.0	1950	500 D, 1000 D
48 x 1.5 RE	12.1	7	6	25.6	1191	500 D, 1000 D
48 x 2.5 RE	7.41	9	8	33.0	2070	500 D, 1000 D
52 x 1.5 RE	12.1	7	6	29.5	1450	500 D, 1000 D
52 x 2.5 RE	7.41	9	8	34.5	2200	500 D, 1000 D
61 x 1.5 RE	12.1	7	6	31.6	1586	500 D, 1000 D
61 x 2.5 RE	7.41	9	8	38.0	2630	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

NYJ-J or -O

PVC/PVC underground cable

DESIGN



- 1 | Copper conductor, round solid (RE), round stranded (RM) resp. sector-shaped stranded (SM)
- 2 | Core insulation (PVC)
- 3 | Inner covering (EPDM or plastic foil)
- 4 | Sheath (PVC black, UV-resistant)

APPLICATION

Power distribution cables in power stations, industrial installations and switchgears, as well as in local mains. For fixed installation underground, in interior premises, cable ducts, in the open air, in water – as permitted by the local building regulations – if no risk of any mechanical damage is to be expected.

TECHNICAL DATA



Standard:
DIN VDE 0276-603
DIN VDE 0276-627



Rated voltage:
0.6/1 kV (U_o/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C
operating temperature: -20 °C up to 70 °C
conductor temperature: max. 70 °C
short circuit temperature: max. 160 °C/5 s (≤300 mm²)
resp. max. 140 °C/5 s (>300 mm²)



Bending radius (min.):
15 x Ø of cable (single core)
12 x Ø of cable (multi core)



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}



Certificate:
VDE Germany

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
NYJ-J or -O						
1 x 4 RE	4.61	50	37	9.1	110	500 D, 1000 D
1 x 6 RE	3.08	62	47	9.5	130	500 D, 1000 D
1 x 10 RE	1.83	83	64	9.7	175	500 D, 1000 D
1 x 10 RM	1.83	83	64	10.0	185	500 D, 1000 D
1 x 16 RE	1.15	107	84	10.6	230	500 D, 1000 D
1 x 16 RM	1.15	107	84	10.9	245	500 D, 1000 D
1 x 25 RM	0.727	138	114	12.6	350	500 D, 1000 D
1 x 35 RM	0.524	164	139	13.8	455	500 D, 1000 D
1 x 50 RM	0.387	195	169	15.4	595	500 D, 1000 D
1 x 70 RM	0.268	238	213	17.0	800	500 D, 1000 D
1 x 95 RM	0.193	280	264	19.1	1100	500 D, 1000 D
1 x 120 RM	0.153	325	307	20.6	1350	500 D, 1000 D
1 x 150 RM	0.124	365	352	22.2	1610	500 D, 1000 D

NYYY-J or -O

PVC/PVC underground cable

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
NYYY-J or -O						
1 x 185 RM	0.0991	413	406	24.6	2060	500 D, 1000 D
1 x 240 RM	0.0754	479	483	27.6	2590	500 D, 1000 D
1 x 300 RM	0.0601	541	557	30.5	3260	500 D, 1000 D
1 x 400 RM	0.047	614	646	34.3	4210	500 D, 1000 D
1 x 500 RM	0.0366	693	747	37.7	5210	500 D, 1000 D
1 x 630 RM	0.0283	777	858	42.5	6650	500 D, 1000 D
2 x 1.5 RE	12.1	27	19	11.5	160	1000 D
2 x 2.5 RE	7.41	36	25	12.3	235	1000 D
2 x 4 RE	4.61	47	34	14.1	315	1000 D
2 x 6 RE	3.08	59	43	15.1	390	1000 D
2 x 10 RE	1.83	79	59	17.4	550	1000 D
2 x 16 RE	1.15	103	79	19.0	660	1000 D
2 x 25 RM	0.727	133	106	23.1	1100	1000 D
2 x 35 RM	0.524	133	106	25.6	1285	500 D, 1000 D
3 x 1.5 RE	12.1	27	19	12.1	215	1000 D
3 x 2.5 RE	7.41	36	25	12.9	265	1000 D
3 x 4 RE	4.61	47	34	14.5	355	1000 D
3 x 6 RE	3.08	59	43	15.5	430	1000 D
3 x 10 RE	1.83	79	59	17.5	600	1000 D
3 x 10 RM	1.83	79	59	18.2	650	1000 D
3 x 16 RE	1.15	103	79	19.0	810	1000 D
3 x 16 RM	1.15	103	79	21.4	940	1000 D
3 x 25 RM	0.727	133	106	24.5	1330	1000 D
3 x 35 SM	0.524	159	129	22.5	1231	1000 D
3 x 50 SM	0.387	188	157	25.6	1800	500 D, 1000 D
3 x 70 SM	0.268	232	199	29.5	2500	1000 D
3 x 120 SM	0.153	318	285	35.8	4000	500 D, 1000 D
3 x 25 + 16 RM/RE	0.727/1.15	133	106	26.6	1400	1000 D
3 x 25 + 16 RM/RM	0.727/1.15	133	106	26.7	1410	1000 D
3 x 35 + 16 SM/RE	0.524/1.15	159	129	24.5	1700	1000 D
3 x 50 + 25 SM/RM	0.387/0.727	188	157	30.7	2330	1000 D
3 x 50 + 25 SM/SM	0.387/0.727	188	157	28.7	2300	1000 D
3 x 70 + 35 SM/SM	0.268/0.524	232	199	31.7	2800	1000 D
3 x 95 + 50 SM/SM	0.193/0.387	280	246	39.1	3840	500 D
3 x 120 + 70 SM/SM	0.153/0.268	318	285	43.0	5150	500 D
3 x 150 + 70 SM/SM	0.124/0.268	359	326	50.4	6090	500 D
3 x 185 + 95 SM/SM	0.0991/0.193	406	374	50.0	7400	500 D
3 x 240 + 120 SM/SM	0.0754/0.153	473	445	57.0	9600	500 D
3 x 300 + 150 SM/SM	0.0601	535	511	64.0	11200	300 D
4 x 1.5 RE	12.1	27	19	13.0	250	1000 D

NY-Y-J or -O

PVC/PVC underground cable

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
NY-Y-J or -O						
4 x 2.5 RE	7.41	36	25	14.0	310	1000 D
4 x 4 RE	4.61	47	34	15.8	425	1000 D
4 x 6 RE	3.08	59	43	17.2	520	1000 D
4 x 10 RE	1.83	79	59	19.0	740	1000 D
4 x 10 RM	1.83	79	59	19.0	790	1000 D
4 x 16 RE	1.15	103	79	22.0	1040	1000 D
4 x 16 RM	1.15	103	79	23.0	1060	1000 D
4 x 25 RM	0.727	133	106	26.7	1550	1000 D
4 x 35 RM	0.524	159	129	29.6	2010	1000 D
4 x 35 SM	0.524	159	129	27.6	1900	1000 D
4 x 50 SM	0.387	188	157	34.4	2450	500 D, 1000 D
4 x 70 SM	0.268	232	199	34.5	3240	500 D
4 x 95 SM	0.193	280	246	39.2	4285	1000 D
4 x 120 SM	0.153	318	285	41.7	5330	500 D, 1000 D
4 x 150 SM	0.124	359	326	50.4	6720	500 D
4 x 185 SM	0.0991	406	374	57.0	8560	500 D
4 x 240 SM	0.0754	473	445	61.0	10760	500 D, 1000 D
4 x 300 SM	0.0601	535	511	62.4	13127	500 D, 1000 D
5 x 1.5 RE	12.1	27	19	13.8	290	1000 D
5 x 2.5 RE	7.41	36	25	14.9	355	1000 D
5 x 4 RE	4.61	47	34	17.0	500	1000 D
5 x 6 RE	3.08	59	43	18.5	615	1000 D
5 x 10 RE	1.83	79	59	20.6	848	1000 D
5 x 10 RM	1.83	79	59	21.5	940	1000 D
5 x 16 RE	1.15	103	79	21.8	1195	1000 D
5 x 16 RM	1.15	103	79	22.6	1236	1000 D
5 x 25 RM	0.727	133	106	29.2	2000	1000 D
5 x 35 RM	0.524	159	129	32.3	2590	1000 D
5 x 50 RM	0.387	188	157	36.9	3390	500 D, 1000 D
5 x 50 SM	0.387	188	157	33.1	3049	500 D, 1000 D
5 x 70 RM	0.268	232	199	39.0	4542	500 D
5 x 95 RM	0.193	280	246	44.3	5980	500 D
5 x 95 SM	0.193	280	246	44.9	5589	500 D
5 x 120 RM	0.153	318	285	51.3	7483	500 D, 1000 D
5 x 120 SM	0.153	318	285	48.5	7483	500 D, 1000 D
5 x 150 RM	0.124	359	326	58.5	8361	500 D, 1000 D
7 x 1.5 RE	12.1	27	19	16.0	300	500 D, 1000 D
7 x 2.5 RE	7.41	36	25	17.0	420	1000 D
7 x 4 RE	4.61	47	34	19.0	630	500 D, 1000 D
7 x 6 RE	3.08	59	43	21.0	840	500 D

NYYY-J or -O

PVC/PVC underground cable

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
NYYY-J or -O						
7 x 10 RE	1.83	79	59	23.0	1150	1000 D
10 x 2.5 RE	1.2	36	25	20.0	500	500 D, 1000 D
12 x 2.5 RE	7.41	36	25	21.0	560	1000 D
14 x 1.5 RE	7.41	27	19	20.0	450	500 D, 1000 D
14 x 2.5 RE	7.41	36	25	21.0	630	1000 D
19 x 1.5 RE	12.1	27	19	22.0	560	1000 D
21 x 1.5 RE	12.1	27	19	23.0	620	500 D, 1000 D
24 x 1.5 RE	12.1	27	19	25.0	700	1000 D
24 x 2.5 RE	7.41	36	25	27.0	1050	1000 D
30 x 1.5 RE	12.1	27	19	26.0	810	1000 D
30 x 2.5 RE	7.41	36	25	28.0	1250	500 D, 1000 D
40 x 1.5 RE	12.1	27	19	29.2	1410	1000 D
40 x 2.5 RE	7.41	36	25	32.2	1894	500 D, 1000 D
52 x 1.5 RE	12.1	27	19	32.0	1400	1000 D
52 x 2.5 RE	7.41	36	25	35.0	2150	1000 D

Technical changes reserved. All figures are therefore without guarantee.

E-Y2Y

PVC/PE underground cable

DESIGN



- 1 | Copper conductor, round solid (RE), round stranded (RM) resp. sector-shaped stranded (SM)
- 2 | Core insulation (PVC)
- 3 | Inner covering (EPDM or plastic foil)
- 4 | Sheath (HDPE black, UV-resistant, min. 55 ShD)

APPLICATION

Power distribution cables in power stations, industrial installations and switchgears, as well as in local mains. For fixed installation underground, in interior premises, cable ducts, in the open air, in water – as permitted by the local building regulations– under severe mechanical stressing during installation and operation.

TECHNICAL DATA



Standard:
ÖVE/ÖNORM E 8200-603



Rated voltage:
0.6/1 kV (U_o/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C max. 70 °C
operating temperature: -20 °C up to 70 °C
conductor temperature: max. 70 °C
short circuit temperature: max. 160 °C/5 s



Bending radius (min.):
12 x Ø of cable



Core identification:
HD 308 S2



Fire properties:
CPR classification: F_{ca}

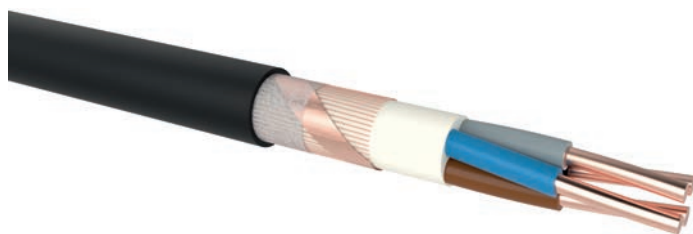
Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
E-Y2Y						
4 x 10 RE	1.83	78	59	18.5	591	500 D, 1000 D
4 x 16 RE	1.15	101	78	21.7	972	500 D, 1000 D
4 x 16 RM	1.15	101	78	21.3	969	500 D, 1000 D
4 x 25 RM	0.727	132	105	25.0	1472	500 D, 1000 D
4 x 35 SM	0.524	159	129	27.1	1577	500 D, 1000 D
4 x 50 SM	0.387	188	157	28.7	2119	500 D, 1000 D
4 x 70 SM	0.268	232	199	32.2	2938	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

E-YCY

PVC/PVC underground cable, screened

DESIGN



- 1 | Copper conductor, round solid (RE) resp. round stranded (RM)
- 2 | Core insulation (PVC)
- 3 | Inner covering (EPDM)
- 4 | Screen (bare copper wires and counter helix, optionally plastic foil)
- 5 | Sheath (PVC black, UV-resistant)

APPLICATION

Power distribution cables in power stations, industrial installations and switch gears, as well as in local mains. For fixed installation under ground, in interior premises, cable ducts, in the open air and in water – as permitted by the local building regulations – if protection against shock hazard in the event of mechanical damage or electrical screening is required.

TECHNICAL DATA



Standard:
ÖVE/ÖNORM E 8200-603
ÖVE/ÖNORM E 8200-627



Rated voltage:
0.6/1 kV (U₀/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C
operating temperature: -50 °C up to 70 °C
conductor temperature: max. 70 °C
short circuit temperature: max. 160 °C/5 s



Bending radius (min.):
12 x Ø of cable



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
E-YCY						
2 x 1.5 RE/1.5	12.1	32	20	10.8	185	500 D, 1000 D
2 x 1.5 RE/4	12.1	32	20	11.7	216	500 D, 1000 D
2 x 1.5 RE/16	12.1	32	20	12.1	315	500 D, 1000 D
3 x 1.5 RE/1.5	12.1	27	19	11.2	205	500 D, 1000 D
3 x 1.5 RE/2.5	12.1	27	19	11.6	212	500 D, 1000 D
3 x 1.5 RE/16	12.1	27	19	12.5	330	500 D, 1000 D
4 x 1.5 RE/1.5	12.1	27	19	11.7	230	500 D, 1000 D
4 x 1.5 RE/16	12.1	27	19	14.0	365	500 D, 1000 D
5 x 1.5 RE/1.5	12.1	19	14	12.8	255	500 D, 1000 D
5 x 1.5 RE/16	12.1	19	14	14.1	375	500 D, 1000 D
7 x 1.5 RE/1.5	12.1	16	12	13.6	305	500 D, 1000 D
7 x 1.5 RE/16	12.1	16	12	17.8	460	500 D, 1000 D
10 x 1.5 RE/2.5	12.1	13	10	16.9	470	500 D, 1000 D
10 x 1.5 RE/6	12.1	13	10	17.7	493	500 D, 1000 D
10 x 1.5 RE/16	12.1	13	10	18.1	590	500 D, 1000 D
12 x 1.5 RE/1.5	12.1	12	10	17.1	472	500 D, 1000 D
12 x 1.5 RE/2.5	12.1	12	10	16.2	480	500 D, 1000 D

E-YCY

PVC/PVC underground cable, screened

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
E-YCY						
12 x 1.5 RE/16	12.1	12	10	17.6	615	500 D, 1000 D
14 x 1.5 RE/2.5	12.1	12	9	18.1	563	500 D, 1000 D
14 x 1.5 RE/16	12.1	12	9	19.2	680	500 D, 1000 D
16 x 1.5 RE/4	12.1	11	9	20.0	585	500 D, 1000 D
16 x 1.5 RE/6	12.1	11	9	19.8	639	500 D, 1000 D
16 x 1.5 RE/16	12.1	11	9	21.0	720	500 D, 1000 D
19 x 1.5 RE/4	12.1	11	9	20.1	705	500 D, 1000 D
19 x 1.5 RE/6	12.1	11	9	20.7	712	500 D, 1000 D
19 x 1.5 RE/16	12.1	11	9	20.9	810	500 D, 1000 D
24 x 1.5 RE/6	12.1	9	8	24.0	935	500 D, 1000 D
24 x 1.5 RE/16	12.1	9	8	24.2	1050	500 D, 1000 D
30 x 1.5 RE/16	12.1	8	7	25.5	1120	500 D, 1000 D
37 x 1.5 RE/6	12.1	8	7	27.4	1251	500 D, 1000 D
37 x 1.5 RE/16	12.1	8	7	27.8	1300	500 D, 1000 D
44 x 1.5 RE/16	12.1	7	6	33.0	1500	500 D, 1000 D
48 x 1.5 RE/16	12.1	7	6	31.0	1610	500 D, 1000 D
61 x 1.5 RE/16	12.1	7	6	33.4	1950	500 D, 1000 D
2 x 2.5 RE/2.5	7.41	42	27	11.9	230	500 D, 1000 D
3 x 2.5 RE/2.5	7.41	36	25	12.1	250	500 D, 1000 D
3 x 2.5 RE/16	7.41	36	25	12.5	380	500 D, 1000 D
4 x 2.5 RE/2.5	7.41	36	25	13.0	285	500 D, 1000 D
4 x 2.5 RE/16	7.41	36	25	13.4	415	500 D, 1000 D
5 x 2.5 RE/2.5	7.41	25	19.5	14.4	340	500 D, 1000 D
5 x 2.5 RE/16	7.41	25	19.5	15.4	465	500 D, 1000 D
7 x 2.5 RE/2.5	7.41	21	17	15.4	450	500 D, 1000 D
7 x 2.5 RE/16	7.41	21	17	16.3	575	500 D, 1000 D
10 x 2.5 RE/4	7.41	18	14	19.0	570	500 D, 1000 D
10 x 2.5 RE/16	7.41	18	14	19.9	745	500 D, 1000 D
12 x 2.5 RE/4	7.41	17	13	20.0	680	500 D, 1000 D
12 x 2.5 RE/16	7.41	17	13	20.4	850	500 D, 1000 D
14 x 2.5 RE/16	7.41	16	13	21.4	925	500 D, 1000 D
16 x 2.5 RE/6	7.41	15	12	22.0	830	500 D, 1000 D
16 x 2.5 RE/16	7.41	15	12	23.0	1100	500 D, 1000 D
19 x 2.5 RE/6	7.41	14	11	22.7	1085	500 D, 1000 D
19 x 2.5 RE/16	7.41	14	11	24.2	1190	500 D, 1000 D
24 x 2.5 RE/10	7.41	12	10	27.0	1240	500 D, 1000 D
24 x 2.5 RE/16	7.41	12	10	27.4	1310	500 D, 1000 D
30 x 2.5 RE/16	7.41	11	9	28.7	1670	500 D, 1000 D
37 x 2.5 RE/16	7.41	11	9	31.2	1970	500 D, 1000 D

E-YCY

PVC/PVC underground cable, screened

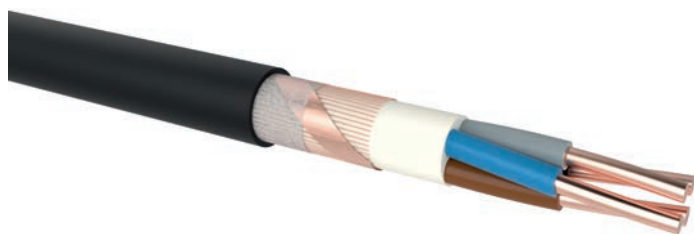
Number of cores x nominal cross-section / cross-section of screen (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
E-YCY						
48 x 2.5 RE/16	7.41	9	8	34.4	2440	500 D, 1000 D
2 x 4 RE/4	4.61	54	37	13.9	340	500 D, 1000 D
2 x 4 RE/16	4.61	54	37	14.7	445	500 D, 1000 D
3 x 4 RE/4	4.61	46	34	14.7	360	500 D, 1000 D
4 x 4 RE/4	4.61	46	34	15.7	430	500 D, 1000 D
4 x 4 RE/16	4.61	46	34	16.0	530	500 D, 1000 D
5 x 4 RE/4	4.61	32	25	17.0	490	500 D, 1000 D
5 x 4 RE/16	4.61	32	25	17.9	605	500 D, 1000 D
7 x 4 RE/4	4.61			18.3	664	500 D, 1000 D
7 x 4 RE/16	4.61			20.0	739	500 D, 1000 D
14 x 4 RE/16	4.61			25.6	1237	500 D, 1000 D
2 x 6 RE/6	3.08	68	48	15.5	390	500 D, 1000 D
2 x 6 RE/16	3.08	68	48	16.0	480	500 D, 1000 D
3 x 6 RE/6	3.08	58	43	16.2	460	500 D, 1000 D
4 x 6 RE/6	3.08	58	43	17.5	550	500 D, 1000 D
4 x 6 RE/16	3.08	58	43	17.6	635	500 D, 1000 D
5 x 6 RE/16	3.08	41	32	19.3	730	500 D, 1000 D
2 x 10 RM/6	1.83	90	66	18.1	574	500 D, 1000 D
2 x 10 RE/16	1.83	90	66	17.5	600	500 D, 1000 D
4 x 10 RE/16	1.83	78	59	19.6	850	500 D, 1000 D
4 x 10 RM/16	1.83	78	59	20.6	875	500 D, 1000 D
2 x 16 RE/16	1.15	116	89	19.5	805	500 D, 1000 D
3 x 16 RE/16	1.15	101	78	21.0	940	500 D, 1000 D
4 x 16 RE/10	1.15	101	78	22.8	1143	500 D, 1000 D
4 x 16 RM/16	1.15	101	78	23.9	1190	500 D, 1000 D
3 x 25 RM/16	0.727	132	105	25.0	1420	500 D, 1000 D
4 x 25 RM/16	0.727	132	105	28.1	1640	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

NYCY

PVC/PVC underground cable, screened

DESIGN



- 1 | Copper conductor, round solid (RE)
- 2 | Core insulation (PVC)
- 3 | Inner covering (EPDM)
- 4 | Screen (bare copper wires and counter helix, optionally plastic foil)
- 5 | Sheath (PVC black, UV-resistant)

APPLICATION

Power distribution cables in power stations, industrial installations and switch gears, as well as in local mains. For fixed installation under ground, in interior premises, cable ducts, in the open air and in water – as permitted by the local building regulations – if protection against shock hazard in the event of mechanical damage or electrical screening is required.

TECHNICAL DATA



Standard:
DIN VDE 0276-603
DIN VDE 0276-627



Rated voltage:
0.6/1 kV (U_o/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C
operating temperature: -50 °C up to 70 °C
conductor temperature: max. 70 °C
short circuit temperature: max. 160 °C/5 s



Bending radius (min.):
12 x Ø of cable



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}



Certificate:
VDE Germany

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
NYCY						
2 x 1.5 RE/1.5	12.1	32	27	12.0	205	1000 D
3 x 1.5 RE/1.5	12.1	27	19	12.4	235	1000 D
4 x 1.5 RE/1.5	12.1	27	19	14.0	330	1000 D
5 x 1.5 RE/1.5	12.1	27	19	14.0	360	1000 D
7 x 1.5 RE/2.5	12.1	15	12	15.0	430	1000 D
8 x 1.5 RE/2.5	12.1	15	12	17.0	460	1000 D
10 x 1.5 RE/2.5	12.1	13	10	18.1	480	1000 D
12 x 1.5 RE/2.5	12.1	11	9	18.2	530	1000 D
14 x 1.5 RE/2.5	12.1	11	9	18.9	580	1000 D
16 x 1.5 RE/4	12.1	10	8	19.5	650	1000 D
19 x 1.5 RE/4	12.1	10	8	20.8	730	1000 D
24 x 1.5 RE/6	12.1	9	7	24.0	910	1000 D
30 x 1.5 RE/6	12.1	7	6	25.2	1050	1000 D
40 x 1.5 RE/10	12.1	7	6	28.3	1350	500 D

NYCY

PVC/PVC underground cable, screened

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
NYCY						
61 x 1.5 RE/10	12.1	7	6	33.4	2000	1000 D
2 x 2.5 RE/2.5	7.41	43	31	13.0	265	1000 D
3 x 2.5 RE/2.5	7.41	36	26	13.5	360	1000 D
4 x 2.5 RE/2.5	7.41	36	26	14.5	340	1000 D
5 x 2.5 RE/2.5	7.41	36	26	15.5	400	1000 D
7 x 2.5 RE/2.5	7.41	20	16	16.5	460	1000 D
8 x 2.5 RE/2.5	7.41	20	16	18.0	570	1000 D
10 x 2.5 RE/4	7.41	17	13	19.6	640	1000 D
12 x 2.5 RE/4	7.41	15	12	20.0	700	1000 D
14 x 2.5 RE/6	7.41	15	12	21.1	800	1000 D
16 x 2.5 RE/6	7.41	13	11	22.5	880	1000 D
19 x 2.5 RE/6	7.41	13	11	23.2	980	1000 D
24 x 2.5 RE/10	7.41	12	10	26.8	1230	1000 D
30 x 2.5 RE/10	7.41	10	8	28.3	1460	1000 D
40 x 2.5 RE/10	7.41	10	8	31.3	1840	1000 D
2 x 4 RE/4	4.61	56	41	14.9	360	1000 D
3 x 4 RE/4	4.61	47	34	16.0	420	1000 D
4 x 4 RE/4	4.61	47	34	16.7	500	1000 D
7 x 4 RE/4	4.61	29	20	19.0	670	1000 D
2 x 6 RE/6	3.08	59	44	16.0	440	1000 D
3 x 6 RE/6	3.08	59	44	17.0	500	1000 D
4 x 6 RE/6	3.08	59	44	18.0	590	1000 D

Technical changes reserved. All figures are therefore without guarantee.

NYCWY

PVC/PVC underground cable, screened

DESIGN



- 1 | Copper conductor, round solid (RE), round stranded (RM) resp. sector-shaped stranded (SM)
- 2 | Core insulation (PVC)
- 3 | Inner covering (EPDM)
- 4 | Screen (bare copper wires, applied with changing direction of lay and counter helix (copper tape), optionally plastic foil)
- 5 | Sheath (PVC black, UV-resistant)

APPLICATION

Power distribution cables in power stations, industrial installations and switch gears, as well as in local mains. For fixed installation under ground, in interior premises, cable ducts, in the open air and in water – as permitted by the local building regulations – if protection against shock hazard in the event of mechanical damage or electrical screening is required.

TECHNICAL DATA



Standard:
DIN VDE 0276-603



Rated voltage:
0.6/1 kV (U₀/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C
operating temperature: -50 °C up to 70 °C
conductor temperature: max. 70 °C
short circuit temperature: max. 160 °C/5 s



Bending radius (min.):
15 x Ø of cable (single core)
12 x Ø of cable (multi core)



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}



Certificate:
VDE Germany

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
NYCWY						
2 x 10 RE/10	1.83	95	72	19.0	645	1000 D
3 x 10 RE/10	1.83	79	60	21.5	855	1000 D
4 x 10 RE/10	1.83	79	60	22.0	915	1000 D
2 x 16 RE/16	1.15	122	95	22.0	890	1000 D
3 x 16 RE/16	1.15	102	80	24.0	1020	1000 D
4 x 16 RE/16	1.15	102	80	25.5	1310	1000 D
3 x 25 RM/16	0.727	133	108	26.0	1440	1000 D
3 x 25 RM/25	0.727	133	108	26.5	1530	1000 D
4 x 25 RM/16	0.727	133	108	28.0	1710	1000 D
3 x 35 SM/16	0.524	160	132	28.0	1590	1000 D
3 x 35 SM/35	0.524	160	132	29.0	1950	1000 D
4 x 35 SM/16	0.524	160	132	31.5	1990	1000 D
3 x 50 SM/25	0.387	190	160	32.0	2120	1000 D
3 x 50 SM/50	0.387	190	160	32.5	2330	1000 D

NYCWY

PVC/PVC underground cable, screened

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
NYCWY						
4 x 50 SM/25	0.387	190	160	36.0	2690	1000 D
3 x 70 SM/35	0.268	234	202	36.0	2940	1000 D
3 x 70 SM/70	0.268	234	202	36.5	3260	1000 D
4 x 70 SM/35	0.268	234	202	40.5	3650	1000 D
3 x 95 SM/50	0.193	280	249	40.5	3870	1000 D
3 x 95 SM/95	0.193	280	249	41.5	4320	1000 D
4 x 95 SM/50	0.193	280	249	46.0	5010	500 D
3 x 120 SM/70	0.153	319	289	44.0	4780	500 D
3 x 120 SM/120	0.153	319	289	46.0	5260	500 D
4 x 120 SM/70	0.153	319	289	50.0	6740	500 D
3 x 150 SM/70	0.124	357	329	48.5	5870	500 D
3 x 150 SM/150	0.124	357	329	50.0	6610	500 D
4 x 150 SM/70	0.124	357	329	56.0	7990	500 D
3 x 185 SM/95	0.0991	402	377	52.5	8120	500 D
4 x 185 SM/95	0.0991	402	377	59.5	9310	500 D
3 x 240 SM/120	0.0754	463	443	59.0	9320	500 D
4 x 240 SM/120	0.0754	463	443	66.0	12110	500 D
1 x 300 RM/35	0.0601	518	504	34.3	3760	1000 D
4 x 300 SM/150	0.0601	535	511	69.6	15331	500 D

Technical changes reserved. All figures are therefore without guarantee.

E-AYY-J or -O

PVC/PVC aluminium underground cable

DESIGN



- 1 | Aluminium conductor, round solid (RE), sector-shaped solid (SE), round stranded (RM), resp. sector-shaped stranded (SM)
- 2 | Core insulation (PVC)
- 3 | Inner covering (EPDM or plastic foil)
- 4 | Sheath (PVC black, UV-resistant)

APPLICATION

Power distribution cable for power stations, industrial facilities and switching stations as well as for local power networks. For fixed installation indoors, in cable ducts, outdoors and in water, according to the applicable erection standards, if no risk of any mechanical damage is to be expected.

TECHNICAL DATA



Standard:
ÖVE/ÖNORM E 8200-603



Rated voltage:
0.6/1 kV (U₀/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
 laying temperature: min. -5 °C
 operating temperature: -50 °C up to 70 °C
 conductor temperature: max. 70 °C
 short circuit temperature: max. 160 °C/5 s (≤300 mm²)
 max. 140 °C/5 s (>300 mm²)



Bending radius (min.):
 15 x Ø of cable (single core)
 12 x Ø of cable (multi core)



Core identification:
HD 308 S2



Fire properties:
 EN 60332-1-2: flame retardant
 CPR classification: E_{ca}

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
E-AYY-J or -O						
1 x 25 RM	1.2	106	87	13.2	196	500 D, 1000 D
1 x 35 RM	0.868	127	107	13.7	240	500 D, 1000 D
1 x 50 RM	0.641	151	131	15.1	302	500 D, 1000 D
1 x 70 RM	0.443	185	166	15.8	375	500 D, 1000 D
1 x 95 RM	0.32	222	205	17.6	485	500 D, 1000 D
1 x 120 RM	0.253	253	239	19.1	580	500 D, 1000 D
1 x 150 RM	0.206	284	273	22.6	716	500 D, 1000 D
1 x 185 RM	0.164	322	317	25.1	895	500 D, 1000 D
1 x 240 RM	0.125	375	378	26.5	1060	500 D, 1000 D
1 x 300 RM	0.1	423	434	30.7	1350	500 D, 1000 D
1 x 400 RM	0.0778	756	653	33.3	1651	500 D, 1000 D
3 x 120 SM	0.253	245	216	36.0	1830	500 D, 1000 D
3 x 150 SM	0.206	275	246	40.3	2040	500 D, 1000 D
3 x 185 SM	0.164	313	285	44.0	2760	500 D, 1000 D
3 x 240 SM	0.125	364	338	52.0	3280	500 D, 1000 D

E-AYY-J or -O

PVC/PVC aluminium underground cable

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
E-AYY-J or -O						
3 x 150 + 70 SM/SM	0.206/0.443	275	246	43.0	2340	500 D, 1000 D
3 x 185 + 95 SM/SM	0.164/0.32	313	285	50.0	3040	500 D
3 x 240 + 120 SM/SM	0.125/0.253	364	338	53.0	3760	500 D, 1000 D
4 x 25 RE	1.2	102	81	24.0	770	500 D, 1000 D
4 x 25 RM	1.2	102	81	24.0	845	500 D, 1000 D
4 x 35 SM	0.868	122	99	26.5	805	500 D, 1000 D
4 x 50 SE	0.641	144	119	26.9	970	500 D, 1000 D
4 x 50 SM	0.641	144	119	29.4	980	500 D, 1000 D
4 x 70 SE	0.443	179	152	30.9	1310	500 D, 1000 D
4 x 70 SM	0.443	179	152	32.6	1290	500 D, 1000 D
4 x 95 SE	0.32	215	186	35.8	1680	500 D, 1000 D
4 x 95 SM	0.32	215	186	36.5	1810	500 D, 1000 D
4 x 120 SE	0.253	245	216	37.8	2000	500 D, 1000 D
4 x 120 SM	0.253	245	216	41.8	2230	500 D, 1000 D
4 x 150 SE	0.206	275	246	40.8	2490	500 D, 1000 D
4 x 150 SM	0.206	275	246	45.0	2610	500 D, 1000 D
4 x 185 SM	0.164	313	285	48.0	3250	500 D, 1000 D
4 x 240 SM	0.125	364	338	53.4	4020	500 D
4 x 300 SM	0.1	535	510	61.7	5237	500 D
5 x 16 RM	1.91	92	72	22.6	720	500 D, 1000 D
5 x 25 RM	1.2	102	82	27.8	1110	500 D, 1000 D
5 x 35 RM	0.868	123	100	30.1	1281	500 D, 1000 D
5 x 50 RM	0.869	144	119	32.2	1280	500 D, 1000 D
5 x 50 SM	0.869	144	119	32.2	1280	500 D, 1000 D
5 x 70 SM	0.443	179	152	35.9	1680	500 D, 1000 D
5 x 95 RM	0.32	215	186	48.6	3006	500 D
5 x 95 SM	0.32	215	186	40.8	2210	500 D, 1000 D
5 x 120 SM	0.253	245	216	44.1	2640	500 D, 1000 D
5 x 150 SM	0.206	275	246	49.9	3310	500 D
5 x 185 SM	0.164	313	285	54.4	4040	500 D
5 x 240 SM	0.125	364	338	61.3	5290	500 D

Technical changes reserved. All figures are therefore without guarantee.

NAYY-J or -O

PVC/PVC aluminium underground cable

DESIGN



- 1 | Aluminium conductor, round solid (RE), sector-shaped solid (SE), round stranded (RM), resp. sector-shaped stranded (SM)
- 2 | Core insulation (PVC)
- 3 | Inner covering (EPDM or plastic foil)
- 4 | Sheath (PVC black, UV-resistant)

APPLICATION

Power distribution cable for power stations, industrial facilities and switching stations as well as for local power networks. For fixed installation indoors, in cable ducts, outdoors and in water, according to the applicable erection standards, if no risk of any mechanical damage is to be expected.

TECHNICAL DATA



Standard:
DIN VDE 0276-603



Rated voltage:
0.6/1 kV (U_o/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
 laying temperature: min. -5 °C
 operating temperature: -50 °C up to 70 °C
 conductor temperature: max. 70 °C
 short circuit temperature: max. 160 °C/5 s (≤300 mm²)
 max. 140 °C/5 s (>300 mm²)



Bending radius (min.):
 15 x Ø of cable (single core)
 12 x Ø of cable (multi core)



Core identification:
HD 308 S2



Fire properties:
 EN 60332-1-2: flame retardant
 CPR classification: E_{ca}



Certificate:
VDE Germany

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
NAYY-J or -O						
1 x 25 RM	1.2	160	110	12.6	210	500 D, 1000 D
1 x 35 RM	0.868	193	135	13.7	240	500 D, 1000 D
1 x 50 RM	0.641	230	166	15.5	315	500 D, 1000 D
1 x 70 RM	0.443	283	210	17.5	405	500 D, 1000 D
1 x 95 RM	0.32	340	259	19.6	520	500 D, 1000 D
1 x 120 RM	0.253	253	239	21.1	615	500 D, 1000 D
1 x 150 RM	0.206	436	345	23.2	740	500 D, 1000 D
1 x 185 RM	0.164	496	401	25.8	904	500 D, 1000 D
1 x 240 RM	0.125	375	378	28.2	1115	500 D, 1000 D
1 x 300 RM	0.1	654	550	31.9	1435	500 D, 1000 D
1 x 400 RM	0.0778	756	653	34.9	1820	500 D, 1000 D
1 x 500 RM	0.061	873	772	37.0	2015	500 D, 1000 D
1 x 630 RM	0.047	1011	915	44.1	2600	500 D, 1000 D

NAYY-J or -O

PVC/PVC aluminium underground cable

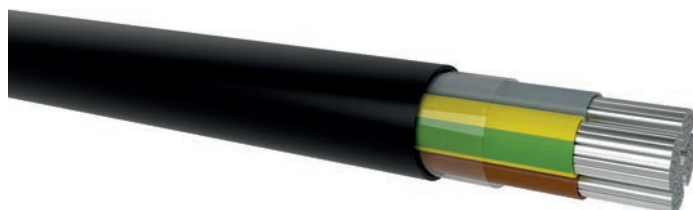
Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
NAYY-J or -O						
4 x 25 RE	1.2	102	81	25.5	990	1000 D
4 x 25 RM	1.2	102	81	26.7	1040	1000 D
4 x 35 RE	0.868	122	99	27.8	1130	1000 D
4 x 50 SE	0.641	144	119	31.9	1300	500 D, 1000 D
4 x 50 SM	0.641	144	119	29.6	1060	500 D, 1000 D
4 x 70 SE	0.443	179	152	36.1	1740	1000 D
4 x 70 SM	0.443	179	152	38.0	1820	1000 D
4 x 95 SE	0.32	215	186	40.3	2240	1000 D
4 x 95 SM	0.32	215	186	43.0	2340	1000 D
4 x 120 SE	0.253	245	216	43.0	2400	500 D, 1000 D
4 x 120 SM	0.253	245	216	41.3	2258	500 D, 1000 D
4 x 150 SE	0.206	275	246	47.7	3120	500 D, 1000 D
4 x 150 SM	0.206	275	246	45.1	2745	500 D, 1000 D
4 x 185 SE	0.164	313	285	52.7	4170	500 D
4 x 185 SM	0.164	313	285	57.0	4360	500 D
4 x 240 SE	0.125	364	338	57.9	5000	500 D
4 x 240 SM	0.125	364	338	55.0	5080	500 D
4 x 300 SM	0.1	419	400	61.0	5170	500 D
5 x 16 RM	1.91	92	72	23.8	725	500 D, 1000 D
5 x 25 RM	1.2	102	82	28.8	1060	500 D, 1000 D
5 x 35 RM	0.868	123	100	31.8	1305	500 D, 1000 D
5 x 50 RM	0.641	144	119	36.2	1720	500 D, 1000 D
5 x 70 RM	0.443	179	152	44.0	2240	500 D, 1000 D
5 x 95 RM	0.32	215	186	47.0	3060	1000 D
5 x 95 SM	0.32	215	186	43.0	2550	1000 D
5 x 120 RM	0.253	245	216	53.0	3580	1000 D
5 x 150 RM	0.206	275	246	56.0	4400	500 D, 1000 D
5 x 150 SM	0.206	275	246	53.0	3679	500 D, 1000 D
5 x 185 SM	0.164	313	285	57.0	4400	500 D
5 x 240 SM	0.125	364	338	65.7	6514	500 D

Technical changes reserved. All figures are therefore without guarantee.

E-AY2Y-J or -O

PVC/PE Aluminum underground cable

DESIGN



- 1 | Aluminium conductor, round solid (RE), sector-shaped solid (SE), round stranded (RM), resp. sector-shaped stranded (SM)
- 2 | Core insulation (PVC)
- 3 | Inner covering (EPDM or plastic foil)
- 4 | Sheath (HDPE black, UV-resistant)

APPLICATION

Power distribution cables in power stations, industrial installations and switchgears, as well as in local mains. For fixed installation underground, in interior premises, cable ducts, in the open air, in water – as permitted by the local building regulations– under severe mechanical stressing during installation and operation.

TECHNICAL DATA



Standard:
ÖVE/ÖNORM E 8200-603



Rated voltage:
0.6/1 kV (U₀/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C
operating temperature: -50 °C up to 70 °C
conductor temperature: max. 70 °C
short circuit temperature: max. 160 °C/5 s



Bending radius (min.):
15 x Ø of cable (single core)
12 x Ø of cable (multi core)



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: F_{ca}

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
E-AY2Y-J or -O						
1 x 70 RM	0.834	283	210	16.9	386	500 D, 1000 D
1 x 120 RM	0.253	389	302	21.6	540	500 D, 1000 D
1 x 240 RM	0.164	578	479	27.2	1058	1000 D
1 x 300 RM	0.1	654	550	30.1	1385	1000 D
3 x 240 + 120 SM/SM	0.125/0.254	364	338	52.0	3510	500 D
4 x 25 RE	1.2	102	81	24.2	698	500 D, 1000 D
4 x 25 RM	1.2	102	81	26.0	700	500 D, 1000 D
4 x 35 SM	0.868	122	99	24.7	748	500 D, 1000 D
4 x 50 SE	0.641	144	119	26.4	896	500 D, 1000 D
4 x 50 SM	0.641	144	119	28.0	1006	500 D, 1000 D
4 x 70 SE	0.443	178	152	31.0	1242	500 D, 1000 D
4 x 70 SM	0.443	178	152	31.2	1235	500 D, 1000 D
4 x 95 SE	0.32	215	186	33.5	1573	500 D, 1000 D
4 x 95 SM	0.32	215	186	36.5	1735	500 D, 1000 D
4 x 120 SE	0.253	245	216	41.0	1895	500 D, 1000 D
4 x 120 SM	0.253	245	216	44.5	2068	500 D, 1000 D
4 x 150 SE	0.206	275	246	41.2	2386	500 D, 1000 D

E-AY2Y-J or -O

PVC/PE Aluminum underground cable

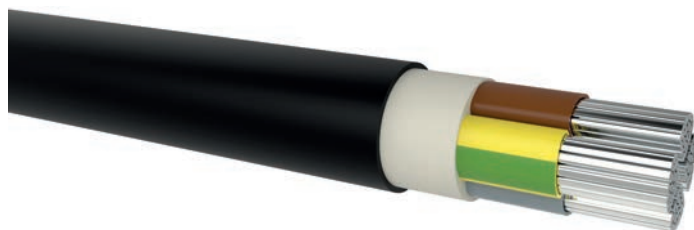
Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
E-AY2Y-J or -O						
4 x 150 SM	0.206	275	246	45.7	2716	500 D, 1000 D
4 x 185 SM	0.164	313	285	49.2	3084	500 D
4 x 240 SM	0.125	364	338	54.0	4072	500 D
4 x 300 SM	0.1	419	400	60.8	5460	500 D

Technical changes reserved. All figures are therefore without guarantee.

NA2XY-J or -O

XLPE/PVC aluminium underground cable

DESIGN



- 1 | Aluminium conductor, round solid (RE), sector-shaped solid (SE), round stranded (RM), resp. sector-shaped stranded (SM)
- 2 | Core insulation (XLPE)
- 3 | Inner covering (EPDM)
- 4 | Sheath (PVC black, UV-resistant)

APPLICATION

Power distribution cables in power stations, industrial installations and switchgears, as well as in local mains. For fixed installation underground, in interior premises, cable ducts, in the open air, in water – as permitted by the local building regulations – if no risk of any mechanical damage is to be expected.

TECHNICAL DATA



Standard:
DIN VDE 0276-603



Rated voltage:
0.6/1 kV (U_o/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C
operating temperature: -50 °C up to 90 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
15 x Ø of cable (single core)
12 x Ø of cable (multi core)



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: F_{ca}



Certificate:
VDE Germany

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
NA2XY-J or -O						
1 x 25 RM	1.2	114	106	11.5	175	1000 D
1 x 35 RM	0.868	136	130	13.0	206	1000 D
1 x 50 RM	0.641	162	161	14.9	267	1000 D
1 x 70 RM	0.443	199	204	16.3	385	1000 D
1 x 95 RM	0.32	238	252	18.9	451	1000 D
1 x 120 RM	0.253	272	295	19.8	571	1000 D
1 x 150 RM	0.206	305	339	21.5	640	500 D, 1000 D
1 x 185 RM	0.164	347	395	23.9	895	500 D, 1000 D
1 x 240 RM	0.125	404	472	26.3	984	500 D, 1000 D
1 x 300 RM	0.1	457	547	29.0	1180	500 D, 1000 D
1 x 400 RM	0.0778	525	643	32.7	1522	500 D, 1000 D
1 x 500 RM	0.0605	754	601	36.5	1922	500 D, 1000 D
3 x 25 RM	1.2	112	102	20.0	587	1000 D
3 x 35 RM	0.868	135	126	22.5	531	1000 D
3 x 185 SM	0.164	342	360	45.7	2347	500 D

NA2XY-J or -O

XLPE/PVC aluminium underground cable

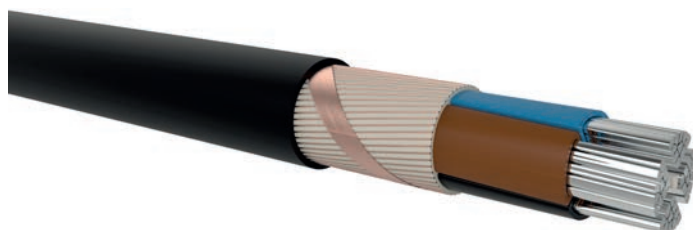
Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω /km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
NA2XY-J or -O						
4 x 25 RE	1.2	112	102	25.5	885	1000 D
4 x 25 RM	1.2	112	102	26.7	895	1000 D
4 x 35 RM	0.868	135	126	29.3	1010	1000 D
4 x 35 SM	0.868	135	126	25.9	690	1000 D
4 x 50 SM	0.641	158	149	34.4	1100	1000 D
4 x 70 SM	0.443	196	191	38.0	1440	1000 D
3 x 16 SE	0.32	234	234	39.0	1750	1000 D
4 x 95 SM	0.32	234	234	41.5	1810	1000 D
4 x 120 SM	0.253	268	273	46.6	2180	1000 D
4 x 150 SM	0.206	300	311	50.4	2750	500 D
4 x 185 SM	0.164	342	360	53.5	3470	500 D
4 x 240 SE	0.125	398	427	55.8	4090	500 D
4 x 240 SM	0.125	398	427	63.2	4290	500 D
5 x 35 SM	0.868	135	126	31.0	1195	1000 D

Technical changes reserved. All figures are therefore without guarantee.

NAYCWY

PVC/PVC aluminium underground cable, screened

DESIGN



- 1 | Aluminium conductor, round solid (RE), sector-shaped solid (SE), round stranded (RM), resp. sector-shaped stranded (SM)
- 2 | Core insulation (PVC)
- 3 | Screen (bare copper wires, applied with changing direction of lay and counter helix (copper tape), optionally plastic foil)
- 4 | Inner covering (EPDM)
- 5 | Sheath (PVC black, UV-resistant)

APPLICATION

Power distribution cables in power stations, industrial installations and switch gears, as well as in local mains. For fixed installation under ground, in interior premises, cable ducts, in the open air and in water – as permitted by the local building regulations – if protection against shock hazard in the event of mechanical damage or electrical screening is required.

TECHNICAL DATA



Standard:
DIN VDE 0276-603



Rated voltage:
0.6/1 kV (U_o/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C
operating temperature: -50 °C up to 70 °C
conductor temperature: max. 70 °C
short circuit temperature: max. 160 °C/5 s



Bending radius (min.):
15 x Ø of cable (single core)
12 x Ø of cable (multi core)



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}



Certificate:
VDE Germany

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
NAYCWY						
2 x 10 RE/10	3.08	79	60	18.8	524	1000 D
3 x 10 RE/10	3.08	79	60	20.2	599	1000 D
2 x 16 RE/16	1.91	102	80	20.6	649	1000 D
4 x 16 RE/16	1.91	75	57	22.0	950	1000 D
3 x 25 RM/16	1.2	103	83	25.0	1046	1000 D
4 x 25 RE/16	1.2	103	83	26.0	1150	1000 D
4 x 25 RM/16	1.2	103	83	26.0	1150	1000 D
4 x 35 RE/16	0.869	123	101	27.0	1200	1000 D
3 x 50 SE/50	0.641	145	121	31.0	1170	1000 D
3 x 50 SM/25	0.641	145	121	29.4	1283	1000 D
4 x 50 RE/25	0.641	145	121	33.0	1600	1000 D
4 x 50 SE/25	0.641	123	101	31.0	1600	1000 D
4 x 50 SM/25	0.641	145	121	31.0	1600	1000 D
3 x 70 SE/70	0.443	180	155	36.0	1670	1000 D

NAYCWY

PVC/PVC aluminium underground cable, screened

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
NAYCWY						
4 x 70 SE/35	0.443	186	155	35.0	2250	1000 D
4 x 70 SM/35	0.443	186	155	36.5	2250	1000 D
3 x 95 SE/95	0.32	216	189	41.0	2230	1000 D
3 x 95 SM/50	0.32	216	185	38.1	2136	1000 D
4 x 95 SE/50	0.32	216	189	40.0	2900	1000 D
4 x 95 SM/95	0.32	216	189	42.0	2900	1000 D
3 x 120 SE/120	0.253	246	220	43.0	2670	1000 D
3 x 120 SM/70	0.253	246	220	40.8	2612	1000 D
4 x 120 SE/70	0.253	246	220	42.5	3500	1000 D
4 x 120 SM/70	0.253	246	220	45.0	3500	1000 D
3 x 150 SE/150	0.206	276	249	47.0	3230	1000 D
3 x 150 SM/70	0.206	276	249	44.9	3019	1000 D
4 x 150 SE/70	0.125	276	249	46.5	4200	1000 D
4 x 150 SM/70	0.206	276	249	50.0	4200	1000 D
3 x 185 SE/185	0.164	313	287	52.0	4020	1000 D
3 x 185 SM/95	0.164	313	287	49.8	3895	1000 D
4 x 185 SE/95	0.164	313	287	53.0	4950	1000 D
4 x 185 SM/95	0.164	313	287	57.0	4950	1000 D
1 x 240 RM/35	0.125	374	358	30.6	1517	1000 D
3 x 240 SE/240	0.125	362	339	58.0	5350	1000 D
4 x 240 SE/120	0.125	362	339	60.0	5600	1000 D
4 x 240 SM/120	0.125	362	339	64.0	5600	1000 D
4 x 300 SM/150	0.1	415	401	69.0	8080	1000 D

Technical changes reserved. All figures are therefore without guarantee.

N2XSYP 6/10 kV

XLPE/PVC medium voltage underground cable, single core

DESIGN



- 1 | Copper conductor, round stranded compressed (RM)
- 2 | Inner semi-conductive layer (conductive XLPE)
- 3 | Core insulation (XLPE)
- 4 | Outer semi-conductive layer (conductive XLPE), taped with a conductive tape
- 5 | Screen (bare copper wires) and counter helix (copper tape)
- 6 | Sheath (PVC red)

APPLICATION

For fixed installation in ground, in indoors, ground and in cable ducts for industry and distribution networks in accordance with the applicable installation regulations.

TECHNICAL DATA



Standard:
DIN VDE 0276-620



Rated voltage:
6/10 kV (U₀/U)



Test voltage:
18 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C
operating temperature: -20 °C up to 80 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
15 x Ø of cable



Fire properties:
EN 60332-1-2: flame retardant



Certificate:
VDE Germany

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Mutual capacitance (nF/km)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
N2XSYP 6/10 kV							
1 x 35 RM/16	0.24	0.524	187	197	25.0	900	500 D, 1000 D
1 x 50 RM/16	0.26	0.387	220	236	26.0	950	500 D, 1000 D
1 x 70 RM/16	0.3	0.268	268	294	28.0	1300	500 D, 1000 D
1 x 95 RM/16	0.31	0.193	320	358	29.0	1600	500 D, 1000 D
1 x 120 RM/16	0.34	0.153	363	413	31.0	1850	500 D, 1000 D
1 x 150 RM/25	0.39	0.124	405	468	32.0	2200	500 D, 1000 D
1 x 185 RM/25	0.42	0.0991	456	535	33.0	2450	500 D, 1000 D
1 x 240 RM/25	0.47	0.0754	526	631	36.0	3150	500 D, 1000 D
1 x 300 RM/25	0.51	0.0601	591	722	38.0	3750	500 D, 1000 D
1 x 400 RM/35	0.57	0.047	662	827	42.0	4650	500 D, 1000 D
1 x 500 RM/35	0.63	0.0366	744	949	45.0	5750	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

N2XSY 12/20 kV

XLPE/PVC medium voltage underground cable, single core

DESIGN



- 1 | Copper conductor, round stranded compressed (RM)
- 2 | Inner semi-conductive layer (conductive XLPE)
- 3 | Core insulation (XLPE)
- 4 | Outer semi-conductive layer (conductive XLPE), taped with a conductive tape
- 5 | Screen (bare copper wires) and counter helix (copper tape)
- 6 | Sheath (PVC red)

APPLICATION

For fixed installation in ground, in indoors, ground and in cable ducts for industry and distribution networks in accordance with the applicable installation regulations.

TECHNICAL DATA



Standard:
DIN VDE 0276-620



Rated voltage:
12/20 kV (U₀/U)



Test voltage:
36 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C
operating temperature: -20 °C up to 80 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
15 x Ø of cable



Fire properties:
EN 60332-1-2: flame retardant



Certificate:
VDE Germany

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Mutual capacitance (nF/km)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
N2XSY 12/20 kV							
1 x 35 RM/16	0.16	0.524	189	200	29.0	1100	500 D, 1000 D
1 x 50 RM/16	0.18	0.387	222	239	30.0	1250	500 D, 1000 D
1 x 70 RM/16	0.2	0.268	271	297	32.0	1350	500 D, 1000 D
1 x 95 RM/16	0.22	0.193	323	361	33.0	1750	500 D, 1000 D
1 x 120 RM/16	0.24	0.153	367	416	35.0	1900	500 D, 1000 D
1 x 150 RM/25	0.26	0.124	409	470	36.0	2400	500 D, 1000 D
1 x 185 RM/25	0.27	0.099	461	538	38.0	2800	500 D, 1000 D
1 x 240 RM/25	0.31	0.0754	532	634	41.0	3400	500 D, 1000 D
1 x 300 RM/25	0.33	0.0601	599	724	43.0	4000	500 D, 1000 D
1 x 400 RM/35	0.37	0.047	671	829	46.0	4950	500 D, 1000 D
1 x 500 RM/35	0.41	0.0366	754	953	49.0	6050	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

N2XSY 18/30 kV

XLPE/PVC medium voltage underground cable, single core

DESIGN



- 1 | Copper conductor, round stranded compressed (RM)
- 2 | Inner semi-conductive layer (conductive XLPE)
- 3 | Core insulation (XLPE)
- 4 | Outer semi-conductive layer (conductive XLPE), taped with a conductive tape
- 5 | Screen (bare copper wires) and counter helix (copper tape)
- 6 | Sheath (PVC red)

APPLICATION

For fixed installation in ground, in indoors, ground and in cable ducts for industry and distribution networks in accordance with the applicable installation regulations.

TECHNICAL DATA



Standard:
DIN VDE 0276-620



Rated voltage:
18/30 kV (U₀/U)



Test voltage:
48 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C
operating temperature: -20 °C up to 80 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
15 x Ø of cable



Fire properties:
EN 60332-1-2: flame retardant



Certificate:
VDE Germany

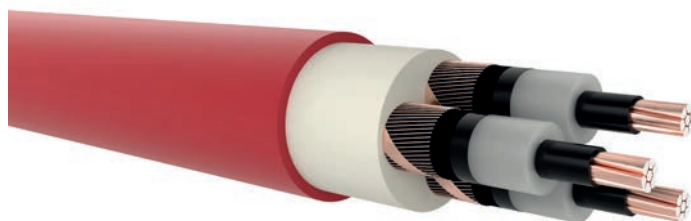
Number of cores x nominal cross-section / cross-section of screen (mm ²)	Mutual capacitance (nF/km)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
N2XSY 18/30 kV							
1 x 50 RM/16	0.14	0.387	225	241	35.0	1450	500 D, 1000 D
1 x 70 RM/16	0.15	0.268	274	299	37.0	1700	500 D, 1000 D
1 x 95 RM/16	0.17	0.193	327	363	38.0	2050	500 D, 1000 D
1 x 120 RM/16	0.18	0.153	371	418	39.0	2350	500 D, 1000 D
1 x 150 RM/25	0.19	0.124	414	472	41.0	2700	500 D, 1000 D
1 x 185 RM/25	0.21	0.091	327	363	43.0	3100	500 D, 1000 D
1 x 240 RM/25	0.23	0.075	539	635	45.0	3700	500 D, 1000 D
1 x 300 RM/25	0.25	0.0601	606	725	48.0	4350	500 D, 1000 D
1 x 500 RM/35	0.3	0.0366	765	953	54.0	6450	500 D

Technical changes reserved. All figures are therefore without guarantee.

N2XSEY 6/10 kV

XLPE/PVC medium voltage underground multicore cable

DESIGN



- 1 | Copper conductor, round stranded compressed (RM)
- 2 | Inner semi-conductive layer (conductive XLPE)
- 3 | Core insulation (XLPE)
- 4 | Outer semi-conductive layer (conductive XLPE), taped with a conductive tape
- 5 | Screen (bare copper wires and counter helix) over each core
- 6 | Inner covering (EPDM or plastic foil)
- 7 | Sheath (PVC red)

APPLICATION

For fixed installation in ground, in indoors, ground and in cable ducts for industry and distribution networks in accordance with the applicable installation regulations.

TECHNICAL DATA



Standard:
DIN VDE 0276-620



Rated voltage:
6/10 kV (U₀/U)



Test voltage:
15 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C
operating temperature: -20 °C up to 70 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
15 x Ø of cable



Fire properties:
EN 60332-1-2: flame retardant



Certificate:
VDE Germany

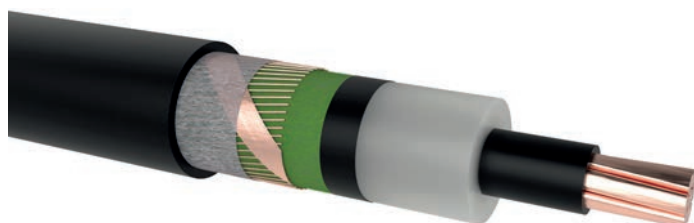
Number of cores x nominal cross-section / cross-section of screen (mm ²)	Mutual capacitance (nF/km)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
N2XSEY 6/10 kV							
3 x 35 RM/16	0.24	0.524	181	178	47.0	2380	500 D, 1000 D
3 x 50 RM/16	0.26	0.387	213	213	50.0	3300	500 D, 1000 D
3 x 70 RM/16	0.3	0.268	261	265	54.0	3350	500 D
3 x 95 RM/16	0.31	0.193	312	322	58.0	4200	500 D
3 x 120 RM/16	0.34	0.153	355	370	62.0	5050	500 D
3 x 150 RM/25	0.39	0.124	399	420	67.0	6000	500 D
3 x 185 RM/25	0.42	0.0991	451	481	69.0	7200	500 D
3 x 240 RM/25	0.47	0.0754	523	566	77.0	11550	500 D

Technical changes reserved. All figures are therefore without guarantee.

N2XS2Y 6/10 kV

XLPE/HDPE medium voltage underground cable

DESIGN



- 1 | Copper conductor, round stranded compressed (RM)
- 2 | Inner semi-conductive layer (conductive XLPE)
- 3 | Core insulation (XLPE)
- 4 | Outer semi-conductive layer (conductive XLPE), taped with a conductive tape
- 5 | Screen (bare copper wires) and counter helix (copper tape)
- 6 | Sheath (HDPE black, UV-resistant, min. 55 ShD)

APPLICATION

For fixed installation for high requirements in the ground subject to external effects of moisture, in the open air and in cable ducts for industrial and distribution mains – as permitted by the local building regulations – under severe mechanical stressing during installation and operation.

TECHNICAL DATA



Standard:
DIN VDE 0276-620



Rated voltage:
6/10 kV (U₀/U)



Test voltage:
18 kV / 50 Hz



Temperature range:
laying temperature: min. -20 °C
operating temperature: -20 °C up to 80 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
15 x Ø of cable



Certificate:
VDE Germany

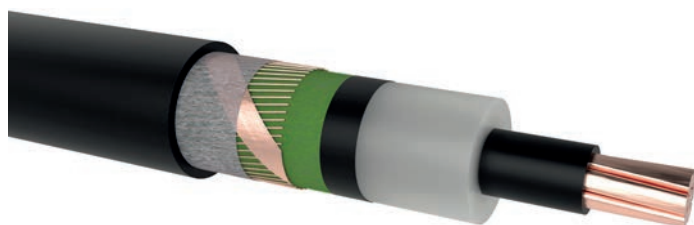
Number of cores x nominal cross-section / cross-section of screen (mm ²)	Mutual capacitance (nF/km)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
N2XS2Y 6/10 kV							
1 x 35 RM/16	0.24	0.524	187	197	25.0	800	500 D, 1000 D
1 x 50 RM/16	0.26	0.387	220	236	26.0	950	500 D, 1000 D
1 x 70 RM/16	0.3	0.268	268	294	27.0	1150	500 D, 1000 D
1 x 95 RM/16	0.31	0.193	320	358	29.0	1450	500 D, 1000 D
1 x 120 RM/16	0.34	0.153	363	413	31.0	1700	500 D, 1000 D
1 x 150 RM/25	0.39	0.124	405	468	32.0	2050	500 D, 1000 D
1 x 185 RM/25	0.42	0.0991	456	535	34.0	2450	500 D, 1000 D
1 x 240 RM/25	0.47	0.0754	526	631	37.0	3000	500 D, 1000 D
1 x 300 RM/25	0.51	0.0601	591	722	39.0	3600	500 D, 1000 D
1 x 400 RM/35	0.57	0.047	662	827	42.0	4500	500 D, 1000 D
1 x 500 RM/35	0.63	0.0366	744	949	45.0	5550	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

N2XS2Y 12/20 kV

XLPE/HDPE medium voltage underground cable

DESIGN



- 1 | Copper conductor, round stranded compressed (RM)
- 2 | Inner semi-conductive layer (conductive XLPE)
- 3 | Core insulation (XLPE)
- 4 | Outer semi-conductive layer (conductive XLPE), taped with a conductive tape
- 5 | Screen (bare copper wires) and counter helix (copper tape)
- 6 | Sheath (HDPE black, UV-resistant, min. 55 ShD)

APPLICATION

For fixed installation for high requirements in the ground subject to external effects of moisture, in the open air and in cable ducts for industrial and distribution mains – as permitted by the local building regulations – under severe mechanical stressing during installation and operation.

TECHNICAL DATA



Standard:
DIN VDE 0276-620



Rated voltage:
12/20 kV (U₀/U)



Test voltage:
36 kV / 50 Hz



Temperature range:
laying temperature: min. -20 °C
operating temperature: -20 °C up to 80 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
15 x Ø of cable



Certificate:
VDE Germany

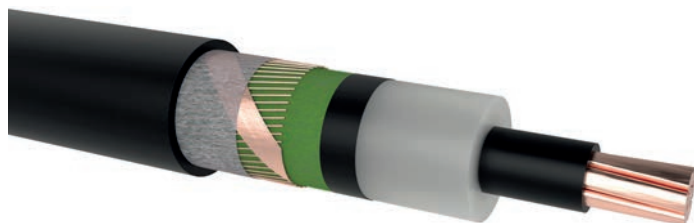
Number of cores x nominal cross-section / cross-section of screen (mm ²)	Mutual capacitance (nF/km)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
N2XS2Y 12/20 kV							
1 x 35 RM/16	0.16	0.524	189	200	29.0	950	500 D, 1000 D
1 x 50 RM/16	0.18	0.387	222	239	30.0	1100	500 D, 1000 D
1 x 70 RM/16	0.2	0.268	271	297	32.0	1350	500 D, 1000 D
1 x 95 RM/16	0.22	0.193	323	361	34.0	1600	500 D, 1000 D
1 x 120 RM/16	0.24	0.153	367	416	35.0	1900	500 D, 1000 D
1 x 150 RM/25	0.26	0.124	409	470	36.0	2300	500 D, 1000 D
1 x 185 RM/25	0.27	0.0991	461	538	38.0	2650	500 D, 1000 D
1 x 240 RM/25	0.31	0.0753	532	634	42.0	3200	500 D, 1000 D
1 x 300 RM/25	0.33	0.0601	599	724	43.0	3850	500 D, 1000 D
1 x 400 RM/35	0.37	0.047	671	829	46.0	4750	500 D, 1000 D
1 x 500 RM/35	0.41	0.0366	754	953	49.0	5850	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

N2XS2Y 18/30 kV

XLPE/HDPE medium voltage underground cable

DESIGN



- 1 | Copper conductor, round stranded compressed (RM)
- 2 | Inner semi-conductive layer (conductive XLPE)
- 3 | Core insulation (XLPE)
- 4 | Outer semi-conductive layer (conductive XLPE), taped with a conductive tape
- 5 | Screen (bare copper wires) and counter helix (copper tape)
- 6 | Sheath (HDPE black, UV-resistant, min. 55 ShD)

APPLICATION

For fixed installation for high requirements in the ground subject to external effects of moisture, in the open air and in cable ducts for industrial and distribution mains – as permitted by the local building regulations – under severe mechanical stressing during installation and operation.

TECHNICAL DATA



Standard:
DIN VDE 0276-620



Rated voltage:
18/30 kV (U₀/U)



Test voltage:
48 kV / 50 Hz



Temperature range:
laying temperature: min. -20 °C
operating temperature: -20 °C up to 80 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
15 x Ø of cable



Certificate:
VDE Germany

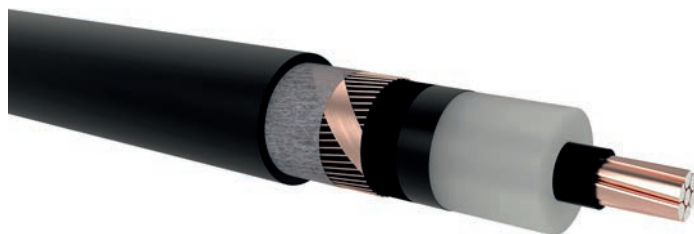
Number of cores x nominal cross-section / cross-section of screen (mm ²)	Mutual capacitan ce (nF/km)	Max. conduc- tor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
N2XS2Y 18/30 kV							
1 x 50 RM/16	0.14	0.387	225	241	35.0	1350	500 D, 1000 D
1 x 70 RM/16	0.15	0.268	274	299	37.0	1550	500 D, 1000 D
1 x 95 RM/16	0.17	0.193	327	363	39.0	1900	500 D, 1000 D
1 x 120 RM/16	0.18	0.153	371	418	40.0	2150	500 D, 1000 D
1 x 150 RM/25	0.19	0.124	414	472	41.0	2550	500 D, 1000 D
1 x 185 RM/25	0.21	0.0991	466	539	43.0	2950	500 D, 1000 D
1 x 240 RM/25	0.23	0.0754	539	635	46.0	3500	500 D, 1000 D
1 x 300 RM/25	0.25	0.0601	606	725	48.0	4150	500 D, 1000 D
1 x 400 RM/35	0.27	0.047	680	831	51.0	5050	500 D, 1000 D
1 x 500 RM/35	0.3	0.0366	765	953	54.0	6200	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

N2XS(F)2Y 6/10 kV

XLPE/HDPE medium voltage underground cable, longitudinally water-proof

DESIGN



- 1 | Copper conductor, round stranded compressed (RM)
- 2 | Inner semi-conductive layer (conductive XLPE)
- 3 | Core insulation (XLPE)
- 4 | Outer semi-conductive layer (conductive XLPE), taped with a conductive tape
- 5 | Screen (bare copper wires) and counter helix (copper tape)
- 6 | Swelling tape over screen
- 7 | Sheath (HDPE black, UV-resistant, min. 55 ShD)

APPLICATION

For fixed installation for high requirements in the ground subject to external effects of moisture, in the open air and in cable ducts for industrial and distribution mains – as permitted by the local building regulations – under severe mechanical stressing during installation and operation.

TECHNICAL DATA



Standard:
DIN VDE 0276-620



Rated voltage:
6/10 kV (U₀/U)



Test voltage:
18 kV / 50 Hz



Temperature range:
laying temperature: min. -20 °C
operating temperature: -20 °C up to 80 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
15 x Ø of cable



Certificate:
VDE Germany

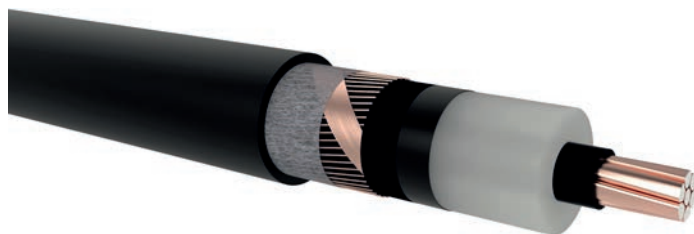
Number of cores x nominal cross-section / cross-section of screen (mm ²)	Mutual capacitance (nF/km)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
N2XS(F)2Y 6/10 kV							
1 x 35 RM/16	0.24	0.524	187	197	26.0	915	500 D, 1000 D
1 x 50 RM/16	0.26	0.387	220	236	27.0	1120	500 D, 1000 D
1 x 70 RM/16	0.3	0.268	268	294	28.0	1330	500 D, 1000 D
1 x 95 RM/16	0.31	0.193	320	358	30.0	1620	500 D, 1000 D
1 x 120 RM/16	0.34	0.153	363	413	32.0	1870	500 D, 1000 D
1 x 150 RM/25	0.39	0.124	405	468	33.0	2260	500 D, 1000 D
1 x 185 RM/25	0.42	0.0991	456	535	35.0	2630	500 D, 1000 D
1 x 240 RM/25	0.47	0.0754	526	631	38.0	3220	500 D, 1000 D
1 x 300 RM/25	0.51	0.0601	591	722	40.0	3810	500 D, 1000 D
1 x 400 RM/35	0.57	0.047	662	827	43.0	4850	500 D, 1000 D
1 x 500 RM/35	0.63	0.0366	744	949	46.0	5800	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

N2XS(F)2Y 12/20 kV

XLPE/HDPE medium voltage underground cable, longitudinally water-proof

DESIGN



- 1 | Copper conductor, round stranded compressed (RM)
- 2 | Inner semi-conductive layer (conductive XLPE)
- 3 | Core insulation (XLPE)
- 4 | Outer semi-conductive layer (conductive XLPE), taped with a conductive tape
- 5 | Screen (bare copper wires) and counter helix (copper tape)
- 6 | Swelling tape over screen
- 7 | Sheath (HDPE black, UV-resistant, min. 55 ShD)

APPLICATION

For fixed installation for high requirements in the ground subject to external effects of moisture, in the open air and in cable ducts for industrial and distribution mains – as permitted by the local building regulations – under severe mechanical stressing during installation and operation.

TECHNICAL DATA



Standard:
DIN VDE 0276-620



Rated voltage:
12/20 kV (U₀/U)



Test voltage:
36 kV / 50 Hz



Temperature range:
 laying temperature: min. -20 °C
 operating temperature: -20 °C up to 80 °C
 conductor temperature: max. 90 °C
 short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
15 x Ø of cable



Certificate:
VDE Germany

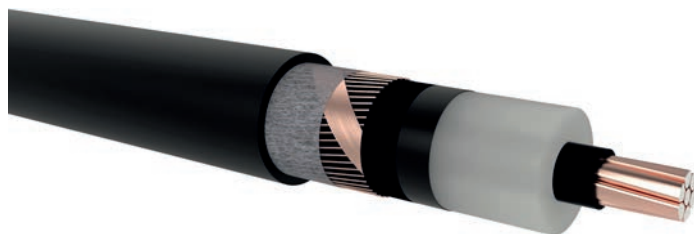
Number of cores x nominal cross-section / cross-section of screen (mm ²)	Mutual capacitance (nF/km)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths /packing (m)
N2XS(F)2Y 12/20 kV							
1 x 35 RM/16	0.16	0.524	189	200	30.0	1075	500 D, 1000 D
1 x 50 RM/16	0.18	0.387	222	239	31.0	1270	500 D, 1000 D
1 x 70 RM/16	0.2	0.268	271	297	33.0	1520	500 D, 1000 D
1 x 95 RM/16	0.22	0.193	323	361	35.0	1780	500 D, 1000 D
1 x 120 RM/25	0.24	0.153	367	416	36.0	2090	500 D, 1000 D
1 x 150 RM/25	0.26	0.124	409	470	37.0	2460	500 D, 1000 D
1 x 185 RM/25	0.27	0.0991	461	538	39.0	2840	500 D, 1000 D
1 x 240 RM/25	0.31	0.0754	532	634	42.0	3400	500 D, 1000 D
1 x 300 RM/25	0.33	0.0601	599	724	44.0	4150	500 D, 1000 D
1 x 400 RM/35	0.37	0.047	671	829	47.0	5190	500 D, 1000 D
1 x 500 RM/35	0.41	0.0366	754	953	50.0	6170	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

N2XS(F)2Y 18/30 kV

XLPE/HDPE medium voltage underground cable, longitudinally water-proof

DESIGN



- 1 | Copper conductor, round stranded compressed (RM)
- 2 | Inner semi-conductive layer (conductive XLPE)
- 3 | Core insulation (XLPE)
- 4 | Outer semi-conductive layer (conductive XLPE), taped with a conductive tape
- 5 | Screen (bare copper wires) and counter helix (copper tape)
- 6 | Swelling tape over screen
- 7 | Sheath (HDPE black, UV-resistant, min. 55 ShD)

APPLICATION

For fixed installation for high requirements in the ground subject to external effects of moisture, in the open air and in cable ducts for industrial and distribution mains – as permitted by the local building regulations – under severe mechanical stressing during installation and operation.

TECHNICAL DATA



Standard:
DIN VDE 0276-620



Rated voltage:
18/30 kV (U₀/U)



Test voltage:
48 kV / 50 Hz



Temperature range:
laying temperature: min. -20 °C
operating temperature: -20 °C up to 80 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
15 x Ø of cable



Certificate:
VDE Germany

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Mutual capacitance (nF/km)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
N2XS(F)2Y 18/30 kV							
1 x 50 RM/16	0.14	0.387	225	241	36.0	1520	500 D, 1000 D
1 x 70 RM/16	0.15	0.268	274	299	38.0	1790	500 D, 1000 D
1 x 70 RM/16	0.17	0.193	327	363	40.0	2070	500 D, 1000 D
1 x 120 RM/16	0.18	0.153	371	418	41.0	2360	500 D, 1000 D
1 x 150 RM/25	0.19	0.124	414	472	42.0	2760	500 D, 1000 D
1 x 185 RM/25	0.21	0.0991	466	539	44.0	3170	500 D, 1000 D
1 x 240 RM/25	0.23	0.754	539	635	47.0	3860	500 D, 1000 D
1 x 300 RM/25	0.25	0.601	606	725	49.0	4490	500 D, 1000 D
1 x 400 RM/35	0.27	0.047	680	831	52.0	5580	500 D, 1000 D
1 x 500 RM/35	0.3	0.0366	765	953	55.0	6600	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

NA2XS2Y 6/10 kV

XLPE/PE medium voltage aluminium underground cable

DESIGN



- 1 | Aluminium conductor, round stranded compressed (RM)
- 2 | Outer semi-conductive layer (conductive XLPE)
- 3 | Core insulation (XLPE)
- 4 | Outer semi-conductive layer (conductive XLPE), taped with a conductive tape
- 5 | Screen (bare copper wires) and counter helix (copper tape)
- 6 | Sheath (HDPE black, UV-resistant, min. 55 ShD)

APPLICATION

For fixed installation for high requirements in the ground subject to external effects of moisture, in the open air and in cable ducts for industrial and distribution mains – as permitted by the local building regulations – under severe mechanical stressing during installation and operation.

TECHNICAL DATA



Standard:
DIN VDE 0276-620



Rated voltage:
6/10 kV (U₀/U)



Test voltage:
18 kV / 50 Hz



Temperature range:
laying temperature: min. -20 °C
operating temperature: -50 °C up to 90 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
15 x Ø of cable



Certificate:
VDE Germany

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Mutual capacitance (nF/km)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
NA2XS2Y 6/10 kV							
1 x 35 RM/16	0.24	0.868	145	153	25.0	600	500 D, 1000 D
1 x 50 RM/16	0.26	0.641	171	183	24.9	630	500 D, 1000 D
1 x 70 RM/16	0.3	0.443	208	228	26.4	720	500 D, 1000 D
1 x 95 RM/16	0.31	0.32	248	278	28.0	820	500 D, 1000 D
1 x 120 RM/16	0.34	0.253	283	321	29.2	910	500 D, 1000 D
1 x 150 RM/25	0.39	0.206	315	364	30.9	1100	500 D, 1000 D
1 x 185 RM/25	0.42	0.164	357	418	32.5	1230	500 D, 1000 D
1 x 240 RM/25	0.47	0.125	413	494	34.6	1420	500 D, 1000 D
1 x 300 RM/25	0.51	0.1	466	568	37.1	1640	500 D, 1000 D
1 x 400 RM/35	0.57	0.0778	529	660	40.4	2050	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

NA2XS2Y 12/20 kV

XLPE/PE medium voltage aluminium underground cable

DESIGN



- 1 | Aluminium conductor, round stranded compressed (RM)
- 2 | Outer semi-conductive layer (conductive XLPE)
- 3 | Core insulation (XLPE)
- 4 | Outer semi-conductive layer (conductive XLPE), taped with a conductive tape
- 5 | Screen (bare copper wires) and counter helix (copper tape)
- 6 | Sheath (HDPE black, UV-resistant, min. 55 ShD)

APPLICATION

For fixed installation for high requirements in the ground subject to external effects of moisture, in the open air and in cable ducts for industrial and distribution mains – as permitted by the local building regulations – under severe mechanical stressing during installation and operation.

TECHNICAL DATA



Standard:
DIN VDE 0276-620



Rated voltage:
12/20 kV (U₀/U)



Test voltage:
36 kV / 50 Hz



Temperature range:
laying temperature: min. -20 °C
operating temperature: -50 °C up to 90 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
15 x Ø of cable



Certificate:
VDE Germany

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Mutual capacitance (nF/km)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
NA2XS2Y 12/20 kV							
1 x 35 RM/16	0.16	0.868	146	155	25.0	600	500 D, 1000 D
1 x 50 RM/16	0.18	0.641	172	185	29.1	780	500 D, 1000 D
1 x 70 RM/16	0.2	0.443	210	231	30.6	880	500 D, 1000 D
1 x 95 RM/16	0.22	0.32	251	280	32.2	990	500 D, 1000 D
1 x 120 RM/16	0.24	0.253	285	323	33.4	1090	500 D, 1000 D
1 x 150 RM/25	0.26	0.206	319	366	35.1	1280	500 D, 1000 D
1 x 185 RM/25	0.27	0.164	361	420	36.7	1430	500 D, 1000 D
1 x 240 RM/25	0.31	0.125	417	496	38.8	1630	500 D, 1000 D
1 x 400 RM/35	0.37	0.0778	535	660	43.8	2250	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

NA2XS2Y 18/30 kV

XLPE/PE medium voltage aluminium underground cable

DESIGN



- 1 | Aluminium conductor, round stranded compressed (RM)
- 2 | Outer semi-conductive layer (conductive XLPE)
- 3 | Core insulation (XLPE)
- 4 | Outer semi-conductive layer (conductive XLPE), taped with a conductive tape
- 5 | Screen (bare copper wires) and counter helix (copper tape)
- 6 | Sheath (HDPE black, UV-resistant, min. 55 ShD)

APPLICATION

For fixed installation for high requirements in the ground subject to external effects of moisture, in the open air and in cable ducts for industrial and distribution mains – as permitted by the local building regulations – under severe mechanical stressing during installation and operation.

TECHNICAL DATA



Standard:
DIN VDE 0276-620



Rated voltage:
18/30 kV (U₀/U)



Test voltage:
48 kV / 50 Hz



Temperature range:
laying temperature: min. -20 °C
operating temperature: -50 °C up to 90 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
15 x Ø of cable



Certificate:
VDE Germany

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Mutual capacitance (nF/km)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
NA2XS2Y 18/30 kV							
1 x 50 RM/16	0.14	0.641	174	187	34.1	990	500 D, 1000 D
1 x 70 RM/16	0.15	0.443	213	232	35.4	1090	500 D, 1000 D
1 x 95 RM/16	0.17	0.32	254	282	36.7	1220	500 D, 1000 D
1 x 120 RM/16	0.18	0.253	289	325	37.9	1330	500 D, 1000 D
1 x 150 RM/25	0.19	0.206	322	367	39.6	1460	500 D, 1000 D
1 x 185 RM/25	0.21	0.164	364	421	41.2	1610	500 D, 1000 D
1 x 240 RM/25	0.23	0.125	422	496	43.8	1920	500 D, 1000 D
1 x 300 RM/25	0.25	0.1	476	568	45.9	2140	500 D, 1000 D
1 x 400 RM/35	0.27	0.0778	541	659	48.8	2570	500 D

Technical changes reserved. All figures are therefore without guarantee.

NA2XS(F)2Y 6/10 kV

XLPE/HDPE medium voltage underground cable, longitudinally water-proof

DESIGN



- 1 | Aluminium conductor, round stranded compressed (RM)
- 2 | Inner semi-conductive layer (conductive XLPE)
- 3 | Core insulation (XLPE)
- 4 | Outer semi-conductive layer (conductive XLPE)
- 5 | Taped with a conductive tape
- 6 | Screen (bare copper wires) and counter helix (copper tape)
- 7 | Swelling tape over screen
- 8 | Sheath (HDPE black, UV-resistant)

APPLICATION

For fixed installation for high requirements in the ground subject to external effects of moisture, in the open air and in cable ducts for industrial and distribution mains – as permitted by the local building regulations – under severe mechanical stressing during installation and operation.

TECHNICAL DATA



Standard:
DIN VDE 0276-620



Rated voltage:
6/10 kV (U₀/U)



Test voltage:
18 kV / 50 Hz



Temperature range:
laying temperature: min. -20 °C
operating temperature: -50 °C up to 90 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
15 x Ø of cable



Certificate:
VDE Germany

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Mutual ca- pacitance (nF/km)	Max. conduc- tor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
NA2XS(F)2Y 6/10 kV							
1 x 35 RM/16	0.24	0.868	145	153	28.0	650	500 D, 1000 D
1 x 50 RM/16	0.26	0.641	171	183	27.0	750	500 D, 1000 D
1 x 70 RM/16	0.3	0.443	208	228	28.0	850	500 D, 1000 D
1 x 95 RM/16	0.31	0.32	248	278	30.0	950	500 D, 1000 D
1 x 120 RM/16	0.34	0.253	323	285	32.0	1100	500 D, 1000 D
1 x 150 RM/25	0.39	0.206	315	364	32.0	1150	500 D, 1000 D
1 x 185 RM/25	0.42	0.164	357	418	36.0	1450	500 D, 1000 D
1 x 240 RM/25	0.47	0.125	413	494	38.0	1600	500 D, 1000 D
1 x 300 RM/25	0.51	0.1	466	568	47.5	2100	500 D, 1000 D
1 x 400 RM/35	0.57	0.0778	529	660	43.0	2350	500 D, 1000 D
1 x 500 RM/35	0.63	0.0605	602	767	55.0	2850	500 D, 1000 D
1 x 630 RM/35	0.65	0.0469	675	890	52.0	3060	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

NA2XS(F)2Y 12/20 kV

XLPE/HDPE medium voltage underground cable, longitudinally water-proof

DESIGN



- 1 | Aluminium conductor, round stranded compressed (RM)
- 2 | Inner semi-conductive layer (conductive XLPE)
- 3 | Core insulation (XLPE)
- 4 | Outer semi-conductive layer (conductive XLPE)
- 5 | Taped with a conductive tape
- 6 | Screen (bare copper wires) and counter helix (copper tape)
- 7 | Swelling tape over screen
- 8 | Sheath (HDPE black, UV-resistant)

APPLICATION

For fixed installation for high requirements in the ground subject to external effects of moisture, in the open air and in cable ducts for industrial and distribution mains – as permitted by the local building regulations – under severe mechanical stressing during installation and operation.

TECHNICAL DATA



Standard:
DIN VDE 0276-620



Rated voltage:
12/20 kV (U₀/U)



Test voltage:
36 kV / 50 Hz



Temperature range:
laying temperature: min. -20 °C
operating temperature: -50 °C up to 90 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
15 x Ø of cable



Certificate:
VDE Germany

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Mutual capacitance (nF/km)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
NA2XS(F)2Y 12/20 kV							
1 x 35 RM/16	0.16	0.868	146	155	28.0	650	500 D, 1000 D
1 x 50 RM/16	0.18	0.641	172	185	28.9	780	500 D, 1000 D
1 x 70 RM/16	0.2	0.443	210	231	30.8	890	500 D, 1000 D
1 x 95 RM/16	0.22	0.32	251	280	32.5	1000	500 D, 1000 D
1 x 120 RM/16	0.18	0.253	325	289	39.0	1750	500 D, 1000 D
1 x 150 RM/25	0.26	0.206	319	366	35.1	1290	500 D, 1000 D
1 x 185 RM/25	0.27	0.164	361	420	36.9	1440	500 D, 1000 D
1 x 240 RM/25	0.31	0.125	417	496	39.2	1660	500 D, 1000 D
1 x 300 RM/25	0.33	0.1	471	569	41.7	1900	500 D, 1000 D
1 x 400 RM/35	0.37	0.0778	535	660	45.2	2350	500 D, 1000 D
1 x 500 RM/35	0.41	0.0605	602	767	48.5	2750	500 D, 1000 D
1 x 630 RM/35	0.43	0.0469	675	890	52.0	3240	500 D, 1000 D
1 x 800 RM/35	0.48	0.0367	750	1015	56.2	3880	500 D, 1000 D
1 x 1000 RM/35	0.54	0.0291	820	1135	60.9	4570	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

NA2XS(F)2Y 18/30 kV

XLPE/HDPE medium voltage underground cable, longitudinally water-proof

DESIGN



- 1 | Aluminium conductor, round stranded compressed (RM)
- 2 | Inner semi-conductive layer (conductive XLPE)
- 3 | Core insulation (XLPE)
- 4 | Outer semi-conductive layer (conductive XLPE)
- 5 | Taped with a conductive tape
- 6 | Screen (bare copper wires) and counter helix (copper tape)
- 7 | Swelling tape over screen
- 8 | Sheath (HDPE black, UV-resistant)

APPLICATION

For fixed installation for high requirements in the ground subject to external effects of moisture, in the open air and in cable ducts for industrial and distribution mains – as permitted by the local building regulations – under severe mechanical stressing during installation and operation.

TECHNICAL DATA



Standard:
DIN VDE 0276-620



Rated voltage:
18/30 kV (U₀/U)



Test voltage:
48 kV / 50 Hz



Temperature range:
laying temperature: min. -20 °C
operating temperature: -50 °C up to 90 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
15 x Ø of cable



Certificate:
VDE Germany

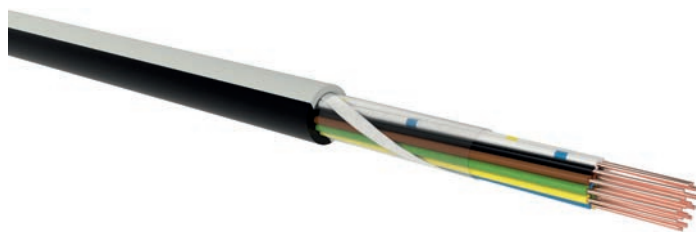
Number of cores x nominal cross-section / cross-section of screen (mm ²)	Mutual capacitance (nF/km)	Max. conductor resistance (Ω/km)	Current rating in the earth (A)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
NA2XS(F)2Y 18/30 kV							
1 x 50 RM/16	0.14	0.641	174	187	36.0	1150	500 D, 1000 D
1 x 70 RM/16	0.15	0.443	213	232	38.0	1300	500 D, 1000 D
1 x 95 RM/16	0.17	0.32	254	282	33.0	1450	500 D, 1000 D
1 x 120 RM/16	0.18	0.253	325	289	39.0	1750	500 D, 1000 D
1 x 150 RM/25	0.19	0.206	322	367	41.3	1800	500 D, 1000 D
1 x 185 RM/25	0.21	0.164	364	421	44.0	1950	500 D, 1000 D
1 x 240 RM/25	0.23	0.125	422	496	46.0	2200	500 D, 1000 D
1 x 300 RM/25	0.25	0.1	476	568	48.0	2400	500 D, 1000 D
1 x 400 RM/35	0.27	0.0778	541	659	51.0	3000	500 D, 1000 D
1 x 500 RM/35	0.3	0.0605	616	764	54.0	3100	500 D, 1000 D
1 x 630 RM/35	0.32	0.0469	675	890	57.5	3790	500 D, 1000 D
1 x 800 RM/35	0.35	0.0367	750	1015	65.0	4367	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

S-YY

PVC/PVC railway signalling cable, unscreened

DESIGN



- 1 | Copper conductor, round solid (RE)
- 2 | Core insulation (PVC)
- 3 | Inner covering (plastic foil)
- 4 | Sheath (PVC grey RAL 7035 with black vertical stripes)

APPLICATION

Safety and control cable for fixed installation in railway installations.

TECHNICAL DATA



Standard:
ÖVE-K 12



Operating voltage:
250/400 V (U₀/U)



Test voltage:
2.5 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C
operating temperature: -30 °C up to 60 °C
conductor temperature: max. 70 °C



Bending radius (min.):
7.5 x Ø of cable



Core identification:
ÖVE-K 12



Fire properties:
EN 60332-1-2: flame retardant

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.6	1
Loop resistance, max.	(Ω/km)	65.9	23.3
Insulation resistance, min. at 20 °C	(MΩ.km)	500	500

Number of cores x conductor diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
S-YY			
20 x 0.6	9.1	124	1000 D
30 x 0.6	10.7	176	1000 D
60 x 0.6	14.9	347	1000 D
10 x 1	9.9	148	1000 D
30 x 1	14.9	394	1000 D

Technical changes reserved. All figures are therefore without guarantee.

S-2YY

PE/PVC railway signalling cable, unscreened

DESIGN



- 1 | Copper conductor, round solid (RE)
- 2 | Core insulation (PE)
- 3 | Inner covering (plastic foil)
- 4 | Sheath (PVC black)

APPLICATION

Safety and control cable for fixed installation in railway installations.

TECHNICAL DATA



Standard:
ÖVE-K 10, ÖVE-K 12



Operating voltage:
800 V



Test voltage:
3.5 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C
operating temperature: -30 °C up to 60 °C
conductor temperature: max. 80 °C



Bending radius (min.):
7.5 x Ø of cable



Core identification:
ÖVE-K 12



Fire properties:
EN 60332-1-2: flame retardant

Number of cores x nominal cross-section (mm ²)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
S-2YY			
4 x 1.5	10.1	1157	1000 D
10 x 1.5	14.0	279	1000 D
20 x 1.5	18.0	480	1000 D
50 x 1.5	28.0	1111	1000 D
80 x 1.5	31.3	1685	1000 D
4 x 2.5	11.5	204	1000 D
12 x 2.5	17.0	474	1000 D
16 x 2.5	18.9	603	1000 D
4 x 4	11.5	278	1000 D
16 x 4	21.9	919	1000 D
20 x 6	26.0	1536	1000 D

Technical changes reserved. All figures are therefore without guarantee.

S-2Y2YBY single core

Railway signalling cable, unscreened, armoured

DESIGN



- 1 | Copper conductor, round solid (RE)
- 2 | Core insulation (PE), cores stranded in layers
- 3 | Inner covering (plastic foil)
- 4 | Inner sheath (PE black)
- 5 | Armouring (bare steel tape, wrapped with plastic tape)
- 6 | Oversheath (PVC grey RAL 7035)

APPLICATION

Safety and control cable for fixed installation in railway installations. The cables must be protected from the constant influence of sunlight.

TECHNICAL DATA



Standard:
ÖVE-K 11



Operating voltage:

max. 400 Veff (0.75 mm²)
max. 800 Veff (≥ 0.75 mm²)



Test voltage:

2500 Veff (0.75 mm²) / 50 Hz
3500 Veff (≥ 0.75 mm²) / 50 Hz



Temperature range:

laying temperature: min. -5 °C
operating temperature: -30 °C up to 60 °C
conductor temperature: max. 80 °C



Bending radius (min.):

12 x Ø of cable



Core identification:

Colour code with trace quad in each layer



Fire properties:

EN 60332-1-2: flame retardant
CPR classification: E_{ca}

ELECTRICAL PARAMETERS

Nominal cross-section	(mm ²)	0.75	1.5	2.5	4	6
Loop resistance, max.	(Ω/km)	24.5	12.1	7.3	4.6	3
Insulation resistance, min. at 20 °C	(MΩ.km)	5000	5000	5000	5000	5000
Mutual capacitance, max. at 800 Hz	(nF/km)	100	120	120	120	120

Number of cores x nominal cross-section (mm ²)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
S-2Y2YBY single core			
5 x 0.75	12.6	247	1000 D
10 x 0.75	15.1	335	1000 D
15 x 0.75	16.5	400	1000 D
20 x 0.75	18.1	468	1000 D
30 x 0.75	20.4	582	1000 D
40 x 0.75	22.1	687	1000 D
60 x 0.75	26.4	972	1000 D
80 x 0.75	29.6	1209	1000 D
100 x 0.75	31.9	1404	1000 D
5 x 1.5	14.2	294	1000 D
10 x 1.5	17.5	429	1000 D
15 x 1.5	18.9	557	1000 D
20 x 1.5	20.6	666	1000 D

S-2Y2YBY single core

Railway signalling cable, unscreened, armoured

Number of cores x nominal cross-section (mm ²)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
S-2Y2YBY single core			
30 x 1.5	24.3	895	1000 D
40 x 1.5	26.7	1107	1000 D
60 x 1.5	31.2	1548	1000 D
80 x 1.5	34.6	1939	1000 D
100 x 1.5	38.5	2340	1000 D
5 x 2.5	15.2	393	1000 D
10 x 2.5	19.6	605	1000 D
15 x 2.5	21.7	777	1000 D
20 x 2.5	24.4	940	1000 D
30 x 2.5	28.4	1276	1000 D
40 x 2.5	31.2	1634	1000 D
60 x 2.5	38.1	2419	1000 D
80 x 2.5	41.9	2968	1000 D
100 x 2.5	47.9	3550	1000 D
5 x 4	18.2	531	1000 D
10 x 4	22.8	825	1000 D
15 x 4	26.2	1123	1000 D
20 x 4	28.8	1451	1000 D
30 x 4	33.4	1959	1000 D
40 x 4	37.7	2855	1000 D
60 x 4	45.7	3620	1000 D
80 x 4	50.2	4664	1000 D
5 x 6	19.4	635	1000 D
10 x 6	24.7	1209	1000 D
24 x 6	35.0	2253	1000 D

Technical changes reserved. All figures are therefore without guarantee.

S-2Y2YBY quad

Railway signalling cable, unscreened, armoured

DESIGN



- 1 | Copper conductor, round solid (RE)
- 2 | Core insulation (PE), cores star quaded and quads stranded in layers
- 3 | Inner covering (plastic foil)
- 4 | Inner sheath (PE black)
- 5 | Armouring (bare steel tape, wrapped with plastic tape)
- 6 | Oversheath (PVC grey RAL 7035)

APPLICATION

Safety and control cable for fixed installation in railway installations. The cables must be protected from the constant influence of sunlight.

TECHNICAL DATA



Standard:
ÖVE-K 11



Operating voltage:
max. 250 V



Test voltage:
2500 Veff / 50 Hz



Temperature range:
laying temperature: min. -5 °C
operating temperature: -30 °C up to 60 °C
conductor temperature: max. 80 °C



Bending radius (min.):
12 x Ø of cable



Core identification:
Colour code with trace quad in each layer



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.8	0.9	1.4
Loop resistance, max.	(Ω/km)	73.2	56.6	23.4
Insulation resistance, min. at 20 °C	(MΩ.km)	10000	10000	10000
Mutual capacitance, max. at 800 Hz (75% of values)	(nF/km)	38	38	38
Mutual capacitance, max. at 800 Hz (90 % of values)	(nF/km)	40	40	40
Mutual capacitance, max. at 800 Hz (100 % of values)	(nF/km)	42	42	42
Capacitance unbalance K1, max. at 800 Hz (100% of values)	(pF/425m)	185	185	185
Capacitance unbalance K ₉ -K ₁₂ , max. at 800 Hz	(pF/425m)	170	170	170
Capacitance unbalance E ₁ -E ₂ , max. at 800 Hz	(pF/425m)	550	550	550

Number of quads x conductor diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
S-2Y2YBY quad			
1 x 4 x 0.8	12.3	210	1000 D
2 x 4 x 0.8	17.3	294	1000 D
3 x 4 x 0.8	18.4	353	1000 D
5 x 4 x 0.8	20.6	469	1000 D

S-2Y2YBY quad

Railway signalling cable, unscreened, armoured

Number of quads x conductor diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
S-2Y2YBY quad			
7 x 4 x 0.8	21.0	546	500 D, 1000 D
10 x 4 x 0.8	25.5	754	500 D, 1000 D
15 x 4 x 0.8	29.0	979	500 D, 1000 D
20 x 4 x 0.8	32.1	1182	500 D, 1000 D
25 x 4 x 0.8	35.6	1435	500 D, 1000 D
1 x 4 x 0.9	14.0	244	500 D, 1000 D
2 x 4 x 0.9	18.0	337	500 D, 1000 D
3 x 4 x 0.9	18.2	403	500 D, 1000 D
5 x 4 x 0.9	21.0	573	500 D, 1000 D
7 x 4 x 0.9	23.2	670	500 D, 1000 D
10 x 4 x 0.9	27.2	881	500 D, 1000 D
15 x 4 x 0.9	31.1	1151	500 D, 1000 D
20 x 4 x 0.9	35.3	1449	500 D, 1000 D
25 x 4 x 0.9	38.7	1696	500 D, 1000 D
1 x 4 x 1.4	15.7	331	500 D, 1000 D
2 x 4 x 1.4	24.5	608	500 D, 1000 D
3 x 4 x 1.4	25.3	698	500 D, 1000 D
5 x 4 x 1.4	29.5	977	500 D, 1000 D
7 x 4 x 1.4	32.6	1181	500 D, 1000 D
10 x 4 x 1.4	39.3	1639	500 D, 1000 D
15 x 4 x 1.4	46.5	2195	500 D, 1000 D
20 x 4 x 1.4	52.5	2816	500 D, 1000 D
25 x 4 x 1.4	57.8	3414	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

S-2Y2YCB2Y single core (J 0.65) HD

PE/PE Railway signalling cable, screened, armoured

DESIGN



- 1 | Copper conductor, round solid (RE)
- 2 | Core insulation (PE), cores stranded in layers
- 3 | Inner sheath (PE black)
- 4 | Screen (copper wires, wrapped with plastic tape)
- 5 | Armouring (bare steel tape, wrapped with plastic tape)
- 6 | Oversheath (PE grey RAL 7035)

APPLICATION

Safety and control cable with induction protection for fixed installation in railway installations. The cables must be protected from the constant influence of sunlight.

TECHNICAL DATA



Standard:
ÖVE-K 11



Operating voltage:

max. 400 Veff (0.75 mm²)
max. 800 Veff (≥ 0.75 mm²)



Test voltage:

2500 Veff (0.75 mm²) / 50 Hz
3500 Veff (≥ 0.75 mm²) / 50 Hz



Temperature range:

laying temperature: min. -5 °C max. 50 °C
operating temperature: -30 °C up to 60 °C
conductor temperature: max. 80 °C



Bending radius (min.):

12 x Ø of cable



Core identification:

Colour code with trace quad in each layer



Fire properties:

EN 60332-1-2: flame retardant
CPR classification: F_{ca}

ELECTRICAL PARAMETERS

Nominal cross-section	(mm ²)	0.75	1.5	2.5	4
Insulation resistance, min. at 20 °C	(MΩ.km)	5000	5000	5000	5000
Mutual capacitance, max. at 800 Hz	(nF/km)	100	100	100	100

Number of cores x nominal cross-section (mm ²)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
S-2Y2YCB2Y single core (J 0.65) HD			
5 x 0.75	15.3	432	1000 D
10 x 0.75	16.8	544	1000 D
15 x 0.75	19.2	625	1000 D
20 x 0.75	19.8	685	1000 D
30 x 0.75	22.7	855	1000 D
40 x 0.75	25.1	1055	1000 D
80 x 0.75	32.1	1649	1000 D
100 x 0.75	36.8	2017	1000 D
5 x 1.5	17.5	528	1000 D
10 x 1.5	19.8	714	1000 D
20 x 1.5	25.3	1158	1000 D
20 x 1.5	25.3	1158	1000 D
30 x 1.5	28.4	1401	1000 D
40 x 1.5	31.0	1686	1000 D

S-2Y2YCB2Y single core (J 0.65) HD

PE/PE Railway signalling cable, screened, armoured

Number of cores x nominal cross-section (mm ²)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
S-2Y2YCB2Y single core (J 0.65) HD			
48 x 1.5	31.1	1868	1000 D
60 x 1.5	36.6	2189	1000 D
80 x 1.5	40.0	2681	1000 D
100 x 1.5	44.0	3163	1000 D
5 x 2.5	19.2	621	1000 D
20 x 2.5	27.3	1465	1000 D
30 x 2.5	33.0	1892	1000 D
40 x 2.5	35.2	2267	1000 D
60 x 2.5	40.3	3067	1000 D
80 x 2.5	45.4	3780	1000 D
100 x 2.5	49.2	4481	1000 D
5 x 4	20.3	907	500 D, 1000 D
15 x 4	28.0	1700	500 D, 1000 D
20 x 4	32.1	1977	500 D, 1000 D
30 x 4	36.7	2553	500 D, 1000 D
40 x 4	41.3	3160	500 D, 1000 D
60 x 4	47.6	4326	500 D, 1000 D
80 x 4	52.9	5490	500 D, 1000 D
100 x 4	59.1	6461	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

S-2Y2YCB2Y quad (J 0.65) HD

PE/PE Railway signalling cable, screened, armoured

DESIGN



- 1 | Copper conductor, round solid (RE)
- 2 | Core insulation (PE), cores star quaded and quads stranded in layers
- 3 | Inner sheath (PE black)
- 4 | Screen (copper wires, wrapped with plastic tape)
- 5 | Armouring (bare steel tape, wrapped with plastic tape)
- 6 | Oversheath (PE grey RAL 7035)

APPLICATION

Safety and control cable with induction protection for fixed installation in railway installations. The cables must be protected from the constant influence of sunlight.

TECHNICAL DATA



Standard:
ÖVE-K 11



Operating voltage:
max. 250 Veff



Test voltage:
2.5 kV (core/core) / 50 Hz
2.5 kV (core/screen) / 50 Hz



Temperature range:
laying temperature: min. -5 °C max. 50 °C
operating temperature: -30 °C up to 60 °C
conductor temperature: max. 80 °C



Bending radius (min.):
12 x Ø of cable



Core identification:
Colour code with trace quad in each layer



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: F_{ca}

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.9	1.4	1.8
Loop resistance, max.	(Ω/km)	56.6	23.4	14.1
Insulation resistance, min. at 20 °C	(MΩ.km)	10000	10000	10000
Mutual capacitance, max. at 800 Hz (75% of values)	(nF/km)	38	38	38
Mutual capacitance, max. at 800 Hz (90 % of values)	(nF/km)	40	40	40
Mutual capacitance, max. at 800 Hz (100 % of values)	(nF/km)	42	42	42
Capacitance unbalance K1, max. at 800 Hz (100% of values)	(pF/425m)	185	185	185
Capacitance unbalance K ₉ -K ₁₂ , max. at 800 Hz	(pF/425m)	170	170	170
Capacitance unbalance E ₁ -E ₂ , max. at 800 Hz	(pF/425m)	550	550	550

Number of quads x conductor diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
S-2Y2YCB2Y quad (J 0.65) HD			
1 x 4 x 0.9	16.4	548	500 D, 1000 D
2 x 4 x 0.9	21.0	659	500 D, 1000 D
3 x 4 x 0.9	21.2	762	500 D, 1000 D
5 x 4 x 0.9	24.8	1011	500 D, 1000 D

S-2Y2YCB2Y quad (J 0.65) HD

PE/PE Railway signalling cable, screened, armoured

Number of quads x conductor diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
S-2Y2YCB2Y quad (J 0.65) HD			
7 x 4 x 0.9	26.4	1131	500 D, 1000 D
10 x 4 x 0.9	30.6	1387	500 D, 1000 D
15 x 4 x 0.9	35.4	1759	500 D, 1000 D
20 x 4 x 0.9	39.0	2070	500 D, 1000 D
25 x 4 x 0.9	42.5	2390	500 D, 1000 D
1 x 4 x 1.4	18.8	664	500 D, 1000 D
2 x 4 x 1.4	27.7	1005	500 D, 1000 D
3 x 4 x 1.4	28.0	1152	500 D, 1000 D
5 x 4 x 1.4	31.7	1422	500 D, 1000 D
7 x 4 x 1.4	34.8	1703	500 D, 1000 D
10 x 4 x 1.4	41.0	2203	500 D, 1000 D
15 x 4 x 1.4	47.6	2866	500 D, 1000 D
20 x 4 x 1.4	52.8	3627	500 D, 1000 D
25 x 4 x 1.4	59.1	4202	500 D, 1000 D
1 x 4 x 1.8	22.1	760	500 D, 1000 D
2 x 4 x 1.8	32.3	1136	500 D, 1000 D
3 x 4 x 1.8	32.8	1476	500 D, 1000 D
5 x 4 x 1.8	39.1	2073	500 D, 1000 D
7 x 4 x 1.8	42.1	2361	500 D, 1000 D
10 x 4 x 1.8	51.5	3085	500 D, 1000 D
15 x 4 x 1.8	60.2	4009	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

YYSch

PVC telecommunications installation cable

DESIGN



- 1 | Copper conductor, round solid
- 2 | Core insulation (PVC)
- 3 | Sheath (PVC grey RAL 7001 or ivory RAL 1015)

APPLICATION

Signalling cable for indoor telephone and intercom systems. Not suitable for outdoor installation; the cable should not be laid in earth or water or used as an energy cable in power installations.

TECHNICAL DATA



Standard:
EN 50575



Operating voltage:
max. 65 V



Test voltage:
500 V / 50 Hz



Temperature range:
laying temperature: min. -5 °C
fixed: -40 °C up to 70 °C
moved: -5 °C up to 50 °C



Bending radius (min.):
8 x Ø of cable



Core identification:
Farbcode für YYSch-Leitungen



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.6
Conductor resistance, max. at 20 °C	(Ω/km)	65
Insulation resistance, min. at 20 °C	(MΩ.km)	50

Number of cores x conductor diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
YYSch			
2 x 0.6	3.4	14	500 Sp, 1000 Sp
3 x 0.6	3.6	18	500 Sp, 1000 Sp
4 x 0.6	3.8	22	500 Sp, 1000 Sp
5 x 0.6	4.1	26	500 Sp, 1000 Sp
6 x 0.6	4.6	32	500 Sp, 1000 Sp
8 x 0.6	5.1	44	500 Sp, 1000 Sp
10 x 0.6	6.0	54	500 Sp, 1000 Sp
12 x 0.6	6.2	62	500 Sp, 1000 Sp
14 x 0.6	6.4	69	500 Sp, 1000 Sp
16 x 0.6	7.1	84	500 Sp, 1000 Sp
20 x 0.6	7.4	99	500 Sp, 1000 Sp
26 x 0.6	8.4	125	500 Sp, 1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

YR

PVC insulated telecommunication cable

DESIGN



- 1 | Copper conductor, round solid
- 2 | Core insulation (PVC), cores stranded in layers
- 3 | Sheath (PVC white RAL 1013)

APPLICATION

Suitable for application in intercom communicators but not admissible in power current systems, outdoor and underground installations. For indoor installation in conduits, cable ducts etc.

TECHNICAL DATA



Standard:
EN 50575



Operating voltage:
100 V



Test voltage:
500 V / 50 Hz



Temperature range:
fixed: -30 °C up to 70 °C
moved: -5 °C up to 50 °C
conductor temperature: max. 70 °C



Bending radius (min.):
8 x Ø of cable



Core identification:
Farbcode für YR-Leitungen



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.8
Conductor resistance, max. at 20 °C	(Ω/km)	36.6
Insulation resistance, min. at 20 °C	(MΩ.km)	100
Mutual capacitance	(nF/km)	max. 300

Number of cores x conductor diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
YR			
2 x 0.8	4.2	24	500 Sp, 1000 Sp
3 x 0.8	4.8	30	500 Sp, 1000 Sp
4 x 0.8	5.2	36	500 Sp, 1000 Sp
5 x 0.8	5.8	44	500 Sp, 1000 Sp
6 x 0.8	6.0	52	500 Sp, 1000 Sp
8 x 0.8	6.3	63	500 Sp, 1000 Sp
10 x 0.8	7.4	92	500 Sp, 1000 Sp
12 x 0.8	7.7	94	500 Sp, 1000 Sp
14 x 0.8	8.2	107	500 Sp, 1000 Sp
16 x 0.8	8.4	135	500 Sp, 1000 Sp
20 x 0.8	9.4	160	500 Sp, 1000 Sp
24 x 0.8	10.4	194	500 Sp, 1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

F-VYAY

PVC/PVC Installation cable for telecommunication, screened

DESIGN



- 1 | Tinned copper conductor, solid
- 2 | Core insulation (PVC), cores pair stranded, pairs stranded in layers
- 3 | Taping (plastic foil)
- 4 | Screen (plastic laminated aluminium tape with drain wire)
- 5 | Sheath (PVC grey RAL 7035)

APPLICATION

Switching cable for use in telecommunication and related equipment. Suitable for fixed installation on and under plaster, in dry and damp rooms.

TECHNICAL DATA



Standard:
ÖVE-K 35



Operating voltage:
max. 300 V



Test voltage:
500 Veff (core/core) / 50 Hz
2000 Veff (core/screen) / 50 Hz



Temperature range:
laying temperature: min. -5 °C
fixed: -40 °C up to 70 °C
moved: -5 °C up to 50 °C



Bending radius (min.):
7.5 x Ø of cable



Core identification:
coloured according to ÖVE-K 35



Fire properties:
EN 50265-2-1: flame retardant
CPR classification: E_{ca}

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.5
Loop resistance, max.	(Ω/km)	195.6
Insulation resistance, min. at 20 °C	(MΩ.km)	500
Mutual capacitance, max. at 800 Hz	(nF/km)	100
Capacitance unbalance K ₉ (pairs), max.at 800 Hz (80% of values)	(pF/100m)	100
Capacitance unbalance K ₉ (pairs), max.at 800 Hz (100% of values)	(pF/100m)	150
Capacitance unbalance K ₁ (quad), max. at 800 Hz	(pF/100m)	500

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
F-VYAY			
2 x 2 x 0.5 *)	5.0	36	100 R, 500 Sp, 1000 Sp
2 x 2 x 0.5	4.8	44	100 R, 500 Sp, 1000 Sp
3 x 2 x 0.5	6.0	36	100 R, 500 Sp, 1000 Sp
5 x 2 x 0.5	6.8	58	100 R, 500 Sp, 1000 Sp
6 x 2 x 0.5	7.5	69	100 R, 500 Sp, 1000 Sp
10 x 2 x 0.5	8.1	95	100 R, 500 Sp, 1000 Sp
12 x 2 x 0.5	8.5	99	100 R, 500 Sp, 1000 Sp
15 x 2 x 0.5	9.5	113	500 D, 1000 D

F-VYAY

PVC/PVC Installation cable for telecommunication, screened

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
F-VYAY			
16 x 2 x 0.5	10.0	119	500 D, 1000 D
20 x 2 x 0.5	10.1	159	500 D, 1000 D
25 x 2 x 0.5	11.0	174	500 D, 1000 D
30 x 2 x 0.5	12.5	222	500 D, 1000 D
40 x 2 x 0.5	14.5	280	500 D, 1000 D
50 x 2 x 0.5	16.7	358	500 D, 1000 D
100 x 2 x 0.5	23.5	617	500 D, 1000 D

Note: *) Core stranding in star quad. Technical changes reserved. All figures are therefore without guarantee.

F-YAY

PVC/PVC Installation cable for telecommunication, screened

DESIGN



- 1 | Copper conductor, round solid (RE)
- 2 | Core insulation (PVC), cores pair stranded, pairs stranded in layers
- 3 | Inner covering (plastic foil)
- 4 | Screen (plastic tape laminated with aluminium foil with drain wire)
- 5 | Sheath (PVC grey RAL 7035)

APPLICATION

Switching cable for use in telecommunication and related equipment. Suitable for fixed installation on and under plaster, in dry and damp rooms.

TECHNICAL DATA



Standard:
ÖVE-K 35 resp. adapted to ÖVE-K 35



Test voltage:
500 Veff (core/core) / 50 Hz
2000 Veff (core/screen) / 50 Hz



Temperature range:
laying temperature: min. -5 °C
fixed: -40 °C up to 70 °C
moved: -5 °C up to 50 °C



Bending radius (min.):
7.5 x Ø of cable



Core identification:
coloured according to ÖVE-K 35



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.6	0.8
Loop resistance, max.	(Ω/km)	135.8	73.2
Insulation resistance, min. at 20 °C	(MΩ.km)	500	500
Mutual capacitance, max. at 800 Hz	(nF/km)	100	100
Capacitance unbalance K ₉ (pairs), max.at 800 Hz (80% of values)	(nF/km)	150	150
Capacitance unbalance K ₉ (pairs), max.at 800 Hz (100% of values)	(nF/km)	200	200
Capacitance unbalance K ₁ (quad), max. at 800 Hz	(nF/km)	500	500

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
F-YAY			
2 x 2 x 0.6 *)	6.5	45	100 R, 500 Sp, 1000 Sp
2 x 2 x 0.6	5.1	35	100 R, 500 Sp, 1000 Sp
3 x 2 x 0.6	6.3	49	500 Sp
5 x 2 x 0.6	7.3	67	100 R, 500 Sp, 1000 Sp
6 x 2 x 0.6	7.6	75	100 R, 500 Sp, 1000 Sp
10 x 2 x 0.6	9.5	112	100 R, 500 Sp, 1000 Sp
12 x 2 x 0.6	9.7	126	100 R, 500 Sp, 1000 Sp
15 x 2 x 0.6	10.4	149	100 R, 500 Sp, 1000 Sp

F-YAY

PVC/PVC Installation cable for telecommunication, screened

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
F-YAY			
20 x 2 x 0.6	11.2	186	500 D, 1000 D
25 x 2 x 0.6	13.3	241	500 D, 1000 D
30 x 2 x 0.6	14.0	278	500 D, 1000 D
40 x 2 x 0.6	15.0	349	500 D, 1000 D
50 x 2 x 0.6	16.9	427	500 D, 1000 D
60 x 2 x 0.6	19.3	567	500 D, 1000 D
80 x 2 x 0.6	21.3	715	500 D, 1000 D
100 x 2 x 0.6	24.2	967	500 D, 1000 D
2 x 2 x 0.8 *)	7.5	60	100 R, 500 Sp, 1000 Sp
2 x 2 x 0.8	6.3	53	100 R, 500 Sp, 1000 Sp
3 x 2 x 0.8	8.0	74	100 R, 500 Sp, 1000 Sp
5 x 2 x 0.8	8.9	102	100 R, 500 Sp, 1000 Sp
6 x 2 x 0.8	9.3	116	100 R, 500 Sp, 1000 Sp
10 x 2 x 0.8	11.9	178	100 R, 500 Sp, 1000 Sp
15 x 2 x 0.8	13.5	256	100 R, 500 Sp, 1000 Sp
20 x 2 x 0.8	14.6	321	500 D, 1000 D
30 x 2 x 0.8	18.2	477	500 D, 1000 D
40 x 2 x 0.8	19.5	604	500 D, 1000 D
50 x 2 x 0.8	22.8	747	500 D, 1000 D
100 x 2 x 0.8	34.9	1653	500 D, 1000 D

Note: *) Core stranding in star quad. Technical changes reserved. All figures are therefore without guarantee.

J-Y(St)Y...Lg

Installation cable, screened

DESIGN



- 1 | Copper conductor, round solid (RE)
- 2 | Core insulation (PVC), cores pair stranded, pairs stranded in layers
- 3 | Inner covering (plastic foil)
- 4 | Screen (plastic laminated aluminium tape with drain wire)
- 5 | Sheath (PVC grey RAL 7001)

APPLICATION

Installation cable for use in telecommunications installations and related installations. Preferably for installation in interior premises but also for fixed installation on exterior walls of buildings. However, not suitable for power installations or direct burial.

TECHNICAL DATA



Standard:
DIN VDE 0815



Rated voltage:
max. 300 Vss
(Ø 0.8 mm briefly max. 600 Vss)



Test voltage:
800 V (core/core) / 50 Hz
800 V (core/screen) / 50 Hz



Temperature range:
laying temperature: min. -5 °C
fixed: -30 °C up to 70 °C
moved: -5 °C up to 50 °C



Bending radius (min.):
7.5 x Ø of cable



Core identification:
DIN VDE 0815



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}



Certificate:
VDE Germany

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.6	0.8
Loop resistance, max.	(Ω/km)	130	73.2
Insulation resistance, min. at 20 °C	(MΩ.km)	100	100
Mutual capacitance, max. at 800 Hz (up to 4 pairs)	(nF/km)	120	120
Mutual capacitance, max. at 800 Hz	(nF/km)	100	100
Capacitance unbalance, max. at 800 Hz (80% of values)	(pF/100m)	300	300
Capacitance unbalance, max. at 800 Hz (100% of values)	(pF/100m)	500	500

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
J-Y(St)Y...Lg			
2 x 2 x 0.6	5.5	40	100 R, 500 Sp, 1000 Sp
3 x 2 x 0.6	6.3	50	100 R, 500 Sp, 1000 Sp
4 x 2 x 0.6	6.8	60	100 R, 500 Sp, 1000 Sp
5 x 2 x 0.6	7.2	70	100 R, 500 Sp, 1000 Sp
6 x 2 x 0.6	7.5	80	500 Sp, 1000 Sp

J-Y(St)Y...Lg

Installation cable, screened

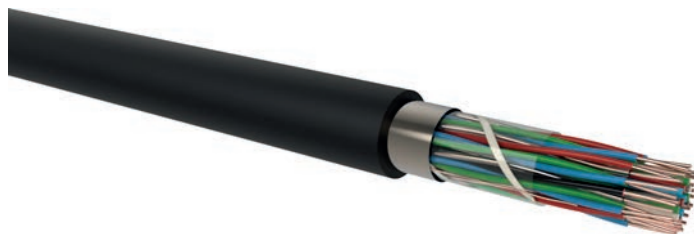
Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
J-Y(St)Y...Lg			
10 x 2 x 0.6	9.0	110	500 Sp, 1000 Sp
12 x 2 x 0.6	9.5	130	500 Sp, 1000 Sp
16 x 2 x 0.6	10.5	160	500 Sp, 1000 Sp
20 x 2 x 0.6	11.0	190	500 D, 1000 D
30 x 2 x 0.6	13.4	285	500 D, 1000 D
40 x 2 x 0.6	17.5	383	500 D, 1000 D
50 x 2 x 0.6	16.0	390	500 D, 1000 D
60 x 2 x 0.6	21.9	574	500 D, 1000 D
100 x 2 x 0.6	21.0	780	500 D, 1000 D
1 x 2 x 0.8	6.0	40	100 R, 500 Sp, 1000 Sp
2 x 2 x 0.8	7.0	60	100 R, 500 Sp, 1000 Sp
3 x 2 x 0.8	8.5	80	100 R, 500 Sp, 1000 Sp
4 x 2 x 0.8	9.0	100	100 R, 500 Sp, 1000 Sp
5 x 2 x 0.8	9.5	120	100 R, 500 Sp, 1000 Sp
6 x 2 x 0.8	10.5	140	100 R, 500 Sp, 1000 Sp
10 x 2 x 0.8	13.0	220	100 R, 500 Sp, 1000 Sp
12 x 2 x 0.8	14.0	250	100 R, 500 Sp, 1000 Sp
16 x 2 x 0.8	15.5	320	500 D, 1000 D
20 x 2 x 0.8	16.5	380	500 D, 1000 D
30 x 2 x 0.8	18.3	570	500 D, 1000 D
40 x 2 x 0.8	24.0	751	500 D, 1000 D
50 x 2 x 0.8	23.0	800	500 D, 1000 D
60 x 2 x 0.8	30.0	1105	500 D, 1000 D
100 x 2 x 0.8	32.0	1600	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

F-2YA2Y

Telecommunication underground cable, screened

DESIGN



- 1 | Copper conductor, round solid (RE)
- 2 | Core insulation (PE), cores star quaded and quads stranded in layers
- 3 | Inner covering (plastic tape)
- 4 | Screen (plastic laminated aluminium tape with drain wire)
- 5 | Sheath (PE black, UV-resistant)

APPLICATION

Underground cable for use in telecommunications installations and related installations. Suitable for installation under ground, in water, cable ducts etc.

TECHNICAL DATA



Standard:
adapted to Telekom Austria-Standard X 5019
EN 50556



Operating voltage:
max. 200 Veff



Test voltage:
500 V (core/core) / 50 Hz
2 kV (core/screen) / 50 Hz



Temperature range:
laying temperature: min. -20 °C
fixed: -20 °C up to 70 °C
moved: -20 °C up to 50 °C
conductor temperature: max. 80 °C



Bending radius (min.):
10 x Ø of cable



Core identification:
Colour code with trace quad in each layer (TA standard)



Fire properties:
CPR classification: F_{ca}

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.6	0.8
Loop resistance, max.	(Ω/km)	130	73.2
Insulation resistance, min. at 20 °C	(MΩ.km)	10000	10000
Mutual capacitance, max. at 800 Hz	(nF/km)	55	55
Capacitance unbalance K ₁ , max. at 800 Hz	(pF/300m)	800	800
Capacitance unbalance K ₉ -K ₁₂ , max. at 800 Hz	(pF/300m)	300	300
Capacitance unbalance E ₁ -E ₂ , max. at 800 Hz	(pF/300m)	800	800

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
F-2YA2Y			
2 x 2 x 0.6	7.2	47	500 D, 1000 D
6 x 2 x 0.6	9.3	85	500 D, 1000 D
10 x 2 x 0.6	10.5	118	500 D, 1000 D
20 x 2 x 0.6	14.5	207	500 D, 1000 D
30 x 2 x 0.6	15.3	274	500 D, 1000 D
40 x 2 x 0.6	16.6	345	500 D, 1000 D
50 x 2 x 0.6	18.0	417	500 D, 1000 D
60 x 2 x 0.6	19.4	489	500 D, 1000 D

F-2YA2Y

Telecommunication underground cable, screened

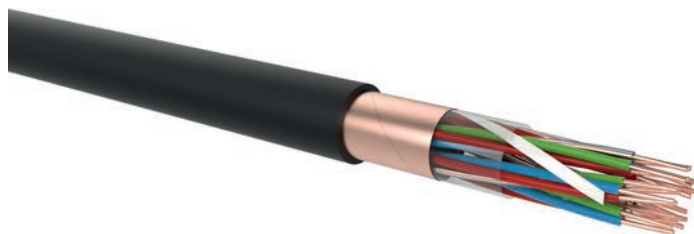
Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
F-2YA2Y			
100 x 2 x 0.6	25.5	792	500 D, 1000 D
2 x 2 x 0.8	7.9	60	500 D, 1000 D
4 x 2 x 0.8	11.0	103	500 D, 1000 D
6 x 2 x 0.8	10.6	121	500 D, 1000 D
10 x 2 x 0.8	12.1	175	500 D, 1000 D
20 x 2 x 0.8	17.2	317	500 D, 1000 D
30 x 2 x 0.8	18.1	432	500 D, 1000 D
40 x 2 x 0.8	19.8	552	500 D, 1000 D
50 x 2 x 0.8	21.5	672	500 D, 1000 D
60 x 2 x 0.8	23.5	797	500 D, 1000 D
100 x 2 x 0.8	31.1	1303	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

F-2YC2Y

Telecommunication underground cable, screened

DESIGN



- 1 | Copper conductor, round solid (RE)
- 2 | Core insulation (PE), cores star quaded and quads stranded in layers
- 3 | Taping (plastic foil)
- 4 | Screen (copper foil with drain wire)
- 5 | Sheath (PE black, UV-resistant)

APPLICATION

Underground cable for use in telecommunications installations and related installations. Suitable for installation under ground, in water, cable ducts etc.

TECHNICAL DATA



Standard:
adapted to Telekom Austria-Standard X 5019



Operating voltage:
max. 200 Veff



Test voltage:
500 Veff (core/core) / 50 Hz
2000 Veff (core/screen) / 50 Hz



Temperature range:
laying temperature: min. -20 °C
fixed: -20 °C up to 70 °C
moved: -20 °C up to 50 °C



Bending radius (min.):
10 x Ø of cable



Core identification:
Colour code with trace quad in each layer (TA standard)



Fire properties:
CPR classification: F_{ca}

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.6	0.8
Loop resistance, max.	(Ω/km)	130	73.2
Insulation resistance, min. at 20 °C	(MΩ.km)	10000	10000
Mutual capacitance, max. at 800 Hz	(nF/km)	55	55
Capacitance unbalance K ₁ , max. at 800 Hz	(pF/300m)	800	800
Capacitance unbalance K ₉ -K ₁₂ , max. at 800 Hz	(pF/300m)	300	300
Capacitance unbalance E ₁ -E ₂ , max. at 800 Hz	(pF/300m)	800	800

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
F-2YC2Y			
2 x 2 x 0.6	7.0	55	500 D, 1000 D
6 x 2 x 0.6	10.2	115	500 D, 1000 D
10 x 2 x 0.6	13.0	150	500 D, 1000 D
20 x 2 x 0.6	15.0	245	500 D, 1000 D
30 x 2 x 0.6	16.5	325	500 D, 1000 D
40 x 2 x 0.6	17.7	405	500 D, 1000 D
50 x 2 x 0.6	20.0	485	500 D, 1000 D
60 x 2 x 0.6	21.0	560	500 D, 1000 D

F-2YC2Y

Telecommunication underground cable, screened

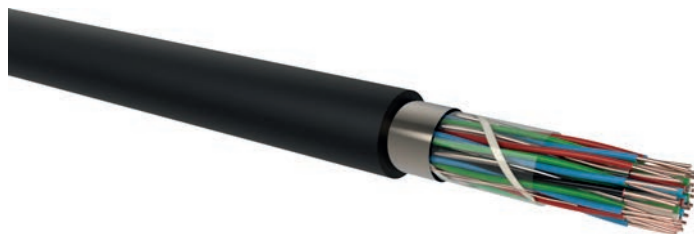
Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
F-2YC2Y			
80 x 2 x 0.6	23.2	730	500 D, 1000 D
100 x 2 x 0.6	26.0	880	500 D, 1000 D
2 x 2 x 0.8	8.5	75	500 D, 1000 D
6 x 2 x 0.8	11.5	150	500 D, 1000 D
10 x 2 x 0.8	13.4	225	500 D, 1000 D
20 x 2 x 0.8	17.0	375	500 D, 1000 D
30 x 2 x 0.8	18.5	515	500 D, 1000 D
40 x 2 x 0.8	21.4	635	500 D, 1000 D
50 x 2 x 0.8	24.5	755	500 D, 1000 D
60 x 2 x 0.8	25.6	885	500 D, 1000 D
80 x 2 x 0.8	29.4	1150	500 D, 1000 D
100 x 2 x 0.8	34.0	1410	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

F-2YJA2Y

Telecommunication underground cable, screened, longitudinally water-proof

DESIGN



- 1 | Copper conductor, round solid (RE)
- 2 | Core insulation (foam skin PE), cores star quaded and quads stranded in layers, core stranding petrol jelly filled
- 3 | Inner covering (plastic foil)
- 4 | Screen (copolymer laminated aluminium tape which is welded to the PE sheath)
- 5 | Sheath (PE black, UV-resistant)

APPLICATION

Underground cable for use in telecommunications installations and related installations. Suitable for installation under ground, in water, cable ducts etc.

TECHNICAL DATA



Standard:
adapted to Telekom Austria-Standard X 5019



Operating voltage:
max. 200 Veff



Test voltage:
500 V (core/core) / 50 Hz
2 kV (core/screen) / 50 Hz



Temperature range:
laying temperature: min. -20 °C
fixed: -20 °C up to 50 °C
moved: -20 °C up to 70 °C
conductor temperature: max. 80 °C



Bending radius (min.):
10 x Ø of cable



Core identification:
Colour code with trace quad in each layer (TA standard)



Fire properties:
CPR classification: F_{ca}

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.6	0.8
Loop resistance, max.	(Ω/km)	130	73.2
Insulation resistance, min. at 20 °C	(MΩ.km)	5000	5000
Mutual capacitance, max. at 800 Hz (80% of values)	(nF/km)	50	50
Mutual capacitance, max. at 800 Hz (100 % of values)	(nF/km)	52	52
Capacitance unbalance K ₁ , max. at 800 Hz (95% of values)	(pF/300m)	400	400
Capacitance unbalance K ₁ , max. at 800 Hz (100% of values)	(pF/300m)	800	800
Capacitance unbalance K ₉ -K ₁₂ , max. at 800 Hz	(pF/300m)	300	300
Capacitance unbalance E ₁ -E ₂ , max. at 800 Hz	(pF/300m)	800	800

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
F-2YJA2Y			
6 x 2 x 0.6	10.7	122	500 D, 1000 D
10 x 2 x 0.6	12.1	165	500 D, 1000 D
20 x 2 x 0.6	17.0	319	500 D, 1000 D

F-2YJA2Y

Telecommunication underground cable, screened, longitudinally water-proof

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
F-2YJA2Y			
30 x 2 x 0.6	17.9	391	500 D, 1000 D
40 x 2 x 0.6	19.4	481	500 D, 1000 D
50 x 2 x 0.6	21.1	582	500 D, 1000 D
60 x 2 x 0.6	22.2	664	500 D, 1000 D
80 x 2 x 0.6	29.0	978	500 D, 1000 D
100 x 2 x 0.6	31.1	1162	500 D, 1000 D
6 x 2 x 0.8	12.1	165	500 D, 1000 D
10 x 2 x 0.8	13.8	232	500 D, 1000 D
20 x 2 x 0.8	19.8	267	500 D, 1000 D
30 x 2 x 0.8	20.9	586	500 D, 1000 D
40 x 2 x 0.8	22.8	730	500 D, 1000 D
20 x 2 x 0.8	25.3	905	500 D, 1000 D
60 x 2 x 0.8	31.0	1114	500 D, 1000 D
80 x 2 x 0.8	34.0	1470	500 D, 1000 D
100 x 2 x 0.8	37.0	1841	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

A-2Y(L)2Y...St III Bd

Telecommunication underground cable, screened

DESIGN



- 1 | Copper conductor, round solid (RE)
- 2 | Core insulation (PE), cores star quaded and quads stranded in groups
- 3 | Inner covering (plastic foil)
- 4 | Screen (copolymer laminated aluminium tape which is welded to the PE sheath)
- 5 | Sheath (HDPE black, UV-resistant)

APPLICATION

Underground cable for use in telecommunications installations and related installations. Suitable for installation under ground, in cable ducts etc.

TECHNICAL DATA



Standard:
DIN VDE 0816



Rated voltage:
225 V_{eff} (peak value)



Test voltage:
500 V (core/core) / 50 Hz
2 kV (core/screen) / 50 Hz



Temperature range:
laying temperature: min. -20 °C
fixed: -20 °C up to 70 °C
moved: -20 °C up to 50 °C



Bending radius (min.):
10 x Ø of cable



Core identification:
DIN VDE 0816



Fire properties:
CPR classification: F_{ca}



Certificate:
VDE Germany

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.6	0.8
Loop resistance, max.	(Ω/km)	130	73.2
Mutual capacitance, max. at 800 Hz (100 % of values)	(nF/km)	52	55
Capacitance unbalance K ₁ , max. at 800 Hz (98% of values)	(pF/300m)	400	400
Capacitance unbalance K ₁ , max. at 800 Hz (100% of values)	(pF/300m)	800	800
Capacitance unbalance K ₉ -K ₁₂ , max. at 800 Hz (98% of values)	(pF/300m)	100	100
Capacitance unbalance K ₉ -K ₁₂ , max. at 800 Hz (100% of values)	(pF/300m)	300	300
Capacitance unbalance E ₁ -E ₂ , max. at 800 Hz	(pF/300m)	800	800

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
A-2Y(L)2Y...St III Bd			
2 x 2 x 0.6	9.0	80	500 D, 1000 D
6 x 2 x 0.6	10.2	106	500 D, 1000 D

A-2Y(L)2Y...St III Bd

Telecommunication underground cable, screened

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
A-2Y(L)2Y...St III Bd			
10 x 2 x 0.6	11.7	143	500 D, 1000 D
20 x 2 x 0.6	15.0	233	500 D, 1000 D
30 x 2 x 0.6	16.5	311	500 D, 1000 D
40 x 2 x 0.6	17.5	390	500 D, 1000 D
50 x 2 x 0.6	19.6	459	500 D, 1000 D
70 x 2 x 0.6	20.5	594	500 D, 1000 D
100 x 2 x 0.6	25.0	828	500 D, 1000 D
150 x 2 x 0.6	31.0	1230	500 D, 1000 D
200 x 2 x 0.6	34.5	1587	500 D, 1000 D
2 x 2 x 0.8	9.5	82	500 D, 1000 D
4 x 2 x 0.8	11.0	116	500 D, 1000 D
6 x 2 x 0.8	11.5	144	500 D, 1000 D
20 x 2 x 0.8	17.5	344	500 D, 1000 D
30 x 2 x 0.8	20.0	464	1000 D
40 x 2 x 0.8	22.0	603	1000 D
50 x 2 x 0.8	23.5	723	1000 D
70 x 2 x 0.8	27.0	963	1000 D
100 x 2 x 0.8	27.0	1341	1000 D
150 x 2 x 0.8	47.0	2935	1000 D
200 x 2 x 0.8	42.4	2572	1000 D

Technical changes reserved. All figures are therefore without guarantee.

A-2YF(L)2Y...St III Bd

Telecommunication underground cable, screened, longitudinally water-proof

DESIGN



- 1 | Copper conductor, round solid (RE)
- 2 | Core insulation (foam skin PE), cores star quaded and quads stranded in groups, core stranding petrol jelly filled
- 3 | Inner covering (paper tape)
- 4 | Screen (copolymer laminated aluminium tape which is welded to the PE sheath)
- 5 | Sheath (PE black, UV-resistant)

APPLICATION

Underground cable for use in telecommunications installations and related installations. Suitable for installation under ground, in cable ducts etc.

TECHNICAL DATA



Standard:
DIN VDE 0816



Rated voltage:
225 Veff (peak value)



Test voltage:
500 V (core/core) / 50 Hz
2 kV (core/screen) / 50 Hz



Temperature range:
laying temperature: min. -20 °C
fixed: -20 °C up to 70 °C
moved: -20 °C up to 50 °C



Bending radius (min.):
10 x Ø of cable



Core identification:
DIN VDE 0816



Fire properties:
CPR classification: F_{ca}



Certificate:
VDE Germany

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.6	0.8
Loop resistance, max.	(Ω/km)	130	73.2
Insulation resistance, min. at 20 °C	(MΩ.km)	1500	1500
Mutual capacitance, max. at 800 Hz (80% of values)	(nF/km)	48	50
Mutual capacitance, max. at 800 Hz (95 % of values)	(nF/km)	50	53
Mutual capacitance, max. at 800 Hz (100 % of values)	(nF/km)	52	55
Capacitance unbalance K ₁ , max. at 800 Hz (98% of values)	(pF/300m)	400	400
Capacitance unbalance K ₁ , max. at 800 Hz (100% of values)	(pF/300m)	800	800
Capacitance unbalance K ₉ -K ₁₂ , max. at 800 Hz (98% of values)	(pF/300m)	100	100
Capacitance unbalance K ₉ -K ₁₂ , max. at 800 Hz (100% of values)	(pF/300m)	300	300
Capacitance unbalance E ₁ -E ₂ , max. at 800 Hz	(pF/300m)	800	800

A-2YF(L)2Y...St III Bd

Telecommunication underground cable, screened, longitudinally water-proof

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
A-2YF(L)2Y...St III Bd			
2 x 2 x 0.6	8.0	80	500 D, 1000 D
6 x 2 x 0.6	10.8	124	500 D, 1000 D
10 x 2 x 0.6	12.6	173	500 D, 1000 D
20 x 2 x 0.6	16.3	291	500 D, 1000 D
30 x 2 x 0.6	18.5	406	500 D, 1000 D
40 x 2 x 0.6	20.9	495	500 D, 1000 D
50 x 2 x 0.6	22.5	604	500 D, 1000 D
70 x 2 x 0.6	25.0	787	500 D, 1000 D
100 x 2 x 0.6	30.0	1143	500 D, 1000 D
200 x 2 x 0.6	41.5	2193	500 D, 1000 D
2 x 2 x 0.8	9.5	89	500 D, 1000 D
4 x 2 x 0.8	12.0	146	500 D, 1000 D
6 x 2 x 0.8	12.5	171	500 D, 1000 D
10 x 2 x 0.8	15.0	253	500 D, 1000 D
20 x 2 x 0.8	19.5	446	500 D, 1000 D
30 x 2 x 0.8	22.5	615	500 D, 1000 D
40 x 2 x 0.8	25.5	821	500 D, 1000 D
50 x 2 x 0.8	28.0	988	500 D, 1000 D
70 x 2 x 0.8	31.0	1283	500 D, 1000 D
100 x 2 x 0.8	37.0	1843	500 D, 1000 D
200 x 2 x 0.8	52.4	3652	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

BM-YY

PVC Fire alarm cable, unscreened

DESIGN



- 1 | Copper conductor, round solid
- 2 | Core insulation (PVC)
- 3 | Sheath (PVC red with marking "Brandmeldeleitung" (fire alarm cable))

APPLICATION

For fixed installation for indoors as installation cable in fire alarm systems.

TECHNICAL DATA



Standard:
EN 50575
adapted to ÖVE-K 35



Operating voltage:
max. 300 Vss



Test voltage:
800 Veff / 50 Hz



Temperature range:
laying temperature: max. -5 °C
fixed: -30 °C up to 70 °C
moved: -5 °C up to 50 °C



Bending radius (min.):
7.5 x Ø of wire



Core identification:
coloured according to ÖVE-K 35



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.8
Conductor resistance, max. at 20 °C	(Ω/km)	36.6
Insulation resistance, min. at 20 °C	(MΩ.km)	100

Number of cores x conductor diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
BM-YY			
2 x 0.8	4.5	30	100 R, 500 Sp, 1000 Sp
3 x 0.8	4.8	36	100 R, 500 Sp, 1000 Sp
4 x 0.8	5.5	44	100 R, 500 Sp, 1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

JB-Y(St)Y

Fire alarm cable, screened

DESIGN



- 1 | Copper conductor, round solid
- 2 | Core insulation (PVC), cores pair stranded, pairs stranded in layers
- 3 | Inner covering (plastic foil)
- 4 | Screen (plastic tape laminated with aluminium foil with drain wire)
- 5 | Sheath (PVC red with marking "Brandmeldeleitung" (fire alarm cable))

APPLICATION

For fixed installation for indoors as installation cable in fire alarm systems.

TECHNICAL DATA



Standard:
adapted to DIN VDE 0815



Operating voltage:
max. 300 Vss (briefly max. 600 Vss)



Test voltage:
800 Veff (core/core) / 50 Hz
800 Veff (core/screen) / 50 Hz



Temperature range:
laying temperature: min. -5 °C
fixed: -30 °C up to 70 °C
moved: -5 °C up to 50 °C



Bending radius (min.):
7.5 x Ø of wire



Core identification:
DIN VDE 0815



Fire properties:
EN 60332-1-2: flame retardant
CPR classification: E_{ca}

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.8
Loop resistance, max.	(Ω/km)	73.2
Insulation resistance, min. at 20 °C	(MΩ.km)	100
Mutual capacitance, max. at 800 Hz (up to 4 pairs)	(nF/km)	120
Mutual capacitance, max. at 800 Hz	(nF/km)	100

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
JB-Y(St)Y			
1 x 2 x 0.8	6.0	40	100 R, 500 Sp, 1000 Sp
2 x 2 x 0.8	6.1	54	100 R, 500 Sp, 1000 Sp
4 x 2 x 0.8	8.7	94	100 R, 500 Sp, 1000 Sp
5 x 2 x 0.8	9.4	114	500 Sp, 1000 Sp
6 x 2 x 0.8	10.1	135	100 R, 500 Sp, 1000 Sp
10 x 2 x 0.8	12.0	205	500 D, 1000 D
12 x 2 x 0.8	12.8	235	500 D, 1000 D
20 x 2 x 0.8	15.0	384	500 D, 1000 D
30 x 2 x 0.8	19.0	522	500 D, 1000 D
40 x 2 x 0.8	20.9	663	500 D, 1000 D
50 x 2 x 0.8	23.4	832	500 D, 1000 D

JB-Y(St)Y

Fire alarm cable, screened

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
JB-Y(St)Y			
60 x 2 x 0.8	25.0	978	500 D, 1000 D
100 x 2 x 0.8	32.5	1900	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

H05Z-K

Insulated wire, halogen-free, fine wire

DESIGN



- 1 | Copper conductor, fine wire (-K)
- 2 | Core insulation (XLPE)

APPLICATION

For fixed installation in conduits on or under plaster. Suitable for protected installation in and on lighting facilities or control devices. Suitable for hotels, hospitals, underground railways, airports etc. to protect people and technical building equipment in the event of fire.

TECHNICAL DATA



Standard:
EN 50525-3-41



Rated voltage:
300/500 V (U₀/U)



Test voltage:
2 kV / 50 Hz



Temperature range:
laying temperature: min. 5 °C
operating temperature: -5 °C up to 90 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
5 x Ø of wire (fixed installed)
12 x Ø of wire (free motion)



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases
EN 61034-2: low smoke emission
CPR classification: E_{ca}

Nominal cross-section (mm ²)	Core colours	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
H05Z-K					
0.5	bk, bn, bu, gy, gnye	36	2.2	9	100 R
0.75	bk, gnye	24.5	2.4	12	100 R
1	bk, bn, rd, bu, vt	18.1	2.6	14	100 R

Technical changes reserved. All figures are therefore without guarantee.

H07Z-U

Insulated wire, halogen-free, solid

DESIGN



- 1 | Copper conductor, solid wire (-U)
- 2 | Core insulation (XLPE)

APPLICATION

For fixed installation in conduits on or under plaster. Suitable for protected installation in and on lighting facilities or control devices for voltages up to 750 V AC or 1000 V DC against ground. Suitable for hotels, hospitals, underground railways, airports etc. to protect people and technical building equipment in the event of fire.

TECHNICAL DATA



Standard:
EN 50525-3-41



Rated voltage:
450/750 V (U₀/U)



Test voltage:
2.5 kV / 50 Hz



Temperature range:
laying temperature: min. 5 °C
operating temperature: -5 °C up to 90 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
4 x Ø of wire



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases
EN 61034-2: low smoke emission
CPR classification: E_{ca}

Nominal cross-section (mm ²)	Core colours	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
H07Z-U					
1.5	bk, bn, bu, gnye	12.1	3.0	20	100 R
2.5	bk, bn, bu, gnye	7.4	3.5	30	100 R
4	bk, bn, bu, gnye	4.6	4.0	45	100 R
6	bk, bn, bu, gnye	3.1	5.0	65	100 R
10	bk, bn, bu, gnye	1.8	6.5	110	100 R
16	bk, bn, bu, gnye	1.2	7.5	175	100 R

Technical changes reserved. All figures are therefore without guarantee.

H07Z-R

Insulated wire, halogen-free, multi core

DESIGN



- 1 | Copper conductor, stranded wire (-R)
- 2 | Core insulation (XLPE)

APPLICATION

For fixed installation in conduits on or under plaster. Suitable for protected installation in and on lighting facilities or control devices for voltages up to 750 V AC or 1000 V DC against ground. Suitable for hotels, hospitals, underground railways, airports etc. to protect people and technical building equipment in the event of fire.

TECHNICAL DATA



Standard:
EN 50525-3-41



Rated voltage:
450/750 V (U₀/U)



Test voltage:
2.5 kV / 50 Hz



Temperature range:
laying temperature: min. 5 °C
operating temperature: -5 °C up to 90 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
4 x Ø of wire



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases
EN 61034-2: low smoke emission
CPR classification: E_{ca}

Nominal cross-section (mm ²)	Core colours	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
H07Z-R					
6	bk, bn, bu, gnye	3.1	5.0	65	500 D, 1000 D
10	bk, bn, bu, gnye	1.8	6.5	110	500 D, 1000 D
16	bk, bn, bu, gnye	1.2	7.5	175	500 D, 1000 D
25	bk, bn, bu, gnye	0.7	9.0	275	500 D, 1000 D
35	bk, gnye	0.5	10.0	365	500 D, 1000 D
50	bk, gnye	0.4	12.0	490	500 D, 1000 D
70	bk, gnye	0.3	14.0	700	500 D, 1000 D
95	bk, gnye	0.2	16.5	920	500 D, 1000 D
120	bk, gnye	0.2	18.5	1150	500 D, 1000 D
150	bk, gnye	0.1	20.5	1400	500 D, 1000 D
185	bk, gnye	0.1	22.5	1760	500 D, 1000 D
240	bk, gnye	0.1	25.5	2300	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

H07Z-K

Insulated wire, halogen-free, fine wire

DESIGN



- 1 | Copper conductor, fine wire (-K)
- 2 | Core insulation (XLPE)

APPLICATION

For fixed installation in conduits on or under plaster. Suitable for protected installation in and on lighting facilities or control devices for voltages up to 750 V AC or 1000 V DC against ground. Suitable for hotels, hospitals, underground railways, airports etc. to protect people and technical building equipment in the event of fire.

TECHNICAL DATA



Standard:
EN 50525-3-41



Rated voltage:
450/750 V (U₀/U)



Test voltage:
2.5 kV / 50 Hz



Temperature range:
laying temperature: min. 5 °C
operating temperature: -5 °C up to 90 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
5 x Ø of wire (fixed installed)
12 x Ø of wire (free motion)



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases
EN 61034-2: low smoke emission
CPR classification: E_{ca}

Nominal cross-section (mm ²)	Core colours	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
H07Z-K					
1.5	bk, rd, gy, wh, gnye	13.3	3.0	19	100 R
2.5	bk, bn, rd, gn, bu, gy, wh, gnye	7.98	3.6	31	100 R
4	bk, bn, bu, gy, gnye	4.95	4.3	45	100 R
6	bk, bn, bu, gy, gnye	3.3	4.8	63	100 R
10	bk, bn, bu, gy, gnye	1.91	6.3	108	100 R
16	bk, bn, bu, gy, gnye	1.21	7.3	162	100 R
25	bk, bn, bu, gy, gnye	0.78	9.2	252	500 D, 1000 D
35	bk	0.554	10.1	338	500 D, 1000 D
50	bk	0.386	12.2	481	500 D, 1000 D
70	bk	0.272	14.1	670	500 D, 1000 D
95	bk	0.206	15.9	888	500 D, 1000 D
120	bk	0.161	17.8	1008	500 D, 1000 D
150	bk	0.129	19.7	1391	500 D, 1000 D
185	bk	0.106	22.0	1686	500 D, 1000 D
240	bk	0.0801	25.2	2212	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

H07Z1-U

Insulated wire, halogen-free, solid

DESIGN



- 1 | Copper conductor, solid wire (-U)
- 2 | Core insulation (halogen-free polymer compound, non cross-linkend)

APPLICATION

For fixed installation in conduits on or under plaster. Suitable for protected installation in and on lighting facilities or control devices for voltages up to 750 V AC or 1000 V DC against ground. Suitable for hotels, hospitals, underground railways, airports etc. to protect people and technical building equipment in the event of fire.

TECHNICAL DATA



Standard:
HD 22.9, EN 50525-3-31



Rated voltage:
450/750 V (U₀/U)



Test voltage:
2.5 kV / 50 Hz



Temperature range:
laying temperature: min. 5 °C
operating temperature: 5 °C up to 70 °C
conductor temperature: max. 70 °C
short circuit temperature: max. 160 °C/5 s



Bending radius (min.):
4 x Ø of wire



Fire properties:
EN 60332-1-2: flame retardant
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases
EN 61034-2: low smoke emission
CPR classification: E_{ca}

Nominal cross-section (mm ²)	Core colours	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
H07Z1-U					
1.5	bk, bn, bu, gnye	13.3	3.2	20	100 R
2.5	bk, gnye	7.98	3.9	30	100 R
4	bk, gnye	4.95	4.4	45	100 R
6	bk, gnye	3.3	5.0	65	100 R

Technical changes reserved. All figures are therefore without guarantee.

HSLH-JZ or -OZ

Control cable, halogen-free, unscreened

DESIGN



- 1 | Copper conductor, fine wire
- 2 | Core insulation (FRNC), cores stranded in layers
- 3 | Sheath (FRNC grey RAL 7001, oil resistant)

APPLICATION

As flexible control and connecting cable for fixed laying and flexible applications without tensile stress and/or without guided movements, especially for the protection of human life and valuable equipment.

TECHNICAL DATA



Rated voltage:
300/500 V (U₀/U)



Test voltage:
2 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C
fixed: -40 °C up to 70 °C
moved: -5 °C up to 70 °C
conductor temperature: max. 70 °C
short circuit temperature: max. 150 °C/5 s



Bending radius (min.):
4 x Ø of cable (fixed installed)
15 x Ø of cable (free motion)



Core identification:
black with number printing, with one core green-yellow (JZ), without (OZ)



Fire properties:
EN 60332-1-2: flame retardant
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases
EN 61034-2: low smoke emission
EN 60332-3-22 and 24: reduced flame propagation
CPR classification: E_{ca}

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
HSLH-JZ or -OZ				
2 x 0.75	26	5.2	40	500 D, 1000 D
3 x 0.75	26	5.5	48	500 D, 1000 D
4 x 0.75	26	6.0	59	500 D, 1000 D
5 x 0.75	26	6.5	70	500 D, 1000 D
7 x 0.75	26	7.3	94	500 D, 1000 D
12 x 0.75	26	9.7	153	500 D, 1000 D
18 x 0.75	26	11.5	221	500 D, 1000 D
25 x 0.75	26	13.7	297	500 D, 1000 D
2 x 1	19.5	5.6	47	500 D, 1000 D
3 x 1	19.5	5.9	58	500 D, 1000 D
4 x 1	19.5	6.5	71	500 D, 1000 D
5 x 1	19.5	7.3	88	500 D, 1000 D
7 x 1	19.5	7.9	113	500 D, 1000 D
12 x 1	19.5	10.5	185	500 D, 1000 D
18 x 1	19.5	12.5	268	500 D, 1000 D
25 x 1	19.5	14.9	384	500 D, 1000 D
2 x 1.5	13.3	6.0	58	500 D, 1000 D
3 x 1.5	13.3	6.4	72	500 D, 1000 D

HSLH-JZ or -OZ

Control cable, halogen-free, unscreened

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
HSLH-JZ or -OZ				
4 x 1.5	13.3	7.2	93	500 D, 1000 D
5 x 1.5	13.3	7.8	111	500 D, 1000 D
7 x 1.5	13.3	8.5	144	500 D, 1000 D
12 x 1.5	13.3	11.6	243	500 D, 1000 D
18 x 1.5	13.3	13.5	346	500 D, 1000 D
25 x 1.5	13.3	16.2	467	500 D, 1000 D
34 x 1.5	13.3	22.0	922	500 D, 1000 D
2 x 2.5	13.3	7.1	85	500 D, 1000 D
3 x 2.5	7.98	7.5	108	500 D, 1000 D
4 x 2.5	7.98	8.3	135	500 D, 1000 D
5 x 2.5	7.98	9.0	162	500 D, 1000 D
7 x 2.5	7.98	10.1	219	500 D, 1000 D
12 x 2.5	7.98	13.4	361	500 D, 1000 D
4 x 4	4.95	10.3	209	500 D, 1000 D
5 x 4	4.95	11.3	252	500 D, 1000 D
4 x 6	3.3	11.9	298	500 D, 1000 D
5 x 6	3.3	13.1	360	500 D, 1000 D
5 x 10	1.91	17.4	623	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

HSLCH-JZ or -OZ

Control cable, halogen-free, screened

DESIGN



- 1 | Copper conductor, fine wire
- 2 | Core insulation (FRNC), cores stranded in layers
- 3 | Inner covering (halogen-free plastic tape)
- 4 | Screen (braided screen, tinned copper wires)
- 5 | Sheath (FRNC grey RAL 7001, oil resistant)

APPLICATION

As flexible control and connecting cable for fixed laying and flexible applications without tensile stress and/or without guided movements, especially for the protection of human life and valuable equipment.

TECHNICAL DATA



Rated voltage:
300/500 V (U₀/U)



Test voltage:
2 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C
fixed: -40 °C up to 70 °C
moved: -5 °C up to 70 °C
conductor temperature: max. 70 °C
short circuit temperature: max. 150 °C/5 s



Bending radius (min.):
4 x Ø of cable (fixed installed)
15 x Ø of cable (free motion)



Core identification:
black with number printing, with one core green-yellow (JZ), without (OZ)



Fire properties:
EN 60332-1-2: flame retardant
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases
EN 61034-2: low smoke emission
EN 60332-3-22 and 24: reduced flame propagation

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
HSLCH-JZ or -OZ				
2 x 0.75	26	5.8	49	500 Sp, 1000 Sp
3 x 0.75	26	7.0	63	500 Sp, 1000 Sp
4 x 0.75	26	7.5	77	500 Sp, 1000 Sp
5 x 0.75	26	7.2	87	500 Sp, 1000 Sp
7 x 0.75	26	7.9	110	500 Sp, 1000 Sp
12 x 0.75	26	11.4	187	500 Sp, 1000 Sp
25 x 0.75	26	16.0	397	500 D, 1000 D
2 x 1	19.5	8.7	130	500 Sp, 1000 Sp
3 x 1	19.5	6.6	70	500 Sp, 1000 Sp
4 x 1	19.5	7.2	85	500 Sp, 1000 Sp
5 x 1	19.5	8.7	111	500 Sp, 1000 Sp
7 x 1	19.5	8.7	130	500 Sp, 1000 Sp
12 x 1	19.5	11.3	215	500 Sp, 1000 Sp
18 x 1	19.5	13.5	315	500 D, 1000 D
25 x 1	19.5	17.7	464	500 D, 1000 D
2 x 1.5	13.3	6.7	67	500 Sp, 1000 Sp
3 x 1.5	13.3	7.0	85	500 Sp, 1000 Sp
4 x 1.5	13.3	7.9	106	500 Sp, 1000 Sp
5 x 1.5	13.3	8.6	130	500 Sp, 1000 Sp

HSLCH-JZ or -OZ

Control cable, halogen-free, screened

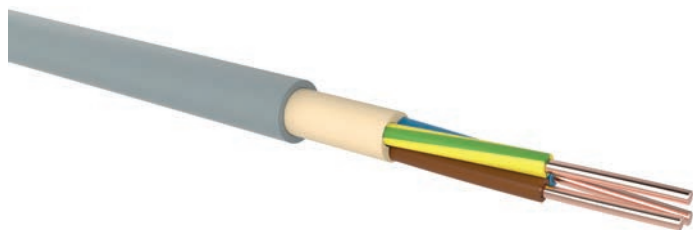
Number of cores x nominal cross-section (mm ²)	Max. conductorre- sistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
HSLCH-JZ or -OZ				
7 x 1.5	13.3	9.2	165	500 Sp, 1000 Sp
18 x 1.5	13.3	14.5	395	500 D, 1000 D
25 x 1.5	13.3	21.0	678	500 D, 1000 D
2 x 2.5	7.98	9.7	123	500 Sp, 1000 Sp
3 x 2.5	7.98	8.4	125	500 Sp, 1000 Sp
4 x 2.5	7.98	11.1	188	500 Sp, 1000 Sp
5 x 2.5	7.98	10.1	190	500 Sp, 1000 Sp
7 x 2.5	7.98	11.0	245	500 Sp, 1000 Sp
12 x 2.5	7.98	18.2	796	500 D, 1000 D
3 x 4	4.95	9.9	175	500 Sp, 1000 Sp
4 x 4	4.95	10.8	220	500 Sp, 1000 Sp
5 x 4	4.95	11.7	270	500 Sp, 1000 Sp
3 x 6	3.3	12.5	365	500 Sp, 1000 Sp
4 x 10	1.91	16.3	523	500 D, 1000 D
4 x 16	1.15	19.2	769	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

NHXMH

XLPE/FRNC installation cable

DESIGN



- 1 | Copper conductor, round solid (RE) resp. round stranded (RM)
- 2 | Core insulation (XLPE)
- 3 | Inner covering (halogen-free polymer compound)
- 4 | Sheath (halogen-free polymer compound grey RAL 7035)

APPLICATION

Cable for fixed installation on, in and under plaster, in dry, damp and wet locations and in masonry. Not suitable for installation in concrete or outdoors. The halogen-free cable provides improved fire resistance and is primarily used where large concentrations of people and valuable assets must be protected from fire damage.

TECHNICAL DATA



Standard:
DIN VDE 0250-214



Rated voltage:
300/500 V (U₀/U)



Test voltage:
2 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C
fixed: -40 °C up to 70 °C
moved: 5 °C up to 70 °C
conductor temperature: max. 70 °C
short circuit temperature: max. 160 °C/5 s



Bending radius (min.):
4 x Ø of cable



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases
EN 60332-3-22 and 24: reduced flame propagation
EN 61034-2: low smoke emission



Certificate:
VDE Germany

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
NHXMH				
2 x 1.5 RE	12.1	8.0	120	500 D, 1000 D
3 x 1.5 RE	12.1	8.4	133	500 D, 1000 D
4 x 1.5 RE	12.1	9.0	142	500 D, 1000 D
5 x 1.5 RE	12.1	9.6	183	500 D, 1000 D
7 x 1.5 RE	12.1	10.0	250	500 D, 1000 D
10 x 1.5 RE	12.1	12.9	287	500 D, 1000 D
12 x 1.5 RE	12.1	16.5	320	500 D, 1000 D
2 x 2.5 RE	7.41	8.8	150	500 D, 1000 D
3 x 2.5 RE	7.41	9.3	176	100 R, 500 Sp
4 x 2.5 RE	7.41	10.0	188	500 D, 1000 D
5 x 2.5 RE	7.41	10.5	249	500 D, 1000 D
7 x 2.5 RE	7.41	14.0	339	500 D, 1000 D
3 x 4 RE	4.61	10.5	247	500 D, 1000 D

NHXMH

XLPE/FRNC installation cable

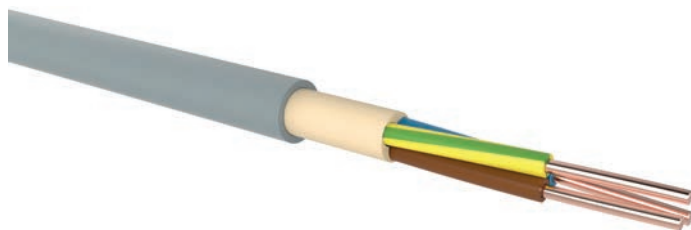
Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
NHXMH				
4 x 4 RE	4.61	12.0	279	500 D, 1000 D
5 x 4 RE	4.61	13.0	370	500 D, 1000 D
3 x 6 RE	3.08	12.0	335	500 D, 1000 D
4 x 6 RE	3.08	12.5	371	500 D, 1000 D
5 x 6 RE	3.08	14.5	488	500 D, 1000 D
3 x 10 RE	1.83	14.5	496	500 D, 1000 D
4 x 10 RE	1.83	15.5	569	500 D, 1000 D
5 x 10 RE	1.83	17.0	739	500 D, 1000 D
5 x 10 RM	1.83	17.0	717	500 D, 1000 D
4 x 16 RM	1.15	20.3	946	500 D, 1000 D
5 x 16 RM	1.15	21.0	1086	500 D, 1000 D
4 x 25 RM	0.727	25.1	1439	500 D, 1000 D
5 x 25 RM	0.727	25.5	1597	500 D, 1000 D
4 x 35 RM	0.524	26.5	1731	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

HMH

Light XLPE/FRNC installation cable

DESIGN



- 1 | Copper conductor, round solid (RE) resp. round stranded (RM)
- 2 | Core insulation (XLPE)
- 3 | Inner covering (halogen-free polymer compound)
- 4 | Sheath (halogen-free polymer compound grey RAL 7035)

APPLICATION

Halogen-free installation cable suitable for application in household and industry. For internal or outdoor application by protected installation. The cable is not UV-resistant.

TECHNICAL DATA



Standard:
DIN VDE 0250-215



Rated voltage:
300/500 V (U₀/U)



Test voltage:
2 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C max. 50 °C
fixed: -15 °C up to 70 °C
conductor temperature: max. 70 °C
short circuit temperature: max. 160 °C/5 s



Bending radius (min.):
10 x Ø of cable



Core identification:
HD 308 S2



Fire properties:
EN 50265-2-1: flame retardant
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
HMH				
2 x 1.5 RE	12.1	6.4	53	500 Sp
3 x 1.5 RE	12.1	7.4	69	500 D, 1000 D
4 x 1.5 RE	12.1	7.4	85	500 D, 1000 D
5 x 1.5 RE	12.1	7.6	104	500 D, 1000 D
7 x 1.5 RE	12.1	8.4	133	500 Sp
2 x 2.5 RE	7.41	7.3	73	500 D, 1000 D
3 x 2.5 RE	7.41	7.4	97	500 D, 1000 D
4 x 2.5 RE	7.41	8.3	122	500 D, 1000 D
5 x 2.5 RE	7.41	8.6	150	500 D, 1000 D
3 x 4 RE	4.61	8.7	143	500 D, 1000 D
4 x 4 RE	4.61	9.8	183	500 D, 1000 D
5 x 4 RE	4.61	10.3	226	500 D, 1000 D
3 x 6 RE	3.08	10.1	198	500 D, 1000 D
4 x 6 RE	3.08	11.0	257	500 D, 1000 D
5 x 6 RE	3.08	11.5	318	500 D, 1000 D
5 x 10 RM	1.83	15.0	523	500 D, 1000 D
5 x 16 RM	1.15	18.2	820	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

N2XH

XLPE/FRNC energy cable

DESIGN



- 1 | Copper conductor, round solid (RE), round stranded (RM) resp. sector-shaped stranded (SM)
- 2 | Core insulation (XLPE)
- 3 | Inner covering (halogen-free polymer compound)
- 4 | Sheath (halogen-free polymer compound black)

APPLICATION

These cables are intended for the stationary distribution of electrical energy in dry or damp premises and for fixed installations in air or concrete. Suitable to protect people and technical building equipment in the event of fire if circuit integrity is not required. Not allowed for installations underground or in water. The cable is not UV-resistant.

TECHNICAL DATA



Standard:
DIN VDE 0276-604



Rated voltage:
0.6/1 kV (U₀/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C
operating temperature: -30 °C up to 90 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
15 x Ø of cable (single core)
12 x Ø of cable (multi core)



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases
EN 60332-3-22 and 24: reduced flame propagation
EN 61034-2: low smoke emission



Certificate:
VDE Germany

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
N2XH					
2 x 1.5 RE	12.1	28	9.7	180	1000 D
3 x 1.5 RE	12.1	24	10.2	200	500 D, 1000 D
4 x 1.5 RE	12.1	24	10.9	230	500 D, 1000 D
5 x 1.5 RE	12.1	16	11.8	270	500 D, 1000 D
7 x 1.5 RE	12.1	15.5	12.7	310	1000 D
10 x 1.5 RE	12.1	10.5	15.6	358	1000 D
12 x 1.5 RE	12.1	12.5	16.3	460	500 D
14 x 1.5 RE	12.1	24	17.0	540	500 D
19 x 1.5 RE	12.1	10.5	19.0	650	500 D
24 x 1.5 RE	12.1	9.5	22.0	760	500 D
30 x 1.5 RE	12.1	9	23.2	900	500 D
40 x 1.5 RE	12.1	8	26.0	1200	500 D
2 x 2.5 RE	7.41	37	10.5	210	500 D, 1000 D
3 x 2.5 RE	7.41	32	11.1	250	500 D, 1000 D

N2XH

XLPE/FRNC energy cable

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
N2XH					
4 x 2.5 RE	7.41	32	11.9	290	500 D, 1000 D
5 x 2.5 RE	7.41	22	13.1	340	500 D, 1000 D
7 x 2.5 RE	7.41	20.5	14.1	400	1000 D
10 x 2.5 RE	7.41	18	17.1	540	1000 D
12 x 2.5 RE	7.41	16.5	18.0	600	500 D
14 x 2.5 RE	7.41	14	20.0	670	500 D
19 x 2.5 RE	7.41	14	21.0	840	500 D
24 x 2.5 RE	7.41	12.5	24.0	1050	500 D
30 x 2.5 RE	7.41	12	25.9	1230	500 D
40 x 2.5 RE	7.41	11	29.2	1820	500 D
1 x 4 RE	4.61	44	9.0	140	1000 D
2 x 4 RE	4.61	49	11.5	270	1000 D
3 x 4 RE	4.61	42	12.1	330	1000 D
4 x 4 RE	4.61	42	13.2	380	1000 D
5 x 4 RE	4.61	28	14.3	450	1000 D
7 x 4 RE	4.61	27	15.5	620	500 D
12 x 4 RE	4.61	42	21.0	820	500 D
2 x 6 RE	3.08	62	12.5	340	500 D
3 x 6 RE	3.08	53	13.4	410	500 D
4 x 6 RE	3.08	53	14.4	490	500 D
5 x 6 RE	3.08	36	15.7	560	500 D
7 x 6 RE	3.08	28	16.6	587	500 D
2 x 10 RE	1.83	85	14.2	450	500 D
3 x 10 RE	1.83	74	15.0	550	500 D
4 x 10 RE	1.83	74	16.3	670	500 D
5 x 10 RE	1.83	49	17.8	790	500 D
7 x 10 RE	1.83		19.5	937	500 D
1 x 16 RE	1.15	131	11.4	230	500 D, 1000 D
1 x 16 RM	1.15	131	11.6	235	500 D, 1000 D
2 x 16 RE	1.15	113	16.6	635	500 D
3 x 16 RE	1.15	98	17.1	671	500 D
3 x 16 RM	1.15	98	17.6	750	500 D
4 x 16 RE	1.15	98	18.9	843	500 D
4 x 16 RM	1.15	98	19.4	960	500 D
5 x 16 RE	1.15	65	21.4	1052	500 D
5 x 16 RM	1.15	65	21.2	1085	500 D
1 x 25 RM	0.727	177	13.5	345	500 D, 1000 D
3 x 25 RM	0.727	133	21.4	1200	500 D, 1000 D
3 x 25 + 16 RM/RE	0.727/1.15	133	23.6	1360	500 D
4 x 25 RM	0.727	133	23.6	1450	500 D, 1000 D
5 x 25 RM	0.727	133	25.9	1694	500 D, 1000 D

N2XH

XLPE/FRNC energy cable

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
N2XH					
1 x 35 RM	0.524	217	14.7	445	500 D, 1000 D
3 x 35 RM	0.524	162	24.3	1600	500 D
3 x 35 + 16 RM/RE	0.524/1.15	162	26.7	1715	500 D
3 x 35 + 16 SM/RE	0.524/1.15	162	25.5	1640	500 D
3 x 35 + 16 SM/RM	0.524/1.15	162	24.6	1640	500 D
4 x 35 SM	0.524	162	24.6	1850	500 D, 1000 D
5 x 35 RM	0.524	162	29.4	2132	500 D, 1000 D
1 x 50 RM	0.387	265	15.0	600	500 D, 1000 D
3 x 50 RM	0.387	197	27.3	1800	500 D
3 x 50 + 25 RM/RM	0.387/0.727	197	28.0	2050	500 D
3 x 50 + 25 SM/RM	0.387/0.727	197	27.6	2170	500 D
4 x 50 SM	0.387	197	27.6	2410	500 D, 1000 D
5 x 50 RM	0.387	197	35.0	2569	500 D, 1000 D
1 x 70 RM	0.268	336	17.9	810	500 D, 1000 D
3 x 70 RM	0.268	250	31.6	2550	500 D, 1000 D
3 x 70 + 35 SM/RM	0.268/0.524	250	31.9	2960	500 D
3 x 70 + 35 SM/SM	0.268/0.524	250	33.7	2760	500 D
4 x 70 SM	0.268	250	31.9	3340	500 D
5 x 70 RM	0.268	246	47.0	5400	500 D
1 x 95 RM	0.193	415	19.8	1070	500 D, 1000 D
3 x 95 + 50 SM/RM	0.193/0.387	308	35.8	3840	500 D
4 x 95 RM	0.193	298	40.6	3960	500 D
4 x 95 SM	0.193	308	35.8	4380	500 D
5 x 95 SM	0.193	308	40.8	4990	500 D
1 x 120 RM	0.153	485	21.5	1330	500 D, 1000 D
3 x 120 + 70 RM/RM	0.153/0.268	346	45.4	5160	500 D
3 x 120 + 70 SM/RM	0.153/0.268	359	39.7	4790	500 D
3 x 120 + 70 SM/SM	0.153/0.268	359	39.0	4750	500 D
4 x 120 SM	0.153	359	39.7	5420	500 D
5 x 120 RM	0.153	359	48.0	6774	500 D
5 x 120 SM	0.153	359	51.3	6212	500 D
1 x 150 RM	0.124	557	23.1	1620	500 D, 1000 D
3 x 150 RM	0.124	412	43.0	5180	300 D
3 x 150 + 70 SM/RM	0.124/0.268	412	44.3	5840	300 D
3 x 150 + 70 SM/SM	0.124/0.268	412	43.3	5810	300 D
3 x 150 + 95 SM/RM	0.124/0.193	412	44.3	5980	300 D
4 x 150 RM	0.124	412	49.5	6150	300 D
4 x 150 SM	0.124	412	44.3	6690	300 D
1 x 185 RM	0.0991	646	25.7	1990	300 D
3 x 185 + 95 RM/RM	0.0991/0.193	450	54.4	7780	300 D
3 x 185 + 95 SM/RM	0.0991/0.193	475	48.9	7020	300 D

N2XH

XLPE/FRNC energy cable

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
N2XH					
3 x 185 + 95 SM/SM	0.0991/0.193	475	47.1	6980	300 D
4 x 185 RM	0.0991	475	54.4	7780	300 D
4 x 185 SM	0.0991	475	48.9	8270	500 D
1 x 240 RM	0.0754	774	28.3	2570	500 D, 1000 D
3 x 240 + 120 RM/ RM	0.0754/0.153	538	61.5	9550	300 D
3 x 240 + 120 SM/ RM	0.0754/0.153	564	55.3	9240	300 D
3 x 240 + 120 SM/ SM	0.0754/0.153	564	52.6	9190	300 D
4 x 240 SM	0.0754	564	55.3	11110	300 D
1 x 300 RM	0.0601	901	31.4	3180	500 D, 1000 D
1 x 400 RM	0.047	1060	35.2	4160	500 D, 1000 D
1 x 500 RM	0.037	1252	38.4	5130	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

N2XH B2ca

XLPE/FRNC energy cable

DESIGN



- 1 | Copper conductor, round solid (RE), round stranded (RM) resp. sector-shaped stranded (SM)
- 2 | Core insulation (XLPE)
- 3 | Inner covering (halogen-free polymer compound)
- 4 | Sheath (halogen-free polymer compound black)

APPLICATION

These cables are intended for the stationary distribution of electrical energy in dry or damp premises and for fixed installations in air or concrete. Suitable to protect people and technical building equipment in the event of fire if circuit integrity is not required. Not allowed for installations underground or in water. The cable is not UV-resistant.

TECHNICAL DATA



Standard:
DIN VDE 0276-604



Rated voltage:
0.6/1 kV (U₀/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C
operating temperature: -30 °C up to 90 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
15 x Ø of cable (single core)
12 x Ø of cable (multi core)



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases
EN 60332-3-22 and 24: reduced flame propagation
EN 61034-2: low smoke emission



Certificate:
VDE Germany

Number of cores x nominal cross-section (mm²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
N2XH B2ca					
2 x 1.5 RE	12.1	28	9.7	180	1000 D
3 x 1.5 RE	12.1	24	10.2	200	500 D, 1000 D
4 x 1.5 RE	12.1	24	10.9	230	500 D, 1000 D
5 x 1.5 RE	12.1	16	11.8	270	500 D, 1000 D
7 x 1.5 RE	12.1	15.5	12.7	310	1000 D
10 x 1.5 RE	12.1	10.5	15.6	358	1000 D
12 x 1.5 RE	12.1	12.5	16.3	460	500 D
14 x 1.5 RE	12.1	24	17.0	540	500 D
19 x 1.5 RE	12.1	10.5	19.0	650	500 D
24 x 1.5 RE	12.1	9.5	22.0	760	500 D
30 x 1.5 RE	12.1	9	23.2	900	500 D
40 x 1.5 RE	12.1	8	26.0	1200	500 D
2 x 2.5 RE	7.41	37	10.5	210	500 D, 1000 D
3 x 2.5 RE	7.41	32	11.1	250	500 D, 1000 D

N2XH B2ca

XLPE/FRNC energy cable

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
N2XH B2ca					
4 x 2.5 RE	7.41	32	11.9	290	500 D, 1000 D
5 x 2.5 RE	7.41	22	13.1	340	500 D, 1000 D
7 x 2.5 RE	7.41	20.5	14.1	400	1000 D
10 x 2.5 RE	7.41	18	17.1	540	1000 D
12 x 2.5 RE	7.41	16.5	18.0	600	500 D
14 x 2.5 RE	7.41	14	20.0	670	500 D
19 x 2.5 RE	7.41	14	21.0	840	500 D
24 x 2.5 RE	7.41	12.5	24.0	1050	500 D
30 x 2.5 RE	7.41	12	25.9	1230	500 D
40 x 2.5 RE	7.41	11	29.2	1820	500 D
5 x 25 RM	0.727	133	25.9	1694	500 D, 1000 D
1 x 16 RM	1.15	131	11.6	235	500 D, 1000 D
1 x 25 RM	0.727	177	13.5	345	500 D, 1000 D
3 x 25 RM	0.727	133	21.4	1200	500 D, 1000 D
3 x 25 + 16 RM/RE	0.727/1.15	133	23.6	1360	500 D
4 x 25 RM	0.727	133	23.6	1450	500 D, 1000 D
1 x 35 RM	0.524	217	14.7	445	500 D, 1000 D
3 x 35 RM	0.524	162	24.3	1600	500 D
3 x 35 + 16 RM/RE	0.524/1.15	162	26.7	1715	500 D
3 x 35 + 16 SM/RE	0.524/1.15	162	25.5	1640	500 D
3 x 35 + 16 SM/RM	0.524/1.15	162	24.6	1640	500 D
4 x 35 SM	0.524	162	24.6	1850	500 D, 1000 D
5 x 35 RM	0.524	162	29.4	2132	500 D, 1000 D
1 x 50 RM	0.387	265	15.0	600	500 D, 1000 D
3 x 50 RM	0.387	197	27.3	1800	500 D
3 x 50 + 25 RM/RM	0.387/0.727	197	28.0	2050	500 D
3 x 50 + 25 SM/RM	0.387/0.727	197	27.6	2170	500 D
4 x 50 SM	0.387	197	27.6	2410	500 D, 1000 D
5 x 50 RM	0.387	197	35.0	2569	500 D, 1000 D
1 x 70 RM	0.268	336	17.9	810	500 D, 1000 D
3 x 70 RM	0.268	250	31.6	2550	500 D, 1000 D
3 x 70 + 35 SM/RM	0.268/0.524	250	31.9	2960	500 D
3 x 70 + 35 SM/SM	0.268/0.524	250	33.7	2760	500 D
4 x 70 SM	0.268	250	31.9	3340	500 D
5 x 70 RM	0.268	246	47.0	5400	500 D
1 x 95 RM	0.193	415	19.8	1070	500 D, 1000 D
3 x 95 + 50 SM/RM	0.193/0.387	308	35.8	3840	500 D
3 x 95 + 50 SM/SM	0.193/0.387	308	36.0	3800	500 D
4 x 95 RM	0.193	298	40.6	3960	500 D
4 x 95 SM	0.193	308	35.8	4380	500 D
5 x 95 SM	0.193	308	40.8	4990	500 D

N2XH B2ca

XLPE/FRNC energy cable

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
N2XH B2ca					
3 x 120 + 70 RM/RM	0.153/0.268	346	45.4	5160	500 D
3 x 120 + 70 SM/RM	0.153/0.268	359	39.7	4790	500 D
3 x 120 + 70 SM/SM	0.153/0.268	359	39.0	4750	500 D
4 x 120 SM	0.153	359	39.7	5420	500 D
5 x 120 RM	0.153	359	48.0	6774	500 D
5 x 120 SM	0.153	359	51.3	6212	500 D
3 x 150 RM	0.124	412	43.0	5180	300 D
3 x 150 + 70 SM/RM	0.124/0.268	412	44.3	5840	300 D
3 x 150 + 70 SM/SM	0.124/0.268	412	43.3	5810	300 D
3 x 150 + 95 SM/RM	0.124/0.193	412	44.3	5980	300 D
4 x 150 RM	0.124	412	49.5	6150	300 D
1 x 185 RM	0.0991	646	25.7	1990	300 D
4 x 150 SM	0.124	412	44.3	6690	300 D
3 x 185 + 95 RM/RM	0.0991/0.193	450	54.4	7780	300 D
3 x 185 + 95 SM/RM	0.0991/0.193	475	48.9	7020	300 D
3 x 185 + 95 SM/SM	0.0991/0.193	475	47.1	6980	300 D
4 x 185 SM	0.0991	475	48.9	8270	500 D
1 x 240 RM	0.0754	774	28.3	2570	500 D, 1000 D
3 x 240 + 120 RM/RM	0.0754/0.153	538	61.5	9550	300 D
3 x 240 + 120 SM/RM	0.0754/0.153	564	55.3	9240	300 D
4 x 240 SM	0.0754	564	55.3	11110	300 D
1 x 300 RM	0.0601	901	31.4	3180	500 D, 1000 D
1 x 400 RM	0.047	1060	35.2	4160	500 D, 1000 D
1 x 500 RM	0.037	1252	38.4	5130	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

(N)HXH FE180/E30 (VDE)

SI/FRNC energy cable with insulation integrity FE180 and circuit integrity E30

DESIGN



- 1 | Copper conductor, round solid (RE) resp. round stranded (RM)
- 2 | Core insulation (silicone rubber)
- 3 | Inner covering (halogen-free fixation tape)
- 4 | Sheath (halogen-free polymer compound orange)

APPLICATION

Suitable to protect people and technical building equipment in the event of fire if circuit integrity is required (circuit integrity is only maintained if these cables are installed with specified supporting elements). The cable is not UV-resistant.

TECHNICAL DATA



Standard:
adapted to DIN VDE 0266



Rated voltage:
0.6/1 kV (U₀/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C
operating temperature: -50 °C up to 90 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
15 x Ø of cable (single core)
12 x Ø of cable (multi core)



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases
EN 60332-3-22 and 24: reduced flame propagation
EN 61034-2: low smoke emission
IEC 60331-21, DIN VDE 0472-814: insulation integrity FE 180
DIN 4102-12: circuit integrity E30



Certificate:
VDE Germany

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
(N)HXH FE180/E30 (VDE)					
2 x 1.5 RE	12.1	29	8.1	110	1000 D
3 x 1.5 RE	12.1	24	8.6	125	1000 D
4 x 1.5 RE	12.1	24	9.3	140	1000 D
5 x 1.5 RE	12.1	24	10.1	175	1000 D
7 x 1.5 RE	12.1	14	11.0	220	1000 D
10 x 1.5 RE	12.1	13	13.9	295	500 D
12 x 1.5 RE	12.1	12	14.5	345	500 D
14 x 1.5 RE	12.1	11	15.2	385	500 D
16 x 1.5 RE	12.1	11	16.5	460	500 D
19 x 1.5 RE	12.1	11	16.9	500	500 D
24 x 1.5 RE	12.1	11	20.0	635	500 D
30 x 1.5 RE	12.1	9	21.2	750	500 D

(N)HXH FE180/E30 (VDE)

SI/FRNC energy cable with insulation integrity FE180 and circuit integrity E30

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
(N)HXH FE180/E30 (VDE)					
40 x 1.5 RE	12.1	8	23.5	980	500 D
2 x 2.5 RE	7.41	38	8.9	140	1000 D
5 x 2.5 RE	7.41	32	11.2	235	1000 D
7 x 2.5 RE	7.41	20	12.4	310	1000 D
10 x 2.5 RE	7.41	18	15.6	415	500 D
12 x 2.5 RE	7.41	17	15.9	475	500 D
14 x 2.5 RE	7.41	16	17.0	545	500 D
19 x 2.5 RE	7.41	16	19.1	725	500 D
24 x 2.5 RE	7.41	13	22.6	910	500 D
30 x 2.5 RE	7.41	12	23.9	1090	500 D
40 x 2.5 RE	7.41	11	26.3	1410	500 D
2 x 4 RE	4.61	51	10.5	195	1000 D
3 x 4 RE	4.61	42	11.1	240	1000 D
4 x 4 RE	4.61	42	12.3	295	1000 D
5 x 4 RE	4.61	42	13.5	355	1000 D
7 x 4 RE	4.61	28	14.7	450	500 D
10 x 4 RE	4.61	25	18.9	630	500 D
12 x 4 RE	4.61	23	19.5	730	500 D
2 x 6 RE	3.08	64	11.5	250	500 D
3 x 6 RE	3.08	53	12.4	315	500 D
4 x 6 RE	3.08	53	13.5	390	500 D
5 x 6 RE	3.08	53	14.8	470	500 D
7 x 6 RE	3.08	53	18.2	654	500 D
2 x 10 RE	1.83	86	13.2	360	500 D
3 x 10 RE	1.83	74	14.0	455	500 D
4 x 10 RE	1.83	74	15.4	570	500 D
5 x 10 RE	1.83	74	16.9	690	500 D
7 x 10 RE	3.08	73	20.6	965	500 D
1 x 16 RE	1.15	131	11.0	230	500 D, 1000 D
2 x 16 RE	1.15	110	15.4	520	500 D
3 x 16 RE	1.15	98	17.9	697	500 D
3 x 16 RM	1.15	98	16.4	670	500 D
4 x 16 RM	1.15	98	18.3	845	500 D
5 x 16 RE	1.15	98	20.1	1040	500 D
1 x 25 RM	0.727	177	11.2	340	500 D, 1000 D
3 x 25 RM	0.727	133	22.2	1090	500 D
3 x 25 + 16 RM/RM	0.727/1.15	133	24.5	1280	500 D
4 x 25 RM	0.727	133	24.5	1400	500 D
5 x 25 RM	0.727	133	27.2	1740	500 D
1 x 35 RM	0.524	217	12.0	415	500 D, 1000 D
3 x 35 RM	0.524	162	23.9	1310	500 D

(N)HXH FE180/E30 (VDE)

SI/FRNC energy cable with insulation integrity FE180 and circuit integrity E30

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
(N)HXH FE180/E30 (VDE)					
4 x 35 RM	0.524	162	26.6	1720	500 D
5 x 35 RM	0.524	162	29.5	2000	500 D
1 x 50 RM	0.387	265	13.9	570	500 D, 1000 D
3 x 50 RM	0.387	197	27.8	1780	500 D
3 x 50 + 25 RM/RM	0.387/0.727	197	31.0	2120	500 D
4 x 50 RM	0.387	197	31.0	2340	500 D
5 x 50 RM	0.387	197	34.4	2910	500 D
1 x 70 RM	0.268	336	15.6	765	500 D, 1000 D
3 x 70 RM	0.268	250	31.6	2430	500 D
3 x 70 + 35 RM/RM	0.268/0.524	250	35.1	2840	500 D
4 x 70 RM	0.268	250	35.1	3200	500 D
5 x 70 RM	0.268	250	38.8	3950	500 D
1 x 95 RM	0.193	415	17.7	1020	500 D, 1000 D
3 x 95 RM	0.193	308	36.4	3230	500 D
3 x 95 + 50 RM/RM	0.193/0.387	308	40.5	3830	500 D
4 x 95 RM	0.193	308	40.5	4250	500 D
1 x 120 RM	0.153	485	19.4	1270	500 D, 1000 D
3 x 120 RM	0.153	359	39.7	4000	500 D, 1000 D
3 x 120 + 70 RM/RM	0.153/0.268	359	44.0	4780	500 D, 1000 D
4 x 120 RM	0.153	359	44.0	5230	500 D
1 x 150 RM	0.124	557	21.2	1540	500 D, 1000 D
4 x 150 RM	0.124	412	48.6	6390	500 D
1 x 185 RM	0.0991	507	26.4	2160	500 D, 1000 D
3 x 185 + 95 RM/RM	0.0991/0.193	480	52.9	8500	500 D
4 x 185 RM	0.0991	480	59.8	9704	500 D
1 x 240 RM	0.0754	604	26.9	2540	500 D, 1000 D
3 x 240 + 120 RM/RM	0.0754/0.153	565	58.8	11000	500 D
1 x 300 RM	0.0601	697	30.0	3300	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

(N)HXH FE180/E30 (HD 604)

SI/FRNC energy cable with insulation integrity FE180 and circuit integrity E30

DESIGN



- 1 | Copper conductor, round solid (RE)
- 2 | Core insulation (silicone rubber)
- 3 | Inner covering (halogen-free fixation tape)
- 4 | Sheath (halogen-free polymer compound orange)

APPLICATION

Suitable to protect people and technical building equipment in the event of fire if circuit integrity is required (circuit integrity is only maintained if these cables are installed with specified supporting elements). The cable is not UV-resistant.

TECHNICAL DATA



Standard:
adapted to HD 604, DIN VDE 0266



Rated voltage:
0.6/1 kV (U_o/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C
operating temperature: -30 °C up to 90 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
12 x Ø of cable



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases
EN 60332-3-22 and 24: reduced flame propagation
EN 61034-2: low smoke emission
IEC 60331-21, DIN VDE 0472-814: insulation integrity FE 180
DIN 4102-12: circuit integrity E30



Certificate:
VDE Germany

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
(N)HXH FE180/E30 (HD 604)					
2 x 1.5 RE	12.1	29	7.8	95	1000 D
3 x 1.5 RE	12.1	24	8.3	115	1000 D
4 x 1.5 RE	12.1	24	9.1	140	1000 D
5 x 1.5 RE	12.1	24	10.0	165	1000 D
7 x 1.5 RE	12.1	16	10.8	210	1000 D
10 x 1.5 RE	12.1	13	14.0	300	500 D
12 x 1.5 RE	12.1	13	14.4	340	500 D
14 x 1.5 RE	12.1	12	15.3	390	500 D
16 x 1.5 RE	12.1	12	16.1	440	500 D
19 x 1.5 RE	12.1	11	17.1	510	500 D
21 x 1.5 RE	12.1	10	17.1	550	500 D

(N)HXH FE180/E30 (HD 604)

SI/FRNC energy cable with insulation integrity FE180 and circuit integrity E30

Number of cores x nominal cross-section (mm²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
(N)HXH FE180/E30 (HD 604)					
24 x 1.5 RE	12.1	10	20.3	650	500 D
30 x 1.5 RE	12.1	8	21.6	785	500 D
40 x 1.5 RE	12.1	8	24.5	1025	500 D
52 x 1.5 RE	12.1	8	28.4	1325	500 D
61 x 1.5 RE	12.1	7	30.2	1530	500 D
2 x 2.5 RE	7.41	38	8.8	130	1000 D
3 x 2.5 RE	7.41	32	9.4	160	1000 D
4 x 2.5 RE	7.41	32	10.4	195	1000 D
5 x 2.5 RE	7.41	32	11.3	230	1000 D
7 x 2.5 RE	7.41	20	12.5	300	1000 D
10 x 2.5 RE	7.41	17	16.1	425	500 D
12 x 2.5 RE	7.41	10	16.8	495	500 D
14 x 2.5 RE	7.41	16	17.6	565	500 D
16 x 2.5 RE	7.41	15	18.8	645	500 D
19 x 2.5 RE	7.41	14	19.9	745	500 D
21 x 2.5 RE	7.41	13	20.9	810	500 D
24 x 2.5 RE	7.41	12	24.3	1030	500 D
30 x 2.5 RE	7.41	12	25.8	1165	500 D
40 x 2.5 RE	7.41	11	28.4	1495	500 D
52 x 2.5 RE	7.41	10	33.1	1950	500 D
61 x 2.5 RE	7.41	9	35.2	2250	500 D
2 x 4 RE	4.61	51	10.2	180	1000 D
3 x 4 RE	4.61	42	10.8	220	1000 D
4 x 4 RE	4.61	42	12.0	270	1000 D
5 x 4 RE	4.61	42	13.0	325	1000 D
2 x 6 RE	3.08	63	11.3	235	500 D
3 x 6 RE	3.08	54	12.2	295	500 D
4 x 6 RE	3.08	54	13.5	375	500 D
5 x 6 RE	3.08	54	14.8	445	500 D
2 x 10 RE	1.83	86	13.8	365	500 D
3 x 10 RE	1.83	74	14.6	455	500 D
4 x 10 RE	1.83	74	16.2	575	500 D
5 x 10 RE	1.83	74	17.9	705	500 D

Technical changes reserved. All figures are therefore without guarantee.

NHXX FE180/E90

SI/FRNC energy cable with insulation integrity FE180 and circuit integrity E90

DESIGN



- 1 | Copper conductor, round solid (RE) resp. round stranded (RM)
- 2 | Core insulation (silicone rubber)
- 3 | Inner covering (halogen-free fixation tape)
- 4 | Sheath (halogen-free polymer compound orange)

APPLICATION

Suitable to protect people and technical building equipment in the event of fire if circuit integrity is required (circuit integrity is only maintained if these cables are installed with specified supporting elements). The cable is not UV-resistant.

TECHNICAL DATA



Standard:
adapted to DIN VDE 0266



Rated voltage:
0.6/1 kV (U₀/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C
operating temperature: -50 °C up to 90 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
15 x Ø of cable (single core)
12 x Ø of cable (multi core)



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases
EN 60332-3-22 and 24: reduced flame propagation
EN 61034-2: low smoke emission
IEC 60331-21, DIN VDE 0472-814: insulation integrity FE 180
DIN 4102-12: circuit integrity E90



Certificate:
VDE Germany

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
NHXX FE180/E90					
2 x 1.5 RE	12.1	28	13.0	185	1000 D
3 x 1.5 RE	12.1	24	13.5	210	1000 D
4 x 1.5 RE	12.1	24	14.4	240	1000 D
5 x 1.5 RE	12.1	16	15.5	280	500 D, 1000 D
6 x 1.5 RE	12.1	15.5	16.5	330	1000 D
7 x 1.5 RE	12.1	15.5	17.0	345	1000 D
8 x 1.5 RE	12.1	13.5	18.9	390	1000 D
10 x 1.5 RE	12.1	13	20.1	465	500 D
12 x 1.5 RE	12.1	12.5	20.7	520	500 D
14 x 1.5 RE	12.1	12	21.5	655	500 D
16 x 1.5 RE	12.1	11.5	22.6	725	500 D
19 x 1.5 RE	12.1	10.5	23.6	810	500 D

NHXX FE180/E90

SI/FRNC energy cable with insulation integrity FE180 and circuit integrity E90

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
NHXX FE180/E90					
24 x 1.5 RE	12.1	9.5	27.4	895	500 D
30 x 1.5 RE	12.1	9	28.9	1180	500 D
40 x 1.5 RE	12.1	8	32.7	1320	500 D
2 x 2.5 RE	7.41	37	13.8	225	500 D
3 x 2.5 RE	7.41	32	14.4	255	1000 D
4 x 2.5 RE	7.41	32	15.4	300	1000 D
5 x 2.5 RE	7.41	22	16.5	350	1000 D
7 x 2.5 RE	7.41	20.5	17.7	445	1000 D
8 x 2.5 RE	7.41	18	20.3	495	500 D
10 x 2.5 RE	7.41	17.5	21.7	645	500 D
12 x 2.5 RE	7.41	16.5	22.3	745	500 D
14 x 2.5 RE	7.41	16	23.3	750	500 D
16 x 2.5 RE	7.41	15	24.5	925	500 D
19 x 2.5 RE	7.41	14	25.6	1040	500 D
24 x 2.5 RE	7.41	12.5	30.0	1175	500 D
30 x 2.5 RE	7.41	12	32.0	1390	500 D
40 x 2.5 RE	7.41	11	35.9	1735	500 D
2 x 4 RE	4.61	49	14.7	270	1000 D
3 x 4 RE	4.61	42	15.4	315	1000 D
4 x 4 RE	4.61	42	16.5	375	1000 D
5 x 4 RE	4.61	28	17.8	465	1000 D
7 x 4 RE	4.61	27	19.1	555	500 D
10 x 4 RE	4.61	23	23.6	755	500 D
12 x 4 RE	4.61	22	24.3	925	500 D
14 x 4 RE	4.61	21	25.4	1005	500 D
19 x 4 RE	4.61	18.5	28.2	1345	500 D
2 x 6 RE	3.08	62	15.7	335	500 D
3 x 6 RE	3.08	53	16.5	400	500 D
4 x 6 RE	3.08	53	17.7	480	500 D
5 x 6 RE	3.08	36	19.2	560	500 D
7 x 6 RE	43.08	34	20.3	725	1000 D
2 x 10 RE	1.83	85	17.3	455	500 D
2 x 10 RM	1.83	74	17.8	555	500 D
3 x 10 RE	1.83	74	18.2	550	500 D
3 x 10 RM	1.83	74	18.8	770	500 D
4 x 10 RE	1.83	74	19.6	690	500 D
4 x 10 RM	1.83	74	20.3	790	500 D
5 x 10 RE	1.83	49	21.3	825	500 D
5 x 10 RM	1.83	49	22.0	920	500 D
7 x 10 RE	1.83	48	23.0	1050	500 D
1 x 16 RE	1.15	131	11.6	280	500 D, 1000 D

NHXX FE180/E90

SI/FRNC energy cable with insulation integrity FE180 and circuit integrity E90

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
NHXX FE180/E90					
1 x 16 RM	1.15	131	11.9	300	500 D, 1000 D
2 x 16 RE	1.15	113	19.1	685	500 D
2 x 16 RM	1.15	113	19.6	695	500 D
3 x 16 RE	1.15	98	20.1	790	500 D
3 x 16 RM	1.15	98	20.8	850	500 D
4 x 16 RE	1.15	98	21.8	1010	500 D
4 x 16 RM	1.15	98	22.5	1075	500 D
5 x 16 RE	1.15	65	23.7	1165	500 D
5 x 16 RM	1.15	65	24.5	1245	500 D
7 x 16 RM	1.15	58	26.5	1580	500 D
1 x 25 RM	0.727	177	13.6	390	500 D, 1000 D
2 x 25 RM	0.727	152	22.9	1080	500 D
3 x 25 RE	0.727	133	24.3	1290	500 D
3 x 25 + 16 RM/RM	0.727/1.15	133	26.5	1435	500 D, 1000 D
4 x 25 RM	0.727	133	26.5	1515	500 D
5 x 25 RM	0.727	90	29.1	1780	500 D
1 x 35 RM	0.524	217	15.0	495	500 D, 1000 D
2 x 35 RM	0.524	186	25.4	1320	500 D
3 x 35 RM	0.524	162	27.2	1615	500 D
3 x 35 + 16 RM/RM	0.524/1.15	162	29.7	1215	500 D
3 x 35 + 25 RM/RM	0.524/0.727	162	29.7	1815	500 D
4 x 35 RM	0.524	162	29.7	1990	500 D
5 x 35 RM	0.524	109	33.3	2480	500 D
1 x 50 RM	0.387	265	16.5	645	500 D, 1000 D
3 x 50 RM	0.387	197	30.9	2035	500 D
3 x 50 + 25 RM/RM	0.387/0.727	197	34.3	2470	500 D
3 x 50 + 35 RM/RM	0.387/0.524	197	34.3	2535	500 D
4 x 50 RM	0.387	197	34.3	2680	500 D
5 x 50 RM	0.387	133	37.8	3320	500 D
1 x 70 RM	0.268	336	18.4	870	500 D, 1000 D
3 x 70 RM	0.268	250	34.9	2910	500 D
3 x 70 + 35 RM/RM	0.268/0.524	250	38.4	3305	500 D
3 x 70 + 50 RM/RM	0.268/0.387	250	38.4	3425	500 D
4 x 70 RM	0.268	250	38.4	3615	500 D
5 x 70 RM	0.268	180	42.9	4580	500 D
1 x 95 RM	0.193	415	20.5	1150	500 D, 1000 D
3 x 95 RM	0.193	415	39.9	3910	500 D
3 x 95 + 50 RM/RM	0.193/0.387	308	44.2	4490	500 D
4 x 95 RM	0.193	308	45.0	4935	500 D
5 x 95 RM	0.193	215	49.0	6150	500 D
1 x 120 RM	0.153	485	22.2	1380	500 D, 1000 D

NHXX FE180/E90

SI/FRNC energy cable with insulation integrity FE180 and circuit integrity E90

Number of cores x nominal cross-section (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
NHXX FE180/E90					
3 x 120 RM	0.153	359	43.7	4825	500 D
3 x 120 + 70 RM/RM	0.153/0.268	359	48.1	5560	500 D
4 x 120 RM	0.153	359	48.1	6150	500 D
5 x 120 RM	0.153	247	53.3	7525	500 D
1 x 150 RM	0.124	557	24.0	1700	500 D, 1000 D
3 x 150 + 70 RM/RM	0.124/0.268	412	52.3	6600	300 D
3 x 150 RM	0.124	412	47.4	5830	300 D
4 x 150 RM	0.124	412	49.0	7500	300 D
5 x 150 RM	0.124	279	58.4	9250	300 D
1 x 185 RM	0.0991	646	26.4	2165	500 D, 1000 D
3 x 185 RM	0.0991	475	52.9	7460	300 D
3 x 185 + 95 RM/RM	0.0991/0.193	475	58.9	8520	300 D
4 x 185 RM	0.0991	475	58.9	9370	500 D
5 x 185 RM	0.0991	321	65.3	11365	300 D
1 x 240 RM	0.0754	774	29.4	2765	500 D, 1000 D
3 x 240 RM	0.754	564	59.8	9530	300 D
3 x 240 + 120 RM/RM	0.0754/0.153	564	66.0	10870	300 D
4 x 240 RM	0.0754	564	66.0	12025	300 D
5 x 240 RM	0.0754	380	73.8	14750	300 D

Technical changes reserved. All figures are therefore without guarantee.

N2XCH

XLPE/FRNC energy cable, screened

DESIGN



- 1 | Copper conductor, round solid (RE), round stranded (RM) resp. sector-shaped stranded (SM)
- 2 | Core insulation (XLPE)
- 3 | Inner covering (halogen-free polymer compound)
- 4 | Screen (bare copper wires and counter helix, over halogen-free plastic tape)
- 5 | Sheath (halogen-free polymer compound black)

APPLICATION

These cables are intended for the stationary distribution of electrical energy in dry or damp premises and for fixed installations in air or concrete. Suitable to protect people and technical building equipment in the event of fire if circuit integrity is not required. Not allowed for installations underground or in water. The cable is not UV-resistant.

TECHNICAL DATA



Standard:
DIN VDE 0276-604



Rated voltage:
0.6/1 kV (U₀/U)



Test voltage:
4 kV / 150 Hz



Temperature range:
laying temperature: min. -5 °C
operating temperature: -50 °C up to 90 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
12 x Ø of cable



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases
EN 60332-3-22 and 24: reduced flame propagation
EN 61034-2: low smoke emission



Certificate:
VDE Germany

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
N2XCH					
2 x 1.5 RE/1.5	12.1	28	14.0	240	500 D, 1000 D
3 x 1.5 RE/1.5	12.1	25	14.5	250	500 D, 1000 D
4 x 1.5 RE/1.5	12.1	25	15.6	260	500 D, 1000 D
5 x 1.5 RE/1.5	12.1	16	16.5	295	500 D, 1000 D
7 x 1.5 RE/2.5	12.1	15.5	17.4	360	500 D, 1000 D
12 x 1.5 RE/2.5	12.1	12.5	21.2	530	500 D
19 x 1.5 RE/4	12.1	10.5	24.5	720	500 D
24 x 1.5 RE/6	12.1	9.5	27.5	850	500 D
30 x 1.5 RE/6	12.1	9	28.9	1020	500 D
40 x 1.5 RE/10	12.1	8	32.2	1370	500 D
2 x 2.5 RE/2.5	7.41	38	15.2	270	1000 D
3 x 2.5 RE/2.5	7.41	33	15.8	290	1000 D

N2XCH

XLPE/FRNC energy cable, screened

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
N2XCH					
4 x 2.5 RE/2.5	7.41	33	16.6	330	1000 D
5 x 2.5 RE/2.5	7.41	22	17.6	365	1000 D
5 x 2.5 RE/16	7.41		18.9	571	1000 D
7 x 2.5 RE/2.5	7.41	20.5	18.8	450	1000 D
12 x 2.5 RE/4	7.41	16.5	23.7	700	500 D, 1000 D
19 x 2.5 RE/6	7.41	14	26.5	985	500 D
24 x 2.5 RE/10	7.41	12.5	30.7	1180	500 D
30 x 2.5 RE/10	7.41	12	32.0	1400	500 D
40 x 2.5 RE/10	7.41	11	35.3	1930	500 D
2 x 4 RE/4	4.61	49	16.8	320	1000 D
3 x 4 RE/4	4.61	43	17.4	380	1000 D
4 x 4 RE/4	4.61	43	18.5	440	1000 D
5 x 4 RE/4	4.61	28	19.7	525	1000 D
7 x 4 RE/4	4.61	27	20.8	595	500 D
2 x 6 RE/6	3.08	62	17.8	410	500 D
3 x 6 RE/6	3.08	54	18.7	470	500 D
4 x 6 RE/6	3.08	54	19.7	550	500 D
2 x 10 RE/10	1.83	85	19.9	550	500 D
3 x 10 RE/10	1.83	75	20.7	640	500 D
4 x 10 RE/10	1.83	75	22.2	760	500 D
2 x 16 RE/16	1.15	113	22.5	785	500 D
3 x 16 RE/16	1.15	100	23.7	829	500 D
4 x 16 RE/16	1.15	100	25.3	1070	500 D
5 x 16 RM/16	1.15	65	27.1	1210	500 D
3 x 25 RM/16	0.727	136	27.3	1290	500 D
4 x 25 RM/16	0.524	136	29.5	1700	500 D
3 x 35 RM/16	0.524	165	28.7	1730	500 D
4 x 35 SM/16	0.524	162	32.7	2150	500 D
3 x 50 SM/25	0.387	201	29.5	1990	500 D
4 x 50 SM/25	0.387	197	33.9	2600	500 D
3 x 70 SM/35	0.268	255	34.3	2830	500 D
4 x 70 SM/35	0.268	250	39.8	3550	500 D
3 x 95 SM/50	0.193	314	37.2	4350	500 D
4 x 95 SM/50	0.193	314	43.5	4800	500 D
3 x 120 SM/70	0.153	364	40.9	5270	500 D
4 x 120 SM/70	0.153	364	47.6	6500	500 D
3 x 150 SM/70	0.124	416	44.9	5450	300 D
4 x 150 SM/70	0.124	416	52.3	7950	300 D
3 x 185 SM/95	0.099	480	50.2	6800	300 D
4 x 185 SM/95	0.099	480	58.1	9970	300 D

N2XCH

XLPE/FRNC energy cable, screened

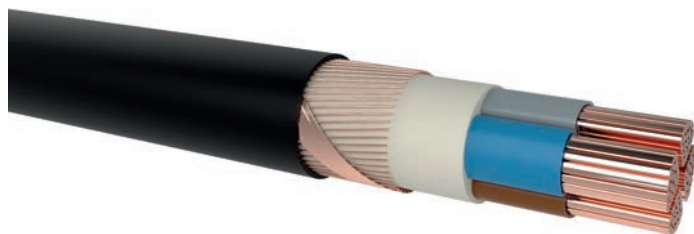
Number of cores x nominal cross-section / cross-section of screen (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
N2XCH					
3 x 240 SM/120	0.075	565	55.2	8900	300 D
4 x 240 SM/120	0.075	565	64.7	12900	300 D

Technical changes reserved. All figures are therefore without guarantee.

N2XCH B2ca

XLPE/FRNC energy cable

DESIGN



- 1 | Copper conductor, round solid (RE), round stranded (RM) resp. sector-shaped stranded (SM)
- 2 | Core insulation (XLPE)
- 3 | Inner covering (halogen-free polymer compound)
- 4 | Screen (bare copper wires and counter helix, over halogen-free plastic tape)
- 5 | Sheath (halogen-free polymer compound black)

APPLICATION

These cables are intended for the stationary distribution of electrical energy in dry or damp premises and for fixed installations in air or concrete. Suitable to protect people and technical building equipment in the event of fire if circuit integrity is not required. Not allowed for installations underground or in water. The cable is not UV-resistant.

TECHNICAL DATA



Standard:
DIN VDE 0276-604



Rated voltage:
0.6/1 kV (U₀/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C
operating temperature: -50 °C up to 90 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
12 x Ø of cable



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases
EN 60332-3-22 and 24: reduced flame propagation
EN 61034-2: low smoke emission



Certificate:
VDE Germany

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
N2XCH B2ca					
2 x 1.5 RE/1.5	12.1	28	14.0	240	500 D, 1000 D
3 x 1.5 RE/1.5	12.1	25	14.5	250	500 D, 1000 D
4 x 1.5 RE/1.5	12.1	25	15.6	260	500 D, 1000 D
5 x 1.5 RE/1.5	12.1	16	16.5	295	500 D, 1000 D
7 x 1.5 RE/2.5	12.1	15.5	17.4	360	500 D, 1000 D
12 x 1.5 RE/2.5	12.1	12.5	21.2	530	500 D
19 x 1.5 RE/4	12.1	10.5	24.5	720	500 D
24 x 1.5 RE/6	12.1	9.5	27.5	850	500 D
30 x 1.5 RE/6	12.1	9	28.9	1020	500 D
40 x 1.5 RE/10	12.1	8	32.2	1370	500 D
2 x 2.5 RE/2.5	7.41	38	15.2	270	1000 D
3 x 2.5 RE/2.5	7.41	33	15.8	290	1000 D

N2XCH B2ca

XLPE/FRNC energy cable

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
N2XCH B2ca					
4 x 2.5 RE/2.5	7.41	33	16.6	330	1000 D
5 x 2.5 RE/2.5	7.41	22	17.6	365	1000 D
5 x 2.5 RE/16	7.41		18.9	571	1000 D
7 x 2.5 RE/2.5	7.41	20.5	18.8	450	1000 D
12 x 2.5 RE/4	7.41	16.5	23.7	700	500 D, 1000 D
19 x 2.5 RE/6	7.41	14	26.5	985	500 D
24 x 2.5 RE/10	7.41	12.5	30.7	1180	500 D
30 x 2.5 RE/10	7.41	12	32.0	1400	500 D
40 x 2.5 RE/10	7.41	11	35.3	1930	500 D
2 x 4 RE/4	4.61	49	16.8	320	1000 D
3 x 4 RE/4	4.61	43	17.4	380	1000 D
4 x 4 RE/4	4.61	43	18.5	440	1000 D
5 x 4 RE/4	4.61	28	19.7	525	1000 D
7 x 4 RE/4	4.61	27	20.8	595	500 D
2 x 6 RE/6	3.08	62	17.8	410	500 D
3 x 6 RE/6	3.08	54	18.7	470	500 D
4 x 6 RE/6	3.08	54	19.7	550	500 D
2 x 10 RE/10	1.83	85	19.9	550	500 D
3 x 10 RE/10	1.83	75	20.7	640	500 D
4 x 10 RE/10	1.83	75	22.2	760	500 D
2 x 16 RE/16	1.15	113	22.5	785	500 D
3 x 16 RE/16	1.15	100	23.7	829	500 D
4 x 16 RE/16	1.15	100	25.3	1070	500 D
5 x 16 RM/16	1.15	65	27.1	1210	500 D
3 x 25 RM/16	0.727	136	27.3	1290	500 D
4 x 25 RM/16	0.524	136	29.5	1700	500 D
3 x 35 RM/16	0.524	165	28.7	1730	500 D
4 x 35 SM/16	0.524	162	32.7	2150	500 D
3 x 50 SM/25	0.387	201	29.5	1990	500 D
4 x 50 SM/25	0.387	197	33.9	2600	500 D
3 x 70 SM/35	0.268	255	34.3	2830	500 D
4 x 70 SM/35	0.268	250	39.8	3550	500 D
3 x 95 SM/50	0.193	314	37.2	4350	500 D
4 x 95 SM/50	0.193	314	43.5	4800	500 D
3 x 120 SM/70	0.153	364	40.9	5270	500 D
4 x 120 SM/70	0.153	364	47.6	6500	500 D
3 x 150 SM/70	0.124	416	44.9	5450	300 D
4 x 150 SM/70	0.124	416	52.3	7950	300 D
3 x 185 SM/95	0.099	480	50.2	6800	300 D
4 x 185 SM/95	0.099	480	58.1	9970	300 D

N2XCH B2ca

XLPE/FRNC energy cable

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Max. conductor resistance (Ω /km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
N2XCH B2ca					
3 x 240 SM/120	0.075	565	55.2	8900	300 D
4 x 240 SM/120	0.075	565	64.7	12900	300 D

Technical changes reserved. All figures are therefore without guarantee.

(N)HXCH FE180/E30 (VDE)

SI/FRNC cable, with insulation integrity FE180 and circuit integrity E30, screened

DESIGN



- 1 | Copper conductor, round solid (RE) resp. round stranded (RM)
- 2 | Primary core insulation (silicone rubber)
- 3 | Secondary core insulation (silicone rubber)
- 4 | Inner covering (halogen-free polymer compound)
- 5 | Screen (bare copper wires and counter helix)
- 6 | Taping (halogen-free plastic tape)
- 7 | Sheath (halogen-free polymer compound orange)

APPLICATION

Suitable to protect people and technical building equipment in the event of fire if circuit integrity is required (circuit integrity is only maintained if these cables are installed with specified supporting elements). The cable is not UV-resistant.

TECHNICAL DATA



Standard:
adapted to DIN VDE 0266



Rated voltage:
0.6/1 kV (U₀/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C
operating temperature: -50 °C up to 90 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
12 x Ø of cable



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases
EN 60332-3-22 and 24: reduced flame propagation
EN 61034-2: low smoke emission
IEC 60331-21, DIN VDE 0472-814: insulation integrity FE 180
DIN 4102-12: circuit integrity E30



Certificate:
VDE Germany

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
(N)HXCH FE180/E30 (VDE)					
2 x 1.5 RE/1.5	12.1	29	11.6	185	1000 D
3 x 1.5 RE/1.5	12.1	24	12.1	205	1000 D
4 x 1.5 RE/1.5	12.1	24	13.0	235	1000 D
4 x 1.5 RE/16	12.1	24	19.0	455	1000 D
4 x 1.5 RE/1.5	12.1	24	13.8	265	1000 D
7 x 1.5 RE/2.5	12.1	14	14.7	330	1000 D
7 x 1.5 RE/16	12.1	14	18.6	550	1000 D
10 x 1.5 RE/2.5	12.1	13	17.5	425	500 D
12 x 1.5 RE/2.5	12.1	12	18.2	475	500 D
14 x 1.5 RE/2.5	12.1	11	18.9	525	500 D

(N)HXCH FE180/E30 (VDE)

SI/FRNC cable, with insulation integrity FE180 and circuit integrity E30, screened

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
(N)HXCH FE180/E30 (VDE)					
19 x 1.5 RE/4	12.1	11	21.2	660	500 D
19 x 1.5 RE/16	12.1	11	25.3	942	500 D
24 x 1.5 RE/6	12.1	10	24.5	835	500 D
30 x 1.5 RE/6	12.1	9	25.7	970	500 D
40 x 1.5 RE/10	12.1	8	28.4	1240	500 D
2 x 2.5 RE/2.5	7.41	38	12.4	230	1000 D
3 x 2.5 RE/2.5	7.41	32	13.1	265	1000 D
4 x 2.5 RE/2.5	7.41	32	14.0	305	1000 D
4 x 2.5 RE/16	7.41	32	17.6	476	1000 D
5 x 2.5 RE/2.5	7.41	32	14.9	345	1000 D
4 x 2.5 RE/2.5	7.41	32	18.0	380	1000 D
7 x 2.5 RE/16	7.41	20	19.9	642	1000 D
10 x 2.5 RE/4	7.41	18	19.9	575	500 D
12 x 2.5 RE/4	7.41	17	20.4	635	500 D
14 x 2.5 RE/6	7.41	16	21.3	705	500 D
19 x 2.5 RE/6	7.41	16	23.4	910	500 D
24 x 2.5 RE/10	7.41	13	27.2	1155	500 D
30 x 2.5 RE/10	7.41	12	28.8	1365	500 D
24 x 2.5 RE/10	7.41	11	31.4	1710	500 D
2 x 4 RE/4	4.61	51	14.7	315	1000 D
3 x 4 RE/4	4.61	42	15.4	365	1000 D
4 x 4 RE/4	4.61	42	16.4	420	1000 D
4 x 4 RE/16	4.61	42	15.6	580	1000 D
7 x 4 RE/16	4.61		19.1	790	500 D
10 x 4 RE/6	4.61	25	23.2	820	500 D
12 x 4 RE/6	4.61	23	23.8	920	500 D
14 x 4 RE/6	4.61	22	24.9	1030	500 D
19 x 4 RE/10	4.61	22	27.8	1050	500 D
2 x 6 RE/6	3.08	64	15.7	395	500 D
3 x 6 RE/6	3.08	53	16.4	460	500 D
4 x 6 RE/6	3.08	53	17.8	550	500 D
4 x 6 RE/16	3.08	53	19.9	697	500 D
5 x 6 RE/16	3.08	53	23.5	895	500 D
2 x 10 RE/10	1.83	86	17.9	555	500 D
3 x 10 RE/10	1.83	74	18.9	655	500 D
4 x 10 RE/10	1.83	74	20.1	770	500 D
5 x 10 RE/10	1.83	74	21.6	905	500 D
2 x 16 RE/16	1.15	110	20.1	775	500 D
3 x 16 RE/16	1.15	98	21.1	930	500 D
4 x 16 RE/16	1.15	97	26.0	1300	500 D

(N)HXCH FE180/E30 (VDE)

SI/FRNC cable, with insulation integrity FE180 and circuit integrity E30, screened

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
(N)HXCH FE180/E30 (VDE)					
4 x 16 RM/16	1.15	98	22.8	1110	500 D
5 x 16 RE/16	1.15	98	24.8	1320	500 D
3 x 25 RM/16	0.727	133	27.4	1410	500 D
4 x 25 RM/16	0.727	133	29.0	1655	500 D
5 x 25 RM/16	0.727	133	31.7	1995	500 D
3 x 35 RM/16	0.524	162	28.6	1600	500 D
3 x 35 RM/35	0.524	162	33.0	2200	500 D
4 x 35 RM/16	0.524	162	31.1	1980	500 D
5 x 35 RM/16	0.524	162	34.2	2420	500 D
4 x 50 RM/25	0.387	197	35.7	2700	500 D
5 x 50 RM/25	0.387	197	39.1	3285	500 D
3 x 70 RM/35	0.268	250	37.5	2930	500 D
4 x 70 RM/35	0.268	250	42.0	4500	500 D
5 x 70 RM/35	0.268	250	45.1	4475	500 D
3 x 95 RM/50	0.193	308	42.5	3895	500 D
4 x 95 RM/50	0.193	308	49.0	6100	500 D
5 x 95 RM/50	0.193	308	51.3	5950	500 D
3 x 120 RM/70	0.153	359	45.8	4870	500 D
4 x 120 RM/70	0.153	359	50.5	6105	500 D
5 x 120 RM/70	0.153	359	55.6	7450	500 D
3 x 150 RM/70	0.124	412	50.3	5845	500 D, 1000 D
4 x 150 RM/70	0.124	412	55.4	7345	300 D
5 x 150 RM/70	0.124	412	61.7	9010	300 D
3 x 185 RM/95	0.0991	480	55.0	7900	500 D, 1000 D
4 x 185 RM/95	0.0991	480	60.5	10300	300 D
4 x 240 RM/120	0.0754	565	64.9	13190	300 D

Technical changes reserved. All figures are therefore without guarantee.

(N)HXCH FE180/E30 (HD 604)

SI/FRNC cable, with insulation integrity FE180 and circuit integrity E30, screened

DESIGN



- 1 | Copper conductor, round solid (RE)
- 2 | Primary core insulation (silicone rubber)
- 3 | Secondary core insulation (silicone rubber)
- 4 | Inner covering (halogen-free polymer compound)
- 5 | Screen (bare copper wires and counter helix)
- 6 | Taping (halogen-free plastic tape)
- 7 | Sheath (halogen-free polymer compound orange)

APPLICATION

Suitable to protect people and technical building equipment in the event of fire if circuit integrity is required (circuit integrity is only maintained if these cables are installed with specified supporting elements). The cable is not UV-resistant.

TECHNICAL DATA



Standard:
adapted to HD 604, DIN VDE 0266



Rated voltage:
0.6/1 kV (U₀/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C
operating temperature: -30 °C up to 90 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
12 x Ø of cable



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases
EN 60332-3-22 and 24: reduced flame propagation
EN 61034-2: low smoke emission
IEC 60331-21, DIN VDE 0472-814: insulation integrity FE 180
DIN 4102-12: circuit integrity E30



Certificate:
VDE Germany

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
(N)HXCH FE180/E30 (HD 604)					
2 x 1.5 RE/1.5	12.1	29	11.2	165	1000 D
3 x 1.5 RE/1.5	12.1	24	11.8	195	1000 D
4 x 1.5 RE/1.5	12.1	24	12.5	220	1000 D
4 x 1.5 RE/1.5	12.1	24	13.5	255	1000 D
7 x 2.5 RE/1.5	12.1	16	14.3	310	1000 D
10 x 1.5 RE/2.5	12.1	13	17.9	435	500 D
12 x 1.5 RE/2.5	12.1	13	18.5	490	500 D
19 x 1.5 RE/2.5	12.1	11	21.0	665	1000 D
24 x 1.5 RE/6	12.1	10	25.4	900	500 D
30 x 1.5 RE/6	12.1	8	26.7	1050	500 D

(N)HXCH FE180/E30 (HD 604)

SI/FRNC cable, with insulation integrity FE180 and circuit integrity E30, screened

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
(N)HXCH FE180/E30 (HD 604)					
2 x 2.5 RE/2.5	7.41	38	12.3	215	1000 D
3 x 2.5 RE/2.5	7.41	32	12.8	245	1000 D
4 x 2.5 RE/2.5	7.41	32	13.9	290	1000 D
5 x 2.5 RE/2.5	7.41	32	14.8	330	1000 D
7 x 2.5 RE/2.5	7.41	21	16.0	410	1000 D
12 x 2.5 RE/4	7.41	17	21.3	670	500 D
19 x 4 RE/2.5	7.41	14	24.4	940	500 D
2 x 4 RE/4	4.61	51	14.7	315	1000 D
3 x 4 RE/4	4.61	42	15.2	350	1000 D
4 x 4 RE/4	4.61	42	16.2	415	1000 D
5 x 4 RE/4	4.61	42	17.5	470	1000 D
3 x 6 RE/6	3.08	53	16.7	460	500 D
4 x 6 RE/6	3.08	53	17.8	535	500 D
5 x 6 RE/6	3.08	53	19.2	625	1000 D
2 x 10 RE/10	1.83	86	18.8	580	500 D
3 x 10 RE/10	1.83	74	19.9	680	500 D
4 x 10 RE/10	1.83	74	21.5	815	500 D
5 x 10 RE/10	1.83	74	23.0	955	500 D

Technical changes reserved. All figures are therefore without guarantee.

NHXCH FE180/E90

SI/FRNC energy cable, with insulation integrity FE180 and circuit integrity E90, screened

DESIGN



- 1 | Copper conductor, round solid (RE) resp. round stranded (RM)
- 2 | Primary core insulation (silicone rubber)
- 3 | Secondary core insulation (silicone rubber)
- 4 | Inner covering (halogen-free polymer compound)
- 5 | Screen (bare copper wires and counter helix)
- 6 | Taping (halogen-free plastic tape)
- 7 | Sheath (halogen-free polymer compound orange)

APPLICATION

Suitable to protect people and technical building equipment in the event of fire if circuit integrity is required (circuit integrity is only maintained if these cables are installed with specified supporting elements). The cable is not UV-resistant.

TECHNICAL DATA



Standard:
adapted to DIN VDE 0266



Rated voltage:
0.6/1 kV (U₀/U)



Test voltage:
4 kV / 50 Hz



Temperature range:
laying temperature: min. -5 °C
operating temperature: -50 °C up to 90 °C
conductor temperature: max. 90 °C
short circuit temperature: max. 250 °C/5 s



Bending radius (min.):
12 x Ø of cable



Core identification:
HD 308 S2



Fire properties:
EN 60332-1-2: flame retardant
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases
EN 60332-3-22 and 24: reduced flame propagation
EN 61034-2: low smoke emission
IEC 60331-21, DIN VDE 0472-814: insulation integrity FE 180
DIN 4102-12: circuit integrity E90



Certificate:
VDE Germany

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
NHXCH FE180/E90					
2 x 1.5 RE/1.5	12.1	28	16.1	310	1000 D
3 x 1.5 RE/1.5	12.1	25	16.6	345	1000 D
4 x 1.5 RE/1.5	12.1	25	17.5	385	1000 D
4 x 1.5 RE/16	12.1	25	18.5	400	1000 D
5 x 1.5 RE/2.5	12.1	25	18.6	430	1000 D
7 x 1.5 RE/2.5	12.1	15.5	19.6	495	1000 D
10 x 1.5 RE/2.5	12.1	13	23.2	635	500 D
12 x 1.5 RE/2.5	12.1	12.5	23.8	690	500 D
14 x 1.5 RE/2.5	12.1	11	24.7	760	500 D
19 x 1.5 RE/4	12.1	10.5	27.6	955	500 D

NHXCH FE180/E90

SI/FRNC energy cable, with insulation integrity FE180 and circuit integrity E90, screened

Number of cores x nominal cross-section / cross-section of screen (mm ²)	Max. conductor resistance (Ω/km)	Current rating in the air (A)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/ packing (m)
NHXCH FE180/E90					
19 x 1.5 RE/16	12.1	10.5	28.0	975	500 D
24 x 1.5 RE/6	12.1	9.5	31.3	1185	500 D
30 x 1.5 RE/6	12.1	9	33.0	1365	500 D
40 x 1.5 RE/10	12.1	8	37.3	1725	500 D
48 x 1.5 RE/10	12.1	7.5	40.4	2205	500 D
2 x 2.5 RE/2.5	7.41	37	16.9	365	1000 D
3 x 2.5 RE/2.5	7.41	33	17.5	395	1000 D
4 x 2.5 RE/2.5	7.41	33	18.5	445	500 D, 1000 D
7 x 2.5 RE/2.5	7.41	20.5	20.8	455	1000 D
10 x 2.5 RE/4	7.41	17.5	25.4	790	500 D
12 x 2.5 RE/4	7.41	16.5	26.0	880	500 D
14 x 2.5 RE/4	7.41	16	27.2	960	500 D
14 x 2.5 RE/16	7.41	16	27.6	985	500 D
19 x 2.5 RE/6	7.41	14	29.6	1210	500 D
24 x 2.5 RE/10	7.41	12.5	34.3	1535	500 D
30 x 2.5 RE/10	7.41	12	36.5	1785	500 D
3 x 4 RE/4	4.61	43	19.1	475	1000 D
4 x 4 RE/4	4.61	43	20.2	540	1000 D
5 x 4 RE/4	4.61	28	21.5	615	1000 D
3 x 6 RE/6	3.08	54	20.6	670	500 D
4 x 6 RE/6	3.08	54	21.4	675	500 D
3 x 10 RE/10	1.83	75	22.9	900	500 D
4 x 10 RE/10	1.83	75	24.4	1045	500 D
3 x 16 RM/16	1.15	100	24.3	1125	500 D
4 x 16 RE/16	1.15	100	25.9	1290	500 D
3 x 16 RM/120	1.15	100	26.8	1340	500 D
4 x 25 RM/16	0.727	136	31.0	1720	500 D
4 x 50 RM/25	0.387	201	38.6	3275	500 D
4 x 70 RM/35	0.255	255	44.0	4355	500 D
4 x 95 RM/50	0.193	314	49.9	5875	500 D
4 x 120 RM/70	0.153	364	53.7	7260	300 D
3 x 150 RM/70	0.124	416	53.0	7105	300 D
4 x 150 RM/70	0.124	416	58.0	8660	300 D
4 x 240 RM/120	0.075	380	72.7	13855	300 D
5 x 240 RM/120	0.075	466	80.3	16670	300 D

Technical changes reserved. All figures are therefore without guarantee.

J-H(St)H...Bd

Control cable, halogen-free, screened

DESIGN



- 1 | Copper conductor, round solid (RE)
- 2 | Core insulation (halogen-free polymer compound), cores pair stranded, pairs stranded into bundl
- 3 | Inner covering (halogen-free plastic foil)
- 4 | Screen (plastic laminated aluminium tape with drain wire)
- 5 | Sheath (halogen-free polymer compound grey)

APPLICATION

For use in telecommunications and similar systems. Not suitable for power installations, underground laying or outdoor applications.

TECHNICAL DATA



Standard:
adapted to DIN VDE 0815



Operating voltage:
max. 300 V



Test voltage:
800 Veff (core/core) / 50 Hz
800 Veff (core/screen) / 50 Hz



Temperature range:
laying temperature: min. -5 °C
fixed: -30 °C up to 70 °C
moved: -5 °C up to 50 °C



Bending radius (min.):
7.5 x Ø of cable



Core identification:
DIN VDE 0815



Fire properties:
EN 60332-1-2: flame retardant
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases
EN 60332-3-22 and 24: reduced flame propagation
EN 61034-2: low smoke emission
CPR classification: E_{ca}

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.6	0.8
Loop resistance, max.	(Ω/km)	130	73.2
Insulation resistance, min. at 20 °C	(MΩ.km)	100	100
Mutual capacitance, max. at 800 Hz (up to 4 pairs)	(nF/km)	144	144
Mutual capacitance, max. at 800 Hz	(nF/km)	120	120
Capacitance unbalance K ₁ , max. at 800 Hz (80% of values)	(pF/100m)	300	300
Capacitance unbalance K ₁ , max. at 800 Hz (100% of values)	(pF/100m)	500	500
Capacitance unbalance K ₉ -K ₁₂ , max. at 800 Hz (90% of values)	(pF/100m)	100	100
Capacitance unbalance K ₉ -K ₁₂ , max. at 800 Hz (100% of values)	(pF/100m)	300	300

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
J-H(St)H...Bd			
2 x 2 x 0.6	5.5	42	500 Sp, 1000 Sp

J-H(St)H...Bd

Control cable, halogen-free, screened

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
J-H(St)H...Bd			
4 x 2 x 0.6	7.4	68	500 Sp, 1000 Sp
6 x 2 x 0.6	8.5	89	500 Sp, 1000 Sp
10 x 2 x 0.6	9.7	126	500 Sp, 1000 Sp
20 x 2 x 0.6	14.1	237	500 D, 1000 D
30 x 2 x 0.6	15.3	318	500 D, 1000 D
40 x 2 x 0.6	16.6	401	500 D, 1000 D
50 x 2 x 0.6	19.1	512	500 D, 1000 D
60 x 2 x 0.6	20.1	594	500 D, 1000 D
80 x 2 x 0.6	26.3	816	500 D, 1000 D
100 x 2 x 0.6	27.1	969	500 D, 1000 D
2 x 2 x 0.8	6.2	59	500 Sp, 1000 Sp
4 x 2 x 0.8	8.6	98	500 Sp, 1000 Sp
6 x 2 x 0.8	9.8	131	500 Sp, 1000 Sp
10 x 2 x 0.8	11.4	190	500 Sp, 1000 Sp
20 x 2 x 0.8	16.8	363	500 D, 1000 D
30 x 2 x 0.8	18.7	516	500 D, 1000 D
40 x 2 x 0.8	20.5	657	500 D, 1000 D
50 x 2 x 0.8	22.9	809	500 D, 1000 D
60 x 2 x 0.8	24.6	969	500 D, 1000 D
80 x 2 x 0.8	32.4	1326	500 D, 1000 D
100 x 2 x 0.8	33.4	1586	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

JB-H(St)H...Bd

Fire alarm cable, halogen-free, screened

DESIGN



- 1 | Copper conductor, round solid (RE)
- 2 | Core insulation (halogen-free polymer compound), cores pair stranded, pairs stranded into bundl
- 3 | Inner covering (halogen-free plastic foil)
- 4 | Screen (plastic tape laminated with aluminium foil with drain wire)
- 5 | Sheath (halogen-free polymer compound red, with the marking "Brandmeldeleitung" (fire alarm cable))

APPLICATION

For use in fire alarm systems. Preferably for indoor applications but also for permanent outdoor installation under protection against solar radiation. Not usable as power cable and/or in earth.

TECHNICAL DATA



Standard:
adapted to DIN VDE 0815



Rated voltage:
max. 300 V



Test voltage:
800 V (core/core) / 50 Hz
800 V (core/screen) / 50 Hz



Temperature range:
laying temperature: min. -5 °C
fixed: -30 °C up to 70 °C
moved: -5 °C up to 50 °C



Bending radius (min.):
7.5 x Ø of cable



Core identification:
DIN VDE 0815



Fire properties:
EN 60332-1-2: flame retardant
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases
EN 60332-3-22 and 24: reduced flame propagation
EN 61034-2: low smoke emission

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.8
Loop resistance, max.	(Ω/km)	73.2
Insulation resistance, min. at 20 °C	(MΩ.km)	100
Mutual capacitance, max. at 800 Hz (up to 4 pairs)	(nF/km)	144
Mutual capacitance, max. at 800 Hz	(nF/km)	120
Capacitance unbalance K_9-K_{12} , max. at 800 Hz (80% of values)	(pF/100m)	200
Capacitance unbalance K_9-K_{12} , max. at 800 Hz (100% of values)	(pF/100m)	300

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
JB-H(St)H...Bd			
1 x 2 x 0.8	5.4	37	500 D, 1000 D
2 x 2 x 0.8	5.9	52	500 D, 1000 D
4 x 2 x 0.8	11.0	124	500 D, 1000 D
6 x 2 x 0.8	11.5	152	500 D, 1000 D
10 x 2 x 0.8	13.5	214	500 D, 1000 D

JB-H(St)H...Bd

Fire alarm cable, halogen-free, screened

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
JB-H(St)H...Bd			
20 x 2 x 0.8	16.0	336	500 D, 1000 D
30 x 2 x 0.8	19.5	490	500 D, 1000 D
40 x 2 x 0.8	22.0	625	500 D, 1000 D
50 x 2 x 0.8	25.0	788	500 D, 1000 D
60 x 2 x 0.8	27.0	924	500 D, 1000 D
80 x 2 x 0.8	30.5	1218	500 D, 1000 D
100 x 2 x 0.8	34.0	1500	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

JB-H(St)H...Bd FE180/E30

Fire alarm cable, with insulation integrity FE180 and circuit integrity E30, screened

DESIGN



- 1 | Copper conductor, round solid (RE)
- 2 | Core insulation (halogen-free polymer compound), cores pair stranded, pairs stranded into bundl
- 3 | Inner covering (halogen-free plastic foil)
- 4 | Screen (plastic tape laminated with aluminium foil with drain wire)
- 5 | Sheath (halogen-free polymer compound red, with the marking "Brandmeldeleitung" (fire alarm cable))

APPLICATION

For use in fire alarm systems where functional integrity is required. Predominantly for indoor applications, but also for fixed installation outdoors if protected from sunlight. Not suitable for power installations and underground laying.

TECHNICAL DATA



Standard:
adapted to DIN VDE 0815



Operating voltage:
max. 225 Vss



Test voltage:
500 Veff (core/core) / 50 Hz
2000 Veff (core/screen) / 50 Hz



Temperature range:
laying temperature: min. -5 °C
fixed: -30 °C up to 70 °C
moved: -5 °C up to 50 °C



Bending radius (min.):
7.5 x Ø of cable



Core identification:
DIN VDE 0815



Fire properties:
EN 60332-1-2: flame retardant
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases
EN 60332-3-22 and 24: reduced flame propagation
EN 61034-2: low smoke emission
IEC 60331-21, DIN VDE 0472-814: insulation integrity FE 180
DIN 4102-12: circuit integrity E30

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.8
Loop resistance, max.	(Ω/km)	73.2
Insulation resistance, min. at 20 °C	(MΩ.km)	100
Mutual capacitance, max. at 800 Hz (up to 4 pairs)	(nF/km)	144
Mutual capacitance, max. at 800 Hz	(nF/km)	120
Capacitance unbalance K_9 - K_{12} , max. at 800 Hz (80% of values)	(pF/100m)	200
Capacitance unbalance K_9 - K_{12} , max. at 800 Hz (100% of values)	(pF/100m)	400

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
JB-H(St)H...Bd FE180/E30			
1 x 2 x 0.8	7.1	61	500 D, 1000 D
2 x 2 x 0.8	7.5	65	500 D, 1000 D
4 x 2 x 0.8	9.5	104	500 D, 1000 D

JB-H(St)H...Bd FE180/E30

Fire alarm cable, with insulation integrity FE180 and circuit integrity E30, screened

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
JB-H(St)H...Bd FE180/E30			
8 x 2 x 0.8	11.5	165	500 D, 1000 D
12 x 2 x 0.8	13.0	235	500 D, 1000 D
16 x 2 x 0.8	15.0	300	500 D, 1000 D
20 x 2 x 0.8	16.5	361	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

JB-H(St)H...Bd FE180/E90

Fire alarm cable, with insulation integrity FE180 and circuit integrity E90, screened

DESIGN



- 1 | Copper conductor, round solid (RE)
- 2 | Core insulation (halogen-free polymer compound), cores pair stranded, pairs stranded into bundl
- 3 | Inner covering (halogen-free plastic foil)
- 4 | Screen (plastic tape laminated with aluminium foil with drain wire)
- 5 | Sheath (halogen-free polymer compound red, with the marking "Brandmeldeleitung" (fire alarm cable))

APPLICATION

For use in fire alarm systems where functional integrity is required. Predominantly for indoor applications, but also for fixed installation outdoors if protected from sunlight. Not suitable for power installations and underground laying.

TECHNICAL DATA



Standard:
adapted to DIN VDE 0815



Operating voltage:
max. 225 Vss



Test voltage:
500 Veff (core/core) / 50 Hz
2000 Veff (core/screen) / 50 Hz



Temperature range:
laying temperature: min. -5 °C
fixed: -30 °C up to 70 °C
moved: -5 °C up to 50 °C



Bending radius (min.):
7.5 x Ø of cable



Core identification:
DIN VDE 0815



Fire properties:
EN 60332-1-2: flame retardant
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases
EN 60332-3-22 and 24: reduced flame propagation
EN 61034-2: low smoke emission
IEC 60331-21, DIN VDE 0472-814: insulation integrity FE 180
DIN 4102-12: circuit integrity E90

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.8
Loop resistance, max.	(Ω/km)	73.2
Insulation resistance, min. at 20 °C	(MΩ.km)	100
Mutual capacitance, max. at 800 Hz (up to 4 pairs)	(nF/km)	144
Mutual capacitance, max. at 800 Hz	(nF/km)	120
Capacitance unbalance K_9-K_{12} , max. at 800 Hz (80% of values)	(pF/100m)	200
Capacitance unbalance K_9-K_{12} , max. at 800 Hz (100% of values)	(pF/100m)	400

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
JB-H(St)H...Bd FE180/E90			
1 x 2 x 0.8	7.7	75	500 D, 1000 D
2 x 2 x 0.8	8.5	83	500 D, 1000 D
4 x 2 x 0.8	11.5	138	500 D, 1000 D

JB-H(St)H...Bd FE180/E90

Fire alarm cable, with insulation integrity FE180 and circuit integrity E90, screened

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
JB-H(St)H...Bd FE180/E90			
8 x 2 x 0.8	15.0	243	500 D, 1000 D
12 x 2 x 0.8	18.5	351	500 D, 1000 D
16 x 2 x 0.8	20.5	441	500 D, 1000 D
20 x 2 x 0.8	24.0	557	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

JE-H(St)H...Bd FE180/E30 or

Industry electronic control cable, with insulation integrity FE180 and circuit integrity E30, screened

DESIGN



- 1 | Copper conductor, round solid (RE)
- 2 | Core insulation (flame retardant halogen-free polymer compound), cores pairs stranded, pairs stranded in groups
- 3 | Inner covering (halogen-free plastic foil)
- 4 | Screen (plastic laminated aluminium tape with drain wire)
- 5 | Sheath (halogen-free polymer compound orange)

APPLICATION

Measuring and control cable providing functional integrity in the event of fire. Not designed for laying in earth or water. Not UV- and water resistant.

TECHNICAL DATA



Standard:
adapted to DIN VDE 0815



Operating voltage:
max. 225 Vss



Test voltage:
500 Veff (core/core) / 50 Hz
2000 Veff (core/screen) / 50 Hz



Temperature range:
laying temperature: min. -5 °C
fixed: -30 °C up to 70 °C
moved: -5 °C up to 50 °C



Bending radius (min.):
7.5 x Ø of cable



Core identification:
DIN VDE 0815



Fire properties:
EN 60332-1-2: flame retardant
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases
EN 60332-3-22 and 24: reduced flame propagation
EN 61034-2: low smoke emission
IEC 60331-21, DIN VDE 0472-814: insulation integrity FE 180
DIN 4102-12: circuit integrity E30

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.8
Loop resistance, max.	(Ω/km)	73.2
Insulation resistance, min. at 20 °C	(MΩ.km)	100
Mutual capacitance, max. at 800 Hz (up to 4 pairs)	(nF/km)	144
Mutual capacitance, max. at 800 Hz	(nF/km)	120
Capacitance unbalance K_9 - K_{12} , max. at 800 Hz (80% of values)	(pF/100m)	200
Capacitance unbalance K_9 - K_{12} , max. at 800 Hz (100% of values)	(pF/100m)	400

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
JE-H(St)H...Bd FE180/E30 or			
2 x 2 x 0.8	6.6	60	500 D, 1000 D
2 x 2 x 0.8	7.3	83	500 D, 1000 D
4 x 2 x 0.8	8.8	104	500 D, 1000 D

JE-H(St)H...Bd FE180/E30 or

Industry electronic control cable, with insulation integrity FE180 and circuit integrity E30, screened

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
JE-H(St)H...Bd FE180/E30 or			
8 x 2 x 0.8	12.8	218	500 D, 1000 D
12 x 2 x 0.8	13.5	235	500 D, 1000 D
16 x 2 x 0.8	16.1	350	500 D, 1000 D
20 x 2 x 0.8	17.0	367	500 D, 1000 D
32 x 2 x 0.8	24.5	730	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

JE-H(St)H...Bd FE180/E90 or

Industry electronic control cable, with insulation integrity FE180 and circuit integrity E90, screened

DESIGN



- 1 | Copper conductor, round solid (RE)
- 2 | Core insulation (flame retardant halogen-free polymer compound), cores pairs stranded, pairs stranded in groups
- 3 | Inner covering (halogen-free plastic foil)
- 4 | Screen (plastic laminated aluminium tape with drain wire)
- 5 | Sheath (halogen-free polymer compound orange)

APPLICATION

Measuring and control cable providing functional integrity in the event of fire. Not designed for laying in earth or water. Not UV- and water resistant.

TECHNICAL DATA



Standard:
adapted to DIN VDE 0815



Operating voltage:
max. 225 Vss



Test voltage:
500 Veff (core/core) / 50 Hz
2000 Veff (core/screen) / 50 Hz



Temperature range:
laying temperature: min. -5 °C
fixed: -30 °C up to 70 °C
moved: -5 °C up to 50 °C



Bending radius (min.):
7.5 x Ø of cable



Core identification:
DIN VDE 0815



Fire properties:
EN 60332-1-2: flame retardant
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases
EN 60332-3-22 and 24: reduced flame propagation
EN 61034-2: low smoke emission
IEC 60331-21, DIN VDE 0472-814: insulation integrity FE 180
DIN 4102-12: circuit integrity E90

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.8
Loop resistance, max.	(Ω/km)	73.2
Insulation resistance, min. at 20 °C	(MΩ.km)	100
Mutual capacitance, max. at 800 Hz (up to 4 pairs)	(nF/km)	144
Mutual capacitance, max. at 800 Hz	(nF/km)	120
Capacitance unbalance K_9-K_{12} , max. at 800 Hz (80% of values)	(pF/100m)	200
Capacitance unbalance K_9-K_{12} , max. at 800 Hz (100% of values)	(pF/100m)	400

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
JE-H(St)H...Bd FE180/E90 or			
1 x 2 x 0.8	6.6	60	500 D, 1000 D
2 x 2 x 0.8	8.5	83	500 D, 1000 D
4 x 2 x 0.8	11.5	138	500 D, 1000 D

JE-H(St)H...Bd FE180/E90 or

Industry electronic control cable, with insulation integrity FE180 and circuit integrity E90, screened

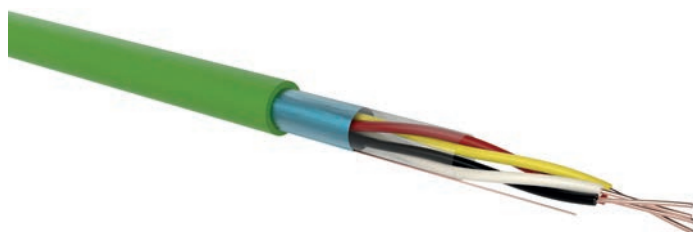
Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
JE-H(St)H...Bd FE180/E90 or			
8 x 2 x 0.8	15.0	243	500 D, 1000 D
12 x 2 x 0.8	18.5	351	500 D, 1000 D
16 x 2 x 0.8	20.5	441	500 D, 1000 D
20 x 2 x 0.8	24.0	557	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

L-H(St)H EIB

MSR cable for EIB-Bus, halogen-free, screened

DESIGN



- 1 | Copper conductor, round solid (RE)
- 2 | Core insulation (halogen-free polymer compound), cores stranded to star quads
- 3 | Taping (halogen-free plastic foil)
- 4 | Screen (plastic laminated aluminium tape with drain wire)
- 5 | Sheath (PVC grey RAL 7035 or green RAL 6018)

APPLICATION

For installation on and under plaster in dry, damp and wet locations, as a BUS cable (EIB installation bus) and as a measuring and control cable in power installations.

TECHNICAL DATA



Standard:
adapted to DIN VDE 0815



Operating voltage:
max. 300 Vss



Test voltage:
800 Veff (core/core) / 50 Hz
4000 Veff (core/screen) / 50 Hz



Temperature range:
laying temperature: min. -5 °C
fixed: -30 °C up to 70 °C
moved: -5 °C up to 50 °C



Bending radius (min.):
7.5 x Ø of cable



Core identification:
1st. circuite: red (a), black (b) 2nd. circuite: white (a), yellow (b)



Fire properties:
EN 60332-1-2: flame retardant
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases
CPR classification: E_{ca}

ELECTRICAL PARAMETERS

Conductor diameter	(mm)	0.8
Loop resistance, max.	(Ω/km)	73.2
Insulation resistance, min. at 20 °C	(MΩ.km)	100
Mutual capacitance, max. at 800 Hz	(nF/km)	100
Capacitance unbalance K, max. at 800 Hz	(pF/100m)	200

Number of pairs x nominal diameter (mm)	Outer diameter (mm) appr.	Total weight (kg/km) appr.	Standard lengths/packing (m)
L-H(St)H EIB			
2 x 2 x 0.8	7.0	60	1000 Sp

Technical changes reserved. All figures are therefore without guarantee.

CU rope soft

Cu rope, soft, compressed

DESIGN



- 1 | Copper wires, bare or tinned, soft
- 2 | Stranded, round, compressed

APPLICATION

Conductors are designed for connection of points with equal electric potential or for high currents.

TECHNICAL DATA



Standard:
IEC 60228
adapted to EN 50164 (for cross-section ≥ 50 mm²)



Bending radius (min.):
15 x $\varnothing$ of rope

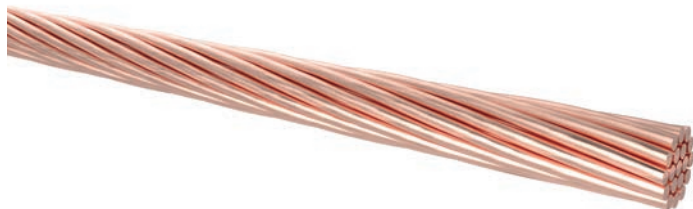
Nominal cross-section (mm ²)	Number of wires in the rope	Outer diameter (mm) appr.	Direction of outer layer	Max. conductor resistance (Ω /km)	Total weight (kg/km) appr.	Standard lengths/packing (m)
CU rope soft						
6	7	3.1	left (S)	3.08	55	500 D, 1000 D
10	7	4.2	left (S)	1.83	90	500 D, 1000 D
16	7	5.3	left (S)	1.15	138	500 D, 1000 D
25	7	6.6	left (S)	0.727	219	500 D, 1000 D
35	7	7.2	left (S)	0.524	304	500 D, 1000 D
50	7	8.2	left (S)	0.387	411	500 D, 1000 D
70	19	9.9	left (S)	0.268	593	500 D, 1000 D
95	19	11.7	left (S)	0.193	824	500 D, 1000 D
120	19	13.1	left (S)	0.153	1039	500 D, 1000 D
150	19	14.4	left (S)	0.124	1340	500 D, 1000 D
185	37	16.1	left (S)	0.0991	1650	500 D, 1000 D
240	37	18.6	left (S)	0.0754	2150	500 D, 1000 D
300	61	21.1	left (S)	0.0601	3000	500 D, 1000 D
400	61	24.1	left (S)	0.047	3570	500 D, 1000 D
500	61	26.9	left (S)	0.037	4460	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

CU rope hard acc. to 48201

Cu rope, hard

DESIGN



- 1 | Copper wires, bare or tinned, hard
- 2 | Stranded, round

APPLICATION

Conductors are designed for connection of points with equal electric potential or for high currents.

TECHNICAL DATA



Standard:
DIN VDE 48201



Bending radius (min.):
15 x Ø of rope

Nominal cross-section (mm²)	Number of wires in the rope	Outer diameter (mm) appr.	Direction of outer layer	Max. conductor resistance (Ω/km)	Total weight (kg/km) appr.	Standard lengths/packing (m)
CU rope hard acc. to 48201						
25	7	5.6	right (Z)	0.727	225	500 D, 1000 D
35	7	7.5	right (Z)	0.524	315	500 D, 1000 D
50	7	9.0	right (Z)	0.387	500	500 D, 1000 D
95	19	12.6	right (Z)	0.268	856	500 D, 1000 D
120	19	12.8	right (Z)	0.153	1039	500 D, 1000 D
150	37	14.4	right (Z)	0.124	1500	500 D, 1000 D
185	37	16.2	right (Z)	0.0991	1850	500 D, 1000 D

Technical changes reserved. All figures are therefore without guarantee.

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Basic design elements of insulated wires and cables

Conductor

Consists of one or more metal wires and is used for transporting electric current.



Round, solid (RE)

For small and medium diameters or cross-sections, made of copper (bare or tinned) up to 16 mm² and of aluminium up to 35 mm². For use in single and multi core cables and wires for fixed installation.



Round, stranded (RM)

For medium and large cross-sections, made of copper conductors from 6 mm² and aluminium conductors from 25 mm². For use in single and multi core cables and wires for fixed installation.



Round, stranded, compressed (RM)

For particularly compact conductors of medium and large cross-section, made of copper from 6 mm² and aluminium from 25 mm². For use in single and multi core cables and wires for fixed installation.



Fine or superfine-wire (F)

For all cross-sections of copper conductors (bare or tinned). For use in flexible cables.



Sector-shaped, solid (SE)

For medium and large cross-sections of aluminium conductors from 50 mm² up to 240 mm². For use in 3-, 4- and 5-core cables.



Sector-shaped, stranded (SM)

For medium and large cross-sections of copper and aluminium conductors from 35 mm² up to 300 mm². For use in 3-, 4- and 5-core cables.

Conductor classes in accordance with IEC 60228

Class	Construction		Type codes for	
			power cables DIN VDE 0271/0276	harmonised cables
1	solid	e.g. round solid or sector-shaped solid	RE, SE	-U, -W
2	stranded	e.g. round stranded or sector-shaped stranded	RM, SM	-R, -S
5	fine wire	flexible	(F)	-K, -F, -D
6	superfine wire	highly flexible	(FF)	-H, -E

Core insulation

Covers the conductor and is used for electrical separation from the surroundings. Mainly made of extruded polymers but also of paper, glass or minerals, varnish etc. or a combination of several of these materials. The conductor and insulation together form the core.

Inner covering, taping

Covers the stranded core consisting of several or many cores and is used for filling the interstices between the stranding elements. The inner covering has no electrical function and consists usually either of extruded polymers, of one or more layers of tape or a combination of these elements.

Screen

Conductive layer which prevents electrical influences (electric fields) from reaching elements within the screen or electric fields generated by these elements from penetrating outside. Consists of metallic tapes (e.g. copper or aluminium), laminated metallic tapes, wires, wire braids or a combination of these elements.

Armouring

Usually arranged over the inner sheath, the armouring provides mechanical reinforcement of the cable. The armouring protects the interior of the cable from damage which may arise from radial forces (e.g. running over by vehicles or pressure of stones in the cable bed etc.). Under certain circumstances, the armouring can take over or assist the electrical function of the screen. Tapes as well as round or flat wires made of galvanized steel or aluminium are usually used as armouring material. Thin, bare steel tapes are commonly used for protection against damage by rodents. Non-metallic designs as protection against damage by rodents or termites are provided by HDPE and PP reinforcement.

Inner sheath

Similar to the sheath, the inner sheath covers the inner part of the cable (stranded core), ensures that it remains compact and protects it from mechanical damage caused by other cable layers, e.g. the armouring. It is made of extruded polymers.

Sheath, protective covering (oversheath)

Functions as the outermost cover of a cable or insulated wire and protects the cable against mechanical damage, water penetration and chemical influences. Mostly made of extruded polymers, but also of metal (lead, aluminium), impregnated fabric tapes etc.

Common insulation and sheathing materials (overview)

Polymers	Designs	Application examples
Thermoplastics Non-cross-linked plastics which undergo reversible plastic deformation at higher temperatures, i.e. which do not harden after cooling and remelting.	Polyvinyl chloride PVC Low cost, excellent ageing properties, service life > 30 years	Insulation and sheathing material for cables and insulated wires for fixed installation (e.g. low-voltage cables for utility networks) and flexible cables
	Thermoplastic polyethylene PE Low water absorption, good mechanical and electrical properties	Sheathing material for low-voltage cables in utility networks subject to higher mechanical stress, insulated overhead lines
	Polypropylene PP Good fatigue resistance, e.g. for repetitive drag chain movement, high strength	Insulation material for heavy duty industrial cables with lower wall thickness and for higher operating temperatures
Thermosets Cross-linked plastics which do not change their structure at higher temperatures and thus maintain their elastic properties.	Cross-linked polyethylene XLPE Low water absorption, high chemical resistance, applicable at higher temperatures and voltages	Insulation material for medium and high-voltage cables, motor supply cables, insulated overhead lines
Thermoplastic elastomers Blends of polyolefins or rubber having amorphous and crystalline regions which undergo reversible plastic deformation at higher temperatures and exhibit rubber-elastic properties without cross-linking at service temperatures.	Thermoplastic polyurethane elastomer TPE-U (TPU, PUR) High-performance material with a unique combination of resistances to abrasion, mechanical and chemical stress, cold	Sheathing material for control and drag chain cables for a range of industrial applications, spiral cables, EVC cables; sheathing material for cables used under adverse ambient conditions
	Thermoplastic polyester elastomer TPE-E Good impact resistance even at low temperatures, high heat resistance (<150 °C)	Insulation material for drag chain cables subject to high thermal stress
	Thermoplastic polyolefin elastomer TPE-O Higher mechanical resistance	Conductors subject to high thermal and mechanical stress
Elastomers Cross-linked rubber-like polymers which exhibit rubber-elastic properties at service temperatures and maintain their structure even at higher temperature.	Silicone rubber SIR Media resistant, high elasticity, cold and heat resistant	Heat-resistant insulated wires for temperatures up to 180°C (up to 250°C for short periods of time)
	Ethylene propylene rubber EPR Good thermal and chemical resistance	Flexible insulated wires and cables for low- and medium voltage, filling compound for inner sheaths
	Polychloroprene CR Elastic even at low temperatures, self-extinguishing	Sheathing material, e.g. for flexible insulated wires
Special compounds	Flame-retardant, halogen-free polymer compounds, non-cross-linked HFFR/FRNC No emission of corrosive fumes, low fire propagation and smoke development	Insulation, filling and sheathing material for flame-retardant, halogen-free safety cables for protecting high concentrations of people and material goods
	Flame-retardant, halogen-free polymer compounds, cross-linked HFFR/FRNC No emission of corrosive fumes, low fire propagation and very low smoke development	Insulation and sheathing material for flame-retardant, halogen-free safety cables for protecting high concentrations of people and material goods

Properties of cable insulation and sheathing materials

Designation			Basic data		Properties (guiding values)											
Material	Abbrevia- tion	Abbrevia- tion acc. to VDE	Ambient temperature		Electrical		Mechanical			Chemical			Thermal			
			Permanent (°C)	Short-term (°C)	Dielectric constant 50 Hz / 20 °C	Specific insulation resistance (Ω × cm) / 20C°	Tensile strength N/mm² MPa	Elongation at break %	Shore hardness	Water absorption % / 20C°	Weather resistance	Oil resist- ance	Flammability			
Thermoplastics																
Polyvinyl chloride	PVC	Y	-30 +70	+100	3,6–6,0	10 ¹³ –10 ¹⁵	10–25	130–350	70–95 (A)	0,4	moderate	good	self-extinguishing			
Low density polyethylene	LDPE	2Y	-50 +70	+100	2,3	10 ¹⁷	10–20	400–600	43–50 (D)	0,1	good	moderate	flammable			
High density polyethylene	HDPE	2Y	-50 +90	+100	2,6	10 ¹⁸	15–28	400–600	60–63 (D)	0,1	good	moderate	flammable			
Polypropylene	PP	9Y	-30 +90	+140	2,3–2,4	10 ¹⁶	20–35	300–400	55–60 (D)	0,1	moderate	moderate	flammable			
Thermosets																
Cross-linked polyethylene	XLPE	2X	-35 +90	+100	4,0–6,0	10 ¹² –10 ¹⁶	12,5–20	300–400	40–45 (D)	0,1	good	moderate	flammable			
Thermoplastic elastomers																
Thermoplastic polyurethane elastomer	TPE-U	11Y	-50 +90	+100	2,7–3,6	5 x 10 ¹⁴	≥ 6	≥ 400	60–75 (A)	1,5	very good	moderate	flammable			
Thermoplastic polyester elastomer	TPE-E	12Y	-50 +90	+110	3,7–5,1	>10 ¹⁰	30–40	300–400	55–75 (D)	1,5	very good	very good	flammable			
Thermoplastic polyolefin elastomer	TPE-O	18Y	-40 +90	+110	2,7–3,6	>10 ¹²	15–25	320–600	36–50 (D)	1,5	very good	moderate	flammable			
Elastomers																
Silicone rubber	SIR	2G	-60 +180	+250	2,8–3,2	10 ¹⁵	5–10	200–350	60–70 (A)	1,0	very good	good	flame-retardant			
Ethylene propylene rubber	EPR	3G	-25 +70	+100	3,2	10 ¹⁴	2–25	200–450	55–75 (A)	0,02	good	low	flammable			
Polychloroprene	CR	5G	-40 +100	+100	6,0–8,0	10 ¹³	25	450	50–70 (A)	0,0	very good	good	self-extinguishing			
Special compounds																
Polymer compound, halogen-free	FRNC	H	-30 +70	+100	3,4–5,0	10 ¹² –10 ¹⁴	8–13	150–250	65–95 (A)	0,20–1,50	moderate	moderate/ medium	self-extinguishing			
Polymer compound, halogen-free, cross-linked		HX	-30 +90	+120	3,4–5,0	10 ¹³ –10 ¹⁴	8–13	150–250	65–95 (A)	0,20–1,50	medium	medium	self-extinguishing			

Type codes for harmonised insulated wires

Code for standard								Conductor cross-section	
Harmonised standard	H								
Recognised national type	A								
Rated voltage U_0/U								Protective conductor	
100/100 V	01							X	Without protective conductor
300/300 V	03							G	With protective conductor
300/500 V	05								
450/750 V	07								
0,6/1 kV	1							Number of cores	
Insulation material								Conductor design	
PVC	V							-U	Solid wire
Natural or synthetic rubber	R							-R	Stranded wire
Silicone rubber	S							-K	Fine wire (for fixed installation)
XLPE	X							-F	Fine wire (for flexible cables)
Flame-retardant, halogen-free polymer compounds, cross-linked	Z							-H	Super-fine wire (for flexible cables)
Flame-retardant halogen-free polymer compounds, non-cross-linked	Z1							-Y	Tinsel wire
Sheath material								-D	Flexible (for welding cables)
PVC	V							-E	Super-flexible (for welding cables)
Natural or synthetic rubber	R								
Chloroprene rubber	N								
Chloroprene rubber (special compound)	N2								
Glass fibre braid	J								
Textile braid	T								
Textile braid, mass impregnated, flame retardant	T2								
Special design									
Flat, separable	H								
Flat, non-separable	H2								
Central element	D5								

Example: H03VV-F 3G1.5
Light PVC flexible cable,
fine wire 3 x 1.5 mm²

Type codes for power cables

Design / code element	Cables according to DIN VDE and ÖVE	
Type	DIN VDE 0266, 0276, -603, -604, -620, -627	ÖVE/ÖNORM E 8200-603, -604, -620, -626, -627
Standard type	N	-
Power cable	-	E-
Special design	-	X
Rated voltage U₀/U		
300/500 V	-	-
0.6/1 kV	-	-
Conductor		
Cu	no code	no code
Al	A (only 0276)	A
Tinned conductor		
Conductor covered (taping)	no code	F
Insulation		
PVC	Y	Y
PE	2Y	2Y
XLPE	2X	2X
Halogen-free polymer compounds, non-cross-linked	-	NY
Halogen-free polymer compounds, cross-linked	HX	NG, 3G
Special structural features		
Cable, unscreened	-	-
Cable, flat with web	-	-
Cable, aluminium tape screened	-	-
Cable, flexible	-	-
Cable, flexible screened	-	-
Screen, concentric conductor		
Concentric conductor (Cu, conventionally stranded)	C	C
Concentric conductor (Cu, wave-form)	CW	C
Cu screen	S	C
Cu screen (longitudinally water-proof)	S(F)	CJ
Individual Cu screen over each core	SE	CE
Sheath, inner covering		
Pb	K	M
PVC	Y	Y
PE	2Y	2Y
Halogen-free polymer compounds, non-cross-linked	H	NY
Halogen-free polymer compounds, cross-linked	HX	NG
Armouring/cable structure		
Steel tape	B	B
Steel flat wire	F	F
Steel round wire	R	R
Steel tape (counter helix)	G	G
Cable, flat	-	-
Cable, self-supporting	-	-
Outer covering		
PVC	Y	Y
PE	2Y	2Y
Halogen-free polymer compounds, non-cross-linked	H	-
Protective conductor		
With protective conductor	-J	-J
Without protective conductor	-O	-O
Insulation / Circuit Integrity		
Halogen-free, without insulation/circuit integrity	-	FRH
Halogen-free, with insulation integrity ...minutes	FE ...	FE ...
Halogen-free, with circuit integrity ...minutes	E ..	E ..

The complete cable code consists of (composition and structure vary depending on standard):

- | | | |
|---|---|-----------------------------------|
| - Code for cable type | - Code(s) for core identification | conductor |
| - Code(s) for cable design | - Code for conductor design | - Code for core identification |
| - Number of cores x nominal conductor cross-section | - If necessary after a slash: nominal cross-section of screen or concentric | - Code for rated voltage |
| | | - Code for additional information |

Example: NHXCH-0 4x2,5 RE/2,5 FE180/E90

Type codes for telecommunication cables

Design / code element	Cables according to ÖVE	Cables according to TA specification	Cables according to DIN VDE
Type			
Telecommunication cable	F-	F-	-
Outdoor cable	-	-	A-
Outdoor cable with protection against interference	-	-	AJ-
Installation cable	-	FI-	J-
Installation cable for industrial electronics	-	-	JE-
Switchboard cable	-	-	S-
Special design	X	-	-
Conductor			
Cu	no code	no code	no code
Tinned conductor	V	V	-
Al	A	-	-
Insulation			
Paper	P	P	P
PVC	Y	Y	Y
PE	2Y	2Y	2Y
XLPE	-	-	-
Foam PE	-	02Y	02Y
Foam PE with skin of solid PE	-	02YH	02YS
Halogen-free polymer compounds, non-cross-linked	NY	-	H
Design of core	-	-	-
No filling of cable cavities	-	-	-
Jelly filling of cable cavities	J	J	F
Screen			
Static screen, laminated Al tape	A	A	(St)
Cu screen	C	C	C, K
Individual screen	E	E	-
Sheath, inner covering			
Pb	M	M	M
Al tape, taped	L	L	-
Al laminated sheath, longitudinally applied	-	A2Y	(L)2Y
PVC	Y	Y	Y
PE	2Y	2Y	-
Halogen-free polymer compounds, non-cross-linked	NY	-	H
Armouring			
Steel tape	B	B	b
Steel flat wire	F	F	-
Steel round wire	R	R	-
Steel tape (counter helix)	G	G	-
Steel wire braid	-	-	Q
Al round wire	-	-	-
Outer covering			
Mass-impregnated jute	U	U	c
PVC	Y	Y	Y
PE	2Y	2Y	2Y
Strain-bearing element			
Strain-bearing element, supporting element	-	T	T
Stranding elements			
Pairs	P	P	P
Pairs, individually screened with metal tape	-	-	PiMF
Star-quads	ST	ST	St
Star-quads in long distance cables	-	-	St I
Star-quads in local cables	-	-	St III
Multiple-twin quad cables	DM	DM	DM
Stranded in layers	-	-	Lg
Stranded in groups	-	BD	Bd
Insulation / circuit integrity			
Halogen-free, without insulation/circuit integrity	FRH	-	FRH
Halogen-free, with insulation integrity ...minutes	FE ...	-	FE ...
Circuit integrity ... minutes	E ...	-	E ...

The complete cable code consists of (composition and structure vary depending on standard):

- Code for cable type
- Number of elements × number of cores
- Codes for stranding elements and kind of stranding
- Code(s) for cable design
- per element × conductor diameter
- Codes for additional information

Example: JE-H(St)H 2x2x0,8 Bd FE180/E30, F-2YA2Y 10x2x0,8

Core identification

Cores in cables and insulated wires (except insulated overhead lines) are identified by the colour of the insulation and/or printed colours (numbers, rings, etc.) or longitudinal colour stripes. The following colour abbreviations are used:

Colour	Abbreviation	Colour	Abbreviation	Colour	Abbreviation
blue	bu	orange	og	turquoise	tq
brown	bn	pink	pk	green/yellow	gnye
yellow	ye	red	rd		
grey	gy	black	bk		
green	gn	violet	vt		
natural	nat	white	wh		

In insulated overhead lines, the cores are identified by longitudinal ribs on the insulation surface.

Core codes for insulated wires and power cables according to HD 308 S2

Number of cores	Acc. to ÖVE	Acc. to HD	With green-yellow core	Acc. to ÖVE	Acc. to HD	Without green-yellow core
1	-J	1G		-0	1X	 and other colours
2				-0	2X	 
3	-J	3G	  	-0	3X	  
4	-J	4G	   	-0	4X	   
5	-J	5G	    	-0	5X	    
6 or more	-J	nG	 other cores with printed numbers 	-0	nX	 with printed numbers

These rules are not valid for cables which are exclusively used for internal wiring of electrical devices and control cabinets.

Core identification for electronic control cables LiYY and LiYCY according to DIN 47100

Cores are counted from outside to inside through all layers.

The first colour is the basic colour of the core insulation, while the second colour indicates the colour of the printed ring (core colour). Slight blurring of the core colour at the edges and a small offset of the two half-rings is permissible.

Twisted cores					
Number of cores	Colour	Abbreviation	Number of cores	Colour	Abbreviation
1	white	wh	24	brown-red	bnrd
2	brown	bn	25	white-black	whbk
3	green	gn	26	brown-black	bnbk
4 ¹⁾	yellow	ye	27	grey-green	gygn
5	grey	gy	28	yellow-grey	yegy
6	pink	pk	29	pink-green	pkgn
7	blue	bu	30	yellow-pink	yepk
8	red	rd	31	green-blue	gnbu
9	black	bk	32	yellow-blue	yebu
10	violet	vt	33	green-red	gnrd
11	grey-pink	gypk	34	yellow-red	yerd
12	red-blue	rdbu	35	green-black	gnbk
13	white-green	whgn	36	yellow-black	yebk
14	brown-green	bngn	37	grey-blue	gybu
15	white-yellow	why	38	pink-blue	pkbu
16	yellow-brown	yebn	39	grey-red	gyrd
17	white-grey	whgy	40	pink-red	pkrd
18	grey-brown	gybn	41	grey-black	gybk
19	white-pink	whpk	42	pink-black	pkbk
20	pink-brown	rdbn	43	blue-black	bubk
21	white-blue	whbu	44	red-black	rdbk
22	brown-blue	brbu	45 ²⁾	white etc.	wh
23	white-red	whrd			

¹⁾ Colour sequence for four-core cables: white, yellow, brown, green.

²⁾ For stranded cores the colours are repeated from the 45th core.

Twisted pairs				
Pair No.			Colour	
			a-core	b-core
1	23	45	white	brown
2	24	46	green	yellow
3	25	47	grey	pink
4	26	48	blue	red
5	27	49	black	violet
6	28	50	grey-pink	red-blue
7	29	51	white-green	brown-green
8	30	52	white-yellow	yellow-brown
9	31	53	white-grey	grey-brown
10	32	54	white-pink	pink-brown
11	33	55	white-blue	brown-blue
12	34	56	white-red	brown-red
13	35	57	white-black	brown-black
14	36	58	grey-green	yellow-green
15	37	59	pink-green	yellow-pink
16	38	60	green-blue	yellow-blue
17	39	61	green-red	yellow-red
18	40	62	green-black	yellow-black
19	41	63	grey-blue	pink-blue
20	42	64	grey-red	pink-red
21	43	65	grey-black	pink-black
22 ¹⁾	44	66	blue-black	red-black

¹⁾ If there are more than 22 pairs, the colours are repeated.

Colour codes for installation cables for industrial electronics JE-LiYCY...Bd, JE-Y(St)Y ... Bd, JE-H(St)H ... Bd according to DIN VDE 0815

Basic colours

Core	Pair 1	Pair 2	Pair 3	Pair 4
a				
b				

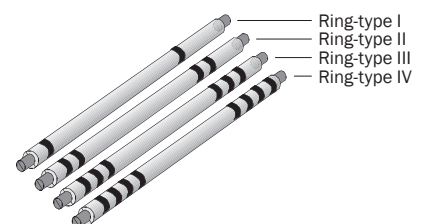
The pairs within a group are identified by the basic colours of the insulation. These colours are repeated in each unit in the same order. In cables with 2 pairs (stranded as star-quad), the a-core (physical circuit 1) is blue, the b-core (physical circuit 1) is red, the a-core (physical circuit 2) is grey and the b-core (physical circuit 2) is yellow.

Group identification by printed helical tapes ("BdZ")

Groups are identified by helical plastic tapes which carry the printed group number.

Group identification by colour rings ("BdSi")

For the identification of groups, the cores contained therein are marked with colour rings. In cables with more than 12 groups, the additional groups are identified with coloured helical plastic tapes.



Number of group		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Ring colour																					
Ring group in group unit	4 cores	I	I	II	II																
	8 cores or 4 pairs	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
	Helix																				

Colour code for telecommunications cables J-Y(St)Y...Lg, JB-Y(St)Y according to DIN VDE 0815

Core	Pair 1	Pair 2	Pair 3	Pair 4	
a	1)	1)	1)	1)	1)
b					

¹⁾ The colour of the a-core of the first pair in each layer (counting pair) is red, in all the other pairs it is white.

For more than 5 pairs the colour code is repeated in the same sequence. In cables with 2 pairs (stranded as star-quad), the a-core (physical circuit 1) is red, the b-core (physical circuit 1) is black, the a-core (physical circuit 2) is white and the b-core (physical circuit 2) is yellow.

Number of pairs	Number of pairs per layer					
	1	2	3	4	5	6
2	2 ¹⁾					
3	3					
4	4					
5	5					
6	6					
10	2	8				
12	3	9				
16	5	11				
20	1	6	13			
30	4	10	16			
40	1	7	13	19		
50	4	10	15	21		
60	1	6	12	18	23	
100	2	8	14	20	25	31

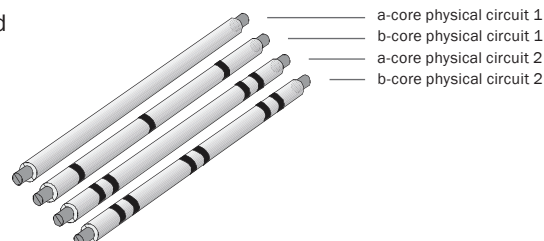
¹⁾ In star quad stranding.

Core code for outdoor telecommunication cables A-2Y(L)2Y, A-2YF(L)2Y and installation cables J-H(St)H according to DIN VDE 0816 and 0815

In order to identify the group, a group (tracer group) is identified with a helix of red plastic tape in each layer. The quads in each group are identified by the basic colour of the core insulation. The colours are repeated in each group in the same sequence.

Quad 1	Quad 2	Quad 3	Quad 4	Quad 5
				

To distinguish the individual cores of each quad these are identified by black colour rings.



Colour codes for YR and YYSch cables

Colour code for YR cables

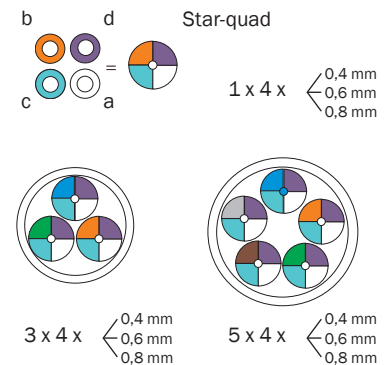
Number of cores x cross-section	Colours
2 x 0,8	bk, bu
3 x 0,8	bk, bu, bn
4 x 0,8	bk, bu, bn, ye
5 x 0,8	bk, bu, bn, ye, gn
6 x 0,8	bk, bu, bn, ye, gn, vt
8 x 0,8	bk, bu, bn, ye, gn, vt, wh, or,
10 x 0,8	bk, bu, bn, ye, gn, vt, wth or, tq, gy
12 x 0,8	bk, bu, bn, ye, gn, vt, wh, or, tq, gy, rd, lbu
14 x 0,8	bk, bu, bn, ye, gn, vt, wh, or, tq, gy, rd, lbu, cog, lgn
16 x 0,8	bk, bu, bn, ye, gn, vt, wh, or, tq, gy, rd, lbu, cog, lgn, lrd, lgy

Colour code for YYSch cables

Number of cores x cross-section	Colours
2 x 0,6	ye, bn
3 x 0,6	ge, gn, bn
4 x 0,6	ge, gn, bn, bk
5 x 0,6	ge, gn, bn, bk, bu
6 x 0,6	ge, gn, bn, bk, gy, pk, wh
10 x 0,6	wh, bk, hbu, bn, gn, ye, gy, pk, bu, rd
16 x 0,6	1 st layer: wh, bk, hbu, bn, gn
	2 nd layer: ye, lgy, pk, bu, rd, tq, gy, vt, lgn, or, ivory
26 x 0,6	Core: wh, bk + 2 fillers
	1 st layer: hbu, bn, gn, ye, lgy, pk, bu, rd, tq
	2 nd layer: gy, vt, lgn, or, ivory, whbu, whye, whgn, whbn, whbk, rdbu, rdy, rdgn, rdbn, rdbk

Colour code for telecommunication cables according to EN 60708

Colour code for cores in basic groups				
Quad number (XN)	Core insulation colour			
	a-core	b-core	c-core	d-core
1	white	blue	turquoise	violet
2	white	orange	turquoise	violet
3	white	green	turquoise	violet
4	white	brown	turquoise	violet
5	white	grey	turquoise	violet
Spare quad	white	blue	turquoise	violet

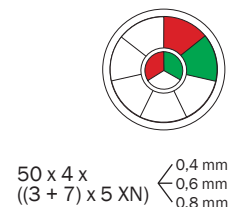
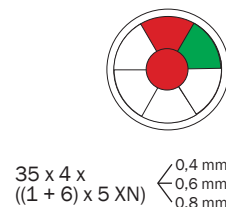
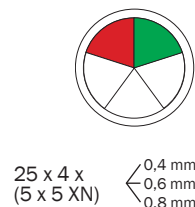
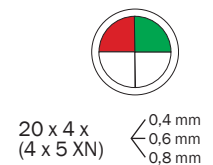
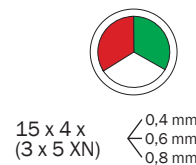
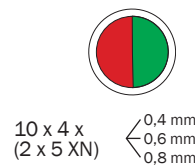
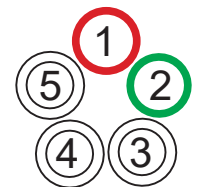


Star-quad 5 XN	
Number of basic group in each layer	Colour of marking tape
1 – Counting group	red
2 – Guiding group	green
Other + cable core	white

Note: The centre of a 35 XN cable core has a red marking tape.

(view of the cable beginning, from the centre of the drum)

Example:
25 x 4 x 0.4
is equivalent to
5 x 5 XN x 0.4

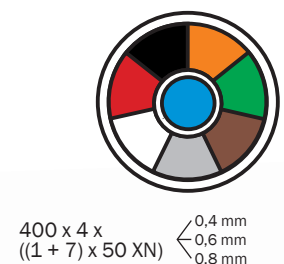
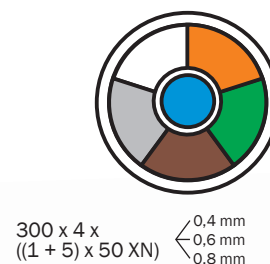
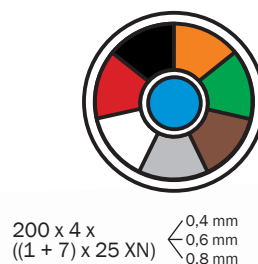
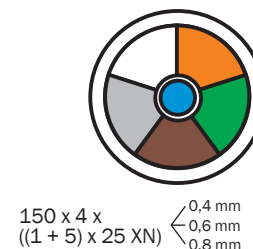
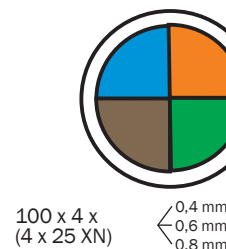
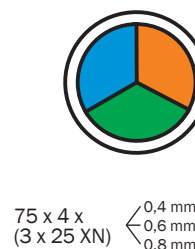


Star quad can be marked by the symbol XN

Colour code for main groups 25 XN and super groups 50 XN	
Number of main or super group	Colour of marking tape
1	blue
2	orange
3	green
4	brown
5	grey
6	white
7	red
8	black
Cable core	white

Note: Control wire in non-filled cables:
a-core: red, b-core: white.

(view of the cable beginning, from the centre of the drum)



Core identification of telecommunication cables according to ÖVE and TA specifications

F-VYAY, F-YAY

The individual pairs are identified by the basic colour and colour rings for the a-core and by the basic colour for the b-core. In cables with 2 pairs (stranded as star-quad), the a-core (physical circuit 1) is blue, the b-core (physical circuit 1) is yellow, the a-core (physical circuit 2) is green and the b-core (physical circuit 2) is brown.

Colour of a-core	Colour of b-core				
	bl	ge	gn	br	sw
wsbl	Pair no. 1	Pair no. 2	Pair no. 3	Pair no. 4	Pair no. 5
wsge	Pair no. 6	Pair no. 7	Pair no. 8	Pair no. 9	Pair no. 10
wsgn	Pair no. 11	Pair no. 12	Pair no. 13	Pair no. 14	Pair no. 15
wsbr	Pair no. 16	Pair no. 17	Pair no. 18	Pair no. 19	Pair no. 20
wssw	Pair no. 21	Pair no. 22	Pair no. 23	Pair no. 24	Pair no. 25
rtbl	Pair no. 26	Pair no. 27	Pair no. 28	Pair no. 29	Pair no. 30
rtge	Pair no. 31	Pair no. 32	Pair no. 33	Pair no. 34	Pair no. 35
rtgn	Pair no. 36	Pair no. 37	Pair no. 38	Pair no. 39	Pair no. 40
rtbr	Pair no. 41	Pair no. 42	Pair no. 43	Pair no. 44	Pair no. 45
rtsw	Pair no. 46	Pair no. 47	Pair no. 48	Pair no. 49	Pair no. 50

The colour code is repeated in the same sequence from pair no. 51.

F-2YA2Y, F-2YC2Y, FI-02YHAY, F-2YJA2Y, F-02YHJA2Y, F-02YHJA2YR

The individual pairs are identified by the basic colour and colour rings for the a-core and by the basic colour for the b-core. In cables with 2 pairs (stranded as star-quad), the a-core (physical circuit 1) is blue, the b-core (physical circuit 1) is yellow, the a-core (physical circuit 2) is green and the b-core (physical circuit 2) is brown.

a-core physical circuit 1	b-core physical circuit 1	a-core physical circuit 2	b-core physical circuit 2
 ¹⁾			

¹⁾ The colour of the a-core of the first star-quad in each layer (counting quad) is black, in all the other quads it is natural.



Parameters for drag chain applications

Type	Minimum bending radius	Traverse length	Acceleration	Traverse speed	Bending cycles up to
FLEXICS® CHAIN	10 × D	5m	3m/s ²	3m/s	3 Million
FLEXICS® CHAIN C	10 × D	5m	3m/s ²	3m/s	3 Million
FLEXICS® CHAIN 11	10 × D	5m	3m/s ²	3m/s	5 Million
FLEXICS® CHAIN 11C	10 × D	5m	3m/s ²	3m/s	5 Million
FLEXICS® CHAIN 911	7,5 × D	5m	3m/s ²	3m/s	5 Million
FLEXICS® CHAIN 99111C	7,5 × D	5m	3m/s ²	3m/s	5 Million
FLEXICS® CHAIN UL / c(UL)	10 × D	5m	3m/s ²	3m/s	3 Million
FLEXICS® CHAIN C UL / c(UL)	10 × D	5m	3m/s ²	3m/s	3 Million
FLEXICS® CHAIN 11 UL / c(UL)	7,5 × D	5m	3m/s ²	3m/s	5 Million
FLEXICS® CHAIN 11C UL / c(UL)	10 × D	5m	3m/s ²	3m/s	5 Million
FLEXICS® CHAIN SERVO 911	7,5 × D	5m	3m/s ²	3m/s	5 Million
FLEXICS® CHAIN SERVO 911C	7,5 × D	5m	3m/s ²	3m/s	5 Million
FLEXICS® CHAIN SERVO 911 UL / c(UL)	7,5 × D	5m	3m/s ²	3m/s	5 Million
FLEXICS® CHAIN SERVO 911C UL / c(UL)	7,5 × D	5m	3m/s ²	3m/s	5 Million

The number of cycles was determined by testing the cables using programmable drag chain test systems with adjustable traverse ranges, traverse speeds, acceleration and bending radius under standardised conditions and in continuous operation at constant temperature.

Construction Products Regulation (CPR)

The Construction Products Regulation entered into force on 1 July 2017 and applies to the entire territory of the European Union. Pursuant to the Regulation, manufacturers and suppliers are not allowed to place cables for “fixed installation” in buildings on the European market without “CE marking” and “Declaration of Performance”.

The CE marking

The CE marking is a statutory requirement confirming that the product is in conformity with all relevant guidelines and provisions. The CPR additionally requires the provision of accompanying information on the product, its testing or certification and its performance. The CE marking must be affixed to the product, and where this is not possible, it must be affixed to the drum, coil or packaging and to the accompanying documents.

What is a construction product?

A construction product means any product which is placed on the market for permanent incorporation in construction works or parts thereof.

Cables fall under the basic requirement “Safety in case of fire” of the CPR and must therefore be classified according to EN 13501. Important notice: For cables and insulated wires, reference is made to EN 50575, which contains only requirements for compliance with fire safety standards but no requirements for the structure or use of such products.

The standard does not apply to cables and insulated wires which provide circuit integrity, but are certified.

What are the duties of the market participants?

● Authorities

- Specify where the CPR-classified cables are to be used
- Examine the market for correct application of the Regulation

● Testing laboratories

- Specify the required reaction to fire based on the CPR classification
- Assess potential specific risks

● Manufacturers

- Produce all products in compliance with the CPR
- Have the products tested according to the CPR

● Wholesaler

- Ensure that all cables placed on the market meet the specified requirements
- Ensure that the product bears the CE marking and that the documents required by the CPR are available

● Installers

- Observe the relevant national provisions
- Install only cables which are in compliance with the CPR

CPR classification

The following criteria are assessed in tests according to EN 50399:

- Heat of combustion
- Heat release
- Vertical flame propagation
- Smoke development
- Flaming droplets / dripping plastic material which may contribute to flame propagation
- Acidity (acid concentration in the substance)

The CPR cable classes:

EN 50575 defines the following fire classes for cables:

- A_{ca} non-flammable, no contribution to fire
- B1_{ca} low flammability, very limited contribution to fire
- B2_{ca}, C_{ca} very limited contribution to fire, limited fire development and heat release
- D_{ca} small contribution to fire, continuous flame propagation; moderate heat release
- E_{ca} normally flammable
- F_{ca} highly flammable

Additional sub-classes need to be specified for classes B1_{ca} – D_{ca}.

Class	Smoke	Droplets	Acidity
A _{ca}			
B1 _{ca}	s1a/s1b	d0	a1
B2 _{ca}	s1	d1	a2
C _{ca}	s2	d2	a3
D _{ca}	s3		
E _{ca}			
F _{ca}			

Example: B2_{ca} – s1a, d0, a1

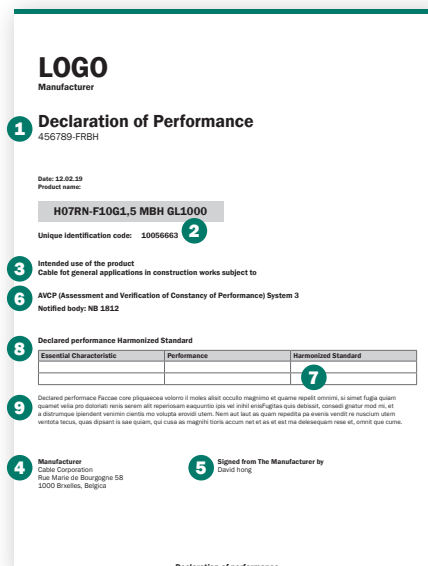
The fire classes must be indicated either on the label or on the accompanying documentation.

The Declaration of Performance (DoP)

By signing this declaration, the manufacturer confirms the performance of the product. The manufacturer must make the DoP available in easily understandable language or in the language required by the relevant Member State.

Which information is mandatory on the DoP and what does it look like?

1. DoP reference number
2. Unique identification code of the product type
3. Intended use
4. Manufacturer
5. Authorised representative
6. System(s) of AVCP (Assessment and Verification of Constancy of Performance)
7. Harmonised standard and notified body
8. Declared performance(s)
9. Declaration of responsibility



LOGO
Manufacturer

1 Declaration of Performance
456789-FRBH

Date: 12.02.19
Product name:
H07RN-F10G1.5 MBH GL1000

Unique identification code: 10056663 **2**

3 Intended use of the product
Cable for general applications in construction works subject to

6 AVCP (Assessment and Verification of Constancy of Performance) System 3
Notified body: NB 1812

8 Declared performance Harmonized Standard

Essential Characteristic	Performance	Harmonized Standard
		7

9 Declared performance: Facciae con piquasicaa volorio il mola alit occulto magistro et quame repaet ornenti, si almet fugia quam quamet nola pro dionatit nola seuen ad repandiam equorile qua vel liti analigilia tona delibato, conatit gnatit mod m, et a distruptioe ibendit vortem clienta mo volupia aenatit ulum. Nam aut laud ea quam repaetia pa aenatit vortit te nuctum ulum vortit laud, quae dionatit la aenatit, qui cula ad magistro tona accuat nectat ea et est nola deliquam nola ad, conatit que conatit.

4 Manufacturer
Cable Corporation
Rue Marie de Bourgogne 58
1000 Brussels, Belgium

5 Signed from The Manufacturer by
David Hong

Declaration of performance



What information is provided on the CPR label?

1. The CE marking
2. Year of initial affixing of the CE marking (2 digits min)
3. Manufacturer
4. The unique identification code of product type
5. The reference number of Declaration of Performance
6. The class of the performance declared
7. The dated reference to the harmonised technical specification applied
8. The identification number of the notified body
9. The intended use as laid down according to applied harmonised technical specification

Choosing the right cable for a specific building:

Each EU Member State can define independently for itself which performance requirements it imposes to ensure that an adequate level of fire protection is achieved, depending on the building type and the typical local construction technologies. Economic agents throughout the supply chain, as well as planners, are therefore obliged to familiarise themselves with the requirements that apply in their country.

Some EU countries have regulated by law which specific fire class is to be applied to which particular building or part of a building, while others only have recommendations of individual stakeholders. ÖVE (Austrian Association for Electrical Engineering), for example, issued such recommendations in Austria.

No.	Building description		Installation standard	Fire class Minimum requirement b	
			ÖVE/ÖNORM (series)	Building (except escape route)	Escape route
1	Free-standing buildings, for example detached and semi-detached houses (buildings of building class 1 according to OIB guideline)	Free-standing buildings with access for firefighting on at least three sides, either on private or public land. Max. 3 floors above ground level, max. 2 residential units or 1 business unit, escape level ≤ 7 m, ≤ 400 m² gross floor space on the above-ground floors.	E 8001	E _{ca}	-
2	Single and two-family terraced houses and non-detached buildings (buildings of building class 2 according to OIB guideline)	a) Buildings with max. 3 floors above ground level, escape level ≤ 7 m, ≤ 400 m² gross floor space on the above-ground floors. b) Terraced houses with max. 3 floors above ground level, escape level ≤ 7 m, consisting of apartments or business units with ≤ 400 m² gross floor space each on the above-ground floors. c) Free-standing buildings for exclusive residential use, with access for firefighting on at least three sides , either on private or public land, max. 3 floors above ground level, escape level ≤ 7 m, ≤ 800 m² gross floor space on the above-ground floors.	E 8001		-
3	Other buildings (buildings of building class 3 according to OIB guideline)	Buildings with max. 3 floors above ground level, escape level ≤ 7 m, which are not covered by lines 1 and 2 of this table.	E 8001	E _{ca}	B2 _{ca} s1a d1 a1
4	Other buildings (buildings of building class 4 according to OIB guideline)	a) Buildings with max. 4 floors above ground level, escape level ≤ 11 m, several residential or business units with max. 400 m² gross floor space each on the above-ground floors. b) Buildings with max. 4 floors above ground level, escape level ≤ 11m, one residential or business unit with unlimited gross floor space on the above-ground floors.	E 8001	E _{ca}	B2 _{ca} s1a d1 a1

No.	Building description		Installation standard	Fire class Minimum requirement b	
			ÖVE/ÖNORM (series)	Building (except escape route)	Escape route
5	Buildings with a maximum escape level of 22 m according to OIB guideline, section 5.4 (Buildings of building class 5 according to OIB guideline)	Buildings with an escape level ≤ 22 m, which are not covered by the buildings described in lines 1 to 4.	E 8001	C _{ca} s1b d2 a1	B2 _{ca} s1a d1 a1
Special buildings and facilities					
6	– School and preschool buildings as well as other buildings with similar use such as universities, universities of applied sciences, adult education centres, other educational establishments	With a gross floor space exceeding 3,200 m ² (if the gross floor space is smaller, assignment according to line 4 of this table)	E 8002-9	C _{ca} s1b d2 a1	B2 _{ca} s1a d1 a1
7	– Accommodation facilities, including student residences and other buildings with similar use.	With more than 100 beds (if there are fewer beds, assignment according to line 4 of this table)	E 8002-5	C _{ca} s1b d2 a1	B2 _{ca} s1a d1 a1
8	– Sales outlets	With a sales area greater than 3,000 m ² (if the sales area is smaller, assignment according to line 4 of this table)	E 8002-3	C _{ca} s1b d2 a1	B2 _{ca} s1a d1 a1
9	– Garages + parking decks	With a usable floor space greater than 1600 m ² (if the usable floor space is smaller, assignment according to line 4 of this table) Garages with a defined group of users on the first underground floor with a usable floor space greater than 10,000 m ² (if the usable floor space is smaller, assignment according to line 4 of this table)	E 8002-6	C _{ca} s1b d2 a1	B2 _{ca} s1a d1 a1
10	– Buildings with escape level above 22 m	Buildings with an escape level above 22 m	E 8002-4	C _{ca} s1b d2 a1	B2 _{ca} s1a d1 a1
11	– Exhibition sites	Exhibition sites in which the exhibition rooms – either individually or in total – have a usable floor space greater than 3,000 m ² (if the usable floor space is smaller, assignment according to line 4 of this table)	E 8002-3	C _{ca} s1b d2 a1	B2 _{ca} s1a d1 a1
12	– Places of assembly	a) Places of assembly and associated stages in buildings with assembly rooms, if the assembly rooms have a capacity of more than 120 persons – either individually or in total. b) Places of assembly and associated stages in buildings with assembly rooms, if the assembly rooms have a capacity of more than 240 persons – either individually or in total – and if the escape routes lead directly to public illuminated transit routes via exit doors on both sides. c) Outdoor places of assembly with performance areas and associated stages for more than 1,000 persons d) Outdoor places of assembly and associated stages for more than 5,000 persons (a) to d): if the capacity is smaller, assignment according to line 4 of this table)	E 8002-2	C _{ca} s1b d2 a1	B2 _{ca} s1a d1 a1
13	– Medical areas according to ÖVE/ÖNORM E 8007	Medical areas according to the scope of application of ÖVE/ÖNORM E 8007 Bed wing: see accommodation facilities	E 8007	C _{ca} s1b d2 a1	B2 _{ca} s1a d1 a1
14	– Public houses	Pubs and restaurants with a capacity of more than 400 guests (if the guest capacity is smaller, assignment according to line 4 of this table) Discotheques and clubs with dance floor with a capacity of more than 120 persons (if the guest capacity is smaller, assignment according to line 4 of this table)	E 8002	C _{ca} s1b d2 a1	B2 _{ca} s1a d1 a1
15	– Transport infrastructure facilities, such as airports, railway stations, etc.	Publicly accessible areas with a floor space greater than 1,600 m ² in transport infrastructure facilities, such as airports or railway stations (if the usable floor space is smaller, assignment according to line 4 of this table)	E 8002	C _{ca} s1b d2 a1	B2 _{ca} s1a d1 a1
16	– Nursing homes, care homes	Areas used for medical purposes in accordance with the scope of ÖVE/ÖNORM E 8007 Bed wing or residential wing: see accommodation facilities	E 8007	C _{ca} s1b d2 a1	B2 _{ca} s1a d1 a1

No.	Building description		Installation standard	Fire class Minimum requirement b	
			ÖVE/ÖNORM (series)	Building (except escape route)	Escape route
18	– Service buildings according to OIB	Areas with special hazards ^a	E 8001	C _{ca} s1b d2 a1	B2 _{ca} s1a d1 a1
19	– Workplaces according to ASchG	If used according to lines 6 to 18	E 8001	as indicated in rows 6 to 18	as indicated in rows 6 to 18
20	– Other rooms/facilities of a special kind (special purpose buildings)		-	determination by the authority	determination by the authority

a Workplaces with special hazards include, for example:

- Laboratories, if employees need to stop or interrupt a running test in order to prevent an acute hazard to employees and third parties. Such acute hazards may be explosions or fires and the release of pathogens or toxic or radioactive substances in hazardous quantities.
- Areas in the immediate vicinity of work equipment whose moving parts continue to move for some time even after the stop button has been pressed, and which could be a potential source of accidents because of the lack of a protective cover or guard – for example facing lathes.
- Control devices for installations that require constant monitoring – e.g. switch rooms and control rooms for power stations, traffic installations, chemical and metallurgical plants as well as workplaces where shut-off and control devices need to be activated during operation or in case of malfunctions in order to avoid accidents and hazards, and to interrupt or stop production processes without danger.
- Workplaces near hot or hazardous baths or casting pits where protection by means of railings or barriers is impossible for production reasons.
- Areas where production processes represent a risk.
- Areas in kitchens where hot liquids become a source of danger if the lighting fails.

b If the cables and insulated wires are routed inside a qualified fire protection duct or structure which is adequately sealed off from the specified area of use, it is possible to use cables and insulated wires within this fire protection duct or structure that do not fulfil the minimum fire class requirement that would otherwise apply to them (see also ÖVE/ÖNORM E 8002-1, Annex B).

Properties of electric cables in case of fire

Reaction to fire

This group of test standards is used to assign cables to fire reaction classes in accordance with the following criteria: heat release, smoke, corrosive gases, flame propagation, and dripping of burning parts.

Testing of vertical fire propagation

EN 60332-1-2:

Self-extinguishing

The purpose of the test is to determine whether flame propagation occurs across the surface of individual conductors or cables.

Test of vertical flame propagation, self-extinguishing



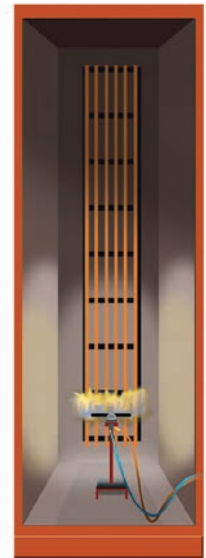
Testing of fire propagation in cable bundles

EN 60332-3-22 und 24:

minor fire propagation

Similar to the vertical fire propagation test, this test considers the extent of flame propagation across the surface of the cables. However, in this case we are looking at cable bundles.

Flame propagation test in bundles



Corrosiveness of the combustion gases

EN 60754-1 and 2: **halogen-free, no corrosive combustion gases**

One of the most important parameters of cables in the event of fire is corrosiveness, i.e. the ability of the gases to create conditions that are aggressive and cause corrosion. This is particularly important because the corrosive atmosphere can potentially also cause damage to equipment that is not directly affected by the fire.



Measurement of the corrosiveness of the combustion gases

Smoke density

EN 61034-2: **minimal smoke emission**

Another important parameter of cables in case of a fire is the smoke density and the resulting restriction of light propagation. Dense smoke interferes with orientation and thus makes it more difficult to evacuate people.

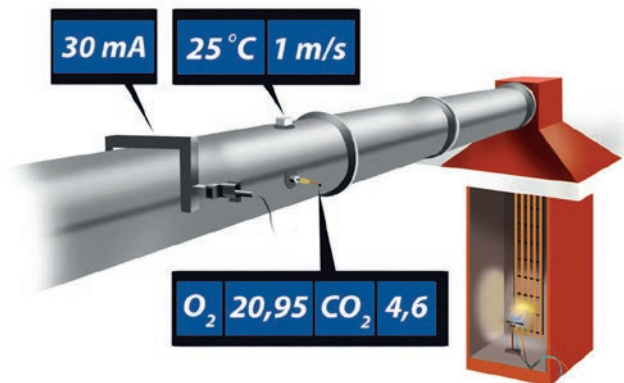


Measurement of smoke density

Measurement of heat and smoke release in flame propagation tests

EN 50399

It is equally important to determine how much heat cables release in the event of a fire and how this contributes to fire development. This property is evaluated in a complex test. Its purpose is to assign the cables to so-called fire reaction classes within the framework of the Construction Products Regulation (CPR). These classes are defined in the European Commission Regulation No. 2006/751/EC.



Testing of the fire reaction of electrical cables to fire

Resistance to fire

In the event of a fire, cables must continue to supply electricity and information to the equipment they feed. This requirement led to the development of cables that are able to keep functioning for a specified period of time in the event of fire.

Insulation integrity FE180

EN 60331-21, DIN VDE 0472-814: **Insulation integrity V180 / FE180**

The first procedure, which examines the functionality of the cables, is described in the test standard EN 60331 'Testing of insulation integrity at temperatures >830° C'. During the test, the cables are connected to the nominal voltage and exposed directly to flames. The period of time during which the cable maintains its functional integrity is measured. As a rule, cables are designed to survive exposure to flames for a period of 180 minutes.

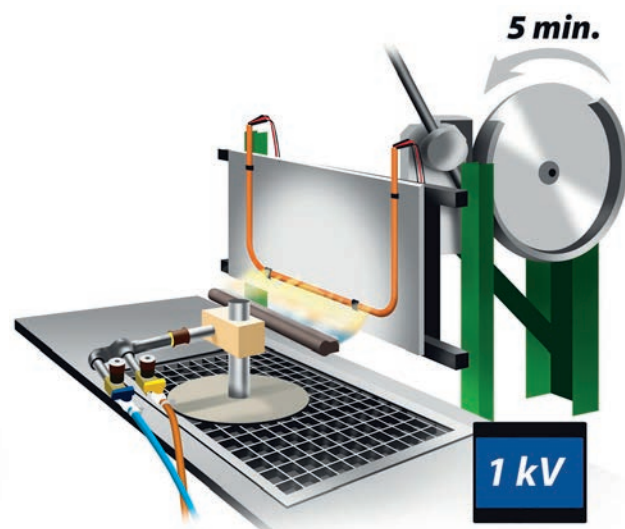


Testing according to EN 60331 (850°C 1 kV)

Insulation integrity for emergency circuits

EN 50200, EN 50362

Additional test methods are described in the following standards: EN 50200 discusses the method for testing the insulation integrity of small-diameter cables exposed to fire (<20 mm), while EN 50362 discusses the method for testing cables with large diameters (>20 mm) laid in protected conduits for use in emergency circuits. During this test, the cable is exposed to high temperatures and voltages and is also subjected to mechanical stress. At five-minute intervals, a metal rod strikes the test plate to which the cable is attached to simulate mechanical vibrations.



Test according to EN 50200 and EN 50362 (approx. 842°C 1 kV)

Functional integrity of cable installations and support systems in the event of fire

Fire protection systems ensure the safe and efficient evacuation of people and the successful subsequent deployment of rescue teams, especially in buildings and facilities where there is an increased risk of fire and where large concentrations of people occur (hospitals, stadiums, shopping malls, airports, tunnels, subways, etc.). Such systems must therefore retain their functional integrity even if there is a fire. Consequently, we need to ensure a continuous power supply or, if applicable, continuous signal and data transmission, and this is only possible with a functioning cable system.

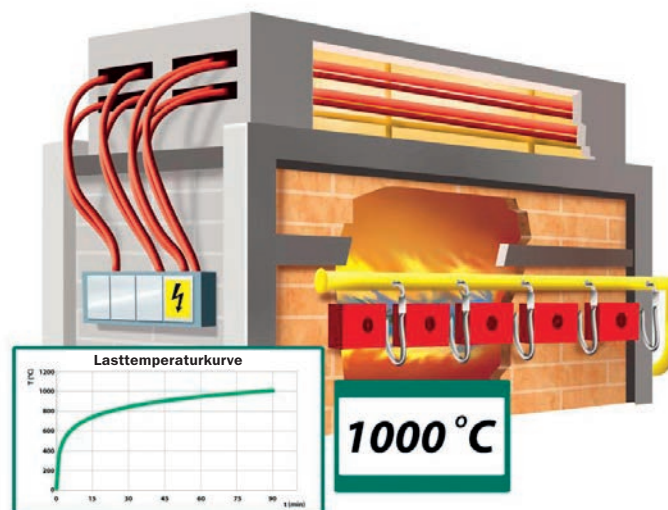
Such a cable system with integrated functional integrity is subjected to the most demanding cable function test procedure in a fire situation. In these cases, it is not only the individual cable that is tested, but also the complete cable system. This includes the cable, the support systems and their connecting elements (such as cable trays, cable ladders, fixing accessories, etc.), which are installed in a fire room and tested under real fire conditions. Since there is no European test procedure for this test, national test procedures are applied instead – standard ČSN 73 0895 in the Czech Republic, standard STN 92 0205 in Slovakia, and DIN 4102-12 in Austria, Germany and Switzerland. Based on these tests, the cables are assigned to classes according to the time in minutes during which they retain their functional integrity. Standard ČSN 73 0895 subdivides functional integrity into four classes (P15-R to P90-R or PH15-R to PH120-R), DIN 4102-12 subdivides it into three classes

(E30, E60 and E90). The cable only passes the test if its function is maintained for at least the specified period of time.

ČSN 73 0895, STN 92 0205 and DIN 4102-12 define four standardised support systems with integrated functional integrity:

- Cable installations on cable ladders
- Cable installations on cable trays
- Cable installations on single clamps
- Cable installations on bracket clamps with long troughs

Since standardised support systems have precisely defined parameters and dimensions, they offer the advantage that the results of the performed tests are transferable. Certified cables for standardised constructions of one support system manufacturer can therefore be installed in another manufacturer's standardised construction without the need to carry out another system test. However, due to the diversity of projects, manufacturers of cable support systems also produce so-called non-standardised support systems. Their advantage is a greater degree of flexibility during installation, and they are usually also easier to assemble. On the other hand, the disadvantage is that the test results are not transferable, meaning that it is necessary to use the same manufacturers of cables and support systems that were previously tested.



Testing according to DIN 4102-12 - Functional integrity of cable systems in case of fire

Packing

R Ring (coil)
 Sp Plywood reel (non-returnable)
 D..... Wooden or steel drum

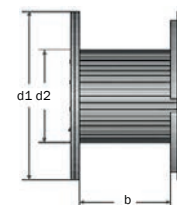
Drum capacity

Cable		Length in m per standard supply drum and cable diameter											Cable
Ø	DA 06	DA 07	DA 08	DA 10	DA 12	DA 14	DA 16	DA 18	DA 20	DA 22	DA 24	DA 25	Ø
6	1451	2277	3560										6
7	1054	1617	2622										7
8	811	1288	1993	4213									8
9	618	1020	1515	3244									9
10	523	806	1309	2668									10
11	396	667	1048	2149									11
12	356	560	877	1872									12
13	297	479	768	1615	2287								13
14	243	404	645	1278	1973	2891							14
15	232	336	552	1217	1721	2556							15
16	185	322	466	1039	1487	2195							16
17	175	261	448	901	1304	1950							17
18	143	249	371	772	1132	1817							18
19	135	207	315	726	1069	1595	2488						19
20	127	196	301	632	915	1387	2375	3389					20
21		159	287	590	858	1312	2111	3054					21
22		149	238	506	746	1159	1862	2736					22
23		149	226	487	720	1091	1764	2608	2913				23
24			213	468	618	951	1583	2316	2777				24
25			183	393	595	920	1538	2256	2516				25
26			172	377	572	859	1327	1985	2390				26
27				360	480	736	1286	1781	2148	2488			27
28				295	460	709	1131	1679	2032	2426			28
29				281	440	682	1093	1629	1809	2302			29
30				281	420	597	1056	1446	1756	2053	2477		30
31				267	343	573	916	1400	1548	1996	2408		31
32				253	343	549	882	1230	1500	1762	2144	2507	32
33				211	326	525	848	1188	1451	1711	2081	2435	33
34				199	326	450	754	1145	1403	1659	2018	2167	34
35				199	309	429	724	1145	1219	1607	1777	2101	35
36				187	257	409	694	992	1176	1400	1720	2035	36
37					243	409	664	954	1176	1353	1663	1850	37
38					243	389	581	954	1006	1306	1445	1791	38
39					229	389	554	814	968	1161	1445	1731	39
40					229	307	554	780	968	1120	1393	1671	40
41					214	307	528	780	929	1078	1342	1504	41
42					214	290	528	746	890	1078	1193	1450	42
43					172	290	430	746	779	1037	1147	1397	43
44					160	290	430	623	745	907	1147	1397	44
45					160	273	407	623	745	871	1101	1194	45
46					160	273	407	594	711	835	1055	1194	46
47						256	407	594	711	835	923	1146	47
48						205	385	564	677	798	883	1098	48
49						205	385	564	581	798	883	1098	49
50						205	385	564	581	798	883	1098	50
51						191	302	458	552	653	843	919	51
52						191	302	458	552	653	843	919	52
53						191	302	433	523	622	803	877	53
54						177	283	433	523	622	688	877	54
55						177	283	433	523	622	688	836	55
56						177	283	407	493	591	654	836	56
57							264	407	411	591	654	836	57
58							264	407	411	560	619	680	58
59							264	339	387	467	619	680	59
60							264	318	387	467	619	680	60
61								318	387	467	619	645	61
62								318	387	441	585	645	62

For flat cables: thickness of flat cable is cable diameter

Cable length: length according to table x cable thickness/cable width

Standard delivery drums



Wooden drums						
New drum designation	Size	Flange diameter d1 mm	Max. winding diameter mm *	Barrel diameter d2 mm *	Winding width mm "b" *	Weight kg *
DA06 without helix	6	600	540	300	330	12
DA07 without helix	7	700	640	350	370	20
DA08 without helix	8	800	740	400	430	33
EA08 with helix	8	800	740	400	405	36
DA10 without helix	10	1000	940	550	600	65
EA10 with helix	10	1000	940	550	580	68
DA12 without helix	12	1200	1120	700	650	105
EA12 with helix	12	1200	1120	700	620	110
DA14 without helix	14	1400	1320	850	750	170
EA14 with helix	14	1400	1320	850	720	175
DA16 without helix	16	1600	1500	900	850	230
EA16 with helix	16	1600	1500	900	800	240
DA18 without helix	18	1800	1700	1000	950	320
EA18 with helix	18	1800	1700	1000	900	330
DA20 without helix	20	2000	1880	1250	1000	400
EA20 with helix	20	2000	1880	1250	920	415
DA22 without helix	22	2200	2000	1300	1100	450
EA22 with helix	22	2200	2000	1300	1020	465
DA24 without helix	24	2400	2200	1450	1100	620
EA24 with helix	24	2400	2200	1450	1020	635
DA25 without helix	25	2500	2300	1500	1150	800
EA25 with helix	25	2500	2300	1500	1070	820

Steel drums						
New drum designation	Size	Flange diameter d1 mm	Max. winding diameter mm *	Barrel diameter d2 mm *	Winding width mm "b" *	Weight kg *
10MC	100(3k)	1000	940	600	575	56
12MC	120(4k)	1200	1120	600	660	82
15MC	150(5k)	1500	1400	750	940	150
18MC	180(6k)	1800	1700	1150	895	280
20MC	200(7k)	2000	1800	1200	895	380
22MC	220(8k)	2200	2000	1450	965	475
25MC	250(ZF)	2500	2300	1600	1250	780

* guide values

Drum allocation

Smallest permissible barrel diameter for cable types.

Types	Smallest barrel diameter
Cables for fixed installation	
Single-core cables	$20 \times D_A$
Sheathed cables, single-core	$20 \times D_A$
Sheathed cables, multi-core	$15 \times D_A$
Flexible cables	$12 \times D_A$
Plastic insulated cables	
Single-core ≤ 6 kV	$20 \times D_A$
Single-core ≥ 10 kV	$25 \times D_A$
Multi-core, including $95 \text{ mm}^2 \leq 1$ kV	$15 \times D_A$
Multi-core, including $95 \text{ mm}^2 \geq 6$ kV	$20 \times D_A$
Multi-core, including $95 \text{ mm}^2 \geq 20$ kV	$25 \times D_A$
Multi-core, larger than $95 \text{ mm}^2 \leq 10$ kV	$20 \times D_A$
Multi-core, larger than $95 \text{ mm}^2 \geq 20$ kV	$25 \times D_A$
Multi-core ≤ 1 kV	$15 \times D_A$
Telecommunication cables and installation cables for telecommunication facilities	
Plastic cables	$20 \times D_A$
Installation cables	$20 \times D_A$
Paper insulated cables with lead sheath	
Single-core ≤ 10 kV	$25 \times D_A$
Single-core ≥ 10 kV	$30 \times D_A$
Multi-core, non-armoured ≥ 6 kV	$25 \times D_A$
Multi-core, armoured ≥ 6 kV	$20 \times D_A$
3-core lead sheathed cable, armoured ≥ 10 kV	$20 \times D_A$

D_A = conductor / cable diameter



SCHWECHATER KABELWERKE

1 SCOPE OF APPLICATION

1.1 Our deliveries and services shall be rendered exclusively on the basis of the following General Terms and Conditions of Delivery. Terms and Conditions of Purchase or other General Terms and Conditions of the purchaser are hereby expressly objected to; they shall not apply, even if we fail to object to them again at the time of conclusion of the contract.

1.2 Deviations from these Terms and Conditions shall only be effective if approved by us in writing.

1.3 The "General Terms and Conditions of Delivery of the Austrian Electric and Electronic Industry" published by the Association of the Austrian Electric and Electronic Industry, version April 2017, shall apply subsidiarily.

2. OFFERS

2.1 Our offers are non-binding as a matter of principle.

2.2 Documents handed over in connection with an offer shall not be copied or made available to third parties without our consent. If an order is placed with a third party such documents shall be returned to us immediately.

3. CONTRACT CONCLUSION

3.1 Contracts shall only be deemed concluded after we have sent a written order acknowledgement or a shipment following receipt of the order.

3.2 Subsequent amendments to or modifications of the contract shall require our written consent to be valid. This written form requirement may not be waived orally or tacitly.

4. PRICES

4.1 Any and all deliveries shall be effected on the basis of the price list valid at the time of delivery plus value added tax in the statutory amount and considering the following discounts and surcharges: Our prices include a copper basis of EUR 130.00 per 100 kg copper and/or an aluminium basis of EUR 100.00 per 100 kg aluminium and/or a lead basis of EUR 50.00 per 100 kg lead. The discounts and surcharges for metal will be charged on the basis of the metal content of our goods as indicated in our price lists and on the basis of the most recent list of Austrian metal quotations valid at the time of delivery, which is published at www.skw.at.

4.2 We reserve the right to invoice current transport costs, surcharges and handling costs for small quantity orders. Current printing costs will be charged for customer-specific cable printing.

4.3 Our prices apply ex works Schwechat excluding costs of drums, planking, packaging and unloading.

4.4 In case of excess and short deliveries (Article 5) we shall invoice the actual quantity delivered.

5. DELIVERY LENGTHS

Orders for goods on stock shall be delivered in the standard lengths advised to you with an allowable variation of +/-10%, and such excess and short deliveries shall be accepted and paid by purchaser. Unless otherwise expressly agreed an allowable length variation of +/-5% shall apply to all other deliveries.

6. DRUMS AND PACKAGING

6.1 Cable drums shall be invoiced separately according to our price list for drums valid at the time of delivery and shall be payable together with the goods without any deduction. Undamaged empty drums returned carriage paid to our Schwechat works within six months of the date of shipment will be bought back deducting a handling fee of 25% of the full price of the drum and issuing a credit note on the relevant amount. If the drums are returned after more than six months, the repurchase price will be reduced by 5% of the full price of the drum for every additional month commenced.

6.2 Non-returnable drums, planking, loading devices and other types of packaging will be invoiced to purchaser at cost and will not be taken back. The purchaser undertakes to arrange and bear the cost for disposal of the packaging material.

7. SHIPMENT / PASSING OF RISK

7.1 Deliveries up to 20 kg shall be sent by post carriage unpaid ex our Schwechat works.

7.2 Other freight shipments within Austria shall be carried out at our discretion through a forwarder or by rail carriage paid to Austrian destination railway station. We reserve the right to invoice current transport costs for small quantity orders. Transportation abroad shall be organised by the purchaser; delivery will be ex works Schwechat. The mode of shipment chosen by SKW in all cases shall be deemed approved by the purchaser.

7.3 If the purchaser collects the goods himself no compensation will be paid. Additional costs for express shipments shall be borne by the purchaser.

7.4 The risk of loss of or damage to the goods as well as the drums shall be borne by the purchaser as from delivery to the carrier at our Schwechat works.

8. DELIVERY

8.1 We shall be entitled to make partial deliveries and to charge them separately.

8.2 The delivery periods notified by us shall apply subject to unforeseeable circumstances or circumstances beyond our control, such as, e.g., warlike events, labour disputes (strike or lock-out) or other events of force majeure, acts of authorities and prohibitions, delays in transportation and customs clearance, etc. irrespective of whether such circumstances affect us directly or any of our suppliers. In the event such circumstances occur, the delivery period shall automatically be extended

by the period of time such circumstance continues. If such circumstance continues for more than three months, each of the parties may rescind the contract with respect to that part of the order which has not been executed as long as such circumstance continues.

8.3 The delivery period shall commence upon the latest of the following dates:

- date of acknowledgement of order;
- date of fulfilment of purchaser's obligations, if any, such as, e.g., handing-over of technical documentation as well as technical clarification of the order, handing-over of official permits, etc.;
- date of receipt of an agreed down-payment or security by us.

8.4 Notification of readiness for shipment at the delivery date shall be deemed equal to actual delivery if the latter cannot be effected at the delivery date due to reasons for which we are not responsible.

9. TERMS OF PAYMENT

9.1 We shall be entitled to demand down-payments. Payments shall be effected to us or to a bank specified by us.

9.2 Our invoices shall be due for payment thirty days after the invoice date in the currency agreed without any deduction. The purchaser shall only be entitled to deduct an agreed cash discount if he is not in arrears with any other of his payment obligations to us.

9.3 The costs arising from payment by letter of credit or documentary collection that might have been agreed shall be borne by the purchaser.

9.4 The purchaser shall not be entitled to withhold payments on grounds of warranty claims, claims for damages or other claims. The purchaser shall only be entitled to offset claims against claims that have been ascertained by court or recognised.

9.5 If the purchaser does not comply with terms of payment, we shall be entitled to hold back outstanding deliveries or to make such deliveries conditional upon production of security or of a (subsequent) down-payment.

9.6 Irrespective of the terms of payment agreed upon, all our accounts receivable shall become due immediately if circumstances arise with the purchaser that diminish his creditworthiness, such as, e.g., opening of insolvency proceedings over the assets of the purchaser or if such insolvency proceedings cannot be opened due to lack of sufficient assets, etc.

9.7 If insolvency proceedings are opened over the assets of the purchaser or if such insolvency proceedings are not opened due to lack of sufficient assets the prices agreed upon shall be replaced by the prices according to our price list valid at the time of conclusion of the contract, since we only grant prices below list prices if the purchaser meets his payment obligations on time and completely.

10. RESERVATION OF TITLE

10.1 The purchased goods shall remain our property until the total invoice amount plus ancillary charges has been paid. Irrespective thereof the risk of loss of or damage to the goods shall lie with the purchaser (see Article 7.4).

10.2 Whilst we hold title to the goods we shall be entitled to identify them as our property by marking the goods in any manner we like. The purchaser undertakes not to damage, remove or obliterate such identification marks.

10.3 Until further notice, the purchaser shall be entitled to sell and/or process the goods to which we have retained title in day-to-day business. The purchaser shall be prohibited from transferring such goods by way of security or pledging or disposing of them in any other way which is not in line with day-to-day business, such as, e.g., sale by the bulk. The purchaser shall inform us immediately if a third party attaches or otherwise seizes goods to which we still hold title. Any costs incurred by us due to enforcement of our title shall be reimbursed to us by the purchaser.

10.4 Our title shall not be extinguished either by processing of goods to which we have retained title. We shall acquire pro-rated co-ownership in the new products or objects created by such processing or combining. Our co-ownership share shall be determined by the proportion of the value of our goods to the total value of the new products which are the result of the processing or combining, or to the increased value of the objects in which our goods are installed.

11. WARRANTY

11.1 The warranty period shall be 12 months as of delivery and/or notification of readiness for shipment.

11.2 The purchaser shall closely inspect all goods delivered immediately after delivery and/or collection to the extent suitable in ordinary business practice and shall notify without delay any defect in writing by registered letter. Transport damage shall additionally be confirmed by the carrier on the transport documents (notice of defects). If the purchaser fails to notify such damage the goods shall be deemed approved unless the defect was not detectable during inspection. In case such a defect is detected later it shall be notified immediately after having been detected; otherwise the goods shall be deemed approved also with respect to such defect. In deviation from Section 924 AGBG [Austrian General Civil Code] the purchaser shall have to prove that the defect existed at the time of delivery. The aforementioned obligations shall also be fulfilled in case that goods other than those ordered or a quantity other than agreed is delivered unless the goods delivered obviously differ from the order to such a substantial degree that the seller had to consider an approval by the purchaser impossible.

11.3 Defects of a purely optical nature, including but not limited to isolated staining or increased surface roughness, discoloration, plasticizer leakage or the like shall not be considered defects for which warranty is assumed or claims for damages may be asserted.



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11.4 In addition to the aforesaid, the purchaser shall lose any claims based on defects under the following circumstances:

11.4.1 if upon detecting or assuming a defect, the purchaser takes or fails to take measures which hinder us to inspect the possible defect or damage in detail (e.g., continuing of installation work, etc.);

11.4.2 if the processing or combining of the goods (in particular installation) violates relevant technical standards or statutory provisions (in particular the Austrian Electrical Engineering Regulation as amended) or is not carried out by an authorised expert;

11.4.3 if possible instructions for application, assembly, installation or use are not observed, the goods are used for a purpose not agreed upon or if the defect is attributable to normal wear and tear, improper handling, inappropriate storage, improper installation or assembly, insufficient frost protection, chemical, electrical or other detrimental impacts or similar circumstances;

11.4.4 if the purchaser himself or a third party not authorised by us have tried to repair the defect.

11.5 With regard to warranty remedies the purchaser is restricted to repair or replacement of the defective part within a reasonable period of time. If transportation of defective goods is not expedient, we will repair the defect or replace the goods at the purchaser's premises. We will regain ownership of any goods replaced by us.

11.6 In any case the purchaser shall bear all costs that exceed the costs of direct repair of defects, such as, e.g., costs of necessary construction measures, excavation works, costs of identification of defects or the cause of defects, etc.

11.7 The original warranty period shall not be extended by repair of defects of the delivered goods or replacing of the same and shall not result in commencement of a new warranty period. Any claims of the purchaser in addition to those stated above of whatever nature as well as recourse pursuant to Section 933b ABGB [Austrian General Civil Code] shall be excluded.

12. LIABILITY

12.1 As seller we shall be liable under the Austrian Product Liability Act (PHG). Our products may only be used within the scope of the relevant technical standards or statutory provisions, including but not limited to the Austrian Electrical Engineering Regulation 2002/A2 (amendment of Electrical Engineering Regulation 2002, BGBl. II No. 33/2006) as amended from time to time, and only by authorised experts. Outside of the scope of application of the Austrian Product Liability Act we shall only be liable for damages according to statutory provisions in the event of proven wilful intent or gross negligence on our part. Liability for slight negligence as well as compensation for consequential damage, pecuniary losses, lost profit or savings, lost interest as well as loss of data or information and for damage in connection with claims of third parties vis-à-vis the purchaser or for other indirect damage shall be excluded.

12.2 We shall only be liable for contractual penalties if they have been agreed upon in writing and only if they are due to our fault.

13. APPLICABLE LAW AND VENUE

13.1 These General Terms and Conditions of Delivery and any related contracts shall be governed by and construed in accordance with the law of Austria with the exception of the UN Convention on the International Sale of Goods

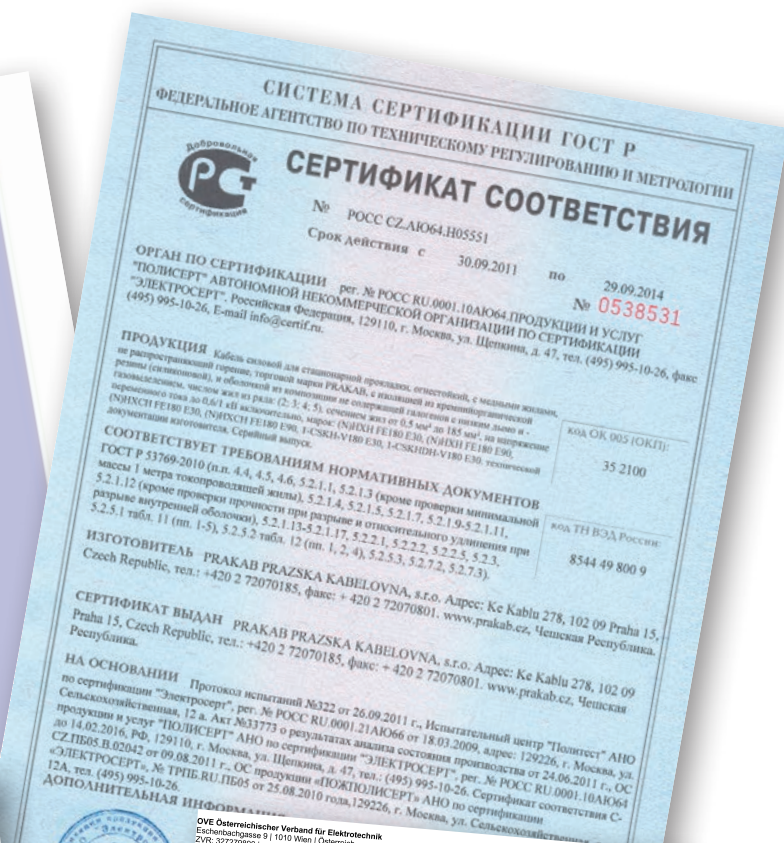
13.2 The exclusive venue for all disputes shall be Vienna, Innere Stadt.

14. MISCELLANEOUS

14.1 Emails shall be deemed received by us only at the time they are retrieved and opened by our staff in charge during our office hours. Emails opened after our office hours shall only be deemed received at the beginning of office hours on the next business day.

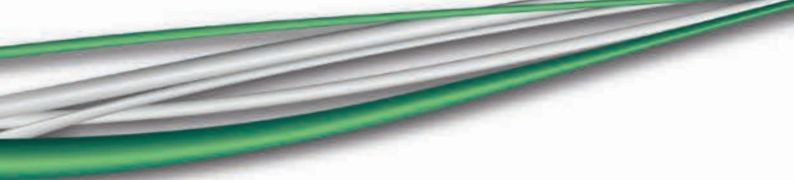
14.2 Amendments to or modifications of these General Terms and Conditions of Delivery shall be made in writing. This written form requirement may not be waived orally or tacitly.

14.3 If one or several provisions of these General Terms and Conditions of Delivery or any related contract are found to be invalid or unenforceable, the validity of the remaining provisions shall not be affected thereby. The invalid or unenforceable provision shall be deemed replaced by a valid and enforceable one which comes as close as possible to the economic aims of the parties which were intended by such invalid or unenforceable provision.





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Presence throughout Europe

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