



TESLA CABLES

CABLES & WIRES

TECHNICAL CATALOGUE

TESLA KABELI d.o.o.

is a Croatian company founded in 2013. The company specializes in wholesale of all types of transmission lines and power cables. We ensure access to all types of transmission lines and cables of all lengths and cross-sections for all clients from our own central stock.

With our long experience, professional client care our employees provide and high quality level of logistics, we can meet the demands of all our clients along with a guarantee of superb cable quality including a service at the professional level.

At the end of 2014 our company became a part of the largest European cable group - Meinhart Holding GmbH.

With this merger, Tesla kabeli d.o.o. became one of the most important distributors of transmission lines and power cables in Croatia, as well as in the region.

TESLA KABELI d.o.o.

Industrijska 20
10 431 Sveta Nedelja
Croatia
www.teslacables.com



Tesla kabeli d.o.o. – Sveta Nedelja



Warehouse



Open-air warehouse



Inside warehouse and machines

MEINHART HOLDING GmbH

Meinhart Holding GmbH is a company founded in 1978 and is owned by the Meinhart family. It is located in St. Florian in the vicinity of Linz, Austria and it takes up 113,000 m². The indoor warehouse contains 7,500 pallet spots, while the outdoor warehouse has around 13,000 cable drums making Meinhart Holding GmbH one of the largest European cable warehouses.

Meinhart Kabel continually has anywhere between 6,000 and 8,000 tons of copper cables and 2,000 to 2,500 tons of aluminium cables, that is, over 3,500 different items. The company employs 170 people with the annual turnovers of 160 million Euro. They also have a fleet of 16 trucks used to ship merchandise every day to the Austrian market, as well to the neighbouring countries.

In 2014 Meinhart Holding GmbH began to intensively expand to the neighbouring markets. At the end of 2014 they realised their largest project – a distribution warehouse in Germany with a size of 75,000 m². The same year, Meinhart Holding GmbH began to expand its operation on the Central and Eastern European markets and gained business shares in the companies VLG Hungary and VLG Romania, Allkabel Czech Republic, as well as Tesla Kabeli d.o.o. Croatia.

The main line of business of the Meinhart Holding GmbH member companies is wholesale of cables and transmission lines, and their primary goal is to offer their clients a high level of service, professional market approach and accessibility to a one-stop cable assortment.



*Meinhart – location in Austria
St. Florian / Linz*



*Meinhart – location in
Germany Höchststadt a.d.
Aisch*



Open-air warehouse



*Inside warehouse and
machines*

H05V-U (Yse) PVC Insulated Single Core Wire

Application: For protected fixed installations inside appliances and in or on lighting fittings. Further for installations in pipes on and under plaster, however, only for signal circuit and control circuit.



Construction: 1 solid bare copper
2 PVC insulation

Standards: DIN VDE 0281-3
DIN EN 60228 Class 5 (construction)

Technical data:

Nominal voltage U ₀ /U		[V]	300 / 500 Volt
Test voltage		[V] _{AC}	2000
Temperature range	in motion		+5°C till +70°C
Operating temperature	short circuit	°C	160
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	4
Flammability	standard		EN 60332-1-2

Nominal cross section	Colours	Copper figure	Cond. construction (appr. value)	Overall diameter	Weight
mm ²		kg/km	mm	appr. mm	appr. kg/km
0,5	gr	4,8	1 x 0,78	2,3	9
0,75	Bk	7,2	1 x 0,95	2,4	12
1	bk/bl/br/gr gr/vi/wh/or gn/ye/red/pk	9,6	1 x 1,15	2,6	14

H07V-U (Ye) PVC Insulated Single Core Wire

Application: For indoor fixed installations in dry locations, in switchboards and distributors, installed in surface mounted or embedded conduits, or on suitably objects.



Construction:
1 solid bare copper
2 PVC insulation

Standards:
DIN VDE 0281-3
DIN EN 60228 Class 1 (construction)

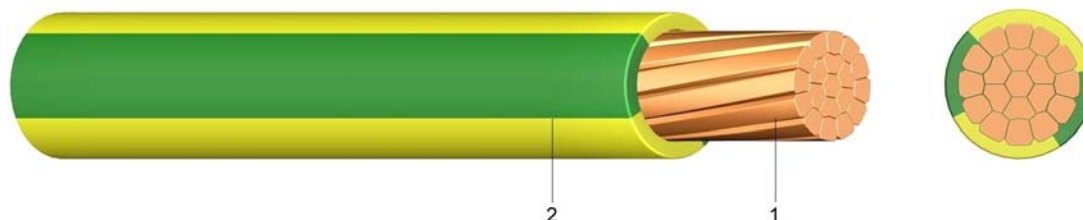
Technical data:

Nominal voltage U_0/U		[V]	450 / 750 Volt
Test voltage		[V] _{Ac}	2500
Temperature range	in motion		+5°C till +70°C
Operating temperature	short circuit	°C	160
Short circuit time	max.	[sec]	5
Flammability	standard		EN 60332-1-2

Nominal cross section mm ²	Colours	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
1,5	bk/bl/br	14,4	1 x 1,38	3,2	20
	gr/dbl	14,4	1 x 1,38	3,2	20
	gr/vi/wt	14,4	1 x 1,38	3,2	20
	or/gn/ye/rd	14,4	1 x 1,38	3,2	20
2,5	bk/bl/br	24,0	1 x 1,78	3,9	31
	gy	24,0	1 x 1,78	3,9	31
	gr/vi/wt/or/gn/rd	24,0	1 x 1,78	3,9	31
4	bk/bl	38,4	1 x 2,25	4,4	46
	br/gr/vi/gn/ye/rd	38,4	1 x 2,25	4,4	46
6	bk/bl/br	57,6	1 x 2,76	5,0	65
	gr/vi/rd	57,6	1 x 2,76	5,0	65
10	bk/bl	96,0	1 x 3,56	6,4	109
	br/gr	96,0	1 x 3,56	6,4	109

H07V-R (Ym) PVC Insulated Single Core Wire

Application: For indoor fixed installations in dry locations, in switchboards and distributors, installed in surface mounted or embedded conduits, or on suitably objects.



Construction: 1 stranded bare copper, compacted
2 PVC insulation

Standards: DIN VDE 0281-3
DIN EN 60228 Class 2 (construction)

Technical data:

Nominal voltage U₀/U

Test voltage

Temperature range

Operating temperature

Short circuit time

Bending radius

Flammability

in motion
short circuit

max.

min.

standard

[V]

[V]_{Ac}

°C

[sec]

x diameter

450 / 750 Volt

2500

+5°C till +70°C

160

5

4

EN 60332-1-2

Nominal cross section	Colours	Copper figure	Cond. construction (appr. value)	Overall diameter	Weight
mm ²		kg/km	mm	appr. mm	appr. kg/km
6	bk/bl	57,6	7 X 1,05	5,0	66
	gr	57,6	7 X 1,05	5,0	66
10	bk/bl/br	96,0	7 X 1,35	6,0	110
	gr	96,0	7 X 1,35	6,0	110
16	bk/bl	153,6	7 X 1,70	7,0	170
	br/gr	153,6	7 X 1,70	7,0	170
25	bk	240,0	7 X 2,13	9,0	270
	bl/br/gr	240,0	7 X 2,13	9,0	270
35	bk	336,0	7 X 2,52	10,0	360
	bl/br/gr	336,0	7 X 2,52	10,0	360
50	bk	480,0	19 X 1,83	11,0	530
	bl/gr	480,0	19 X 1,83	11,0	530
70	bk	672,0	19 X 2,17	14,0	740
	bl/gr	672,0	19 X 2,17	14,0	740
95	bk	912,0	19 X 2,52	15,0	1.000
	gr	912,0	19 X 2,52	15,0	1.000
120	bk	1.152,0	37 X 2,03	18,0	1.250
	gr	1.152,0	37 X 2,03	18,0	1.250
150	bk	1.440,0	37 X 2,27	19,0	1.580
	gr	1.440,0	37 X 2,27	19,0	1.580
185	bk	1.776,0	37 X 2,52	21,0	1.930
	gr	1.776,0	37 X 2,52	21,0	1.930
240	bk	2.304,0	61 X 2,24	23,0	2.500
	gr	2.304,0	61 X 2,24	23,0	2.500
300	bk	2.880,0	61 X 2,50	29,6	3.130

H05V-K (Ysf) PVC Insulated Single Core Wire

Application: For protected fixed installations inside appliances and in or on lighting fittings.
For installations in pipes on and under plaster, however, only for signal circuit.



Construction: 1 fine stranded bare cooper
2 PVC insulation

Standards: DIN VDE 0281-3
DIN EN 60228 Class 5 (construction)

Technical data:

Nominal voltage U ₀ /U		[V]	300 / 500 Volt
Test voltage		[V] _{AC}	2000
Temperature range	in motion		+5°C till +70°C
Operating temperature	short circuit	°C	160
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	4
Flammability	standard		EN 60332-1-2

Nominal cross section mm ²	Colours	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
one coloured und yellow-green					
0,50	bk/b/br	4,8	16 x 0,21	2,2	10,0
	yg/dbl/gr/lgy/vi/wt	4,8	16 x 0,21	2,2	10,0
	or/gn/ye/rd/pk/tra	4,8	16 x 0,21	2,2	10,0
0,75	bk/bl/br	7,2	24 x 0,21	2,4	12,0
	yg/dbl/lbl/gr	7,2	24 x 0,21	2,4	12,0
	vi/wt/or/gn/rd	7,2	24 x 0,21	2,4	12,0
1	bk/bl/br	9,6	32 x 0,21	2,6	14,0
	yg/dbl/lbl/gr/vi	9,6	32 x 0,21	2,6	14,0
	wt/or/gn/ye/rd	9,6	32 x 0,21	2,6	14,0
two coloured construction					
0,50	blwt/rdwt/rdye	4,8	16 x 0,21	2,2	10,0
	bkye/bkwt	4,8	16 x 0,21	2,2	10,0
0,75	blrd/blwt/wtbr	7,2	24 x 0,21	2,4	12,0
	dblwt/rdwt/gnwt	7,2	24 x 0,21	2,4	12,0
	gnbk/rdbk	7,2	24 x 0,21	2,4	12,0
1	blwt/rdwt/brwt	9,6	32 x 0,21	2,6	14,0
	bkwt/yebk/vibk	9,6	32 x 0,21	2,6	14,0
	blbk/brbk/viwt	9,6	32 x 0,21	2,6	14,0

H07V-K (Yf) PVC Insulated Single Core Wire

Application: For indoor fixed installations in dry locations, in electrical equipment, switchboards and distributors. Should be installed in surface mounted or embedded conduits, for protected fixed installations in or on lighting fittings. Suitable for installations in machines for nominal voltages up to 1.000 V alternating current or up to 750 V to earth direct current. Cannot be used for installations under the wall surface.



Construction: 1 fine-stranded bare copper
2 PVC insulation

Standards: DIN VDE 0281-3
DIN EN 60228 Class 5 (construction)

Technical data:

Nominal voltage U ₀ /U		[V]	450 / 750 Volt
Test voltage		[V] _{AC}	2500
Temperature range	in motion		+5°C till +70°C
Operating temperature	short circuit	°C	160
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	4,0
Flammability	Standard		EN 60332-1-2

Nominal cross section mm ²	Colours	Copper figure kg/km	Cond. construction (appr.value) mm	Overall diameter appr. mm	Weight appr. kg/km
one coloured and yg					
1,5	bk/bl/br	14,4	30 x 0,26	3,1	21
	yg/dbl/gv/vi/wt	14,4	30 x 0,26	3,1	21
	or/gn/ye/rd/pk/nat	14,4	30 x 0,26	3,1	21
2,5	bk/bl/br	24,0	50 x 0,26	3,7	32
	yg/dbl/gr/vi	24,0	50 x 0,26	3,7	32
	wt/or/gn/ye/rd/pk	24,0	50 x 0,26	3,7	32
4	bk/bl/br	38,4	56 x 0,31	4,3	47
	yg/dbl/gr/vi	38,4	56 x 0,31	4,3	47
	wt/gn/rd/ye	38,4	56 x 0,31	4,3	47
6	bk/bl/br	57,6	84 x 0,31	4,9	67
	yg/lbl/gr/dbl	57,6	84 x 0,31	4,9	67
	vi/wt/gn/ye/rd	57,6	84 x 0,31	4,9	67
10	bk/bl/br	96,0	80 x 0,41	6,2	115
	yg/bl/gr/vi/or/rd/wt	96,0	80 x 0,41	6,2	115
16	bk/bl/br	153,6	128 x 0,41	7,4	175
	yg/bl/gr/rd/gn	153,6	128 x 0,41	7,4	175
25	bk	240,0	200 x 0,41	9,3	280
	bl/br/yp/rd/wt	240,0	200 x 0,41	9,3	280
35	bk	336,0	280 x 0,41	10,7	375
	bl/br/yp/rd	336,0	280 x 0,41	10,7	375
50	bk	480,0	400 x 0,41	12,7	550
	bl/yp/rd	480,0	400 x 0,41	12,7	550

Nominal cross section mm ²	Colours	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
70	bk	672,0	356 x 0,51	14,8	760
	bl/yg	672,0	356 x 0,51	14,8	760
95	bk	912,0	485 x 0,51	16,7	1.020
	bl/yg/rd	912,0	485 x 0,51	16,7	1.020
120	bk	1.152,0	614 x 0,51	18,4	1.270
	yg	1.152,0	614 x 0,51	18,4	1.270
150	bk	1.440,0	765 x 0,51	20,5	1.600
	yg	1.440,0	765 x 0,51	20,5	1.600
185	bk	1.776,0	944 x 0,51	22,8	1.960
	yg	1.776,0	944 x 0,51	22,8	1.960
240	bk	2.304,0	1225 x 0,51	25,9	2.550
	yg	2.304,0	1225 x 0,51	25,9	2.550
two coloured constuction					
1,5	bl/ye/blbk/blwt	14,4	30 x 0,26	3,1	21
	gygn/rdbk/rdgn	14,4	30 x 0,26	3,1	21
	rdwt/bkwt	14,4	30 x 0,26	3,1	21
2,5	blwt/rdwt	24,0	50 x 0,26	3,7	32
4	blwt/rdwt	38,4	56 x 0,31	4,3	47

AWG-Litzen **PVC Insulated Single Core Wire** with UL and CSA approbation

Application: To the internal wiring of devices, switch arrangements and machines as well as for the protected transfer in and on lights.



Construction: 1 fine-stranded bare copper
2 PCV insulation

Information:

AWG 24 = app. 0,205mm ²	AWG 14 = app. 2,080mm ²
AWG 22 = app. 0,324mm ²	AWG 12 = app. 3,310mm ²
AWG 20 = app. 0,519mm ²	AWG 10 = app. 5,261mm ²
AWG 18 = app. 0,823mm ²	AWG 08 = app. 8,367mm ²
AWG 16 = app. 1,310mm ²	AWG 06 = app. 13,30mm ²

More cross sections on enquiry.

Standards: DIN EN 60228 Class 5 (construction)
UL / CSA / MTW 1015+1063
UL 758, UL 1581
CSA C 22.2 Nr. 127

Technical data:

Nominal voltage U ₀ /U		[V]	600 Volt
Test voltage		[V] _{AC}	4000
Temperature range	in motion		+5°C till +105°C
	fixed		-15°C till +105°C
Operating temperature	short circuit	°C	160
Short circuit time	max.	[sec]	5
Flammability	standard		EN 60332-1-2

Nominal cross section mm ²	Colours	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
AWG 24/7	bk/bl/br/vi/wh/gn/ye/rd	2,1	14 x 0,15	2,2	8
AWG 22	bk/bl/br/ye/dbl/gr vi/wh/or/gn/ye/rd	4,8	16 x 0,20	2,4	10
AWG 20	bk/bl/br/ye/dbl/gr vi/wh/or/gn/ye/rd	7,2	24 x 0,20	2,6	12
AWG 18	bk/bl/br/ye/dbl/gr vi/wh/or/gn/ye/rd	9,6	32 x 0,20	2,8	16
AWG 16	bk/bl/br/ye/dbl/gr vi/wh/or/gn/ye/rd	14,4	84 x 0,30	3,1	22
AWG 14	bk/bl/br/ye/dbl/gr vi/wh/or/gn/ye/rd	24,0	50 x 0,25	3,5	31

Nominal cross section mm ²	Colours	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
AWG 12	bk/bl/br/yg/dbl/gr vi/wh/or/gn/ye/rd	38,4	56 x 0,30	4,0	45
AWG 10	bk/bl/br/yg/dbl/gr vi/wh/or/gn/ye/rd	57,6	84 x 0,30	4,6	65
AWG 8	bk/bl/br/yg/dbl/gr vi/wh/or/gn/ye/rd	96,0	80 x 0,40	6,5	110
AWG 6	bk/bl/br/yg/dbl/gr vi/wh/or/gn/ye/rd	153,6	128 x 0,40	8,0	175

AYZL

PVC Ignition Wire 1kV

Application: In automobiles and similar systems.



Construction: 1 fine-stranded tinned copper
2 special PVC insulation

Standards: DIN EN 60228 Class 5 (construction)

Technical data:

Nominal voltage U_0/U

Test voltage

Temperature range

Bending radius

Flammability

in motion
min.
standard

[V]

[V]_{AC}

x diameter

1000 Volt
15000
+5°C till +70°C
12,5
EN 60332-1-2

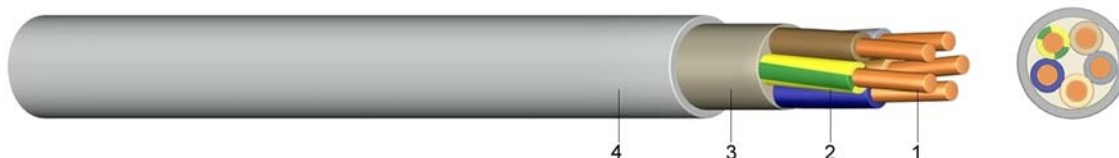
Nominal cross section	Colours	Copper figure	Cond. construction (appr. value)	Overall diameter	Weight
mm ²		kg/km	mm	appr. mm	appr. kg/km
1,5/5	sw	14,4	30 x 0,26	5,0	38

(N)YM

PVC Sheathed Wire

Application:

Only for fixed installations in dry, humid and wet locations. Not suitable for laying directly open-air or in concrete.



Construction:

- 1 bare copper, solid (RE) or stranded (RM)
- 2 polyvinylchloride (PVC) insulation
- 3 common core covering
- 4 polyvinylchloride (PVC) outer sheath, grey or special colours

Information:

Core identification at 7 cores: black with figures or coloured cores (core colours: green/yellow, violet, pink, orange, brown, black, blue). From 10 cores on, all cores are black with figures.

Standards:

NYM : DIN VDE 0250-204
 DIN EN 60228 Class 1 (RE) and class 2 (RM) (construction)
 YM : ÖVE / ÖNORM E 8241
 HD 308 S2 (core identification)

Technical data:

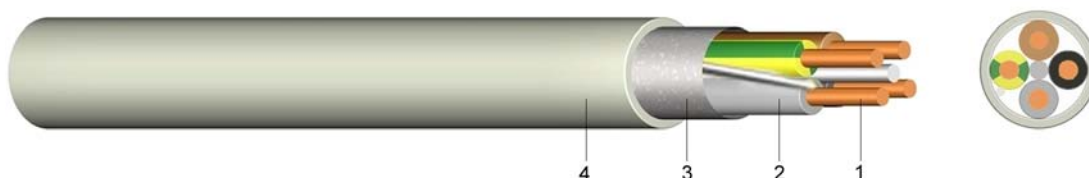
Nominal voltage U_0/U		[V]	300 / 500 Volt
Test voltage		[V] _{AC}	2000
Temperature range	in motion		+5°C till +70°C
	fixed		-40°C till +70°C
Operating temperature	short circuit	°C	160
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	4
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure kg/km	Overall diameter appr. mm	Calorific potential kwh/m	Weight appr. kg/km
1 x 4 RE	38,4	6,0	0,25	79
1 x 6 RE	57,6	6,8	0,28	105
1 x 10 RE	96,0	9,0	0,36	151
1 x 16 RE	153,6	10,0	0,42	218
2 x 1,5 RE	28,8	8,5	0,42	105
2 x 2,5 RE	48,0	9,5	0,53	145
3 x 1,5 RE	43,2	8,8	0,44	121
3 x 2,5 RE	72,0	10,4	0,58	170
3 x 4 RE	115,2	11,5	0,72	241
3 x 6 RE	172,8	13,0	0,92	328
4 x 1,5 RE	57,6	9,6	0,53	144
4 x 2,5 RE	96,0	11,2	0,67	206
4 x 4 RE	153,6	13,2	0,92	305
4 x 6 RE	230,4	14,8	1,08	400
4 x 10 RE	384,0	17,8	1,50	622
4 x 10 RM	384,0	17,8	1,50	622
4 x 16 RM	614,4	21,8	1,86	924

Number of cores and nominal cross section mm ²	Copper figure kg/km	Overall diameter appr.mm	Calorific potential kwh/m	Weight appr. kg/km
5 x 1,5 RE	72,0	10,3	0,58	168
5 x 2,5 RE	120,0	12,1	0,75	242
5 x 4 RE	192,0	14,7	1,11	360
5 x 6 RE	288,0	16,1	1,28	476
5 x 10 RE	480,0	19,3	1,83	744
5 x 10 RM	480,0	19,3	1,83	744
5 x 16 RM	768,0	24,2	2,31	1.145
7 x 1,5 RE	100,8	11,3	0,67	212
7 x 1,5 RE color. cores	100,8	11,3	0,67	212
10 x 1,5 RE	144,0	14,7	1,05	296
12 x 1,5 RE	172,8	16,0	1,17	345
7 x 2,5 RE	168,0	14,5	0,88	320
3 x 1,5 RE red	43,2	8,8	0,44	121
3 x 2,5 RE red	72,0	10,4	0,58	170

(N)YM(ST)-J PVC Sheathed Wire with Screen Bio Wire

Application: Suitable where effective limitation of electro-magnetic interference fields is necessary, for installations in dry, humid and wet locations. Not suitable for laying directly open-air or in concrete. Not suitable in areas with explosion hazard.



Construction:

- 1 solid bare copper
- 2 polyvinylchloride (PVC) insulation
- 3 screen of plastic coated aluminium tape with tinned drain wire
- 4 polyvinylchloride (PVC) outer sheath, grey

Standards:

- adapted to DIN VDE 250-204
- DIN EN 60228 Class 1 (construction)
- HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U		[V]	300 / 500 Volt
Test voltage		[V] _{AC}	2000
Temperature range	in motion		+5°C till +70°C
Operating temperature	short circuit	°C	160
Short circuit time	max.	[sec]	5
Flammability	standard		EN 60332-1-2

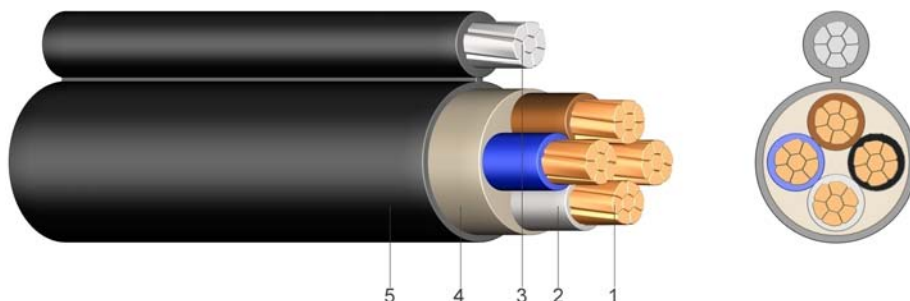
Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construcion (appr. value) mm	Overall diameter appr. mm	Calorific potential kWh/m	Weight appr. kg/km
3 x 1,5 / 1,5	52,8	1 x 1,38	10,5	0,44	140
4 x 1,5 / 1,5	65,3	1 x 1,38	11,5	0,53	188
5 x 1,5 / 1,5	79,7	1 x 1,38	12,0	0,58	216
7 x 1,5 / 1,5	108,5	1 x 1,38	13,0	0,67	263
3 x 2,5 / 1,5	79,7	1 x 1,78	12,0	0,58	214
5 x 2,5 / 1,5	127,7	1 x 1,78	13,5	0,75	300

YMT

PVC - Cable with Steel Carrier

Application:

Usable as a self-supporting circuit on free power mains, in accordance with applicable regulation. They may not be installed directly into the ground.



Construction:

- 1 bare copper, solid (RE) or stranded (RM)
- 2 polyvinylchloride (PVC) insulation
- 3 carrier cable steel-reinforced, stranded
- 4 bedding
- 5 polyvinylchloride (PVC) outer sheath, black

Information:

The minimum value for the breaking force of the supporting element amounts to:

6.000 N at the 3x2,5 and 5x2,5 mm²
 10.500 N at the 4x10 and 4x16 mm²
 Information according to DIN VDE 0250-206

Standards:

according to ÖVE K41
 DIN 57250 part 206
 DIN VDE 250-206
 DIN EN 60228 class 1 and 2 (construction)
 HD 308 S2 (core identification)

Technical data:

Nominal voltage U ₀ /U		[V]	300 / 500 Volt
Test voltage		[V] _{AC}	4000
Temperature range	in motion		+5°C till +70°C
	fixed		-40°C till +70°C
Operating temperature	short circuit	°C	160
Short circuit time	max.	[sec]	5
Bending radius	in motion	x diameter	4
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure kg/km	Overall measures appr. mm	Weight appr. kg/km
3 x 2,5 RE	72,0	12,5 x 20,5	190
4 x 10 RM	384,0	19,0 x 28,0	960
4 x 16 RM	614,4	22,0 x 32,0	1.320
5 x 2,5 RE	120,0	14,5 x 23,0	361
5 x 10 RM	480,0	21,0 x 32,0	993

(H)03VH-H PVC Twin Wire (YzwL)

Application: Suitable in dry locations for connections of portable electrical appliances submitted to weak mechanical strength, like radio sets and lighting fittings, but not for heating devices.



Construction:

- 1 fine-stranded bare copper, class 6
- 2 polyvinylchloride (PVC) insulation, laid up parallel, can be easily divided

Standards: adapted to DIN VDE 081-5
DIN EN 60228 class 6 (construction)

Technical data:

Nominal voltage U_0/U		[V]	300 / 300 Volt
Test voltage		[V] _{AC}	2000
Temperature range	in motion		+5°C till +70°C
Operating temperature	short circuit	°C	150
Short circuit time	max.	[sec]	5
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Colours	Copper figure kg/km	Cond. construction (appr. value) mm	Overall measures appr. mm	Weight appr. kg/km
2 x 0,75	bk/lgr/wt/br	14,4	40 x 0,16	2,7 x 5,3	27

(N)YFAZ

PVC Twin Wire

Application:

Suitable in dry locations for connections of portable power consumers submitted to weak mechanical strength like light electrical hand-held equipment and in and on lighting units.



Construction:

- 1 fine-stranded bare copper
- 2 polyvinylchloride (PVC) insulation laid up parallel, can be easily divided, one core insulation is corrugated

Standards:

adapted to DIN VDE 0250
DIN EN 60228 class 5 (construction)

Technical data:

Nominal voltage U_0/U

Test voltage

Temperature range

Flammability

in motion
standard

[V]
[V]_{AC}

300 / 300 Volt
2000
+5°C till +70°C
EN 60332-1-2

Number of cores and nominal cross section mm ²	Colours	Copper figure kg/km	Cond. construction (appr. value) mm	Overall measures appr. mm	Weight appr. kg/km
2 x 0,5	wt	9,6	16 x 0,20	2,1 x 4,4	16
2 x 0,75	wt	14,4	24 x 0,20	2,3 x 5,0	22
2 x 1	wt	19,2	30 x 0,20	2,6 x 5,5	28
2 x 1,5	wt	28,8	30 x 0,25	2,8 x 6,0	37
2 x 2,5	wt	48,0	50 x 0,25	3,6 x 7,5	60
2 x 4	wt	76,8	56 x 0,30	4,4 x 9,5	101

LFZ-XY

Loudspeaker Wire

Application:

Suitable in dry locations for connections in communication technology, mainly for HIFI applications such as a loudspeaker connecting cable.



Construction:

- 1 very fine-stranded bare copper
- 2 laid up parallel, insulated with very soft PVC, cores are identified by a polarisation stripe

Standards:

according to Factory standard

Technical data:

Nominal voltage U_0/U

[V]

300 / 300 Volt

Test voltage

[V]_{AC}

2000

Temperature range

in motion

-5°C till +70°C

Flammability

standard

EN 60332-1-2

Number of cores and nominal cross section mm ²	Colours	Copper figure kg/km	Conductor resistance Ohm/km	Cond. construction (appr. value) mm	Overall measures appr. mm	Weight appr. kg/km
2 x 1,5	natur	28,8	13,3	191 x 0,10	3,2 x 6,4	41
2 x 2,5	natur	48,0	8,0	322 x 0,10	3,7 x 7,4	61
2 x 4	natur	76,8	5,0	511 x 0,10	4,8 x 9,6	104
2 x 6	natur	115,2	3,3	765 x 0,10	6,5 x 14,0	160
2 x 10	natur	192,0	2,0	560 x 0,15	8,0 x 17,0	270

LSP

Loudspeaker Wire

Application:

Suitable in dry locations for connections in communication technology, mainly for HIFI applications such as a loudspeaker connecting cable.



Construction:

1 very fine-stranded bare copper
2 cores laid up parallel, insulated with very soft polyvinylchloride (PVC), coloured cores or cores are identified by a polarisation stripe

Standards:

according to Factory standard

Technical data:

Nominal voltage U_0/U

[V]

300 / 300 Volt

Test voltage

[V]_{AC}

2000

Temperature range

in motion

-5°C till +70°C

Flammability

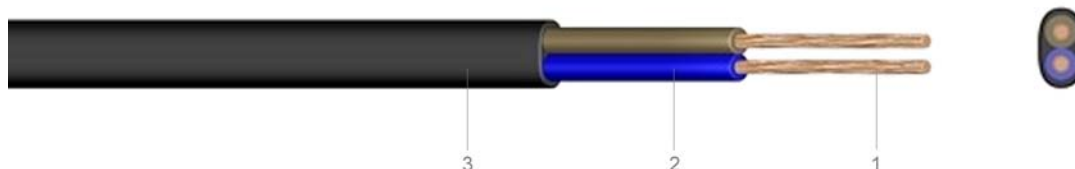
standard

EN 60332-1-2

Number of cores and nominal cross section mm ²	Colours	Copper figure kg/km	Conductor resistance Ohm/km	Cond. construction (appr. value) mm	Overall measures appr. mm	Weight appr. kg/km
2 x 0,75	rd/bk	14,4	26,0	23 x 0,20	2,7 x 5,3	25,8
2 x 1,5	rd/bk	28,8	13,3	30 x 0,25	2,8 x 6,2	41,9
2 x 2,5	bk/wh	48,0	8,0	70 x 0,20	3,3 x 6,7	65,0

H03VVH2-F PVC Sheathed Wire Flat (YML-fl)

Application: Suitable in dry locations for connections of portable electrical appliances submitted to weak mechanical strength, like radio sets and lighting fittings, but not for heating devices.



Construction:

- 1 fine-stranded bare copper
- 2 polyvinylchloride (PVC) insulation
- 3 polyvinylchloride (PVC) outer sheath

Standards:

- DIN VDE 0281-5
- DIN EN 60228 class 5 (construction)
- HD 21.5 S3 +A1+A2
- HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U		[V]	300 / 300 Volt
Test voltage		[V] _{AC}	2000
Temperature range	in motion		-5°C till +70°C
Operating temperature	short circuit	°C	150
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	6
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Colours	Copper figure kg/km	Cond. construction (appr. value) mm	Overall measures appr. mm	Weight appr. kg/km
2 x 0,75	bk	14,4	24 x 0,21	4,4/5,6	33
2 x 0,75	gr/wh/br	14,4	24 x 0,21	4,4/5,6	33

H03VV-F (YML) PVC Sheathed Wire

A03VV-F

Application: Suitable in dry locations for connections of portable electrical appliances submitted to weak mechanical strength, like radio sets and lighting fittings, but not for heating devices.



Construction:

- 1 fine-stranded bare copper
- 2 polyvinylchloride (PVC) insulation
- 3 polyvinylchloride (PVC) outer sheath

Standards:

- DIN VDE 0281-5
- HD 21.5 S3 +A1+A2
- DIN EN 60228 class 5 (construction)
- HD 308 S2 (core identification)
- ÖVE / ÖNORM E8241 (HD21)

Technical data:

Nominal voltage U ₀ /U		[V]	300 / 300 Volt
Test voltage		[V] _{AC}	2000
Temperature range	in motion		-5°C till +70°C
Operating temperature	short circuit	°C	150
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	6
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Colours	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
2 X 0,5	lgr/wt	9,6	16 x 0,21	5,9	38
2 X 0,75	bk/lgr/wt	14,4	24 x 0,21	6,3	48
3 G 0,5	lgr	14,4	16 x 0,21	6,3	44
	br/bk/wt	14,4	16 x 0,21	6,3	44
3 G 0,75	lgr/wt	21,6	24 x 0,21	6,7	57
	bk/br/gold	21,6	24 x 0,21	6,7	57
4 G 0,5	lgr	19,2	16 x 0,21	6,9	46
4 G 0,75	lgr	28,8	24 x 0,21	7,3	65
	bk/wt/br	28,8	24 x 0,21	7,3	65

A03VV-F

5 G 0,5	lgr	24,0	16 x 0,21	7,2	72
5 G 0,75	lgr	36,0	24 x 0,21	7,7	82
	wt/bk	36,0	24 x 0,21	7,7	82

Number of cores and nominal cross section mm ²	Colours	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg / km
A03VV-F					
2 X 1	lgr	19,2	30 x 0,21	5,8	55
	br/wt	19,2	30 x 0,21	5,8	55
3 G 1	lgr/wt	28,8	30 x 0,21	6,2	60
	br/bk	28,8	30 x 0,21	6,2	60
4 G 1	lgr	38,4	30 x 0,21	6,8	72
	wt	38,4	30 x 0,21	6,8	72

H05VV-F(YMM) PVC Sheathed Wire A05VV-F

Application:

Suitable in dry and humid locations for connections of electrical appliances submitted to medium level mechanical strength, like washing machines, refrigerators, etc. Suitable for heating appliances provided that there is no risk of contact with hot parts.



Construction:

- 1 fine-stranded bare copper
- 2 polyvinylchloride (PVC) insulation
- 3 polyvinylchloride (PVC) outer sheath

Standards:

DIN VDE 0281-5
HD 21.5 S3+A1+A2
DIN EN 60228 class 5 (construction)
HD 308 S2 (core identification)
ÖVE / ÖNORM E 8241 (HD21)

Technical data:

Nominal voltage U_0/U
Test voltage
Temperature range
Operating temperature
Short circuit time
Bending radius
Flammability

in motion
short circuit
max.
min.
standard

[V]
[V]_{AC}
°C
[sec]
x diameter

300 / 500 Volt
2000
-5°C till +70°C
150
5
5
EN 60332-1-2

Number of cores and nominal cross section mm ²	Colours	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
2 X 1	lgr	19,2	30 x 0,21	7,5	67
	bk/wt	19,2	30 x 0,21	7,5	67
2 X 1,5	lgr	28,8	30 x 0,26	8,6	89
	bk/wt	28,8	30 x 0,26	8,6	89
2 X 2,5	lgr	48,0	50 x 0,26	10,6	134
	bk	48,0	50 x 0,26	10,6	134
3 G 0,75	lgr	21,6	24 x 0,21	7,6	64
	wt	21,6	24 x 0,21	7,6	64
3 G 1	lgr	28,8	30 x 0,21	8,0	80
	wt/bk/br	28,8	30 x 0,21	8,0	80
3 G 1,5	lgr	43,2	30 x 0,26	9,4	120
	bk/wt/br/or	43,2	30 x 0,26	9,4	120
3 G 2,5	lgr	72,0	50 x 0,26	11,4	175
	bl/ws	72,0	50 x 0,26	11,4	175
4 G 1	lgr	38,4	30 x 0,21	9,0	94
	bk/wt	38,4	30 x 0,21	9,0	94

Number of cores and nominal cross section mm ²	Colours	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
4 G 1,5	lgr	57,6	30 x 0,26	10,5	130
	bk/wt	57,6	30 x 0,26	10,5	130
4 G 2,5	lgr	96,0	50 x 0,26	12,5	200
	bk/wt	96,0	50 x 0,26	12,5	200
4 G 4	lgr	153,6	56 x 0,31	14,3	280
5 G 0,75	lgr	36,0	24 x 0,21	9,3	100
	bk/wt	36,0	24 x 0,21	9,3	100
5 G 1	lgr	48,0	30 x 0,21	9,8	120
	wt/bk	48,0	30 x 0,21	9,8	120
5 G 1,5	lgr	72,0	30 x 0,26	11,6	170
	bk/wt/or	72,0	30 x 0,26	11,6	170
5 G 2,5	lgr	120,0	50 x 0,26	13,9	250
	bk/wt/or	120,0	50 x 0,26	13,9	250
5 G 4	lgr	192,0	56 x 0,31	16,1	350
	wt	192,0	56 x 0,31	16,1	350

A05VV-F

5 G 6	lgr	288,0	84 x 0,31	16,5	480
	wt	288,0	84 x 0,31	16,5	480
7 G 1	lgr	67,2	30 x 0,21	9,0	150
7 G 1,5	lgr	100,8	30 x 0,26	10,4	196
	bk	100,8	30 x 0,26	10,4	196
7 G 2,5	lgr	168,0	50 x 0,26	13,1	315
10 G 1,5	lgr	144,0	30 x 0,26	14,0	305

YMS

PVC Sheathed Wire for Medium-Level Mechanical Stress

Application:

With middle mechanical demands in dry, humid and wet locations, as well as for the installation outside, however not in earth.



Construction:

- 1 fine-stranded bare copper
- 2 polyvinylchloride (PVC) insulation
- 3 polyvinylchloride (PVC) outer sheath

Standards:

DIN EN 60228 class 5 (construction)
HS 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U

[V]

600 / 1000 Volt

Test voltage

[V]_{AC}

2500

Temperature range

in motion

-5°C till +70°C

Bending radius

min.

x diameter

8

Flammability

standard

EN 60332-1-2

Number of cores and nominal cross section mm ²	Colours	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
3 x 1,5	bk	43,2	30 x 0,26	10,8	150
4 x 1,5	bk	57,6	30 x 0,26	11,6	180
5 x 1,5	bk	72,0	30 x 0,26	12,5	210
3 x 2,5	bk	72,0	50 x 0,26	12,0	210
	gr	72,0	50 x 0,26	12,0	210
4 x 2,5	bk	96,0	50 x 0,26	13,0	250
	gr	96,0	50 x 0,26	13,0	250
5 x 2,5	bk	120,0	50 x 0,26	14,0	300
4 x 4	bk	153,6	56 x 0,31	15,0	350
	gr	153,6	56 x 0,31	15,0	350
5 x 4	bk	192,0	56 x 0,31	16,3	430
	gr	192,0	56 x 0,31	16,3	430
4 x 6	bk	230,4	84 x 0,31	16,5	470
5 x 6	bk	288,0	84 x 0,31	18,5	580
	gr	288,0	84 x 0,31	18,5	580
4 x 10	bk	384,0	80 x 0,41	20,0	750
5 x 10	bk	480,0	80 x 0,41	22,0	900
	gr	480,0	80 x 0,41	22,0	900
4 x 16	bk	614,4	128 x 0,41	23,4	1.150
5 x 16	bk	768,0	128 x 0,41	25,4	1.340

H05RR-F (GML)

Rubber Sheathed Cable for Weak Mechanical Stress

Application:

For general use in dry locations for connections of electrical apparatus submitted to weak mechanical strength, like vacuum cleaner, kitchen appliance, etc. unsuitable for industrial and agricultural use.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of rubber
- 3 outer sheath of ordinary ethylene propylene rubber, black

Standards:

DIN VDE 0282-4
DIN EN 60228 class 5 (construction)
HD 308 S2 (core identification)
HD 22.4 S4:2004

Technical data:

Nominal voltage U ₀ /U		[V]	300 / 500 Volt
Test voltage		[V] _{AC}	2000
Temperature range	in motion		-25°C till +60°C
Operating temperature	short circuit	°C	200
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	4
	in motion	x diameter	8
Flammability	standard		EN 60332-1-2

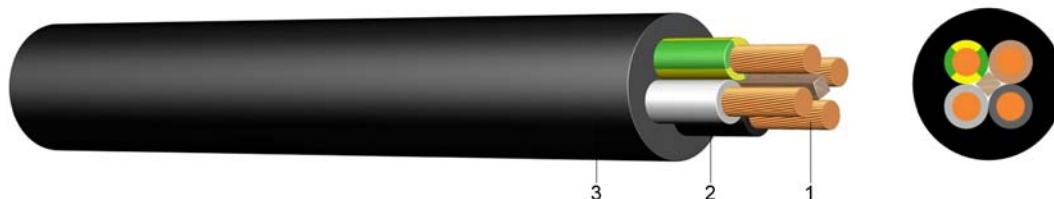
Number of cores and nominal cross section	Copper figure	Cond. construction (appr. value)	Overall diameter	Weight
mm ²	kg/km	mm	appr. mm	appr. kg/km
2 X 0,75	14,4	24 x 0,21	6,2	56
3 G 0,75	21,6	24 x 0,21	6,7	72
4 G 0,75	28,8	24 x 0,21	7,3	86
5 G 0,75	36,0	24 x 0,21	8,2	109
2 X 1	19,2	32 x 0,21	6,8	68
3 G 1	28,8	32 x 0,21	7,2	82
4 G 1	38,4	32 x 0,21	7,8	98
2 X 1,5	28,8	30 x 0,26	8,2	101
3 G 1,5	43,2	30 x 0,26	8,8	120
4 G 1,5	57,6	30 x 0,26	9,8	155
5 G 1,5	72,0	30 x 0,26	10,7	185
2 X 2,5	48,0	50 x 0,26	9,7	145
3 G 2,5	72,0	50 x 0,26	10,2	180
4 G 2,5	96,0	50 x 0,26	11,2	225
5 G 2,5	120,0	50 x 0,26	12,7	282

H07RN-F (GMS)

Rubber Sheathed Cable for Medium-Level Mechanical Stress

Application:

For general use in dry, humid and wet locations, for outdoor use, for agricultural applications or in locations subject to explosion hazards. Also suitable for connections of industrial and workshop electrical equipment submitted to medium-level mechanical stress. It can be used for fixed installations in temporary buildings as well as for connections of mobile machines and hoists.



Construction:

- 1 fine-stranded bare copper
- 2 EPR rubber insulation
- 3 outer sheath of polychloroprene compound (EM2), black, abrasion and oil resistant, flame retardant, special colours on enquiry

Standards:

DIN VDE 0282-4
DIN EN 60228 class 5 (construction)
HD 308 S2 (core identification)
HD 22.4 S4:2004

Technical data:

Nominal voltage U_0/U		[V]	450 / 750 Volt
Test voltage		[V] _{AC}	2500
Temperature range	in motion		-25°C till +60°C
Operating temperature	short circuit	°C	200
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	4
Bending radius	in motion	x diameter	8
Oil-resistant	standard		EN 60811-2-1
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section	Copper figure	Cond. construction (appr. value)	Overall diameter	Overall diameter max. value	Weight
mm ²	kg/km	mm	appr. mm	appr. mm	appr. kg/km
1 X 1,5	14,4	30 x 0,26	5,7	7,1	50
1 X 2,5	24,0	50 x 0,26	6,3	7,9	66
1 X 4	38,4	56 x 0,31	7,2	9,0	94
1 X 6	57,6	84 x 0,31	7,9	9,8	109
1 X 10	96,0	80 x 0,41	9,5	11,9	182
1 X 16	153,6	128 x 0,41	10,8	13,4	256
1 X 25	240,0	200 x 0,41	12,7	15,8	369
1 X 35	336,0	280 x 0,41	14,3	17,9	482
1 X 50	480,0	400 x 0,41	16,5	20,6	662
1 X 70	672,0	356 x 0,51	18,6	23,3	895
1 X 95	912,0	485 x 0,51	20,8	26,0	1.160

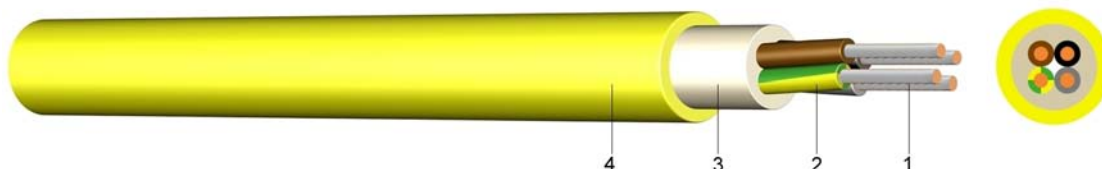
Number of cores and nominal cross section	Copper figure	Cond. construction (appr. value)	Overall diameter	Overall diameter max. value	Weight
mm ²	kg/km	mm	appr. mm	appr. mm	appr. kg/km
1 X 120	1.152,0	614 x 0,51	22,8	28,6	1.430
1 X 150	1.440,0	765 x 0,51	25,2	31,4	1.740
1 X 185	1.776,0	944 x 0,51	27,6	34,4	2.160
1 X 240	2.304,0	1225 x 0,51	30,6	38,3	2.730
1 X 300	2.880,0	1530 x 0,50	33,5	41,9	3.480
2 X 1	19,2	32 x 0,20	7,7	10,0	99
2 X 1,5	28,8	30 x 0,26	8,5	11,0	111
2 X 2,5	48,0	50 x 0,26	10,2	13,1	161
2 X 4	76,8	56 x 0,31	11,8	15,1	238
2 X 6	115,2	84 x 0,31	13,1	16,8	279
3 G 1	28,8	32 x 0,21	8,3	10,7	117
3 G 1,5	43,2	30 x 0,26	9,2	11,9	134
3 G 2,5	72,0	50 x 0,26	10,9	14,0	195
3 G 4	115,2	56 x 0,31	12,7	16,2	290
3 G 6	172,8	84 x 0,31	14,1	18,0	346
3 G 10	288,0	80 x 0,41	19,1	24,2	663
3 G 35	1.008,0	280 x 0,41	29,3	37,1	1.760
3 G 50	1.440,0	400 x 0,41	34,1	42,9	2.390
4 G 1,5	57,6	30 x 0,26	10,2	13,1	165
4 G 2,5	96,0	50 x 0,26	12,5	15,5	245
4 G 4	153,6	56 x 0,31	14,0	18,0	357
4 G 6	230,4	84 x 0,31	15,7	20,0	443
4 G 10	384,0	80 x 0,41	20,8	26,5	818
4 G 16	614,4	128 x 0,41	23,8	30,1	1.150
4 G 25	960,0	200 x 0,41	28,9	36,6	1.700
4 G 35	1.344,0	280 x 0,41	32,5	41,1	2.180
4 G 50	1.920,0	400 x 0,41	37,7	47,5	3.030
4 G 70	2.688,0	356 x 0,51	42,7	54,0	3.990
4 G 95	3.648,0	485 x 0,51	48,4	61,0	5.360
4 G 120	4.608,0	614 x 0,51	53,0	66,0	6.500
4 G 150	5.760,0	765 x 0,51	58,0	73,0	7.990
4 G 185	7.104,0	944 x 0,51	64,0	80,0	9.910
4 G 240	9.216,0	1225 x 0,51	72,0	91,0	12.800
5 G 1,5	72,0	30 x 0,26	11,2	14,4	238
5 G 2,5	120,0	50 x 0,26	13,3	17,0	297
5 G 4	192,0	56 x 0,31	15,6	19,9	453
5 G 6	288,0	84 x 0,31	17,5	22,2	557
5 G 10	480,0	80 x 0,41	22,9	29,1	1.001
5 G 16	768,0	128 x 0,41	26,4	33,3	1.430
5 G 25	1.200,0	200 x 0,41	32,0	40,4	2.096
5 G 35	1.680,0	280 x 0,41	44,0	50,0	3.008
5 G 50	2.400,0	400 x 0,41	51,0	58,0	4.390
5 G 70	3.360,0	356 x 0,51	60,0	67,0	5.296
5 G 95	4.560,0	485 x 0,51	61,0	71,0	6.250
5 G 120	5.760,0	614 x 0,51	62,0	73,0	8.260
7 G 1,5	100,8	30 x 0,26	14,7	17,0	342
12 G 1,5	172,8	30 x 0,26	18,6	22,2	510
19 G 1,5	273,6	30 x 0,26	23,0	29,0	630
24 G 1,5	345,6	30 x 0,26	24,3	30,7	1.000
27 G 1,5	388,8	30 x 0,26	23,6	32,0	1.077
7 G 2,5	168,0	50 x 0,26	16,9	19,2	485
12 G 2,5	288,0	50 x 0,26	21,1	24,6	799
19 G 2,5	456,0	50 x 0,26	24,5	28,0	1.100
24 G 2,5	576,0	50 x 0,26	27,3	32,5	1.250
7 G 4	268,8	56 x 0,31	19,6	21,5	703

NSSHöu

Rubber Sheathed Cable for High Mechanical Stress

Application:

These cables are suitable for extreme mechanical stress in dry and humid locations and outdoor use for connections of heavy equipment. For mines and industrial use.



Construction:

- 1 fine-stranded tinned copper
- 2 EPR rubber insulation
(ethylen-propylen polymer)
- 3 rubber inner sheath
- 4 outer sheath of polychloroprene (CR), yellow, abrasion
and oil resistant, flame retardant

Standards:

DIN VDE 0250-812
DIN EN 60228 class 5 (construction)
HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U		[V]	600 / 1000 Volt
Test voltage		[V] _{AC}	4000
Temperature range	in motion		-25°C till +80°C
Operating temperature	short circuit	°C	250
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	4
Bending radius	in motion	x diameter	10
Oil-resistant	standard		EN 60811-2-1
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (app.value) mm	Overall diameter appr.mm	Weight appr. kg/km
1 x 25	240,0	200 x 0,41	12,9	350
1 x 35	336,0	280 x 0,41	13,6	446
1 x 50	480,0	400 x 0,41	16,0	618
1 x 70	672,0	356 x 0,51	18,2	838
1 x 95	912,0	485 x 0,51	20,7	1.082
1 x 120	1.152,0	614 x 0,51	22,4	1.350
1 x 150	1.440,0	765 x 0,51	24,6	1.660
1 x 185	1.776,0	944 x 0,51	28,3	2.067
1 x 240	2.304,0	1225 x 0,51	30,2	2.621
3 x 1,5	43,2	30 x 0,26	11,5	184
3 x 2,5	72,0	50 x 0,26	12,9	245
3 x 70/35	2.352,0	356 x 0,51	42,2	3.775
3 x 95/50	3.216,0	485 x 0,51	50,2	5.116
3 x 120/70	4.128,0	614 x 0,50	55,0	6.388
4 x 1,5	57,6	30 x 0,26	12,2	213
4 x 2,5	96,0	50 x 0,26	15,1	328

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
4 x 4	153,6	56 x 0,31	16,7	423
4 x 6	230,4	84 x 0,31	18,1	530
4 x 10	384,0	80 x 0,41	22,3	832
4 x 16	614,4	128 x 0,41	26,3	1.198
4 x 25	960,0	200 x 0,41	31,5	1.771
4 x 35	1.344,0	280 x 0,41	33,2	2.196
4 x 50	1.920,0	400 x 0,41	40,4	3.160
4 x 70	2.688,0	356 x 0,51	44,8	4.115
4 x 95	3.648,0	485 x 0,51	52,6	5.516
4 x 120	4.608,0	614 x 0,51	57,0	6.815
5 x 1,5	72,0	30 x 0,26	13,1	249
5 x 2,5	120,0	50 x 0,26	16,1	384
5 x 4	192,0	56 x 0,31	17,9	501
5 x 6	288,0	84 x 0,31	20,3	672
5 x 10	480,0	80 x 0,41	24,2	1.001
5 x 16	768,0	128 x 0,41	28,4	1.445
5 x 25	1.200,0	200 x 0,41	34,1	2.140
5 x 35	1.680,0	280 x 0,41	37,4	2.791
7 x 1,5	100,8	30 x 0,26	16,1	370
7 x 2,5	168,0	50 x 0,26	18,3	504
10 x 1,5	144,0	30 x 0,26	19,0	490
12 x 2,5	288,0	50 x 0,26	22,3	733
18 x 2,5	432,0	50 x 0,26	26,4	1.055

A07RN-R (GWuö/DSTL)

Rubber Insulated Single Core Cable Roof pylon Cable

Application:

In dry and wet locations as well as outdoors for fixed installations. Suitable for span widths up to 20 m as a house lead-in cable, also for appliances within easy reach.



Construction:

- 1 stranded (RM) tinned copper
- 2 separator tape
- 3 rubber insulation (EPR)
- 4 outer sheath of polychloroprene (CR), black

Standards:

adapted to DIN VDE 0282-4
DIN EN 60228 class 2 (construction)

Technical data:

Nominal voltage U_0/U

Temperature range

Flammability

in motion
standard

[V]

1000 Volt
-25°C till +80°C
EN 60332-1-2

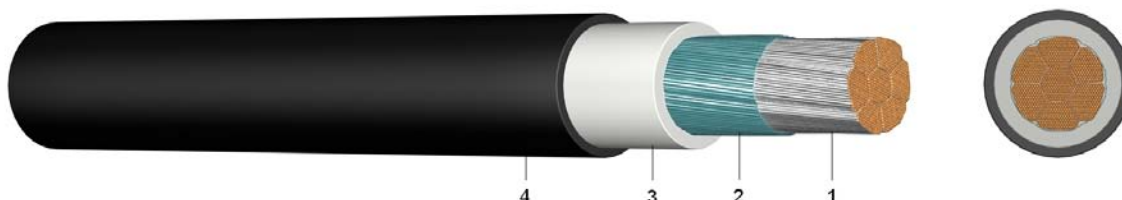
Nominal cross section mm ²	Colours	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
10	bk	96,0	7 x 1,35	10,2	183
16	bk	153,6	7 x 1,70	11,4	260
	bl	153,6	7 x 1,70	11,4	260
25	bk	240,0	7 x 2,13	13,3	374
35	bk	336,0	7 x 2,52	14,3	491
50	bk	480,0	19 x 1,83	16,5	610
70	bk	672,0	19 x 2,17	18,5	860

NSGAFöu (GHöuf)

Special Rubber Single Core Cable 1,8 / 3 kV

Application:

For track bound vehicles and trackless trolley buses as well as for installations in dry locations, in switchboards and distributors up to 1.000 V as a short circuit and earth fault proof cable at the nominal voltage of U_0 / U 1,8 / 3 kV.



Construction:

- 1 fine-stranded tinned copper
- 2 wrapped with Alu-PT-Film
- 3 EPR rubber insulation
- 4 outer sheath of polychloroprene, black, abrasion and oil resistant, flame retardant

Information:

NSGAFöu 3,6/6KV : Prices and delivery times on inquiry.

Standards:

DIN VDE 0250 part 602
DIN EN 60228 class 5 (construction)

Technical data:

Nominal voltage U_0/U		[V]	1800 / 3000 Volt
Test voltage		[V] _{AC}	6000
Temperature range	in motion		-25°C till +80°C
Operating temperature	short circuit	°C	200
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	6
	in motion	x diameter	10
Oil-resistant	standard		EN 60811-2-1
Flammability	standard		EN 60332-1-2

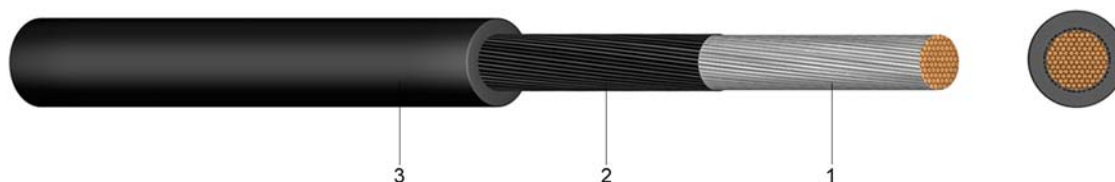
Nominal cross section	Copper figure	Cond. construction (appr. value)	Overall diameter	Current carrying capacity	Weight
mm ²	kg/km	mm	appr. mm	air A	appr. kg/km
1,5	14,4	30 x 0,26	6,5	30	60
2,5	24,0	50 x 0,26	7,0	41	70
4	38,4	56 x 0,31	7,5	55	90
6	57,6	84 x 0,31	8,5	70	120
10	96,0	80 x 0,41	10,0	98	180
16	153,6	126 x 0,41	11,0	132	250
25	240,0	196 x 0,41	13,0	176	390
35	336,0	276 x 0,41	14,0	218	470
50	480,0	396 x 0,41	15,5	276	625
70	672,0	360 x 0,51	17,0	347	880
95	912,0	475 x 0,51	19,5	416	1.190
120	1.152,0	608 x 0,51	21,5	488	1.430
150	1.440,0	756 x 0,51	23,0	566	1.750
185	1.776,0	925 x 0,51	25,0	644	2.160
240	2.304,0	1221 x 0,51	28,0	775	2.534
300	2.880,0	1530 x 0,51	32,5	898	3.178

H01N2-D

Welding Cable

Application:

For use on handheld electrodes keepers till 100 V with **normal flexibility**.



Construction:

- 1 fine-stranded tinned or bare copper
- 2 separator tape
- 3 outer sheath of polychloroprene (EM5), black

Standards:

DIN VDE 0282-6
DIN EN 60228 class 5 (construction)
HD 22.6 S2:1995+A1:1999+A2:2004

Technical data:

Nominal voltage U_0/U		[V]	100 / 100 Volt
Test voltage		[V] _{AC}	1000
Temperature range	in motion		-20°C till +80°C
Operating temperature	short circuit	°C	250
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	5
Flammability	standard		EN 60332-1-2

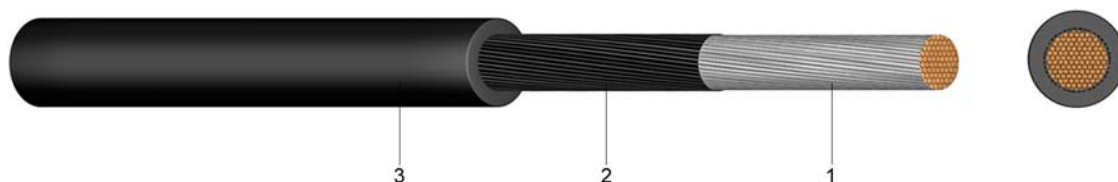
Number of cores and nominal cross section mm ²	Copper figure kg/km	Wire diameter mm	Insulation thickness mm	Overall diameter appr. mm	Weight appr. kg/km
1 x 16	153,6	0,21	2,0	9,5	210
1 x 25	240,0	0,21	2,0	11,0	300
1 x 35	336,0	0,21	2,0	12,0	400
1 x 50	480,0	0,21	2,0	14,0	560
1 x 70	672,0	0,21	2,4	16,5	780
1 x 95	912,0	0,21	2,6	18,5	1.010
1 x 120	1.152,0	0,51	2,8	20,0	1.250

H01N2-E

Welding Cable

Application:

For use on handheld electrodes keepers till 100 V with **high flexibility**.



Construction:

- 1 fine-stranded bare copper
- 2 separator tape
- 3 outer sheath of polychloroprene (EM5), black

Standards:

DIN VDE 282-6
DIN EN 60228 class 6 (construction)
HD 22.6 S2:1995+A1:1999+A2:2005

Technical data:

Nominal voltage U_0/U		[V]	100 / 100 Volt
Test voltage		[V] _{AC}	1000
Temperature range	in motion		-20°C till +80°C
Operating temperature	short circuit	°C	250
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	5
Flammability	standard		EN 60332-1-2

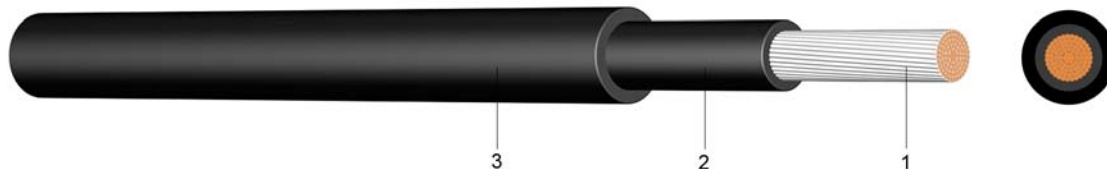
Number of cores and nominal cross section mm ²	Copper figure kg/km	Wire diameter mm	Insulation thickness mm	Overall diameter appr. mm	Weight appr. kg/km
1 x 16	153,6	0,16	1,2	8,0	180
1 x 25	240,0	0,16	1,2	9,5	270
1 x 35	336,0	0,16	1,2	10,5	370
1 x 50	480,0	0,16	1,2	12,5	530
1 x 70	672,0	0,16	1,5	14,5	710
1 x 95	912,0	0,16	1,5	16,5	960
1 x 120	1.152,0	0,21	1,8	18,5	1.180
1 x 150	1.440,0	0,21	2,0	20,5	1.570

Solar-Cable

Sheathed Cable for Photo-Voltaic Systems

Application:

Cable for fixed installations of photo-voltaic systems in- and outdoors.



Construction:

- 1 fine-stranded tinned copper
- 2 core insulation of TPE or EPR rubber
- 3 outer sheath of TPE or polyurethane (PUR), black, red or blue

Information:

More cross-sections on enquiry.

Standards:

TÜV 2 tested 1169/08.2007 CE
DIN EN 60228 class 5 (construction)
EN 60811
EN 50267-2-1
EN 50363

Technical data:

Nominal voltage U_0/U

[V]

1000 Volt

Test voltage

[V]_{AC}

4000

Temperature range

in motion

-40°C till +90°C

Bending radius

one time / fixed

x diameter

6

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
1 x 2,5 bk, rd, bu	24,0	56 x 0,30	6,0	45
1 x 4 bk, rd, bu	38,4	56 x 0,30	6,7	60
1 x 6 bk, rd, bu	57,6	84 x 0,30	7,1	79
1 x 10 bk	96,0	84 x 0,30	8,8	130
1 x 16 bk	153,6	128 x 0,41	9,5	210
1 x 25 bk	240,0	200 x 0,41	11,0	300
1 x 35 bk, rd	336,0	280 x 0,41	12,0	400
1 x 50 bk	480,0	400 x 0,41	13,0	552
1 x 70 bk	672,0	356 x 0,51	14,7	712

H05RNH2-F Illumination Flat Cable

Application: This cable is used in dry, humid and wet locations, as well as outdoors as a clamping cable for standardised lamp holders for the illumination of spaces and gardens.



Construction:

- 1 fine-stranded tinned copper
- 2 ethylene propylene rubber (NR) or styrene-butadiene rubber (SBR) insulation
- 3 polychloroprene (CR) inner sheath
- 4 polychloroprene (CR) outer sheath, green

Standards:

- DIN VDE 0282
- DIN EN 60228 class 5 (construction)
- HD 22.6 S2:1994+A1:1999+A2:2004

Technical data:

Nominal voltage U_0/U		[V]	300 / 500 Volt
Test voltage		[V] _{AC}	2000
Temperature range	in motion		-25°C till +50°C
Operating temperature	short circuit	°C	200
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	6
Flammability	standard		EN 60332-1-2

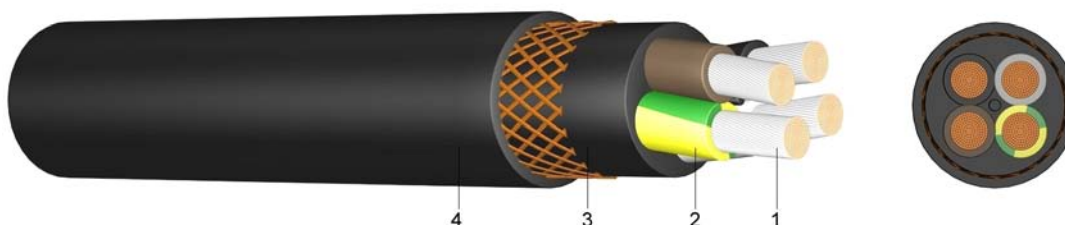
Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall measures appr. mm	Weight appr. kg/km
2 x 1,5	28,8	30 x 0,26	6,0 x 14,0	130
2 x 2,5	48,0	50 x 0,26	6,5 x 14,5	145

NSHTöu

Rubber Sheathed Cable for Reeling Purposes Crane Cable

Application:

It is to be used in dry and humid locations as well as in the open-air for frequent reeling processes and when the cable is exposed to heavy tensile and torsion load as well as to forced bending as in the case of cable carriages, line chains, drums or other mechanical equipment. Travel speed up to 120 m/min.



Construction:

- 1 fine-stranded tinned copper
- 2 core insulation of rubber compound (EPR)
- 3 inner sheath of rubber (5GM2) with open plaiting out of plastic threads to protect the cable from torsion
- 4 outer sheath of polychloroprene (5GM2), black, oil resistant and flame retardant

Standards:

DIN VDE 0250-814
DIN EN 60228 class 5 (construction)
HD 308 S2 (core identification)
DIN VDE 0293-1

Information:

Please note installation instruction on page 273!
Download elevation sheet: www.meinhart.at/service/download

Technical data:

Nominal voltage U_0/U		[V]	600 / 1000 Volt
Test voltage		[V] _{AC}	4000
Temperature range	in motion		-20°C till +90°C
Operating temperature	short circuit	°C	200
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	8
Oil-resistant	standard		EN 60811-2-1
Flammability	standard		EN 60332-1-2

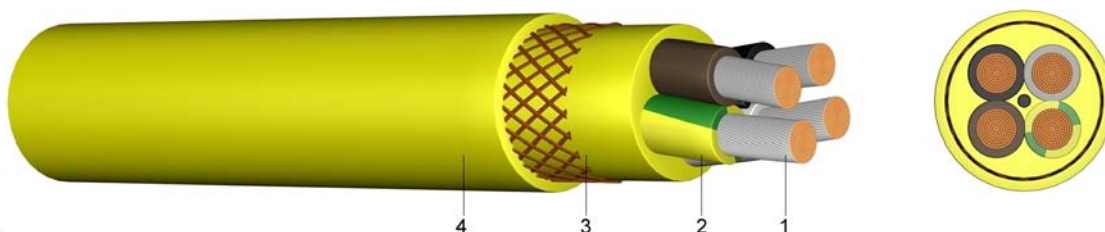
Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
4 x 1,5	57,6	44 x 0,21	11,8	222
5 x 1,5	72,0	44 x 0,21	12,7	260
7 x 1,5	100,8	44 x 0,21	16,0	380
12 x 1,5	172,8	44 x 0,21	22,0	720
18 x 1,5	259,2	44 x 0,21	22,1	770
24 x 1,5	345,6	44 x 0,21	26,1	1.000
30 x 1,5	432,0	44 x 0,21	29,5	1.320
4 x 2,5	96,0	73 x 0,21	14,4	335
5 x 2,5	120,0	73 x 0,21	15,4	390
7 x 2,5	168,0	73 x 0,21	17,9	505

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
12 x 2,5	288,0	73 x 0,21	25,0	970
18 x 2,5	432,0	73 x 0,21	25,9	1.100
24 x 2,5	576,0	73 x 0,21	30,8	1.450
30 x 2,5	720,0	73 x 0,21	34,9	1.950
4 x 4	153,6	75 x 0,26	16,0	435
4 x 6	230,4	119 x 0,26	17,4	530
4 x 10	384,0	196 x 0,26	21,3	830
4 x 16	614,4	210 x 0,31	24,7	1.170
4 x 25	960,0	336 x 0,31	31,4	1.830
4 x 35	1.344,0	475 x 0,31	33,9	2.280
4 x 50	1.920,0	684 x 0,31	40,2	3.220
4 x 70	2.688,0	551 x 0,41	44,5	4.200
4 x 95	3.648,0	722 x 0,41	51,0	5.530
5 x 4	192,0	75 x 0,26	17,3	520
5 x 6	288,0	119 x 0,26	19,7	690
5 x 10	480,0	196 x 0,26	23,1	1.000
5 x 16	768,0	210 x 0,31	26,8	1.400
5 x 35	1.680,0	475 x 0,31	38,3	2.950

NSHTöu(SMK) Rubber Sheathed Cable for Cordaflex Reeling Purposes Crane Cable

Application:

It is to be used as a connection cable for reeling purposes for very high mechanical loads on movable appliances, mobile line carriers, cable carriages as well as for vertical drum operation. It is also applicable for the scope of DIN VDE 0168 and 0118, for underground and open-cast mines.



Construction:

- 1 fine-stranded tinned copper
- 2 PROTOLON insulated cores
- 3 inner sheath of a special compound polychloroprene (PCP), antitension braid made of polyester threads , in a vulcanised bond
- 4 outer sheath of wear- and tear-resistant PCP compound, yellow, oil-, weather- and water resistant

Standards:

adapted to DIN VDE 0250-814
DIN EN 60228 class 5 (construction)
HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U		[V]	600 / 1.000 Volt
Test voltage		[V] _{AC}	2500
Temperature range	in motion		-35°C till +60°C
	fixed		-50°C till +80°C
Operating temperature	short circuit	°C	250
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	8
Oil-resistant	standard		EN 60811-2-1
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Overall diameter max. value appr. mm	Weight appr. kg/km
5 x 1,5	72,0	50 x 0,21	13,0	14,6	280
7 x 1,5	105,6	50 x 0,21	15,2	17,2	385
12 x 1,5	182,4	50 x 0,21	21,4	23,4	710
24 x 1,5	362,9	50 x 0,21	23,8	26,8	990
4 x 2,5	100,8	80 x 0,21	13,2	14,8	305
7 x 2,5	175,7	80 x 0,21	16,6	18,6	510
12 x 2,5	302,4	80 x 0,21	23,4	25,4	920
18 x 2,5	454,1	80 x 0,21	23,3	25,3	1.005

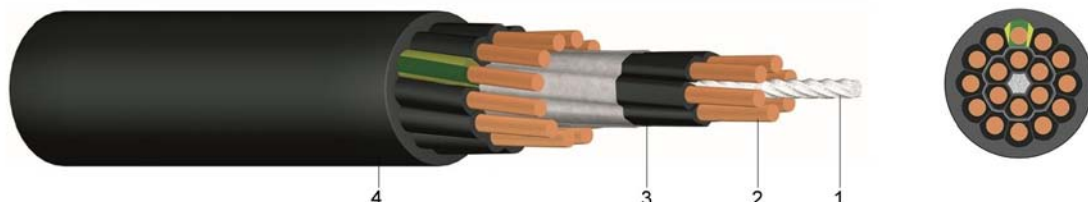
Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Overall diameter max. value appr. mm	Weight appr. kg/km
24 x 2,5	604,80	80 x 0,21	26,2	29,2	1.320
19 x 2,5+5x1(C)	584,6	80 x 0,21	26,2	29,2	1.290
25 x 2,5+5x1(C)	736,3	80 x 0,21	29,4	32,4	1.620
30 x 2,5	756,5	80 x 0,21	29,4	32,4	1.660
4 x 6	241,9	120 x 0,26	17,4	19,4	575
4 x 10	424,3	210 x 0,26	21,6	23,6	905
4 x 16	645,1	230 x 0,31	23,7	26,7	1.240
4 x 25	1.020,5	360 x 0,31	28,5	31,5	1.850
5 x 6	302,4	120 x 0,26	19,0	21,0	690
3 x 35+3x16/3	1.220,2	510 x 0,31	34,4	37,4	2.160
3 x 50+3x25/3	1.764,5	530 x 0,31	39,7	42,7	2.850
3 x 70+3x35/3	2.470,1	730 x 0,36	39,7	42,7	3.920
3 x 95+3x50/3	3.377,3	780 x 0,41	44,3	47,3	5.020
3 x 120+3x70/3	4.334,4	1000 x 0,41	51,0	55,0	6.630

**(STN)
(N)FLGöu**

Rubber - Control Cable with Supporting Element for Medium-Level Mechanical Stress

Application:

To be used in dry, humid and wet locations as well as in the open-air as a flexible power and control cable for medium-level mechanical loads. This cable is suitable for connecting movable parts of machine tools, material handling equipment and large machines.



Construction:

- 1 supporting element out of cord
- 2 fine-stranded bare copper
- 3 core insulation of a rubber compound
- 4 outer sheath of rubber (5GM1), black

Standards:

adapted to DIN VDE 0250
DIN EN 60228 class 6 (construction)
Core identification: 1 core green/yellow, all other cores black with figures

Technical data:

Nominal voltage U_0/U		[V]	450 / 750 Volt
Test voltage		[V] _{AC}	2500
Temperature range	in motion		-25°C till +60°C
Operating temperature	short circuit	°C	250
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	4
	in motion	x diameter	5
Flammability	standard		EN 60332-1-2

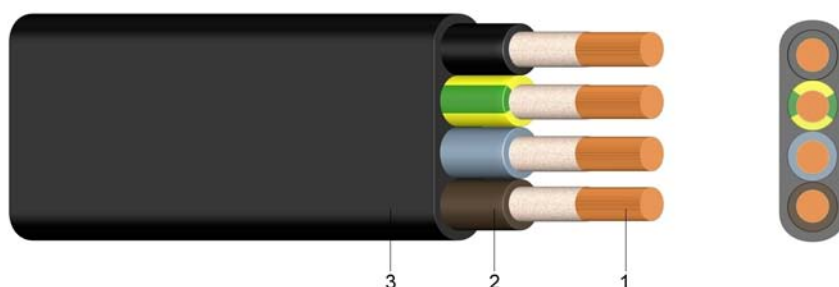
Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
7 x 1	67,2	56 x 0,16	14,0	220
12 x 1	115,2	56 x 0,16	19,0	430
18 x 1	172,8	56 x 0,16	20,0	510
24 x 1	230,4	56 x 0,16	23,0	670
36 x 1	345,6	56 x 0,16	26,0	900
48 x 1	460,8	56 x 0,16	30,0	1.220
4 x 1,5	57,6	84 x 0,16	11,0	180
5 x 1,5	72,0	84 x 0,16	12,0	200
7 x 1,5	100,8	84 x 0,16	15,0	280
9 x 1,5	129,6	84 x 0,16	18,0	400
12 x 1,5	172,8	84 x 0,16	20,0	540
18 x 1,5	259,2	84 x 0,16	21,0	600
24 x 1,5	345,6	84 x 0,16	25,0	840
4 x 2,5	96,0	140 x 0,16	14,0	250
7 x 2,5	168,0	140 x 0,16	17,5	380
12 x 2,5	288,0	140 x 0,16	22,5	710

NGFLGöu

Rubber Flat Cable for Medium-Level Mechanical Stress

Application:

It is to be used in dry, humid and wet locations as well as in the open-air as a flexible power and control cable for medium-level mechanical loads. This cable is suitable for connecting movable parts of machine tools, material handling equipment and large machines provided it is exposed to bending in only one plane. Cores grouped with individual groups separated by a stay



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of a rubber compound (3GI3), laid up parallel
- 3 outer sheath out of a rubber compound (5GM3), black, flame retardant

Standards:

DIN VDE 0250-809
DIN EN 60228 class 5 and 6 (construction)
HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U		[V]	300 / 500 Volt
Test voltage		[V] _{AC}	2000
Temperature range	in motion		-25°C till +60°C
	fixed		-40°C till +80°C
Operating temperature	short circuit	°C	200
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	3
	in motion	x diameter	5
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall measures appr. mm	Weight appr. kg/km
4 x 1,5	57,6	84 x 0,16	6,2 x 17,5	200
5 x 1,5	72,0	84 x 0,16	6,2 x 21,5	240
7 x 1,5	100,8	84 x 0,16	6,2 x 29,0	360
8 x 1,5	115,2	84 x 0,16	6,2 x 31,5	370
12 x 1,5	172,8	84 x 0,16	6,5 x 47,0	620
24 x 1,5	345,6	84 x 0,16	13,5 x 56,0	1.010
4 x 2,5	96,0	140 x 0,16	7,5 x 21,0	280
5 x 2,5	120,0	140 x 0,16	7,5 x 27,0	400
7 x 2,5	168,0	140 x 0,16	7,5 x 35,0	520
8 x 2,5	192,0	140 x 0,16	7,5 x 39,0	550
12 x 2,5	288,0	140 x 0,16	8,0 x 56,0	800
24 x 2,5	576,0	140 x 0,16	17,0 x 72,5	1.690

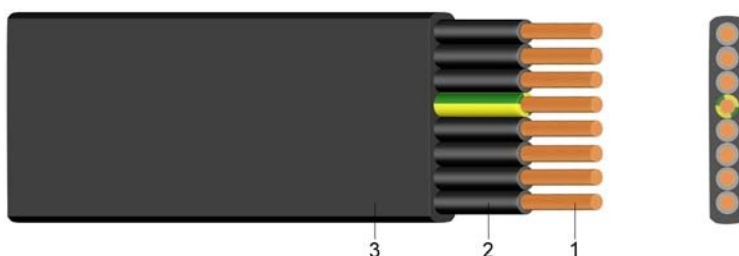
Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall measures appr. mm	Weight appr. kg/km
4 x 4	153,6	224 x 0,16	9,0 x 26,0	410
4 x 6	230,4	192 x 0,21	9,5 x 29,0	600
4 x 10	384,0	320 x 0,21	11,0 x 33,0	800
4 x 16	614,4	512 x 0,21	13,0 x 38,0	1.150
4 x 25	960,0	800 x 0,21	15,0 x 49,5	1.700
4 x 35	1.344,0	280 x 0,41	17,0 x 55,0	2.200
5 x 4	192,0	224 x 0,16	9,0 x 32,0	560
5 x 6	288,0	192 x 0,21	9,5 x 35,0	650
5 x 16	768,0	512 x 0,21	13,0 x 50,0	1.450
7 x 4	268,8	224 x 0,16	9,0 x 42,0	700
7 x 6	403,2	192 x 0,21	9,5 x 44,5	850
7 x 10	672,0	320 x 0,21	12,1 x 63,5	1.350

H07VVH6-F

PVC Flat Cable for Medium-Level Mechanical Stress

Application:

To be used in dry and humid locations but not in the open-air for low and medium-level mechanical loads. This cable is suitable for connecting movable parts of machine tools, material handling equipment and large machines provided it is exposed to bending in only one plane. Cables with more than 5 cores grouped with individual groups separated by a stay.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of polyvinylchloride (PVC), cores are laid up parallel
- 3 outer sheath of soft polyvinylchloride (PVC), black

Standards:

DIN VDE 0281-404
DIN EN 60228 class 5 (construction)
HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U		[V]	450 / 750 Volt
Test voltage		[V] _{AC}	2500
Temperature range	in motion		-5°C till +70°C
	fixed		-30°C till +70°C
Operating temperature	short circuit	°C	160
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	10
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall measures appr. mm	Weight appr. kg/km
4 G 1,5	57,6	30 x 0,26	5,0 x 15,0	150
5 G 1,5	72,0	30 x 0,26	5,0 x 18,0	180
7 G 1,5	100,8	30 x 0,26	5,0 x 27,0	265
8 G 1,5	115,2	30 x 0,26	5,0 x 29,0	295
10 G 1,5	144,0	30 x 0,26	5,0 x 36,0	355
12 G 1,5	172,8	30 x 0,26	5,0 x 41,0	415
4 G 2,5	96,0	50 x 0,26	5,7 x 18,5	250
5 G 2,5	120,0	50 x 0,26	5,7 x 22,0	280
7 G 2,5	168,0	50 x 0,26	5,7 x 33,5	385
8 G 2,5	192,0	50 x 0,26	5,7 x 37,0	430
12 G 2,5	288,0	50 x 0,26	5,7 x 51,0	630
4 G 4	153,6	56 x 0,31	6,9 x 21,5	320
5 G 4	192,0	56 x 0,31	6,9 x 26,0	390
7 G 4	268,8	56 x 0,31	6,9 x 38,0	560
4 G 6	230,4	84 x 0,31	7,6 x 24,5	430
5 G 6	288,0	84 x 0,31	7,6 x 29,5	530
4 G 10	384,0	80 x 0,41	9,6 x 31,0	690

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall measures appr. mm	Weight appr. kg/km
4 G 16	614,4	128 x 0,41	10,9 x 35,5	970
4 G 25	960,0	200 x 0,41	12,7 x 41,5	1.405
4 G 35	1.344,0	280 x 0,41	15,7 x 49,0	2.035
4 G 50	1.920,0	400 x 0,41	19,1 x 61,5	3.000

XYMM K35 PVC Building Site Cable

Application: This cable is suitable for connecting electrical equipment particularly on building sites. It is used in dry and damp locations, outdoors and in areas with explosion hazard.



Construction:

- 1 fine-stranded copper
- 2 core insulation of cold-resistant polyvinylchloride(PVC)
- 3 outer sheath of polyvinylchloride (PVC), yellow

Information: Cable may be used only in Austria as a building site cable.

Standards:

- adapted to ÖVE-K41
- DIN EN 60228 class 5 (construction)
- HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U		[V]	450 / 750 Volt
Test voltage		[V] _{AC}	2500
Temperature range	in motion		-35°C till +70°C
Operating temperature	short circuit	°C	150
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	6
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
3 x 1,5	43,2	30 x 0,26	9,7	128
4 x 1,5	57,6	30 x 0,26	10,7	157
5 x 1,5	72,0	30 x 0,26	11,6	180
3 x 2,5	72,0	50 x 0,26	11,5	191
4 x 2,5	96,0	50 x 0,26	12,5	231
5 x 2,5	120,0	50 x 0,26	13,6	283
5 x 4	192,0	56 x 0,31	16,0	407
5 x 6	288,0	84 x 0,31	19,0	580
5 x 10	480,0	80 x 0,41	24,7	1.020
5 x 16	768,0	128 x 0,41	28,3	1.400

N07V3V3-F PVC Building Site Cable

Application: This cable is suitable for connecting electrical equipment particularly on building sites. It is used in dry and damp locations, outdoors and in areas with explosion hazard.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of cold-resistant polyvinylchloride(PVC)
- 3 outer sheath of cold-resistant polyvinylchloride (PVC), yellow

Standards:

- HD 21.13.S1 1995
- ÖNORM E8241-55
- DIN EN 60228 class 5 (construction)
- HD 308 S2 (core identification)

Technical data:

Nominal voltage U ₀ /U		[V]	450 / 750 Volt
Test voltage		[V] _{AC}	2500
Temperature range	in motion		-35°C till +70°C
Operating temperature	short circuit	°C	160
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	6
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
2 X 1,5	28,8	30 x 0,26	9,0	85
3 G 1,5	43,2	30 x 0,26	10,5	132
4 G 1,5	57,6	30 x 0,26	11,6	161
5 G 1,5	72,0	30 x 0,26	12,8	185
3 G 2,5	72,0	50 x 0,26	12,4	197
4 G 2,5	96,0	50 x 0,26	13,8	238
5 G 2,5	120,0	50 x 0,26	15,2	291
5 G 4	192,0	56 x 0,31	17,8	420
5 G 6	288,0	84 x 0,31	19,9	598
5 G 10	480,0	80 x 0,41	26,0	1.051
5 G 16	768,0	128 x 0,41	29,9	1.442

H05BQ-F

Polyurethane Building Site Cable with Rubber Insulated Conductors

Application:

This termination and connection cable with high mechanical stress-resistance can be used in dry, damp or wet rooms as well as in the open-air. It is ideal for application in industrial plants, building sites, in fact everywhere where extreme wear and tear resistance is required and where the cable is subjected to hard utilisation.



Construction:

- 1 fine-stranded tinned or bare copper
- 2 core insulation of a rubber compound (EL6)
- 3 outer sheath of polyurethane (PUR), orange

Standards:

DIN VDE 0282-10
DIN EN 60228 class 5 (construction)
HD 308 S2 (core identification)
HD 22.10 S1+A1

Technical data:

Nominal voltage U_0/U		[V]	300 / 500 Volt
Test voltage		[V] _{AC}	2000
Temperature range	in motion		-40°C till +90°C
Operating temperature	short circuit	°C	200
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	4
Bending radius	in motion	x diameter	5
Oil-resistant	standard		EN 60811-2-1
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section	Copper figure	Cond. construction (appr. value)	Overall diameter	Weight
mm ²	kg/km	mm	appr. mm	appr. kg/km
2 X 0,75	14,4	24 x 0,21	6,8	51
3 G 0,75	21,6	24 x 0,21	7,4	66
4 G 0,75	28,8	24 x 0,21	7,9	79
5 G 0,75	36,0	24 x 0,21	8,8	97
2 X 1	19,2	30 x 0,21	7,4	61
3 G 1	28,8	30 x 0,21	7,8	76
4 G 1	38,4	30 x 0,21	8,4	92
5 G 1	48,0	30 x 0,21	9,4	116

H07BQ-F

Polyurethane Building Site Cable with Rubber Insulated Conductors

Application:

This termination and connection cable with high mechanical stress-resistance can be used in dry, damp or wet rooms as well as in the open-air. It is ideal for application in industrial plants, building sites, in fact everywhere where extreme wear and tear resistance is required and where the cable is subjected to hard utilisation.



Construction:

- 1 fine-stranded tinned or bare copper
- 2 core insulation of a rubber compound (EL6)
- 3 outer sheath of polyurethane (PUR), orange

Standards:

DIN VDE 0282-10
 HD 22.10 S1+A1
 DIN EN 60228 class 5 (construction)
 HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U	[V]	450 / 750 Volt
Test voltage	[V] _{AC}	2500
Temperature range	in motion	-40°C till +90°C
Operating temperature	short circuit	200
Short circuit time	max.	[sec]
Bending radius	one time / fixed	x diameter
	in motion	x diameter
Oil-resistant	standard	EN 60811-2-1
Flammability	standard	EN 60332-1-2

with filling compound

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
2 X 1,5	28,8	30 x 0,26	8,8	88
3 G 1,5	43,2	30 x 0,26	9,3	110
4 G 1,5	57,6	30 x 0,26	10,3	140
5 G 1,5	72,0	30 x 0,26	11,2	169
3 G 2,5	72,0	50 x 0,26	11,0	163
4 G 2,5	96,0	50 x 0,26	12,2	208
5 G 2,5	120,0	50 x 0,26	13,5	257
5 G 4	192,0	56 x 0,31	15,6	365
5 G 6	288,0	84 x 0,31	17,6	504
5 G 10	480,0	80 x 0,41	23,2	962
5 G 16	768,0	128 x 0,41	27,1	1.379
5 G 25	1.200,0	200 x 0,41	33,3	2.169

without filling compound

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
2 X 1,5	28,8	30 x 0,26	8,8	88
3 G 1,5	43,2	30 x 0,26	9,3	110
4 G 1,5	57,6	30 x 0,26	10,3	140
5 G 1,5	72,0	30 x 0,26	11,2	169
2 X 2,5	48,0	50 x 0,26	10,4	129
3 G 2,5	72,0	50 x 0,26	11,0	163
4 G 2,5	96,0	50 x 0,26	12,2	208
5 G 2,5	120,0	50 x 0,26	13,5	257
3 G 4	115,2	56 x 0,31	13,1	236
4 G 4	153,6	56 x 0,31	14,0	293
5 G 4	192,0	56 x 0,31	15,6	365
4 G 6	230,4	84 x 0,31	15,2	346
5 G 6	288,0	84 x 0,31	17,6	504
4 G 10	384,0	80 x 0,41	20,2	702
5 G 10	480,0	80 x 0,41	23,2	962
4 G 16	614,4	128 x 0,41	22,8	981
5 G 16	768,0	128 x 0,41	27,1	1.379
5 G 25	1.200,0	200 x 0,41	33,3	2.169

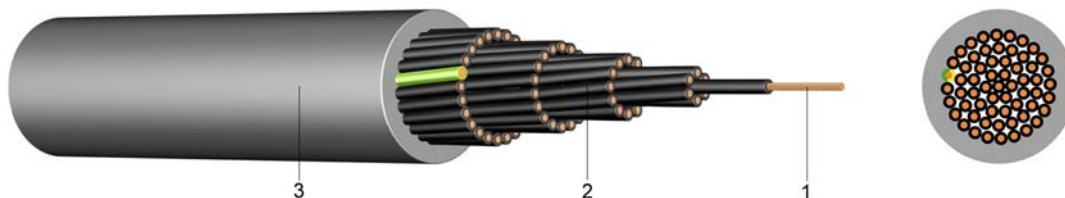
Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
07BQ-F				
7 G 1,5	100,8	30 x 0,26	14,0	291
7 G 2,5	168,0	50 x 0,26	16,5	431
12 G 1,5	172,8	30 x 0,26	18,0	446
12 G 2,5	288,0	50 x 0,26	21,0	641

YSLY

PVC Control Cable

Application:

In dry and damp locations for low and medium-level mechanical stress, but not in the open-air. To be used as a termination and connection cable in the control, measuring and signal technology. Suitable as a signal and impulse cable for control and inspection of industrial plants, production lines and machinery.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 outer sheath of polyvinylchloride (PVC), grey, increased oil resistant

Standards:

adapted to DIN VDE 0281
 DIN EN 60228 class 5 (construction)
 HD 308 S2 (core identification for coloured cores)
 core identification JZ: 1 core green/yellow, other cores black with figures
 core identification OZ: every core black with figures

Technical data:

Nominal voltage U_0/U		[V]	300 / 500 Volt
Test voltage		[V] _{AC}	2000
Temperature range	in motion		-5°C till +70°C
	fixed		-30°C till +70°C
Operating temperature	short circuit	°C	150
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	6
Bending radius	in motion	x diameter	15
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (app.value) mm	Overall diameter appr.mm	Weight appr. kg/km
2 x 0,5	9,6	16 x 0,21	4,8	35
3 x 0,5 *	14,4	16 x 0,21	5,1	41
4 x 0,5	19,2	16 x 0,21	5,7	49
5 x 0,5	24,0	16 x 0,21	6,2	60
7 x 0,5 *	33,6	16 x 0,21	6,7	77
10 x 0,5	48,0	16 x 0,21	8,6	114
12 x 0,5	57,6	16 x 0,21	8,9	128
14 x 0,5	67,2	16 x 0,21	9,5	149
16 x 0,5	76,8	16 x 0,21	10,0	164
18 x 0,5	86,4	16 x 0,21	10,5	185
21 x 0,5	100,8	16 x 0,21	11,7	219
25 x 0,5	120,0	16 x 0,21	12,6	256
30 x 0,5	144,0	16 x 0,21	13,5	310
34 x 0,5	1.632,0	16 x 0,21	14,3	331
40 x 0,5	192,0	16 x 0,21	15,2	409
50 x 0,5	240,0	16 x 0,21	17,2	510
61 x 0,5	292,8	16 x 0,21	18,5	595

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (app.value) mm	Overall diameter appr. mm	Weight appr. kg/km
2 x 0,75 *	14,4	24 x 0,21	5,3	42
3 x 0,75 *	21,6	24 x 0,21	5,5	50
4 x 0,75 *	28,8	24 x 0,21	6,2	64
5 x 0,75	36,0	24 x 0,21	6,7	77
6 x 0,75	41,3	24 x 0,21	7,1	95
7 x 0,75 *	50,4	24 x 0,21	7,4	99
10 x 0,75	72,0	24 x 0,21	9,4	160
12 x 0,75	86,4	24 x 0,21	9,7	165
15 x 0,75	108,0	24 x 0,21	10,9	210
16 x 0,75	115,2	24 x 0,21	11,5	240
18 x 0,75	129,6	24 x 0,21	11,8	240
21 x 0,75	151,2	24 x 0,21	12,8	282
25 x 0,75	180,0	24 x 0,21	13,9	333
34 x 0,75	244,8	24 x 0,21	15,9	435
41 x 0,75	295,2	24 x 0,21	17,4	535
42 x 0,75	302,4	24 x 0,21	17,8	547
50 x 0,75	360,0	24 x 0,21	19,2	643
80 x 0,75	576,0	24 x 0,21	23,6	1.005
2 x 1 *	19,2	32 x 0,21	5,5	50
3 x 1 *	28,8	32 x 0,21	5,9	61
4 x 1 *	38,4	32 x 0,21	6,5	75
5 x 1 *	48,0	32 x 0,21	7,1	95
7 x 1	67,2	32 x 0,21	8,0	114
9 x 1	86,4	32 x 0,21	10,0	156
10 x 1	96,0	32 x 0,21	10,2	179
12 x 1	115,2	32 x 0,21	10,5	211
14 x 1	134,4	32 x 0,21	11,0	244
16 x 1	153,6	32 x 0,21	11,8	280
18 x 1	172,8	32 x 0,21	12,7	303
21 x 1	201,6	32 x 0,21	13,7	339
25 x 1	240,0	32 x 0,21	14,7	395
34 x 1	326,4	32 x 0,21	17,0	536
41 x 1	393,6	32 x 0,21	18,9	674
42 x 1	403,2	32 x 0,21	19,0	680
50 x 1	480,0	32 x 0,21	20,7	823
61 x 1	585,6	32 x 0,21	22,2	951
2 x 1,5 *	28,8	30 x 0,26	6,3	63
3 x 1,5 *	43,2	30 x 0,26	6,6	79
4 x 1,5 *	57,6	30 x 0,26	7,3	98
5 x 1,5 *	72,0	30 x 0,26	8,1	123
7 x 1,5	100,8	30 x 0,26	8,9	161
8 x 1,5	115,2	30 x 0,26	10,6	188
9 x 1,5	129,6	30 x 0,26	11,0	220
10 x 1,5	144,0	30 x 0,26	11,3	237
11 x 1,5	158,4	30 x 0,26	11,6	258
12 x 1,5	172,8	30 x 0,26	11,8	277
14 x 1,5	201,6	30 x 0,26	12,6	319
16 x 1,5	230,4	30 x 0,26	13,4	364
18 x 1,5	259,2	30 x 0,26	14,2	411
21 x 1,5	302,4	30 x 0,26	15,4	476
25 x 1,5	360,0	30 x 0,26	16,7	566
26 x 1,5	374,4	30 x 0,26	17,3	584
32 x 1,5	460,8	30 x 0,26	18,7	717
34 x 1,5	489,6	30 x 0,26	19,4	741
42 x 1,5	604,8	30 x 0,26	21,6	933
50 x 1,5	720,0	30 x 0,26	23,5	1.102
61 x 1,5	878,4	30 x 0,26	25,2	1.328

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
2 x 2,5 *	48,0	48 x 0,26	7,6	101
3 x 2,5 *	72,0	48 x 0,26	8,2	127
4 x 2,5 *	96,0	48 x 0,26	9,0	160
5 x 2,5 *	120,0	48 x 0,26	10,0	197
7 x 2,5	168,0	48 x 0,26	11,1	256
10 x 2,5	240,0	48 x 0,26	14,3	379
12 x 2,5	288,0	48 x 0,26	14,8	447
16 x 2,5	384,0	48 x 0,26	16,7	603
18 x 2,5	432,0	48 x 0,26	17,8	657
25 x 2,5	600,0	48 x 0,26	21,1	887
34 x 2,5	816,0	48 x 0,26	24,6	1.231
50 x 2,5	1.200,0	48 x 0,26	30,0	1.860
2 x 4	76,8	56 x 0,31	9,0	138
3 x 4 *	115,2	56 x 0,31	9,7	181
4 x 4 *	153,6	56 x 0,31	10,7	230
5 x 4 *	192,0	56 x 0,31	11,8	287
7 x 4	268,8	56 x 0,31	13,1	375
2 x 6	115,2	84 x 0,31	10,7	212
3 x 6	172,8	84 x 0,31	11,5	272
4 x 6 *	230,4	84 x 0,31	12,8	353
5 x 6	288,0	84 x 0,31	14,2	431
7 x 6	403,2	84 x 0,31	15,7	561
4 x 10 *	384,0	80 x 0,41	16,2	593
5 x 10 *	480,0	80 x 0,41	18,1	783
7 x 10	672,0	80 x 0,41	20,0	1.080
4 x 16 *	614,4	128 x 0,41	19,1	897
5 x 16 *	768,0	128 x 0,41	21,5	1.117
7 x 16	1.075,2	128 x 0,41	23,7	1.768
4 x 25 *	960,0	200 x 0,41	23,5	1.314
5 x 25 *	1.200,0	200 x 0,41	26,2	1.648
7 x 25	1.680,0	200 x 0,41	29,0	2.187
4 x 35 *	1.344,0	280 x 0,41	26,4	1.807
5 x 35 *	1.680,0	280 x 0,41	29,6	2.213
4 x 50 **	1.920,0	400 x 0,41	31,8	2.557
5 x 50 **	2.400,0	400 x 0,41	35,0	2.920
4 x 70 **	2.688,0	350 x 0,51	36,2	3.489
5 x 70 **	3.360,0	350 x 0,51	40,0	3.660
4 x 95 **	3.648,0	485 x 0,51	42,1	4.501
5 x 95 **	4.560,0	485 x 0,51	47,5	5.490
4 x 120 **	4.608,0	580 x 0,51	46,5	5.673

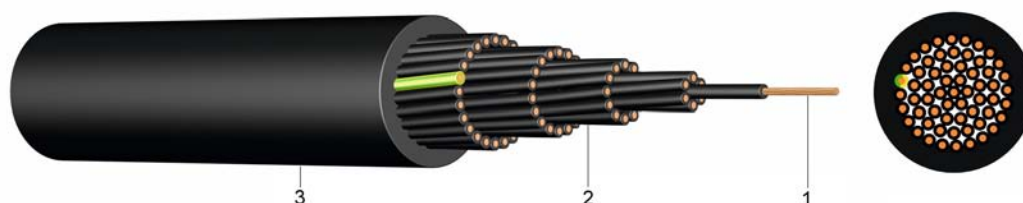
* also with coloured core available from Stock

** only with coloured core available from Stock, with black insulation and white figures on enquiry

More types on enquiry

YSLY
PVC – Control Cable 0,6/1 kV, UV-resistant
Application:

As energy or connecting cable, as measuring, checking and control cable in machine tool manufacturing, plant engineering and on assembly lines and production lines. Suitable for fixed installation or flexible applications with free movement without forced motion and without tensile stress in dry and damp rooms, outdoors transferred considering the temperature range. Not for use in water or in the ground.


Construction:

- 1 fine stranded bare copper
- 2 core insulation of polyvinylchloride (PVC)
core identification JZ: 1 core green/yellow, other cores black with figures
core identification OZ: every core black with figures
- 3 outer sheath of polyvinylchloride (PVC), black,
increased oil resistant, flame retardant, UV-resistant

Standards:

DIN EN 60228 Class 5 (construction)

Technical data:

Nominal voltage U_0/U

[V]

600 / 1000 Volt

Test voltage

[V]_{AC}

6000

Temperature range

in motion

-5°C till +70°C

fixed

-40°C till +70°C

Bending radius

x diameter

7,5

Flammability

standard

EN 60332-1

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
2 x 0,75	14,4	24 x 0,21	7,5	95
3 x 0,75	21,6	24 x 0,21	8,0	105
4 x 0,75	28,8	24 x 0,21	10,0	125
5 x 0,75	36,0	24 x 0,21	9,5	135
7 x 0,75	50,4	24 x 0,21	11,1	180
12 x 0,75	86,4	24 x 0,21	13,0	250
18 x 0,75	129,6	24 x 0,21	15,6	355
2 x 1	19,2	32 x 0,21	8,2	75
3 x 1	28,8	32 x 0,21	8,6	85
4 x 1	38,4	32 x 0,21	9,4	100
5 x 1	48,0	32 x 0,21	10,4	125
7 x 1	67,2	32 x 0,21	12,1	170
12 x 1	115,2	32 x 0,21	14,5	285
18 x 1	172,8	32 x 0,21	17,2	400
25 x 1	240,0	32 x 0,21	20,8	560
34 x 1	326,4	32 x 0,21	23,5	740

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
2 x 1,5	28,8	30 x 0,26	8,9	90
3 x 1,5	43,2	30 x 0,26	9,7	110
4 x 1,5	57,6	30 x 0,26	10,4	140
5 x 1,5	72,0	30 x 0,26	11,5	160
7 x 1,5	100,8	30 x 0,26	13,5	220
12 x 1,5	172,8	30 x 0,26	16,5	320
18 x 1,5	259,2	30 x 0,26	19,5	510
25 x 1,5	359,0	30 x 0,26	23,4	720
3 x 2,5	72,0	48 x 0,26	10,4	170
4 x 2,5	96,0	48 x 0,26	11,5	200
5 x 2,5	120,0	48 x 0,26	12,8	240
7 x 2,5	168,0	48 x 0,26	14,4	331
12 x 2,5	288,0	48 x 0,26	18,2	540
3 x 4	115,2	56 x 0,31	12,6	220
4 x 4	153,6	56 x 0,31	14,0	300
5 x 4	192,0	56 x 0,31	15,3	400
3 x 6	172,8	84 x 0,31	14,2	360
4 x 6	230,4	84 x 0,31	15,7	415
5 x 6	288,0	84 x 0,31	17,9	630
4 x 10	384,0	80 x 0,41	19,5	780
5 x 10	480,0	80 x 0,41	19,7	940
4 x 16	614,4	128 x 0,41	20,8	1080
5 x 16	767,0	128 x 0,41	23,1	1550
4 x 25	960,0	200 x 0,41	25,8	1580
4 x 35	1.344,0	280 x 0,41	28,4	1889
5 x 50	2.400,0	400 x 0,41	39,0	3800

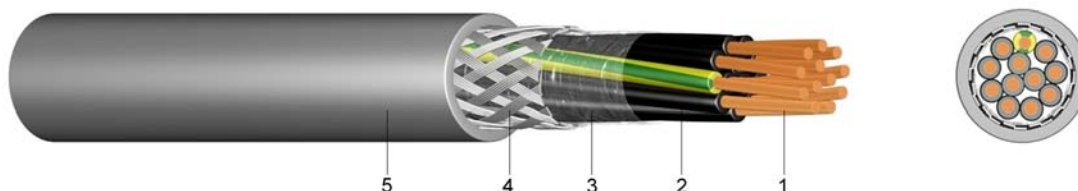
* on request

YSLCY

PVC Control Cable with Copper Braiding

Application:

Suitable as a signal and impulse cable in the control, measuring and signal technology. The copper braiding optimises protection against external interferences, like electromagnetic fields and stray frequencies.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 wrapped in a plastic foil
- 4 braiding of tinned copper round wires
- 5 outer sheath of polyvinylchloride (PVC), grey, increased oil resistant

Standards:

adapted to DIN VDE 0281
DIN EN 60228 class 5 (construction)
HD 308 S2 (core identification for coloured cores)
core identification JZ: 1 core green/yellow, other cores black with figures
core identification OZ: every core black with figures

Technical data:

Nominal voltage U_0/U		[V]	300 / 500 Volt
Test voltage		[V] _{AC}	2000
Temperature range	in motion		-5°C till +70°C
	fixed		-30°C till +70°C
Operating temperature	short circuit	°C	150
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	10
Bending radius	in motion	x diameter	20
Flammability	standard		EN 60332-1-2

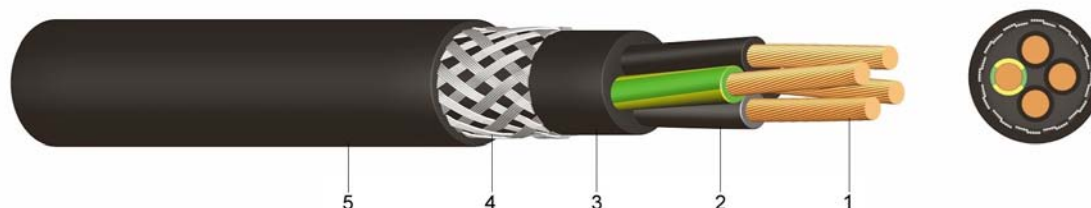
Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (app.value) mm	Overall diameter appr.mm	Weight appr. kg/km
2 x 0,5	34,6	16 x 0,21	5,6	45
3 x 0,5	41,3	16 x 0,21	5,9	55
4 x 0,5	47,0	16 x 0,21	6,4	73
5 x 0,5	54,7	16 x 0,21	7,0	91
12 x 0,5	99,8	16 x 0,21	9,8	208
25 x 0,5	202,6	16 x 0,21	13,7	354
2 x 0,75	41,3	24 x 0,21	6,2	56
3 x 0,75	49,9	24 x 0,21	6,5	70
4 x 0,75	58,6	24 x 0,21	7,0	96
5 x 0,75	69,1	24 x 0,21	7,8	157
7 x 0,75	85,4	24 x 0,21	8,4	168
10 x 0,75	116,2	24 x 0,21	10,4	217
12 x 0,75	132,5	24 x 0,21	10,9	231
18 x 0,75	202,6	24 x 0,21	12,8	314
25 x 0,75	268,8	24 x 0,21	15,2	434
34 x 0,75	332,2	24 x 0,21	17,1	529

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (app.value) mm	Overall diameter appr.mm	Weight appr. kg/km
2 x 1	49,0	32 x 0,21	6,5	83
3 x 1	59,5	32 x 0,21	6,7	111
4 x 1	71,0	32 x 0,21	7,4	131
5 x 1	84,5	32 x 0,21	8,1	155
7 x 1	107,5	32 x 0,21	8,8	190
12 x 1	177,6	32 x 0,21	11,5	286
18 x 1	257,3	32 x 0,21	13,8	393
25 x 1	339,8	32 x 0,21	16,0	658
34 x 1	439,7	32 x 0,21	18,4	759
50 x 1	644,2	32 x 0,21	22,0	994
2 x 1,5 *	62,4	30 x 0,26	7,1	97
3 x 1,5 *	78,7	30 x 0,26	7,6	124
4 x 1,5 *	96,0	30 x 0,26	8,2	166
5 x 1,5 *	114,2	30 x 0,26	9,0	192
7 x 1,5	147,8	30 x 0,26	9,8	245
12 x 1,5	257,3	30 x 0,26	13,0	365
18 x 1,5	358,1	30 x 0,26	15,5	556
25 x 1,5	508,8	30 x 0,26	18,0	737
27 x 1,5	537,6	30 x 0,26	20,0	750
34 x 1,5	658,6	30 x 0,26	20,9	966
50 x 1,5	961,0	30 x 0,26	24,8	1.342
2 x 2,5	88,3	50 x 0,26	8,5	161
3 x 2,5 *	113,3	50 x 0,26	9,0	187
4 x 2,5	141,1	50 x 0,26	9,9	241
5 x 2,5	169,0	50 x 0,26	11,0	274
7 x 2,5	242,9	50 x 0,26	12,0	344
12 x 2,5	391,7	50 x 0,26	15,9	407
4 x 4	238,0	56 x 0,31	11,6	307
5 x 4	276,5	50 x 0,31	12,8	370
2 x 6	163,2	84 x 0,31	12,5	180
4 x 6	329,3	84 x 0,31	14,0	402
5 x 6	386,9	84 x 0,31	15,5	506
4 x 10 *	513,6	80 x 0,41	17,2	747
5 x 10	609,6	80 x 0,41	19,3	861
4 x 16	768,0	128 x 0,41	20,0	1.041
5 x 16	921,6	128 x 0,41	22,2	1.289
4 x 25	1.228,8	200 x 0,41	24,7	1.460
5 x 25	1.468,8	200 x 0,41	27,5	1.840

* also with coloured cores according to HD 308 S2

YSLYCY PVC – Control Cable 0,6/1 kV, UV-resistant with Copper Braiding

Application: Used as energy or connecting cable, as measuring, checking and control cable in machine tool manufacturing, plant engineering and on assembly lines and production lines. Suitable fixed for fixed installation or flexible applications with free movement without forced motion and without tensile stress in dry and damp rooms, outdoors transferred considering the temperature range. Not for use in water or in the ground.
For interference-free signal transmission for measuring, control and regulation technology, these cables with copper screening assures.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of polyvinylchloride (PVC)
core identification JZ: 1 core green/yellow, other cores black with figures
core identification OZ: every core black with figures
- 3 inner sheath of polyvinylchloride (PVC)
- 4 braiding of tinned copper round wires
- 5 outer sheath of polyvinylchloride (PVC), black,
increased oil resistant, flame retardant, UV-resistant

Standards: DIN EN 60228 Class 5 (construction)

Technical data:

Nominal voltage U_0/U		[V]	600 / 1000 Volt
Test voltage		[V] _{AC}	6000
Temperature range	in motion		- 5°C till +70°C
	fixed		-40°C till +70°C
Bending radius		x diameter	15
Flammability	standard		EN 60332-1

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (app.value) mm	Overall diameter appr. mm	Weight appr. kg/km
2 x 0,75	41,3	24 x 0,21	10,5	183
3 x 0,75	54,7	24 x 0,21	10,9	210
4 x 0,75	67,2	24 x 0,21	11,4	238
5 x 0,75	78,7	24 x 0,21	12,1	272
7 x 0,75	97,0	24 x 0,21	12,9	315
12 x 0,75	168,0	24 x 0,21	15,8	464
2 x 1	51,8	32 x 0,21	10,8	198
3 x 1	66,2	32 x 0,21	11,2	228
4 x 1	85,4	32 x 0,21	11,8	261
5 x 1	93,1	32 x 0,21	12,6	300
7 x 1	117,1	32 x 0,21	13,3	335
12 x 1	204,5	32 x 0,21	16,4	522
18 x 1	280,3	32 x 0,21	19,4	628

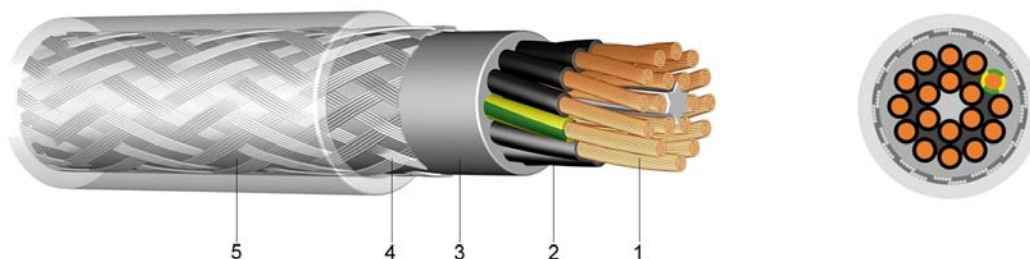
Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (app.value) mm	Overall diameter appr. mm	Weight appr. kg/km
25 x 1	368,6	32 x 0,21	21,6	884
2 x 1,5	69,1	30 x 0,26	11,8	243
3 x 1,5	87,4	30 x 0,26	12,3	273
4 x 1,5	101,8	30 x 0,26	13,0	290
5 x 1,5	124,8	30 x 0,26	13,9	352
7 x 1,5	180,5	30 x 0,26	15,0	448
12 x 1,5	257,3	30 x 0,26	18,8	534
18 x 1,5	358,1	30 x 0,26	21,6	720
3 x 2,5	122,9	50 x 0,26	13,5	354
4 x 2,5	168,0	50 x 0,26	14,6	413
5 x 2,5	203,5	50 x 0,26	15,7	515
4 x 4	238,1	56 x 0,31	16,2	587
4 x 6	317,8	84 x 0,31	17,7	715
4 x 10	574,1	80 x 0,41	21,7	1.188
4 x 16	809,3	128 x 0,41	24,3	1.656

YSLYQY

PVC Control Cable with Steel Wire Braiding

Application:

Used as a power and control cable with increased mechanical stress-resistance for rough operating conditions. This cable is also suitable for fixed installations in vehicles, machines and hoists, etc.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 inner sheath of polyvinylchloride (PVC)
- 4 braiding of galvanised steel wires
- 5 outer sheath of polyvinylchloride (PVC), transparent, increased oil resistant

Standards:

adapted to DIN VDE 0281
DIN EN 60228 class 5 (construction)
HD 308 S2 (core identification for coloured cores)
core identification JZ: 1 core green/yellow, other cores black with figures
core identification OZ: every core black with figures

Technical data:

Nominal voltage U_0/U		[V]	300 / 500 Volt
Test voltage		[V] _{AC}	2000
Temperature range	in motion		- 5°C till +70°C
	fixed		-40°C till +70°C
Operating temperature	short circuit	°C	150
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	6
Bending radius	in motion	x diameter	15
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
2 x 0,75	14,4	24 x 0,21	7,5	73
3 x 0,75	21,6	24 x 0,21	7,8	82
4 x 0,75	28,8	24 x 0,21	8,2	89
5 x 0,75	36,0	24 x 0,21	8,8	101
7 x 0,75	50,4	24 x 0,21	9,1	127
12 x 0,75	86,4	24 x 0,21	11,5	187
18 x 0,75	129,6	24 x 0,21	13,3	258
25 x 0,75	180,0	24 x 0,21	16,3	370
34 x 0,75	244,8	24 x 0,21	18,0	473
50 x 0,75	360,0	24 x 0,21	20,5	649
2 x 1	19,2	32 x 0,21	7,7	79
3 x 1	28,8	32 x 0,21	8,0	90
4 x 1	38,4	32 x 0,21	8,5	106

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
5 x 1	48,0	32 x 0,21	9,1	119
7 x 1	67,2	32 x 0,21	9,7	145
12 x 1	115,2	32 x 0,21	12,1	226
18 x 1	172,8	32 x 0,21	13,8	311
25 x 1	240,0	32 x 0,21	16,9	438
34 x 1	326,4	32 x 0,21	18,5	561
50 x 1	480,0	32 x 0,21	22,4	794
2 x 1,5	28,8	30 x 0,26	8,3	96
3 x 1,5	43,2	30 x 0,26	8,5	117
4 x 1,5 *	57,6	30 x 0,26	9,2	132
5 x 1,5	72,0	30 x 0,26	9,7	147
7 x 1,5	100,8	30 x 0,26	10,6	184
12 x 1,5	172,8	30 x 0,26	13,5	293
18 x 1,5	259,2	30 x 0,26	16,3	433
25 x 1,5	360,0	30 x 0,26	19,0	572
34 x 1,5	489,6	30 x 0,26	21,2	739
50 x 1,5	720,0	30 x 0,26	28,1	1.227
3 x 2,5	72,0	50 x 0,26	9,7	155
4 x 2,5 *	96,0	50 x 0,26	10,7	191
5 x 2,5	120,0	50 x 0,26	11,5	224
7 x 2,5	168,0	50 x 0,26	12,6	285
12 x 2,5	288,0	50 x 0,26	16,6	460
18 x 2,5	432,0	50 x 0,26	19,3	654
25 x 2,5	600,0	50 x 0,26	23,2	891
4 x 4 *	153,6	56 x 0,31	12,3	271
5 x 4 *	192,0	56 x 0,31	13,8	330
7 x 4	268,8	56 x 0,31	15,4	442
4 x 6	230,4	84 x 0,31	14,5	379
5 x 6 **	288,0	84 x 0,31	16,4	474
7 x 6	403,2	84 x 0,31	17,7	615
4 x 10	384,0	80 x 0,41	18,0	608
7 x 10	672,0	80 x 0,41	21,6	920
4 x 16	614,4	128 x 0,41	21,8	945
5 x 16 **	768,0	128 x 0,41	23,4	1.123
7 x 16	1.075,2	128 x 0,41	26,0	1.494
4 x 25 **	960,0	200 x 0,41	25,1	1.349
4 x 35 **	1.344,0	280 x 0,41	29,6	1.839
5 x 35 **	1.680,0	280 x 0,41	32,0	2.197
4 x 50 **	1.920,0	400 x 0,41	34,3	2.605
4 x 70 **	2.688,0	356 x 0,51	38,5	3.453
4 x 95 **	3.648,0	470 x 0,51	43,0	4.544

* also with coloured core on Stock available

** only with coloured core on Stock available, with black insulation and white figures on enquiry

H05VV5-F

PVC Control Cable Oil Resistant

Application:

In dry and wet locations for low and medium-level mechanical stress, but not in the open-air. To be used as a termination and connection cable in the control, measuring and signal technology. Suitable as a signal and impulse cable for control and inspection of industrial plants, production lines and machinery.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of polyvinylchloride (PVC-mixture YI2)
- 3 outer sheath of polyvinylchloride (PVC-mixture YM2), grey

Standards:

DIN VDE 0281-part 13
DIN EN 60228 class 5 (construction)
core identification: 1 core green/yellow, other cores black with figures

Technical data:

Nominal voltage U ₀ /U		[V]	300 / 500 Volt
Test voltage		[V] _{AC}	2000
Temperature range	in motion		-5°C till +70°C
	fixed		-40°C till +70°C
Operating temperature	short circuit	°C	150
Bending radius	one time / fixed	x diameter	12,5
Bending radius	in motion	x diameter	15,0
Oil-resistant	standard		EN 60811-2-1
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter mm	Weight appr. kg/km
2 X 0,75	14,4	24 x 0,21	6,1	55
3 G 0,75	21,6	24 x 0,21	6,6	66
4 G 0,75	28,8	24 x 0,21	7,3	83
5 G 0,75	36,0	24 x 0,21	8,1	102
7 G 0,75	50,4	24 x 0,21	8,9	129
12 G 0,75	86,4	24 x 0,21	11,9	227
18 G 0,75	129,6	24 x 0,21	14,2	329
25 G 0,75	180,0	24 x 0,21	16,5	449
34 G 0,75	244,8	24 x 0,21	19,2	609
50 G 0,75 *	360,0	24 x 0,21	23,2	893
2 X 1	19,2	32 x 0,21	6,5	63
3 G 1	28,8	32 x 0,21	6,9	77
4 G 1	38,4	32 x 0,21	7,7	97
5 G 1	48,0	32 x 0,21	8,5	120
7 G 1	67,2	32 x 0,21	9,4	152
12 G 1	115,2	32 x 0,21	12,6	268
18 G 1	172,8	32 x 0,21	15,0	389
25 G 1	240,0	32 x 0,21	17,5	533
34 G 1	326,4	32 x 0,21	20,4	721

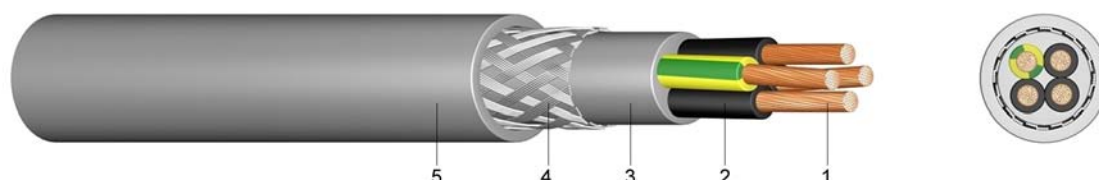
Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter mm	Weight appr. kg/km
2 X 1,5 *	28,8	30 x 0,26	7,6	90
3 G 1,5	43,2	30 x 0,26	8,2	110
4 G 1,5	57,6	30 x 0,26	9,1	138
5 G 1,5	72,0	30 x 0,26	10,1	172
7 G 1,5	100,8	30 x 0,26	11,1	219
12 G 1,5	172,8	30 x 0,26	14,9	388
18 G 1,5	259,2	30 x 0,26	17,9	565
25 G 1,5	360,0	30 x 0,26	20,9	775
34 G 1,5	489,6	30 x 0,26	24,3	1.051
3 G 2,5	72,0	50 x 0,26	9,7	162
4 G 2,5	96,0	50 x 0,26	10,7	205
5 G 2,5	120,0	50 x 0,26	12,0	256
7 G 2,5	168,0	50 x 0,26	13,2	328
12 G 2,5	288,0	50 x 0,26	17,8	581
18 G 2,5	432,0	50 x 0,26	21,3	848
34 G 2,5	816,0	50 x 0,26	29,0	1.584
4 G 4 *	153,6	56 x 0,31	11,6	280
5 G 4 *	192,0	56 x 0,31	14,1	340
7 G 4 *	268,8	56 x 0,31	15,1	445
4 G 6 *	230,4	84 x 0,31	16,8	450
5 G 6 *	288,0	84 x 0,31	18,4	550

* adapted to DIN VDE

H05VVC4V5-K PVC Control Cable with Copper Braiding, Oil Resistant

Application:

Suitable for dry, damp and wet locations but not in the open-air. It is used as a screened termination and connection cable in the control, measuring and signal technology. Suitable as a signal and impulse cable for control and inspection of industrial plants, machinery and working processes.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of polyvinylchloride (PVC-mixture YI2)
- 3 inner sheath of polyvinylchloride (mixture YM2)
- 4 braiding of tinned copper wires
- 5 outer sheath of polyvinylchloride (PVC-mixture YM2), grey

Standards:

DIN VDE 0281-13
HD 21.13.S1
DIN EN 60228 class 5 (construction)
core identification: 1 core green/yellow, other cores black with figures

Technical data:

Nominal voltage U_0/U		[V]	300 / 500 Volt
Test voltage at 50 Hz	core / core	[V] _{AC}	2000
	core / screen	[V] _{AC}	1000
Temperature range	in motion		-5°C till +70°C
	fixed		-40°C till +70°C
Operating temperature	short circuit	°C	150
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	12,5
Bending radius	in motion	x diameter	15,0
Oil-resistant	standard		EN 60811-2-1
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter mm	Weight appr. kg/km
2 X 0,75 *	41,3	24 x 0,21	8,4	111
3 G 0,75	54,7	24 x 0,21	8,9	130
4 G 0,75	67,2	24 x 0,21	9,6	150
5 G 0,75	78,7	24 x 0,21	10,5	179
7 G 0,75	108,5	24 x 0,21	12,5	263
12 G 0,75	184,3	24 x 0,21	14,6	363
25 G 0,75	317,8	24 x 0,21	19,5	643
3 G 1	74,9	32 x 0,21	9,3	143
4 G 1	85,4	32 x 0,21	10,0	171
5 G 1	101,8	32 x 0,21	10,9	199
7 G 1	126,7	32 x 0,21	13,4	314

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter mm	Weight appr. kg/km
12 G 1	197,8	32 x 0,21	15,4	408
18 G 1	303,4	32 x 0,21	17,9	564
25 G 1	411,8	32 x 0,21	20,5	733
2 X 1,5 *	71,0	30 x 0,26	10,0	163
3 G 1,5	95,0	30 x 0,26	10,6	186
4 G 1,5	116,2	30 x 0,26	11,5	224
5 G 1,5	129,6	30 x 0,26	12,6	268
7 G 1,5	217,9	30 x 0,26	15,4	418
12 G 1,5	309,1	30 x 0,26	17,8	558
18 G 1,5	410,9	30 x 0,26	20,9	763
25 G 1,5	545,3	30 x 0,26	24,0	1.012
3 G 2,5	147,8	50 x 0,26	12,1	251
4 G 2,5	163,2	50 x 0,26	13,4	323
5 G 2,5	199,7	50 x 0,26	14,7	390
7 G 2,5	288,0	50 x 0,26	17,9	583
12 G 2,5	495,4	50 x 0,26	20,8	778
18 G 2,5	590,4	50 x 0,26	24,4	1.088

* adapted to DIN VDE

H05VV5-F UL/CSA

PVC Control Cable Oil Resistant with UL and CSA - Approbation (UL-Style 2587)

Application:

In dry and wet locations for low and medium-level mechanical stress, but not in the open-air. To be used as a termination and connection cable in the control, measuring and signal technology. Suitable as a signal and impulse cable for control and inspection of industrial plants, production lines and machinery.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of special-polyvinylchloride (PVC)
- 3 outer sheath of special polyvinylchloride (PVC), grey

Information:

0,50 mm² is equivalent to app. AWG 20 (0,519mm²)
 0,75 mm² is equivalent to app. AWG 18 (0,823mm²)
 1,00 mm² is equivalent to app. AWG 17 (1,040mm²)
 1,50 mm² is equivalent to app. AWG 15 (1,650mm²)
 2,50 mm² is equivalent to app. AWG 13 (2,630mm²)

Standards:

DIN VDE 0281-13, HD 21.13.S1
 UL/CSA (UL-Style 2587)
 DIN EN 60228 class 5 (construction)
 core identification: 1 core green/yellow, other cores black with figures

Technical data:

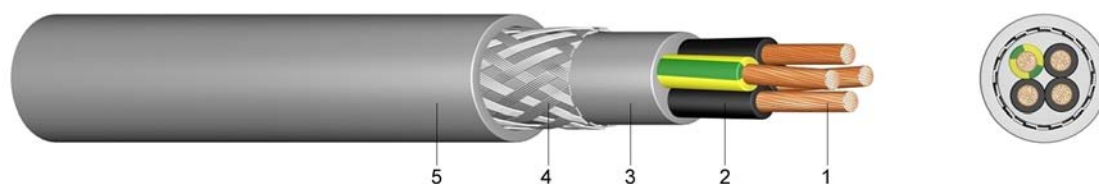
Nominal voltage U ₀ /U		[V]	600 Volt
Test voltage		[V] _{AC}	3000
Temperature range	in motion		-5°C till +90°C
	fixed		-40°C till +90°C
Operating temperature	short circuit	°C	150
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	12,5
	in motion	x diameter	15,0
Oil-resistant	standard		EN 60811-2-1
Flammability	standard		EN 60332-1-2
Insulation resistance	min.	[MΩm/km]	20

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter mm	Weight appr. kg/km
3 G 0,5	14,4	16 x 0,21	6,1	54
4 G 0,5	19,2	16 x 0,21	6,7	67
5 G 0,5	24,0	16 x 0,21	7,5	83
7 G 0,5	33,6	16 x 0,21	8,2	103
12 G 0,5	57,6	16 x 0,21	10,9	182
18 G 0,5	86,4	16 x 0,21	13,0	262
25 G 0,5	120,0	16 x 0,21	15,2	357
34 G 0,5	163,2	16 x 0,21	17,6	482

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter mm	Weight appr. kg/km
41 G 0,5	196,8	16 x 0,21	19,5	588
50 G 0,5	240,0	16 x 0,21	21,3	707
61 G 0,5	292,8	16 x 0,21	22,9	834
3 G 0,75	21,6	24 x 0,21	6,6	66
4 G 0,75	28,8	24 x 0,21	7,3	83
5 G 0,75	36,0	24 x 0,21	8,1	102
7 G 0,75	50,4	24 x 0,21	8,9	129
12 G 0,75	86,4	24 x 0,21	11,9	227
18 G 0,75	129,6	24 x 0,21	14,2	329
25 G 0,75	180,0	24 x 0,21	16,5	449
34 G 0,75	244,8	24 x 0,21	19,2	609
41 G 0,75	295,2	24 x 0,21	21,2	742
50 G 0,75	360,0	24 x 0,21	23,3	893
61 G 0,75	438,7	24 x 0,21	24,9	1.056
3 G 1	28,8	32 x 0,21	6,9	77
4 G 1	38,4	32 x 0,21	7,7	96
5 G 1	48,0	32 x 0,21	8,5	120
7 G 1	67,2	32 x 0,21	9,4	152
12 G 1	115,2	32 x 0,21	12,6	268
18 G 1	172,8	32 x 0,21	15,0	389
25 G 1	240,0	32 x 0,21	17,5	533
34 G 1	326,4	32 x 0,21	20,4	722
41 G 1	393,6	32 x 0,21	22,6	879
50 G 1	480,0	32 x 0,21	24,7	1.059
61 G 1	585,6	32 x 0,21	26,5	1.257
3 G 1,5	43,2	30 x 0,26	8,2	110
4 G 1,5	57,6	30 x 0,26	9,1	138
5 G 1,5	72,0	30 x 0,26	10,1	172
7 G 1,5	100,8	30 x 0,26	11,1	219
12 G 1,5	172,8	30 x 0,26	14,9	388
18 G 1,5	259,2	30 x 0,26	17,9	565
25 G 1,5	360,0	30 x 0,26	20,9	774
34 G 1,5	489,6	30 x 0,26	24,3	1.051
41 G 1,5	589,4	30 x 0,26	26,9	1.281
50 G 1,5	720,0	30 x 0,26	29,5	1.545
61 G 1,5	878,4	30 x 0,26	31,6	1.835
3 G 2,5	72,0	48 x 0,26	9,4	162
4 G 2,5	96,0	48 x 0,26	10,7	205
5 G 2,5	120,0	48 x 0,26	12,0	256
7 G 2,5	168,0	48 x 0,26	13,2	328
12 G 2,5	288,0	48 x 0,26	17,8	581
18 G 2,5	432,0	48 x 0,26	21,3	849
25 G 2,5	600,0	48 x 0,26	24,9	1.167
34 G 2,5	816,0	48 x 0,26	29,0	1.584
50 G 2,5	1.200,0	48 x 0,26	35,2	2.331

H05VVC4V5-K PVC Control Cable with Copper Braiding, Oil Resistant, with UL and CSA Approbation (UL-Style 2587)

Application: Suitable for dry, damp and wet locations but not in the open-air. It is used as a screened termination and connection cable in the control, measuring and signal technology. The copper braiding optimises protection against external interferences, like electromagnetic fields and stray frequencies. Suitable as a signal and impulse cable for control and inspection of industrial plants, machinery and working processes.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of special polyvinylchloride (PVC)
- 3 inner sheath of special polyvinylchloride (PVC)
- 4 braiding of tinned copper wires
- 5 outer sheath of special polyvinylchloride (PVC), grey

Information:

- 0,50 mm² is equivalent to app. AWG 20 (0,519mm²)
- 0,75 mm² is equivalent to app. AWG 18 (0,823mm²)
- 1,00 mm² is equivalent to app. AWG 17 (1,040mm²)
- 1,50 mm² is equivalent to app. AWG 15 (1,650mm²)
- 2,50 mm² is equivalent to app. AWG 13 (2,630mm²)

Standards:

- DIN VDE 0281-13, HD 21.13.S1
- UL/CSA (UL-Style 2587)
- DIN EN 60228 class 5 (construction)
- core identification: 1 core green/yellow, other cores black with figures

Technical data:

Nominal voltage U ₀ /U		[V]	600 Volt
Test voltage		[V] _{Ac}	3000
Temperature range	in motion		-5°C till +90°C
	fixed		-40°C till +90°C
Operating temperature	short circuit	°C	150
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	12,5
	in motion	x diameter	15,0
Oil-resistant	standard		EN 60811-2-1
Flammability	standard		EN 60332-1-2
Insulation resistance	min.	[MΩm/km]	20

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter mm	Weight appr. kg/km
3 G 0,75	50,9	24 x 0,21	8,8	125
4 G 0,75	63,4	24 x 0,21	9,6	147
5 G 0,75	78,7	24 x 0,21	10,3	172

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter mm	Weight appr. kg/km
7 G 0,75	107,5	24 x 0,21	12,2	235
12 G 0,75	161,3	24 x 0,21	14,5	354
18 G 0,75	219,8	24 x 0,21	16,9	478
3 G 1	74,9	32 x 0,21	9,3	140
4 G 1	86,4	32 x 0,21	9,9	165
5 G 1	101,8	32 x 0,21	10,9	195
7 G 1	126,7	32 x 0,21	12,9	271
12 G 1	193,9	32 x 0,21	15,4	405
18 G 1	265,0	32 x 0,21	17,7	548
3 G 1,5	95,0	30 x 0,26	10,4	180
4 G 1,5	116,2	30 x 0,26	11,3	217
5 G 1,5	129,6	30 x 0,26	12,6	267
7 G 1,5	168,0	30 x 0,26	14,9	379
12 G 1,5	254,4	30 x 0,26	17,6	538
18 G 1,5	384,0	30 x 0,26	20,5	743
3 G 2,5	147,8	50 x 0,26	12,0	246
4 G 2,5	163,2	50 x 0,26	13,3	316
5 G 2,5	199,7	50 x 0,26	14,6	383

YSLY **PVC Control Cable for Intrinsically Safe Circuits** Intrinsically Safe **with Blue Outer Sheath**

Application: Suitable for dry, damp and wet locations as well as in areas with explosion hazard but not in the open-air. To be used as a connection and control cable for the application in intrinsically safe circuits for medium-level mechanical stress.



Construction: 1 fine-stranded bare copper
2 core insulation of polyvinylchloride (PVC)
3 outer sheath of polyvinylchloride (PVC), blue, increased oil resistant

Information: **Capacity:** Core / Core approx. 120 nF/km
Inductivity: approx. 0,65 mH/km

Standards: adapted to DIN VDE 0281
DIN EN 60228 class 5 (construction)
core identification JZ: 1 core green/yellow, other cores black with figures
core identification OZ: every core black with figures

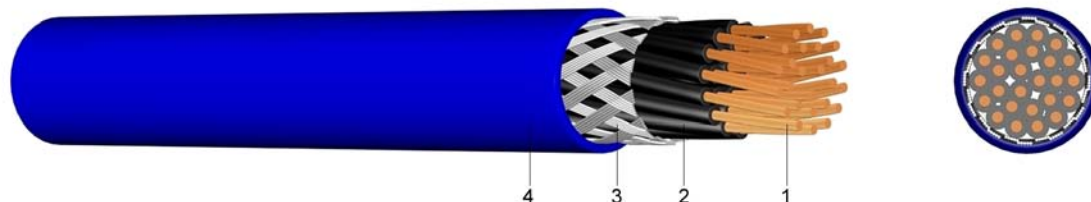
Technical data:

Nominal voltage U_0/U		[V]	300 / 500 Volt
Test voltage		[V] _{AC}	2000
Temperature range	in motion		- 5°C till +70°C
	fixed		-30°C till +70°C
Operating temperature	short circuit	°C	150
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	6
	in motion	x diameter	15
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
2 x 0,75	14,4	24 x 0,21	5,3	42
3 x 0,75	21,6	24 x 0,21	5,5	50
4 x 0,75	28,8	24 x 0,21	6,2	64
5 x 0,75	36,0	24 x 0,21	6,7	77
7 x 0,75	50,4	24 x 0,21	7,4	99
25 x 0,75	180,0	24 x 0,21	13,9	333
2 x 1	19,2	32 x 0,21	5,5	50
7 x 1	67,2	32 x 0,21	8,0	114
18 x 1	172,8	32 x 0,21	12,7	303
2 x 1,5	28,8	30 x 0,26	6,3	63
3 x 1,5	43,2	30 x 0,26	6,6	79
4 x 1,5	57,6	30 x 0,26	7,3	98
5 x 1,5	72,0	30 x 0,26	8,1	123
7 x 1,5	100,8	30 x 0,26	8,9	161
12 x 1,5	172,8	30 x 0,26	11,8	277

YSLCY Intrinsically Safe PVC Control Cable for Intrinsically Safe Circuits with Copper Braiding and Blue Outer Sheath

Application: For dry, humid and wet locations as well as areas with explosion hazard, but not in the open-air. To be used as an MSR cable for the application in intrinsically safe circuits. The copper braiding optimises protection against external electrical and magnetic interferences. The cable is suitable for medium-level mechanical stress.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 braiding of tinned copper wires
- 4 outer sheath of polyvinylchloride (PVC), blue, increased oil resistant

Information:

Capacity:
core / core : appr. 150 nF/km and core / screen : app. 200 nF/km
Inductivity: approx. 0,65 mH/km

Standards:

adapted to DIN VDE 0281
DIN EN 60228 class 5 (construction)
core identification JZ: 1 core green/yellow, other cores black with figures
core identification OZ: every core black with figures

Technical data:

Nominal voltage U_0/U		[V]	300 / 500 Volt
Test voltage		[V] _{AC}	2000
Temperature range	in motion		-5°C till +70°C
	fixed		-30°C till +70°C
Operating temperature	short circuit	°C	150
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	10
Bending radius	in motion	x diameter	20
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
2 x 0,75	41,3	24 x 0,21	6,2	56
3 x 0,75	49,9	24 x 0,21	6,5	70
4 x 0,75	58,6	24 x 0,21	7,0	96
5 x 0,75	69,1	24 x 0,21	7,8	157
7 x 0,75	85,4	24 x 0,21	8,4	168
12 x 0,75	132,5	24 x 0,21	10,9	231
18 x 0,75	202,6	24 x 0,21	12,8	314
25 x 0,75	268,8	24 x 0,21	15,2	434
2 x 1,5	62,4	30 x 0,26	7,1	97
3 x 1,5	78,7	30 x 0,26	7,6	124
4 x 1,5	96,0	30 x 0,26	8,2	166
5 x 1,5	114,2	30 x 0,26	9,0	192
7 x 1,5	147,8	30 x 0,26	9,8	245

SLM 0,6/1 kV PVC Composite Connection Cable

Application: These connection cables are well suited for fixed installations and for flexible use e.g. in machine and plant engineering for medium level mechanical stress in dry, damp and wet locations.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 outer sheath of polyvinylchloride (PVC)
grey or black, increased oil resistant

Standards: DIN EN 60228 class 5 (construction)
HD 308 S2 (core identification)
core identification: 1 core green/yellow, other cores black with figures

Technical data:

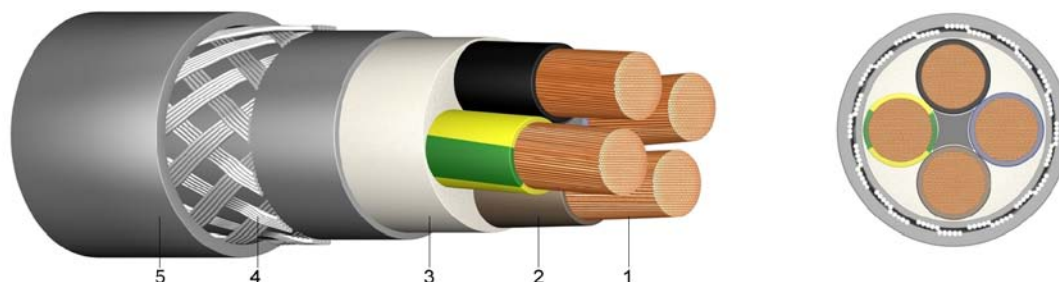
Nominal voltage U_0/U		[V]	600 / 1000 Volt
Test voltage		[V] _{AC}	4000
Temperature range	in motion		-5°C till +70°C
	fixed		-30°C till +70°C
Bending radius	one time / fixed	x diameter	5,0
	in motion	x diameter	7,5
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter mm	Weight appr. kg/km
4 x 1,5	57,6	30 x 0,26	10,7	176
4 x 2,5	96,0	48 x 0,26	10,7	242
4 x 4	153,6	56 x 0,31	13,7	330
4 x 6	230,4	84 x 0,31	15,0	428
4 x 10	384,0	80 x 0,41	18,3	668
4 x 16	614,4	128 x 0,41	20,7	941
4 x 25	960,0	200 x 0,41	25,2	1.431
5 x 4	192,0	56 x 0,31	14,9	400
5 x 6	288,0	84 x 0,31	16,4	523
5 x 10	480,0	80 x 0,41	20,2	820

SLCM 0,6/1 kV PVC Composite Connection Cable with Copper Braiding

Application:

These connection cables are well suited for fixed installations and for flexible use e.g. in machine and plant engineering for medium-level mechanical stress in dry, damp and wet locations. With the copper braiding electrical and magnetic interferences exerted on other cables and wires or adjacent electric components are effectively suppressed. They are especially suitable as supply cables between frequency converters and servomotors.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 inner sheath of polyvinylchloride (PVC) or taping
- 4 screen of tinned copper braiding
- 5 outer sheath of polyvinylchloride (PVC), grey, increased oil resistant

Standards:

adapted to DIN EN 60228 class 5 (construction)
 HD 308 S2 (core identification)
 core identification: 1 core green/yellow, other cores black with figures

Technical data:

Nominal voltage U_0/U		[V]	600 / 1000 Volt
Test voltage at 50 Hz	core / core	[V] _{AC}	4000
	core / screen	[V] _{AC}	4000
Temperature range	in motion		+5°C till +70°C
	fixed		-30°C till +70°C
Bending radius	one time / fixed	x diameter	7,5
	in motion	x diameter	15,0
Flammability	standard		EN 60332-1-2

Number of core and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter mm	Weight appr. kg/km
4 x 1,5	97,0	30 x 0,26	12,7	240
4 x 2,5	151,7	48 x 0,26	14,5	335
4 x 4	247,7	56 x 0,31	16,1	440
4 x 6	331,2	84 x 0,31	17,4	553
4 x 10	531,8	80 x 0,41	20,9	830
4 x 16	788,2	128 x 0,41	23,3	1.136
4 x 25	1.233,6	200 x 0,41	28,2	1.696
4 x 35	1.681,9	280 x 0,41	31,4	2.204
4 x 50 *	2.376,0	400 x 0,41	36,8	3.074
4 x 70 *	3.191,0	350 x 0,51	42,3	4.169
4 x 95 *	4.309,4	485 x 0,51	47,0	5.600

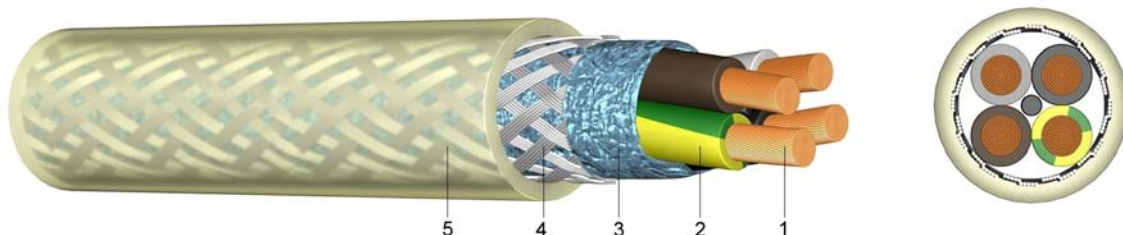
* with coloured cores according to HD 308 S2

2YSLCY

EMV Composite Connection Cable with Copper Braiding

Application:

These composite connection cables are produced according to the European EMV Guidelines and are particularly suitable for plants and facilities with appliances and electrical equipment of which electromagnetic interference fields could have an undue influence on the surroundings. These connection cables are well suited for fixed installations and for flexible use in motive power engineering with frequency converting technology (e.g. machine and plant engineering) for medium-level mechanical loads in dry, humid and wet locations.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of polyethylene (PE)
- 3 static screen of aluminium foil
- 4 concentric screen of tinned copper wires
- 5 outer sheath of polyvinylchloride (PVC), transparent

Standards:

DIN VDE 0281
DIN EN 60228 class 5 (construction)
HD 308 S2 (core identification)
DIN VDE 0207
EN 55011

Technical data:

Nominal voltage U_0/U		[V]	600 / 1000 Volt
Test voltage at 50 Hz	core / core	[V] _{AC}	4000
	core / screen	[V] _{AC}	4000
Temperature range	in motion		- 5°C till +70°C
	fixed		-30°C till +70°C
Operating temperature	short circuit	°C	160
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	7,5
	in motion	x diameter	15,0
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure kg/km	Wire diameter mm	Overall diameter mm	Weight appr. kg/km
4 x 1,5	90,2	0,26	11,4	170
4 x 2,5	149,8	0,26	13,0	235
4 x 4	215,0	0,31	14,7	320
4 x 6	289,9	0,31	16,7	425
4 x 10	470,4	0,41	20,9	665
4 x 16	710,4	0,41	23,7	970
4 x 25	1.020,5	0,41	28,3	1.400
4 x 35	1.500,5	0,41	32,1	1.890
4 x 50	2.100,5	0,41	38,7	2.700

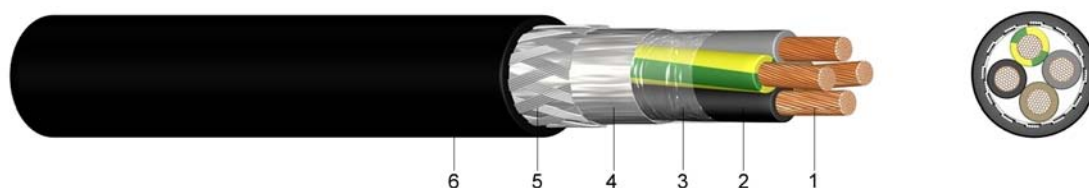
Number of cores and nominal cross section mm ²	Copper figure kg/km	Wire diameter mm	Overall diameter mm	Weight appr. kg/km
4 x 70	3.195,8	0,51	43,2	3.480
4 x 95	4.309,4	0,51	48,3	4.848
4 x 120	5.107,2	0,51	53,4	5.660
4 x 150	6.384,0	0,51	59,6	6.930

2YSLCYK

EMV Composite Connection Cable with Copper Braiding

Application:

These composite connection cables are produced according to the European EMV Guidelines and are particularly suitable for plants and facilities with appliances and electrical equipment of which electromagnetic interference fields could have an undue influence on the surroundings. These connection cables are well suited for fixed installations and for flexible use in motive power engineering with frequency converting technology (e.g. machine and plant engineering) for medium-level mechanical loads in dry, humid and wet locations and outdoor.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of polyethylene (PE)
- 3 layer of foil
- 4 screen of PETP aluminium foil
- 5 concentric screen of tinned copper wires
- 6 outer sheath of polyvinylchloride (PVC), black

Standards:

DIN VDE 0281
DIN EN 60228 class 5 (construction)
HD 308 S2 (core identification)
DIN VDE 0207
EN 55011

Technical data:

Nominal voltage U_0/U		[V]	600 / 1000 Volt
Test voltage at 50 Hz	core / core	[V] _{AC}	4000
	core / screen	[V] _{AC}	4000
Temperature range	in motion		-5°C till +70°C
	fixed		-40°C till +70°C
Operating temperature	short circuit	°C	160
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	7,5
	in motion	x diameter	15,0
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter mm	Weight appr. kg/km
4 x 1,5	95,0	30 x 0,26	11,4	170
4 x 2,5	149,8	48 x 0,26	13,0	235
4 x 4	234,2	56 x 0,31	14,7	320
4 x 6	319,7	84 x 0,31	16,7	425
4 x 10	531,8	80 x 0,41	20,9	665
4 x 16	788,2	128 x 0,41	23,7	970

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter mm	Weight appr. kg/km
4 x 25	1.233,6	200 x 0,41	28,3	1.400
4 x 35	1.660,8	280 x 0,41	32,1	1.890
4 x 50	2.341,4	400 x 0,41	38,7	2.700
4 x 70	3.191,0	350 x 0,51	43,2	3.480
4 x 95	4.309,4	485 x 0,51	49,3	4.570
4 x 120	5.107,2	614 x 0,51	53,4	5.660
4 x 150	6.393,6	765 x 0,51	59,6	6.930
4 x 185	8.189,8	944 x 0,51	64,1	8.330

YSL11Y

PUR Control Cable

Application:

Used as energy or connecting cable, as measuring, checking and control cable in machine tool manufacturing, plant engineering and on assembly lines and production lines to meet stringent safety requirements. Suitable for fixed installation or flexible applications with unrestricted mobility without forced movement control and without exposure to tensile load. Installation in dry and moist rooms.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 outer sheath of polyurethane (PUR), grey, oil resistant

Standards:

adapted to DIN VDE 0281
 DIN EN 60228 class 5 (construction)
 core identification JZ: 1 core green/yellow, other cores black with figures
 core identification OZ: every core black with figures

Technical data:

Nominal voltage U_0/U		[V]	300 / 500 Volt
Test voltage		[V] _{AC}	3000
Temperature range	in motion fixed		- 5°C till +70°C -40°C till +70°C
Bending radius	one time / fixed in motion	x diameter x diameter	6 20
Flammability	standard		EN 60332-1-2

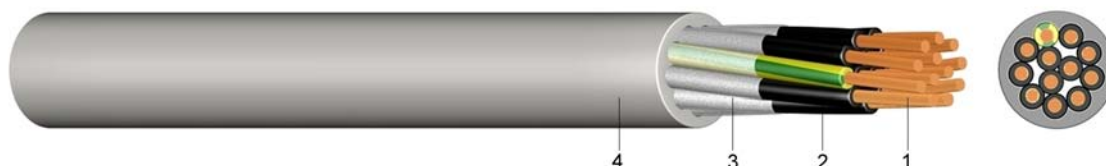
Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
2 x 0,75	14,4	24 x 0,21	5,4	43
3 x 0,75	21,6	24 x 0,21	5,7	61
4 x 0,75	28,8	24 x 0,21	6,2	75
5 x 0,75	36,0	24 x 0,21	6,7	100
7 x 0,75	50,4	24 x 0,21	7,3	125
2 x 1	19,2	32 x 0,21	5,7	57
3 x 1	28,8	32 x 0,21	6,0	80
4 x 1	38,4	32 x 0,21	6,5	106
5 x 1	48,0	32 x 0,21	7,1	123
7 x 1	67,2	32 x 0,21	8,0	149
2 x 1,5	28,8	30 x 0,26	6,3	100
3 x 1,5	43,2	30 x 0,26	6,7	110
4 x 1,5	57,6	30 x 0,26	7,2	125
5 x 1,5	72,0	30 x 0,26	8,1	145
7 x 1,5	100,8	30 x 0,26	8,9	195
3 x 2,5	72,0	48 x 0,26	8,1	170
4 x 2,5	96,0	48 x 0,26	8,9	180
5 x 2,5	120,0	48 x 0,26	10,0	190
7 x 2,5	168,0	48 x 0,26	11,1	280

S 80

PVC Cable Chain Cable

Application:

The flexible cable chain cable S 80 is best suited for application in moving machine parts, industrial robots, production lines, wood and packaging machines, machine tools, cable chains and automation systems.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 fine cotton binding over the outside
- 4 outer sheath of polyvinylchloride (PVC), grey or black

Standards:

in according with DIN VDE 0281
 DIN EN 60228 class 6 (construction)
 core identification JZ: 1 core green/yellow, other cores black with figures
 core identification OZ: every core black with figures

Technical data:

Nominal voltage U_0/U		[V]	300 / 500 Volt
Test voltage		[V] _{AC}	2000
Temperature range	in motion		- 5°C till +70°C
	fixed		-40°C till +70°C
Operating temperature	short circuit	°C	150
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	5,0
	in motion	x diameter	7,5
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure kg/km	Wire diameter mm	Overall diameter appr. mm	Weight appr. kg/km
3 x 0,5	14,4	0,16	6,7	52
4 x 0,5	19,2	0,16	7,3	63
5 x 0,5	24,0	0,16	8,5	85
7 x 0,5	33,6	0,16	9,9	118
12 x 0,5	57,6	0,16	9,9	145
18 x 0,5	86,4	0,16	14,0	250
25 x 0,5	120,0	0,16	16,4	350
2 x 0,75	14,4	0,16	6,7	48
3 x 0,75	21,6	0,16	7,1	61
4 x 0,75	28,8	0,16	7,7	76
5 x 0,75	36,0	0,16	8,9	102
7 x 0,75	50,4	0,16	10,8	152
12 x 0,75	86,4	0,16	12,9	214
18 x 0,75	129,6	0,16	14,8	306
25 x 0,75	180,0	0,16	18,1	454
2 x 1	19,2	0,16	7,1	55
3 x 1	28,8	0,16	7,5	71
4 x 1	38,4	0,16	8,7	97

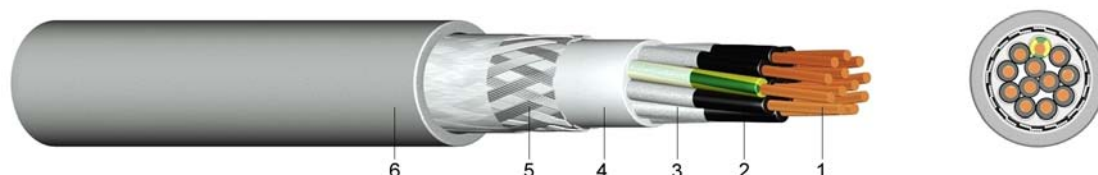
Number of cores and nominal cross section mm ²	Copper figure kg/km	Wire diameter mm	Overall diameter appr. mm	Weight appr. kg/km
5 x 1	48,0	0,16	9,4	119
7 x 1	67,2	0,16	11,4	177
12 x 1	115,2	0,16	13,6	253
18 x 1	172,8	0,16	16,4	387
25 x 1	240,0	0,16	19,1	535
2 x 1,5	28,8	0,16	8,7	78
3 x 1,5	43,2	0,16	9,1	101
4 x 1,5	57,6	0,16	9,9	126
5 x 1,5	72,0	0,16	11,1	166
7 x 1,5	100,8	0,16	13,1	234
12 x 1,5	172,8	0,16	16,5	357
18 x 1,5	259,2	0,16	19,6	540
25 x 1,5	360,0	0,16	22,6	708
3 x 2,5	72,0	0,16	11,0	160
4 x 2,5	96,0	0,16	12,0	201
5 x 2,5	120,0	0,16	13,0	250
7 x 2,5	168,0	0,16	15,6	355
12 x 2,5	288,0	0,16	19,9	573
25 x 2,5	600,0	0,16	28,5	1.134
4 x 4	153,6	0,16	13,6	262
5 x 4	192,0	0,16	14,8	328
7 x 4	268,8	0,16	17,4	458
4 x 6	230,4	0,21	15,3	359
5 x 6	288,0	0,21	17,6	476
7 x 6	403,2	0,21	24,6	666
4 x 10	384,0	0,21	20,6	639
4 x 16	614,4	0,21	23,8	910

S 80 C

PVC Cable Chain with Copper Braiding

Application:

The flexible cable chain cable S 80 C is best suited for the application in moving machine parts, industrial robots, wood and packaging machines, production lines, machine tools, cable chains and automation systems. The tinned copper braiding optimises protection against high-frequency external interference.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 cotton binding
- 4 inner sheath
- 5 screen of tinned copper braiding
- 6 outer sheath of polyvinylchloride (PVC), grey or black

Standards:

in according with DIN VDE 0281
DIN EN 60228 class 6 (construction)
core identification JZ: 1 core green/yellow, other cores black with figures
core identification OZ: every core black with figures

Technical data:

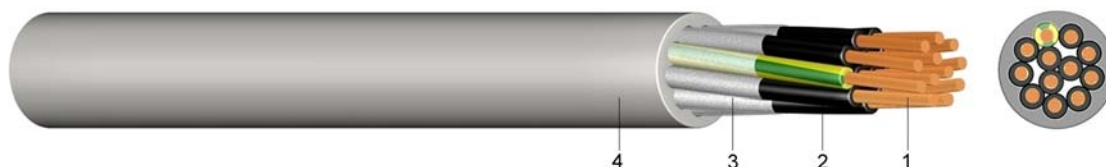
Nominal voltage U_0/U		[V]	300 / 500 Volt
Test voltage at 50 Hz	core / core	[V] _{AC}	2500
	core / screen	[V] _{AC}	1000
Temperature range	in motion		- 5°C till +70°C
	fixed		-40°C till +70°C
Operating temperature	short circuit	°C	150
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	5,0
	in motion	x diameter	7,5
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure kg/km	Wire diameter mm	Overall diameter appr. mm	Weight appr. kg/km
3 x 0,5	55,7	0,16	8,8	113
4 x 0,5	66,2	0,16	9,5	132
5 x 0,5	74,9	0,16	10,2	154
7 x 0,5	90,2	0,16	12,0	208
12 x 0,5	126,7	0,16	14,3	302
18 x 0,5	191,0	0,16	17,2	429
2 x 0,75	55,7	0,16	8,8	113
3 x 0,75	64,3	0,16	9,4	132
4 x 0,75	79,7	0,16	9,9	153
5 x 0,75	92,2	0,16	11,0	184
7 x 0,75	109,4	0,16	12,5	241
12 x 0,75	188,2	0,16	15,0	345

Number of cores and nominal cross section mm ²	Copper figure kg/km	Wire diameter mm	Overall diameter appr. mm	Weight appr. kg/km
18 x 0,75	258,2	0,16	18,1	501
25 x 0,75	319,7	0,16	21,9	688
2 x 1	60,5	0,16	9,1	126
3 x 1	71,0	0,16	9,7	149
5 x 1	103,7	0,16	11,5	209
7 x 1	135,4	0,16	12,4	250
12 x 1	218,9	0,16	17,5	305
18 x 1	303,4	0,16	19,5	593
25 x 1	382,1	0,16	23,4	815
2 x 1,5	78,7	0,16	10,7	170
3 x 1,5	94,1	0,16	11,2	196
4 x 1,5	119,0	0,16	12,0	223
5 x 1,5	130,6	0,16	13,0	268
7 x 1,5	170,9	0,16	15,7	390
12 x 1,5	300,5	0,16	19,5	580
18 x 1,5	394,6	0,16	22,8	780
25 x 1,5	533,8	0,16	27,3	1.109
3 x 2,5	131,5	0,16	12,7	264
4 x 2,5	165,1	0,16	14,0	337
7 x 2,5	297,6	0,16	19,3	592

S 200 / S 210 PUR Cable Chain Cable

Application: This highly flexible cable chain cable S 200 is best suited for application in industrial branches such as industrial robots, handling gears, automation systems, wood and packaging machines, automobile industry, machine tools and high shelf building.



Construction:

- 1 very fine-stranded bare copper
- 2 core insulation of thermoplastic polyester elastomer (TPE-E), polypropylene (PP) or PVC (S 200)
- 3 fine cotton binding over each layer
- 4 outer sheath of polyurethane (PUR), grey, poor in adhesion, oil and abrasion resistant, halogen-free*, UV-resistant

Standards: in according with DIN VDE 0281
DIN EN 60228 class 6 (construction)
core identification JZ: 1 core green/yellow, other cores black with figures
core identification OZ: every core black with figures

Technical data:

Nominal voltage U ₀ /U	[V]	300 / 500 Volt
Test voltage	[V]AC	2500
Temperature range	in motion	-30°C** till +80°C
	fixed	-40°C till +80°C
Operating temperature	short circuit	150
Short circuit time	max.	[sec]
Bending radius	one time / fixed	x diameter
	in motion	x diameter
Oil-resistant	standard	7,5
Flammability	standard	EN 60811-2-1
		EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure kg/km	Wire diameter mm	Overall diameter appr. mm	Weight appr. kg/km
2 x 0,5	9,6	0,16	5,7	37
3 x 0,5	14,4	0,16	6,3	42
4 x 0,5	19,2	0,16	7,1	57
5 x 0,5	24,0	0,16	7,2	58
7 x 0,5	33,6	0,16	8,2	76
12 x 0,5	57,6	0,16	9,6	117
25 x 0,5	120,0	0,16	14,0	223
36 x 0,5	172,8	0,16	20,1	321
2 x 0,75	14,4	0,16	6,2	44
3 x 0,75	21,6	0,16	6,5	54
4 x 0,75	28,8	0,16	7,3	63
5 x 0,75	36,0	0,16	7,9	74
7 x 0,75	50,4	0,16	9,3	102
12 x 0,75	86,4	0,16	10,9	161

Number of cores and nominal cross section mm ²	Copper figure kg/km	Wire diameter mm	Overall diameter appr. mm	Weight appr. kg/km
18 x 0,75	129,6	0,16	12,9	222
25 x 0,75	180,0	0,16	18,1	454
36 x 0,75	259,2	0,16	20,2	653
3 x 1	28,8	0,16	7,2	64
4 x 1	38,4	0,16	7,7	73
5 x 1	48,0	0,16	8,3	95
7 x 1	67,2	0,16	10,1	122
12 x 1	115,2	0,16	11,8	201
18 x 1	172,8	0,16	14,4	277
25 x 1	240,0	0,16	16,0	312
30 x 1	288,0	0,16	19,2	374
36 x 1	345,6	0,16	23,0	449
2 x 1,5	28,8	0,16	7,2	71
3 x 1,5	43,2	0,16	7,7	86
4 x 1,5	57,6	0,16	8,6	104
5 x 1,5	72,0	0,16	9,4	132
7 x 1,5	100,8	0,16	11,4	181
12 x 1,5	172,8	0,16	13,3	279
18 x 1,5	259,2	0,16	15,9	408
25 x 1,5	360,0	0,16	19,3	569
34 x 1,5	489,6	0,16	26,2	773
3 x 2,5	72,0	0,16	9,5	124
4 x 2,5	96,0	0,16	10,4	164
5 x 2,5	120,0	0,16	11,6	199
7 x 2,5	168,0	0,16	14,0	269
12 x 2,5	288,0	0,16	16,6	448
4 x 4	153,6	0,16	13,6	262
4 x 6	230,4	0,21	15,3	359

* only S 210

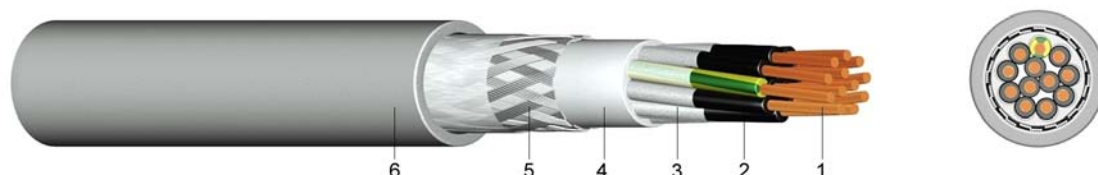
** -5 °C by S 200

S 200 C S 210 C

PUR Cable Chain Cable with Copper Braiding

Application:

This highly flexible cable chain cable S 200 C is best suited for application in industrial robots, handling gears, automation systems, wood and packaging machines, the automobile industry, machine tools and high shelf building.



Construction:

- 1 very fine-stranded bare copper
- 2 core insulation of thermoplastic polyester elastomer (TPE-E), polypropylene (PP) or PVC (S 200 C)
- 3 wrapping of fine cotton binding
- 4 inner sheath
- 5 screen of tinned copper braiding
- 6 outer sheath of polyurethane (PUR), grey, poor in adhesion, oil and abrasion resistant, halogen-free*, UV-resistant

Standards:

in according with DIN VDE 0281
DIN EN 60228 class 6 (construction)
core identification JZ: 1 core green/yellow, other cores black with figures
core identification OZ: every core black with figures

Technical data:

Nominal voltage U ₀ /U		[V]	300 / 500 Volt
Test voltage at 50 Hz	core / core	[V] _{AC}	2500
	core / screen	[V] _{AC}	1000
Temperature range	in motion		-30°C** till +80°C
	fixed		-40°C till +80°C
Operating temperature	short circuit	°C	150
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	5,0
	in motion	x diameter	7,5
Oil-resistant	standard		EN 60811-2-1
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure kg/km	Wire diameter mm	Overall diameter appr. mm	Weight appr. kg/km
2 x 0,5	47,0	0,16	7,1	68
3 x 0,5	52,8	0,16	7,4	81
4 x 0,5	59,5	0,16	8,5	90
5 x 0,5	65,3	0,16	8,9	106
7 x 0,5	84,5	0,16	10,0	134
12 x 0,5	116,2	0,16	11,9	192
18 x 0,5	156,5	0,16	13,6	250
25 x 0,5	227,5	0,16	16,8	371

Number of cores and nominal cross section mm ²	Copper figure kg/km	Wire diameter mm	Overall diameter appr. mm	Weight appr. kg/km
2 x 0,75	52,8	0,16	7,7	79
3 x 0,75	62,4	0,16	8,1	96
4 x 0,75	70,1	0,16	8,7	114
5 x 0,75	86,4	0,16	9,5	125
7 x 0,75	106,6	0,16	11,3	167
12 x 0,75	155,5	0,16	12,9	235
18 x 0,75	233,3	0,16	15,5	336
25 x 0,75	313,0	0,16	18,4	466
36 x 0,75	399,4	0,16	22,1	636
3 x 1	70,1	0,16	8,7	105
4 x 1	88,3	0,16	9,3	128
5 x 1	98,9	0,16	10,1	147
7 x 1	124,8	0,16	12,0	198
12 x 1	186,2	0,16	13,9	301
18 x 1	279,4	0,16	16,8	420
25 x 1	377,3	0,16	20,2	576
41 x 1	598,1	0,16	25,4	1.250
50 x 1	723,8	0,16	23,4	1.212
2 x 1,5	78,7	0,16	8,8	116
3 x 1,5	94,1	0,16	9,4	139
4 x 1,5	112,3	0,16	10,2	157
5 x 1,5	128,6	0,16	11,3	198
7 x 1,5	169,9	0,16	12,9	252
12 x 1,5	278,4	0,16	15,6	419
18 x 1,5	393,6	0,16	18,7	561
25 x 1,5	532,8	0,16	22,4	815
36 x 1,5	702,7	0,16	27,3	1.047
3 x 2,5	129,6	0,16	11,2	197
4 x 2,5	164,2	0,16	12,1	233
5 x 2,5	190,1	0,16	13,3	290
7 x 2,5	273,6	0,16	16,2	417
12 x 2,5	425,3	0,16	18,9	631
18 x 2,5	607,7	0,16	22,5	918
4 x 4	255,4	0,16	13,9	310
4 x 6	359,0	0,21	16,1	446

* only S 210 C

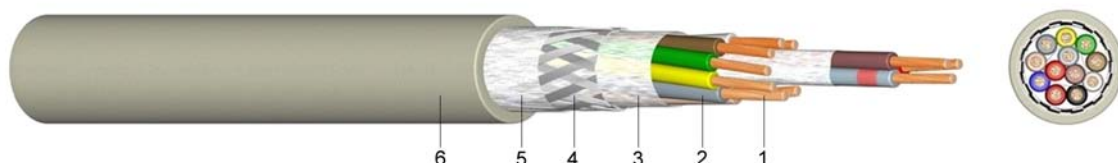
** -5 °C by S 200 C

S 368 C

PUR Cable Chain Data Cable with Copper Braiding

Application:

This highly flexible cable chain data cable S 368 C is best suited for different industrial areas such as machine construction, the automobile and communications industry as well as for steering, controlling and measuring machinery. It is particularly suited for machinery put to prolonged, flexible use, such as industrial scales. The copper braiding should be fully connected to optimise protection against high-frequency external interference (EMC).



Construction:

- 1 very fine-stranded bare copper
- 2 core insulation of thermoplastic polyester elastomer (TPE-E) or polypropylene (PP)
- 3 wrapping of fine cotton binding
- 4 screen of tinned copper braiding
- 5 wrapping of fine cotton binding
- 6 outer sheath of polyurethane (PUR), grey, poor in adhesion, oil and abrasion resistant, UV-resistant

Info:

Nominal Voltage :
till 0,34mm² 250 Volt
from 0,50mm² 350 Volt

Standards:

in according with DIN VDE 0281 and 0812
DIN EN 60228 class 6 (construction)
in according with DIN 47100 or factory style (core identification)

Technical data:

Ceiling voltage	[V]	till 0,34mm ²	250 Volt
Test voltage		[V] _{AC}	1500
Temperature range	in motion		-30°C till +80°C
Bending radius	min.	x diameter	7,5
Oil-resistant	standard		EN 60811-2-1
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure	Wire diameter	Overall diameter appr. mm	Weight appr. kg/km
	kg/km	mm		
2 x 0,14	11,5	0,10	3,9	30
3 x 0,14	14,4	0,10	4,0	34
4 x 0,14	15,4	0,10	4,3	38
5 x 0,14	17,3	0,10	4,5	44
7 x 0,14	25,9	0,10	5,1	58
12 x 0,14	42,2	0,10	5,9	92
2 x 0,25	16,3	0,10	4,2	35
3 x 0,25	19,2	0,10	4,4	40
4 x 0,25	21,1	0,10	4,6	46

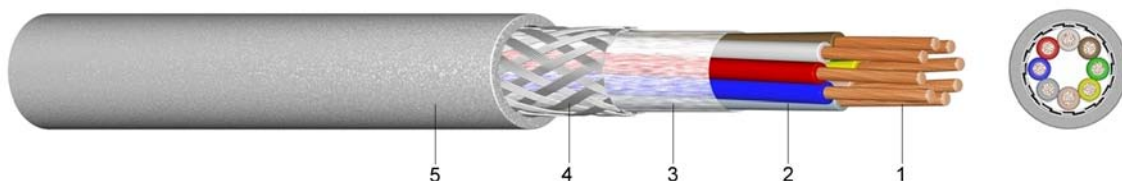
Number of cores and nominal cross section mm ²	Copper figure kg/km	Wire diameter mm	Overall diameter appr. mm	Weight appr. kg/km
5 x 0,25	30,7	0,10	4,9	61
7 x 0,25	37,4	0,10	5,6	77
12 x 0,25	53,8	0,10	6,6	118
18 x 0,25	75,8	0,10	7,5	157
2 x 0,34	20,2	0,10	4,4	43
3 x 0,34	26,9	0,10	4,6	57
4 x 0,34	34,6	0,10	4,9	78
5 x 0,34	38,4	0,10	5,2	84
7 x 0,34	50,9	0,10	5,9	108
12 x 0,34	74,9	0,10	7,0	162
18 x 0,34	97,0	0,10	8,0	222
24 x 0,34	147,8	0,10	9,4	318
25 x 0,34	154,6	0,10	9,5	321
2 x 0,5	33,6	0,16	5,0	65
3 x 0,5	45,1	0,16	5,2	73
4 x 0,5	51,8	0,16	5,6	91
5 x 0,5	60,5	0,16	6,0	112
12 x 0,5	98,9	0,16	8,2	187
18 x 0,5	131,5	0,16	9,7	262
30 x 0,5	233,3	0,16	15,8	413
7 x 0,75	89,3	0,16	7,9	171

S 369 C TP

PUR Cable Chain Data Cable with Copper Braiding

Application:

This highly flexible pair wise stranded cable chain data cable is best suited for different industrial areas such as machine construction, the automobile and communications industry, as well as for steering, controlling and measuring machinery. It is particularly useful for machinery that is put to prolonged use, such as machine controls. The paired cable suppresses electrical couplings of individual signals whilst effectively lowering near- and crosstalk attenuation. The copper braiding should be fully connected to optimise protection against high frequency external interference (EMC).



Construction:

- 1 very fine-stranded bare copper
- 2 core insulation of thermoplastic polyester elastom (TPE-E) or polypropylene (PP)
- 3 wrapping of fine cotton binding
- 4 screen of tinned copper braiding
- 5 outer sheath of polyurethane (PUR), grey, poor in adhesion, oil and abrasion resistant, UV-resistant

Standards:

in according with DIN VDE 0812
 DIN EN 60228 class 6 (construction)
 in according with DIN 47100 or factory style (core identification)

Technical data:

Ceiling voltage	[V]	till 0,34mm ²	250 Volt
	[V]	from 0,50mm ²	350 Volt
Test voltage		[V] _{AC}	1500
Temperature range	in motion		-30°C till +80°C
Bending radius	min.	x diameter	7,5
Oil-resistant	standard		EN 60811-2-1
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure	Wire diameter	Overall diameter	Weight
	kg/km	mm	appr. mm	appr. kg/km
2 x 2 x 0,14	16,3	0,10	6,1	42
3 x 2 x 0,14	20,2	0,10	6,4	54
4 x 2 x 0,14	26,9	0,10	6,9	59
5 x 2 x 0,14	36,5	0,10	7,4	75
6 x 2 x 0,14	49,00	0,10	7,6	91
8 x 2 x 0,14	54,7	0,10	8,7	109
10 x 2 x 0,14	60,5	0,10	10,1	120

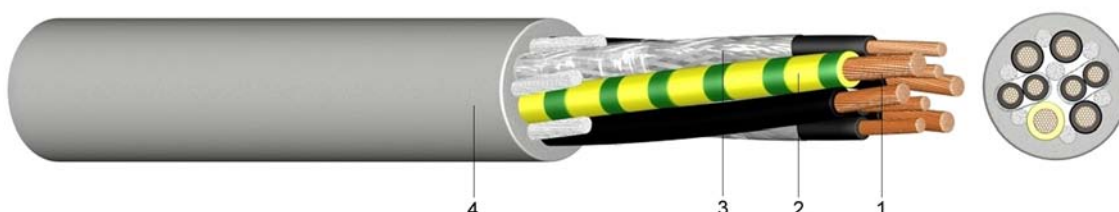
Number of cores and nominal cross section mm ²	Copper figure kg/km	Wire diameter mm	Overall diameter appr. mm	Weight appr. kg/km
2 x 2 x 0,25	31,7	0,10	7,1	62
3 x 2 x 0,25	38,4	0,10	7,4	68
4 x 2 x 0,25	44,2	0,10	8,4	97
5 x 2 x 0,25	50,9	0,10	9,0	105
6 x 2 x 0,25	72,0	0,10	9,8	133
8 x 2 x 0,25	73,9	0,10	11,5	153
10 x 2 x 0,25	91,2	0,10	12,8	191
14 x 2 x 0,25	109,4	0,10	13,4	214
2 x 2 x 0,34	25,9	0,10	6,1	50
3 x 2 x 0,34	33,6	0,10	6,4	54
4 x 2 x 0,34	43,2	0,10	7,0	66
5 x 2 x 0,34	53,8	0,10	7,5	77
6 x 2 x 0,34	60,5	0,10	8,4	99
8 x 2 x 0,34	84,5	0,10	9,4	122
10 x 2 x 0,34	94,1	0,10	10,5	146
2 x 2 x 0,5	50,9	0,16	9,3	102
3 x 2 x 0,5	72,0	0,16	10,0	127
4 x 2 x 0,5	73,9	0,16	11,1	152
5 x 2 x 0,5	84,5	0,16	11,9	171
6 x 2 x 0,5	100,8	0,16	12,8	195
8 x 2 x 0,5	143,0	0,16	15,7	251
10 x 2 x 0,5	174,7	0,16	17,6	348
2 x 2 x 0,75	60,5	0,16	9,7	113
3 x 2 x 0,75	86,4	0,16	10,9	161
4 x 2 x 0,75	100,8	0,16	11,5	170
5 x 2 x 0,75	114,2	0,16	12,5	205
6 x 2 x 0,75	133,4	0,16	13,4	229
8 x 2 x 0,75	191,0	0,16	16,4	345
10 x 2 x 0,75	256,3	0,16	19,3	459
12 x 2 x 0,75	274,6	0,16	16,4	351

SL 800

Combined Composite Connection Cable with PUR Outer Sheath

Application:

This cable is well suited for flexible use in industries such as industrial robots, cable chains or machine and plant engineering. It is used for high mechanical stress in dry, damp and wet locations as well as at low temperatures as a connection cable for the power supply and as a signal and data cable for the steering and control of motors.



Construction:

- 1 very fine-stranded bare copper
- 2 core insulation of thermoplastic polyester elastomer or polypropylene (PP)
- 3 pair wise shielding of aluminium foil
- 4 outer sheath of polyurethane (PUR), grey, oil and abrasion resistant, UV-resistant

Standards:

in according with DIN VDE 0281
DIN EN 60228 class 6 (construction)

Technical data:

Nominal voltage U_0/U		[V]	600 / 1000 Volt
Test voltage		[V] _{AC}	4000
Temperature range	in motion		-30°C till +80°C
Operating temperature	short circuit	°C	150
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	7,5
Oil-resistant	standard		EN 60811-2-1
Flammability	standard		EN 60332-1-2

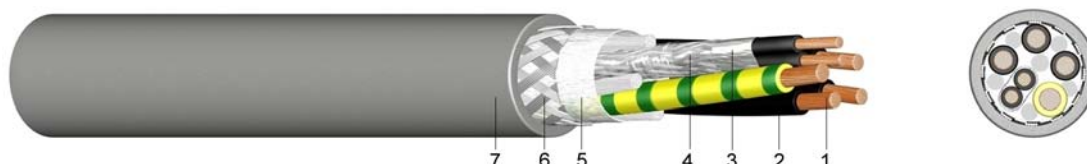
Number of cores and nominal cross section mm ²	Copper figure kg/km	Wire diameter mm	Overall diameter appr. mm	Weight appr. kg/km
4 x 0,75 + 2x(2x0,34)	65,3	0,16	9,7	125
4 x 1,50 + 2x(2x0,75)	121,0	0,16	11,4	350
4 x 2,50 + 2x(2x0,75)	159,4	0,16	13,7	244
4 x 4,00 + (2x0,75)+(2x1)	219,8	0,16	15,6	352
4 x 6,00 + (2x0,75)+(2x1)	299,5	0,21	18,3	473
4 x 10,00 + (2x0,75)+(2x1)	453,1	0,21	22,1	685
4 x 16,00 + 2x(2x1)	687,4	0,21	25,2	993
4 x 25,00 + 2x(2x1,5)	1.033,0	0,21	30,0	1.740
4 x 35,00 + 2x(2x1,5)	1.440,0	0,21	32,2	2.410

SL 801 C

Combined Composite Connection Cable with PUR Outer Sheath and Copper Braiding

Application:

This cable is well suited for flexible use in industries such as industrial robots, cable chains or machine and plant engineering. It is used for high mechanical stress in dry, damp and wet locations as well as at low temperatures as a connection cable for the power supply and as a signal and data cable for the steering and control of motors.



Construction:

- 1 very fine-stranded bare copper
- 2 core insulation of polypropylene (PP)
- 3 pair wise shielding of aluminium foil
- 4 pair wise shielding of copper braiding
- 5 wrapping of fine cotton binding
- 6 screen of tinned copper braiding
- 7 outer sheath of polyurethane (PUR), grey, oil and abrasion resistant, UV-resistant

Standards:

in according with DIN VDE 0281
DIN EN 60228 class 6 (construction)

Technical data:

Nominal voltage U_0/U		[V]	600 / 1000 Volt
Test voltage		[V] _{AC}	4000
Temperature range	in motion		-30°C till +80°C
Operating temperature	short circuit	°C	150
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	7,5
Oil-resistant	standard		EN 60811-2-1
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure kg/km	Wire diameter mm	Overall diameter appr. mm	Weight appr. kg/km
4 x 0,75 + 2 x (2x0,34)	121,0	0,16/0,11	11,0	171
4 x 1,50 + 2 x (2x0,75)	186,2	0,16/0,11	12,1	370
4 x 2,50 + 2 x (2x0,75)	225,6	0,16/0,11	15,3	312
4 x 4,00 + 2 x (2x1)	330,2	0,21/0,16	17,3	445
4 x 6,00 + 2 x (2x1)	433,0	0,21/0,16	19,3	589
4 x 10,00 + 2 x (2x1)	599,0	0,21/0,16	23,4	804
4 x 16,00 + 2 x (2x1)	867,8	0,21/0,16	27,0	1.134
4 x 25,00 + 2 x (2x1,5)	1.254,7	0,21/0,16	29,2	1.782
4 x 35,00 + 2 x (2x1,5)	1.678,1	0,21/0,16	32,4	2.570

SL 803 C

Incremental Transmission Cable with PUR Outer Sheath

Application:

These cables are used as highly flexible connection cables in speedometers, brakes and pulse generators in machine and plant engineering. Moreover, they are well suited for flexible use in industrial robots and cable chains for extreme mechanical stress, also in dry, damp and wet locations as well as at low temperatures. These two types show different characteristics in relation to the steering of servo-motors. The motor feedback cable is used to regulate motor speed and indicate actual values. The incremental transmission cable controls positioning and processing.



Construction:

- 1 very fine-stranded bare copper
- 2 core insulation of polypropylene (PP)
- 3 banding of plastic-concealed Al-foil and braided shield
- 4 screen of tinned copper braiding
- 5 outer sheath of polyurethane (PUR), grey,
oil and abrasion resistant, UV-resistant

Standards:

in according with DIN VDE 0281
DIN EN 60228 class 6 (construction)
in according with DIN 47100 (core identification)

Technical data:

Nominal voltage U_0/U		[V]	250 Volt
Test voltage		[V] _{AC}	2000
Temperature range	in motion		-30°C till +80°C
Operating temperature	short circuit	°C	150
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	7,5
Oil-resistant	standard		EN 60811-2-1
Flammability	standard		EN 60332-1-2

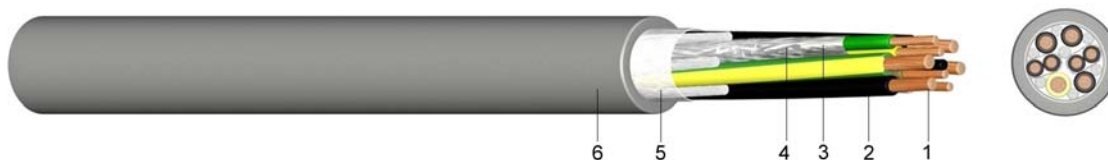
Number of cores and nominal cross section mm ²	Copper figure	Wire diameter	Overall diameter	Weight
	kg/km	mm	appr. mm	appr. kg/km
4 x 2 x 0,25 + 2x1	72,0	0,16/0,11	8,8	134
4 x 2 x 0,14 + 4x0,5	55,7	0,16/0,11	8,2	109
4 x 2 x 0,38 + 4x0,5	78,7	0,16/0,11	8,6	203
10 x 0,14 + 2 x 0,5	46,1	0,16/0,11	8,0	70
10 x 0,14 + 4 x 0,5	57,6	0,16/0,11	8,0	85
15 x 0,14 + 4x0,5	65,3	0,16/0,11	8,8	127
3 x (2 x 0,14C)+2x1	80,6	0,16/0,11	8,4	108
3 x 2 x 0,14C+2x(0,5C)	87,4	0,16/0,11	8,3	100

SL 805

Combined Composite Connection Cable with PVC Outer Sheath

Application:

This cable is well suited for flexible use in machine and plant engineering. It is used for medium level mechanical stress in dry, damp and wet locations. It serves as a connection cable for the power supply and as a signal and data cable for the steering and control of motors.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 pair wise shielding of aluminium foil
- 4 pair wise shielding of tinned copper braiding
- 5 wrapping of fine cotton
- 6 outer sheath of polyvinylchloride (PVC)

Standards:

in according with DIN VDE 0281
DIN VDE 0295 class 5 (construction)

Technical data:

Nominal voltage U ₀ /U	Powerwire	[V]	600 / 1000 Volt
	Controllwire	[V]	300 / 500 Volt
Test voltage	Powerwire	[V] _{AC}	4000
	Controllwire	[V] _{AC}	2000
Temperature range	in motion		- 5°C till +70°C
	fixed		-30°C till +80°C
Operating temperature	short circuit	°C	150
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	7,5
Flammability	standard		EN 60332-1-2

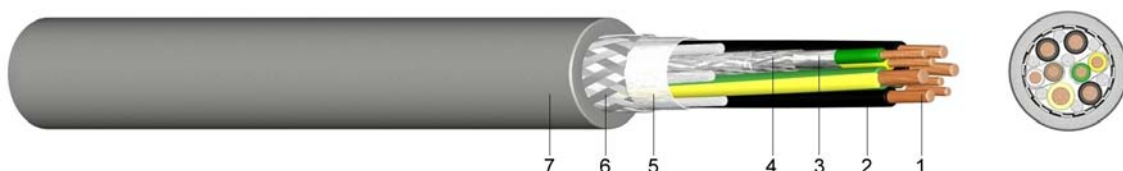
Number of cores and nominal cross section mm ²	Copper figure kg/km	Wire diameter mm	Overall diameter appr. mm	Weight appr. kg/km
4 x 0,75 + 2x(2x0,34)	69,1	0,16	10,6	126
4 x 1,50 + 2x(2x0,75)	121,0	0,16	12,7	194
4 x 2,50 + 2x(2x0,75)	159,4	0,16	14,9	318
4 x 4,00 + (2x0,75)+(2x1)	223,7	0,16	16,6	414
4 x 6,00 + (2x0,75)+(2x1)	299,5	0,21	18,7	551
4 x 10,00 + (2x0,75)+(2x1)	453,1	0,21	22,4	822
4 x 16,00 + 2x(2x1)	688,3	0,21	25,9	1.127
4 x 25,00 + 2x(2x1)	1.059,8	0,21	29,5	1.632
4 x 35,00 + 2x(2x1,5)	1.443,8	0,21	33,2	2.058

SL 806 C

Combined Composite Connection Cable with PVC Outer Sheath

Application:

This cable is well suited for flexible use in machine and plant engineering. It is used for medium level mechanical stress in dry, damp and wet locations. It serves as a connection cable for the power supply and as a signal and data cable for the steering and control of motors.



Construction:

- 1 very fine-stranded bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 pair wise screened with aluminium foil
- 4 paarweise screened with tinned copper drain wire
- 5 wrapping of fine cotton binding
- 6 screen of tinned copper braiding
- 7 outer sheath of polyvinylchloride (PVC)

Standards:

in according with DIN VDE 0281
DIN EN 60228 class 6 (construction)

Technical data:

Nominal voltage U ₀ /U	Powerwire	[V]	600 / 1000 Volt
	Controllwire	[V]	300 / 500 Volt
Test voltage	Powerwire	[V] _{AC}	4000
	Controllwire	[V] _{AC}	2000
Temperature range	in motion		+5°C till +70°C
Operating temperature	short circuit	°C	150
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	7,5
Flammability	standard		EN 60332-1-2

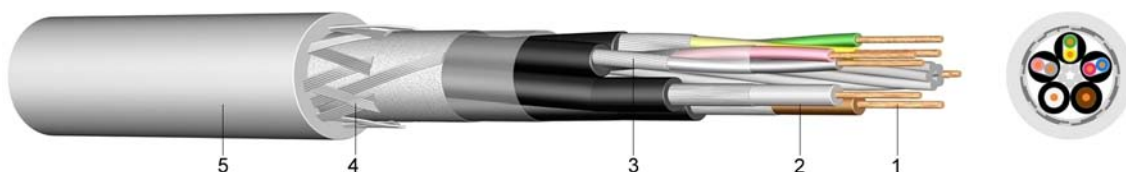
Number of cores and nominal cross section mm ²	Copper figure kg/km	Wire diameter mm	Overall diameter appr. mm	Weight appr. kg/km
4 x 0,75 + 2 x (2x0,34)	125,8	0,16	11,5	171
4 x 1,50 + 2 x (2x0,75)	179,5	0,16	13,8	256
4 x 2,50 + 2 x (2x0,75)	230,4	0,16	16,2	394
4 x 10,00 + 2 x (2x1)	600,0	0,21	23,5	854
4 x 16,00 + 2 x (2x1)	865,9	0,21	26,5	1.152
4 x 25,00 + 2 x (2x1,5)	1.257,6	0,21	30,0	1.672
4 x 35,00 + 2 x (2x1,5)	1.678,1	0,21	34,2	2.116

SL 808 C

Incremental Transmission Cable with PVC Outer Sheath

Application:

These cables are used as highly flexible connection cables in speedometers, brakes and pulse generators in machine and plant engineering for medium-level mechanical stress in dry, damp and wet locations. These two types show different characteristics in relation to the steering of servomotors. The motor feedback cable is used to regulate motor speed and indicate actual values. The incremental transmission cable controls positioning and processing.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of polyethylene (PE)
- 3 banding of plastic-concealed Al-foil and braided shield
- 4 screen of tinned copper braiding
- 5 outer sheath of polyvinylchloride (PVC)

Standards:

in according with DIN 0281, 0812
 DIN EN 60228 class 5 (construction)
 in according with DIN 47100 (core identification)

Technical data:

Nominal voltage U_0/U	[V]	till 0,38mm ²	350 Volt
	[V]	from 0,50 mm ²	500 Volt
Test voltage	[V] _{AC}		2000
Temperature range	in motion		- 5°C till +70°C
	fixed		-30°C till +80°C
Operating temperature	short circuit	°C	150
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	7,5
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure	Wire diameter	Overall diameter	Weight
	kg/km	mm	appr. mm	appr. kg/km
4 x 2 x 0,14 + 4x0,5	69,1	0,16/0,21	8,0	96
4 x 2 x 0,25 + 2x1C	64,3	0,16/0,21	9,0	120
4 x 2 x 0,38 + 4x0,5	78,7	0,16/0,21	9,9	145
10 x 0,14 + 2x0,5	44,2	0,11/0,21	8,0	75
10 x 0,14 + 4x0,5	57,6	0,11/0,21	8,2	95
15 x 0,14 + 4x0,5	67,2	0,11/0,21	8,8	140
3 x (2x 0,14C)+2x(0,5C)	82,6	0,11/0,21	8,0	100

H07G-K (110°) Rubber Insulated Single Core Wire with Increased Heat-Resistance

Application: This wire is well suited for internal wiring in lamps, instruments, control panels and distributors in dry locations. It should be installed in surface mounted or embedded conduits.



Construction: 1 fine-stranded tinned or bare copper
2 core insulation of a heat resistant rubber compound

Standards: adapted DIN VDE 0282 Part 7
HD 22.7 S2:1995 + A1 :1999+A2:2004
DIN EN 60228 Class 5 (construction)

Technical data:

Nominal voltage U ₀ /U		[V]	450 / 750 Volt
Test voltage		[V] _{AC}	2500
Temperature range	in motion		-25°C till +110°C
Operating temperature	short circuit	°C	260
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	7
Flammability	standard		EN 60332-1-2

Nominal cross section	Colours	Copper figure	Cond. construction (appr. value)	Overall diameter	Weight
mm ²		kg/km	mm	mm	appr. kg/km
1,5	bk	14,4	30 x 0,26	3,4	25
2,5	bk	24,0	50 x 0,26	4,0	40
4	bk	38,4	56 x 0,31	5,0	60
6	bk	57,6	84 x 0,31	5,5	80
10	bk	96,0	80 x 0,41	7,0	125
16	bk	153,6	126 x 0,41	8,0	190
25	bk	240,0	196 x 0,41	10,0	292
35	bk	336,0	276 x 0,41	11,5	420

SiA

Silicone Insulated Wire

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.



Construction:

- 1 solid tinned copper
2 core insulation of silicone (2G11)

Standards:

DIN EN 60228 Class 1 (construction)

Technical data:

Nominal voltage U_0/U

[V]

300 / 500 Volt

Test voltage

[V]_{AC}

2000

Temperature range

in motion

-60°C till +180°C

temporary resilient

+250°C

Flammability

standard

EN 60332-1-2

Nominal cross section	Colours	Copper figure	Cond. construction (appr. value)	Overall diameter	Weight
mm ²		kg/km	mm	mm	appr. kg/km
0,75	bk/bl/br/yg/gr/wh/rd	7,2	1 x 0,98	2,2	12
1	bk/bl/br/yg/wh	9,6	1 x 1,13	2,3	15
1,5	bk/bl/br/yg/wh/rd	14,4	1 x 1,38	2,6	20
2,5	bk/bl/yg	24,0	1 x 1,78	3,2	33
4	bk	38,4	1 x 2,26	3,9	51
6	bk	57,6	1 x 2,76	4,4	72
10	bk	96,0	1 x 3,57	5,6	120

SiF Silicone Insulated Wire

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.



Construction:
 1 fine-stranded tinned copper
 2 core insulation of silicone (2GI1)

Standards: DIN EN 60228 Class 5 (construction)

Technical data:

Nominal voltage U _{o/U}	[V]	300 / 500 Volt
Test voltage	[V] _{AC}	2000
Temperature range	in motion temporary resilient standard	-60°C till +180°C +250°C
Flammability		EN 60332-1-2

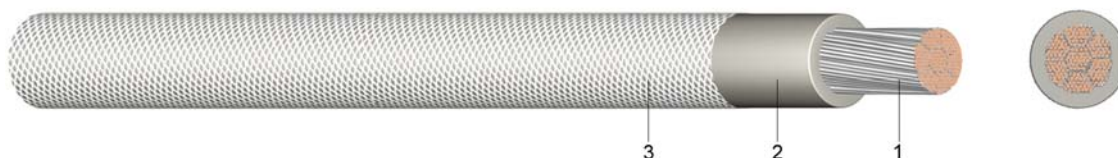
Nominal cross section mm ²	Colours	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter mm	Weight appr. kg/km
0,50	bk/bl/br/yl/gr/wh/rd	4,8	16 x 0,21	2,1	10
0,75	bk/bl/br/yl/gr/wh/rd	7,2	24 x 0,21	2,4	13
1	bk/bl/br/yl/gr/wh/rd/rbr	9,6	32 x 0,21	2,5	16
1,5	bk/bl/br/gg/yl/gr/wh/rd/rbr	14,4	30 x 0,26	2,8	22
2,5	bk/bl/br/yl/gr/wh/rd	24,0	50 x 0,26	3,4	35
4	bk/bl/br/yl/gr/wh/rd	38,4	56 x 0,31	4,2	54
6	bk/bl/br/yl/gr/wh/rd	57,6	84 x 0,31	5,2	82
10	bk/bl/yl/gr/rd	96,0	80 x 0,41	6,4	132
16	bk/bl/br/yl/gr/rd/rbr	153,6	128 x 0,41	8,0	209
25	bk/bl/yl/gr/rbr	240,0	200 x 0,41	10,0	327
35	bk/yl/gr/rbr	336,0	280 x 0,41	11,2	439
50	bk/rbr	480,0	400 x 0,41	13,3	624
70	bk/rbr	672,0	356 x 0,51	15,4	860
95	bk/rbr	912,0	485 x 0,51	17,8	1.161
120	rbr	1.152,0	614 x 0,51	19,8	1.456
150	rbr	1.440,0	765 x 0,51	21,5	1.785
185	rbr	1.776,0	944 x 0,51	24,4	2.233
240	bk	2.304,0	1225 x 0,51	26,8	2.827

SiF / GL

Silicone Insulated Wire with Fibreglass Braiding

Application:

This wire is well suited for internal wiring in lamps, instruments, control panels and distributors. It is used for high mechanical stress, as the fibreglass braiding protects the silicone insulation from mechanical damages. It is halogen-free and heat resistant.



Construction:

- 1 fine-stranded tinned or bare copper
- 2 core insulation silicon (2GI1)
- 3 impregnated fibreglass braiding

Standards:

DIN EN 60228 Class 5 (construction)

Technical data:

Nominal voltage U_0/U

Test voltage

Temperature range

Flammability

[V]

[V]_{AC}

in motion
temporary resilient
standard

300 / 500 Volt
2000
-60°C till +180°C
+250°C
EN 60332-1-2

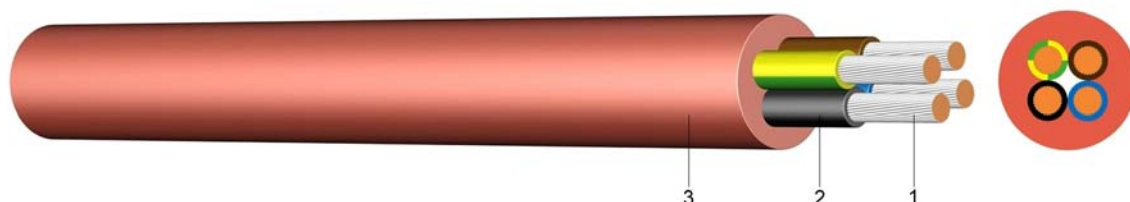
Nominal cross section	Colours	Copper figure	Cond. construction (appr. value)	Overall diameter	Weight
mm ²		kg/km	mm	mm	appr. kg/km
0,75	WS	7,2	24 x 0,21	2,7	15
1	WS	9,6	32 x 0,21	2,8	18
1,5	WS	14,4	30 x 0,26	3,3	26
2,5	WS	24,0	50 x 0,26	3,9	38
4	WS	38,4	56 x 0,31	4,5	55
6	WS	57,6	84 x 0,31	5,2	76
10	WS	96,0	80 x 0,41	7,3	136
16	WS	153,6	128 x 0,41	8,3	200
25	WS	240,0	200 x 0,41	10,2	311
35	WS	336,0	280 x 0,41	11,4	412
50	WS	480,0	400 x 0,41	14,1	583
70	WS	672,0	356 x 0,51	16,1	798
95	WS	912,0	495 x 0,51	18,5	1.073
120	WS	1.152,0	614 x 0,51	20,0	1.329

SiHF

Silicone Sheathed Cable

Application:

In dry, humid and wet locations as well as in the open-air for low mechanical stress, particularly at high ambient temperatures.



Construction:

- 1 fine-stranded tinned or bare copper
- 2 core insulation of silicone (2G11)
- 3 outer sheath of silicone (2GM1), red-brown

Standards:

DIN VDE 0207 part 20
DIN EN 60228 class 5 (construction)
HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U

[V]

Test voltage

[V]_{AC}

Temperature range

in motion

temporary resilient

standard

300 / 500 Volt

2000

-60°C till 180°C

+250°C

EN 60332-1-2

Flammability

Number of cores and nominal cross section mm ²	Copper figure	Cond. construction (appr. value)	Overall diameter	Weight
	kg/km	mm	appr. mm	appr. kg/km
2 x 0,75	14,4	24 x 0,21	6,4	63
3 x 0,75	21,6	24 x 0,21	6,8	76
4 x 0,75	28,8	24 x 0,21	7,8	101
5 x 0,75	36,0	24 x 0,21	8,5	120
7 x 0,75	50,4	24 x 0,21	9,2	148
2 x 1	19,2	32 x 0,21	6,6	71
3 x 1	28,8	32 x 0,21	7,4	93
4 x 1	38,4	32 x 0,21	8,1	113
5 x 1	48,0	32 x 0,21	8,8	136
7 x 1	67,2	32 x 0,21	9,5	169
2 x 1,5	28,8	30 x 0,26	7,6	97
3 x 1,5	43,2	30 x 0,26	8,0	117
4 x 1,5	57,6	30 x 0,26	8,8	145
5 x 1,5	72,0	30 x 0,26	9,6	175
7 x 1,5	100,8	30 x 0,26	10,9	220
12 x 1,5	172,8	30 x 0,26	14,6	413
16 x 1,5	230,4	30 x 0,26	16,2	520
24 x 1,5	345,6	30 x 0,26	20,4	811
2 x 2,5	48,0	50 x 0,26	9,2	146
3 x 2,5	72,0	50 x 0,26	9,7	179
4 x 2,5	96,0	50 x 0,26	10,6	222
5 x 2,5	120,0	50 x 0,26	11,6	268
7 x 2,5	168,0	50 x 0,26	12,6	339
12 x 2,5	288,0	50 x 0,26	17,1	609

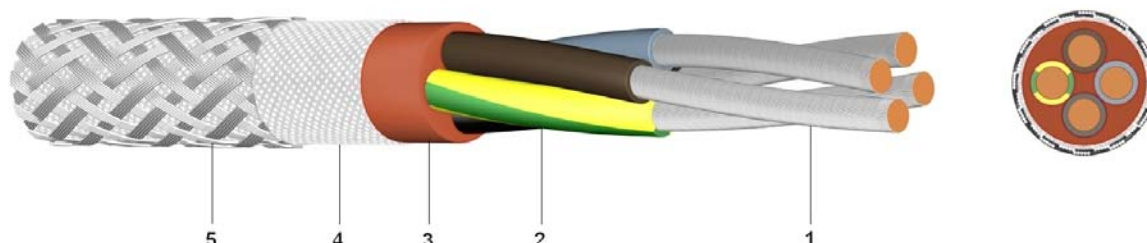
Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
2 x 4	76,8	50 x 0,31	10,8	210
3 x 4	115,2	50 x 0,31	11,5	261
4 x 4	153,6	50 x 0,31	13,2	346
5 x 4	192,0	50 x 0,31	14,3	418
7 x 4	268,8	50 x 0,31	15,6	530
4 x 6	230,4	84 x 0,31	15,6	497
5 x 6	288,0	84 x 0,31	17,6	631
4 x 10	384,0	80 x 0,41	19,1	778
4 x 16	614,4	128 x 0,41	23,4	1.197
4 x 25	960,0	200 x 0,41	28,6	1.827

SiHF/GL/P

Silicone Sheathed Cable with Fibreglass Braiding and Steel Wire Braiding

Application:

In dry, damp and wet rooms and outdoor for light mechanical stresses, particularly at high ambient temperatures. A grid of galvanized steel wires used as protection against mechanical damage.



Construction:

- 1 fine-stranded tinned copper
- 2 core insulation of silicone (2GI1)
- 3 outer sheath of silicone (2GM1), red-brown
- 4.....armouring of fibreglass braiding
- 5 armouring of galvanised steel wire braiding

Standards:

adapted to DIN VDE 0207 part 20
DIN EN 60228 class 5 (construction)
HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U

Test voltage

Temperature range

Flammability

[V]

[V]_{AC}

300 / 500 Volt

2000

-60°C till +180°C

+250°C

EN 60332-1-2

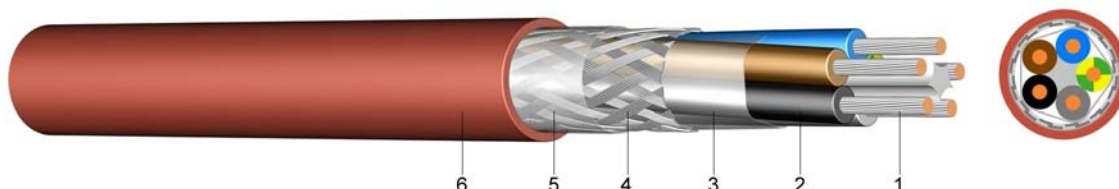
Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
2 x 0,75	14,4	24 x 0,21	7,2	95
3 x 0,75	21,6	24 x 0,21	7,6	109
4 x 0,75	28,8	24 x 0,21	8,8	151
5 x 0,75	36,0	24 x 0,21	9,5	180
2 x 1	19,2	32 x 0,21	7,4	104
2 x 1,5	28,8	30 x 0,26	8,6	147
3 x 1,5	43,2	30 x 0,26	9,0	168
4 x 1,5	57,6	30 x 0,26	9,8	205
5 x 1,5	72,0	30 x 0,26	10,6	246
7 x 1,5	100,8	30 x 0,26	11,4	292
12 x 1,5	172,8	30 x 0,26	15,8	496
3 x 2,5	72,0	50 x 0,26	10,7	236
4 x 2,5	96,0	50 x 0,26	11,6	281
5 x 2,5	120,0	50 x 0,26	12,6	341
4 x 4	153,6	50 x 0,31	14,4	424

SiFCuSi

Silicone Sheathed Cable with Copper Braiding

Application:

In dry, humid and wet locations as well as in the open-air for low mechanical stress, particularly at high ambient temperatures. The copper braiding optimises protection against high-frequency external interference.



Construction:

- 1 fine-stranded tinned or bare copper
- 2 core insulation of silicone (2GI1)
- 3 wrapped with PETP foil
- 4 screen of tinned copper braiding
- 5 wrapped with PETP foil
- 6 outer sheath of silicone (2GM1), red-brown

Standards:

DIN VDE 0207 part 20
DIN EN 60228 class 5 (construction)
HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U

[V]

300 / 500 Volt

Test voltage

[V]_{AC}

2000

Temperature range

in motion

-60°C till +180°C

temporary resilient

+250°C

Flammability

standard

EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (app.value) mm	Overall diameter appr.mm	Weight appr. kg/km
2 x 0,75	43,2	24 x 0,21	7,0	72
3 x 0,75	50,9	24 x 0,21	7,4	88
4 x 0,75	61,4	24 x 0,21	8,4	114
5 x 0,75	73,9	24 x 0,21	9,1	135
7 x 0,75	91,2	24 x 0,21	9,8	166
2 x 1	48,0	32 x 0,21	7,2	79
3 x 1	60,5	32 x 0,21	8,0	105
4 x 1	75,8	32 x 0,21	8,7	129
5 x 1	86,4	32 x 0,21	9,4	150
7 x 1	108,5	32 x 0,21	10,1	189
2 x 1,5	66,2	30 x 0,26	8,2	103
3 x 1,5	81,6	30 x 0,26	8,6	128
4 x 1,5	98,9	30 x 0,26	9,4	158
5 x 1,5	121,9	30 x 0,26	10,2	188
7 x 1,5	155,5	30 x 0,26	11,2	250
12 x 1,5	242,9	30 x 0,26	15,4	433
3 x 2,5	121,9	50 x 0,26	10,3	189
4 x 2,5	146,9	50 x 0,26	11,4	249
5 x 2,5	176,6	50 x 0,26	12,4	293

Ignition Wire Silicone 16 kV

Application: In automobiles and similar systems.



Construction:

- 1 fine-stranded tinned copper
- 2 core insulation of silicone
- 3 fibreglass braiding
- 4 outer sheath of silicone, blue

Standards: DIN EN 60228 class 5 (construction)
VDE 0207 part 20

Technical data:

Nominal voltage U_0/U

Test voltage

Temperature range

Bending radius

Flammability

in motion

temporary resilient

min.

standard

[V]

[V]_{AC}

x diameter

16000 Volt

20000

-60°C till +180°C

+250°C

7,5

EN 60332-1-2

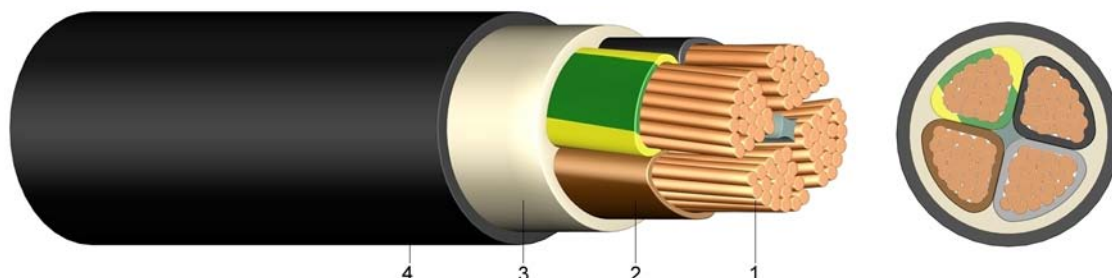
Nominal cross section	Colours	Copper figure	Cond. construction (appr. value)	Overall diameter	Weight
mm ²		kg/km	mm	mm	appr. kg/km
1,5	bl	14,4	30 x 0,25	8,5	92

E-YY

PVC Insulated Heavy Current Cable 0,6/1kV Single or Multi Core

Application:

This power cable is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground if no mechanical damage is to be expected.



Construction:

- 1 solid (RE) or stranded (RM/SM) bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 PVC core covering or taping
- 4 outer sheath of polyvinylchloride (PVC), black, UV-resistant

Information:

short circuit temperature (max. 5 sec.)
 $\leq 300\text{mm}^2 \rightarrow 160^\circ\text{C}$
 $> 300\text{mm}^2 \rightarrow 140^\circ\text{C}$

Standards:

ÖVE-K 603
DIN EN 60228 class 1 and 2 (construction)
HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U		[V]	600 / 1000 Volt
Test voltage		[V] _{AC}	4000
Temperature range	in motion		- 5°C till +70°C
	fixed		-20°C till +70°C
Bending radius	single-core style	x diameter	15
	multi-core style	x diameter	12
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section	Copper figure	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air
mm ²	kg/km	appr. mm	appr. kg/km	A	A
1 x 16 RE	153,6	11	250	107	84
1 x 25 RM	240,0	12	350	138	114
1 x 35 RM	336,0	13	460	164	139
1 x 50 RM	480,0	15	600	195	169
1 x 70 RM	672,0	17	820	238	213
1 x 95 RM	912,0	19	1.080	286	264
1 x 120 RM	1.152,0	21	1.310	325	307
1 x 150 RM	1.440,0	23	1.600	365	352
1 x 185 RM	1.776,0	25	2.000	413	406
1 x 240 RM	2.304,0	28	2.500	479	483
1 x 300 RM	2.880,0	30	3.180	541	557
1 x 400 RM	3.840,0	32	3.180	614	646
1 x 500 RM	4.800,0	34	3.180	693	747
1 x 630 RM	6.048,0	42	3.180	777	858

Number of cores and nominal cross section	Copper figure	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air
mm ²	kg/km	appr. mm	appr. kg/km	A	A
2 x 1,5 RE	28,8	11	220	27	20
2 x 2,5 RE	48,0	12	267	36	25
2 x 4 RE	76,8	14	342	47	34
2 x 6 RE	115,2	15	412	59	43
2 x 10 RE	192,0	16	510	79	59
2 x 16 RM	307,2	18	670	102	79
3 x 1,5 RE	43,2	11	244	27	20
3 x 2,5 RE	72,0	12	294	36	25
3 x 4 RE	115,2	14	393	47	34
3 x 6 RE	172,8	15	481	59	43
3 x 10 RE	288,0	16	645	79	59
3 x 16 RE	460,8	18	872	102	79
3 x 16 RM	460,8	19	872	102	79
3 x 25 RM	720,0	21	1.350	133	106
3 x 35 SM	1.008,0	22	1.460	159	129
3 x 50 SM	1.440,0	26	1.750	188	157
3 x 70 SM	2.016,0	29	2.400	232	199
3 x 95 SM	2.736,0	33	3.560	280	246
3 x 120 SM	3.456,0	37	4.310	318	285
3 x 150 SM	4.320,0	41	5.310	359	326
3 x 185 SM	5.328,0	47	6.630	406	374
3 x 240 SM	6.912,0	52	8.480	473	445
3 x 25/16 RM/RE	873,6	22	1.513	133	106
3 x 35/16 SM/RE	1.161,6	23	1.804	159	129
3 x 50/25 SM/RM	1.680,0	28	2.349	188	157
3 x 70/35 SM	2.352,0	32	3.117	232	199
3 x 95/50 SM	3.216,0	36	4.167	280	246
3 x 120/70 SM	4.128,0	39	5.190	318	285
3 x 150/70 SM	4.992,0	43	6.161	359	326
3 x 185/95 SM	6.240,0	50	7.673	406	374
3 x 240/120 SM	8.064,0	56	9.850	473	445
3 x 300/150 SM	10.080,0	66	11.900	535	511
4 x 1,5 RE	57,6	11	278	27	20
4 x 2,5 RE	96,0	12	340	36	25
4 x 4 RE	153,6	14	460	47	34
4 x 6 RE	230,4	15	570	59	43
4 x 10 RE	384,0	17	775	79	59
4 x 10 RM	384,0	18	775	79	59
4 x 16 RE	614,4	19	1.072	102	79
4 x 16 RM	614,4	20	1.072	102	79
4 x 25 RM	960,0	22	1.632	133	106
4 x 35 SM	1.344,0	23	1.959	159	129
4 x 50 SM	1.920,0	28	2.595	188	157
4 x 70 SM	2.688,0	32	3.488	232	199
4 x 95 SM	3.648,0	36	4.637	280	246
4 x 120 SM	4.608,0	39	5.689	318	285
4 x 150 SM	5.760,0	45	6.973	359	326
4 x 185 SM	7.104,0	52	8.663	406	374
4 x 240 SM	9.216,0	58	11.140	473	445
5 x 1,5 RE	72,0	13	317	*	*
5 x 2,5 RE	120,0	14	391	*	*
5 x 4 RE	192,0	16	537	*	*
5 x 6 RE	288,0	17	672	*	*
5 x 10 RE	480,0	19	921	*	*
5 x 10 RM	480,0	20	921	*	*
5 x 16 RE	768,0	22	1.294	*	*

Number of cores and nominal cross section	Copper figure	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air
mm ²	kg/km	appr. mm	appr. kg/km	A	A
5 x 16 RM	1.200,0	27	2.004	*	*
5 x 25 RM	1.200,0	27	2.004	*	*
5 x 35 RM	1.680,0	28	2.575	*	*
5 x 50 RM	2.400,0	34	3.193	*	*
5 x 70 RM	3.360,0	38	4.319	*	*
5 x 95 RM	4.560,0	44	5.783	*	*
5 x 120 RM	5.760,0	48	7.095	*	*
5 x 150 RM	7.200,0	59	8.240	*	*
7 x 1,5 RE	100,8	13	376	*	*
10 x 1,5 RE	144,0	16	495	*	*
12 x 1,5 RE	172,8	18	440	*	*
14 x 1,5 RE	201,6	19	494	*	*
16 x 1,5 RE	230,4	20	600	*	*
19 x 1,5 RE	273,6	19	614	*	*
21 x 1,5 RE	302,4	22	700	*	*
24 x 1,5 RE	345,6	23	769	*	*
30 x 1,5 RE	432,0	25	918	*	*
40 x 1,5 RE	576,0	27	1.250	*	*
7 x 2,5 RE	168,0	14	472	*	*
10 x 2,5 RE	240,0	19	530	*	*
12 x 2,5 RE	288,0	20	578	*	*
14 x 2,5 RE	336,0	21	680	*	*
16 x 2,5 RE	384,0	22	750	*	*
19 x 2,5 RE	456,0	23	870	*	*
21 x 2,5 RE	504,0	24	900	*	*
24 x 2,5 RE	576,0	25	1.035	*	*
30 x 2,5 RE	720,0	27	1.300	*	*
40 x 2,5 RE	960,0	30	1.700	*	*
7 x 4 RE	268,8	19	600	*	*
7 x 6 RE	403,2	20	760	*	*
7 x 10 RE	672,0	22	1.080	*	*

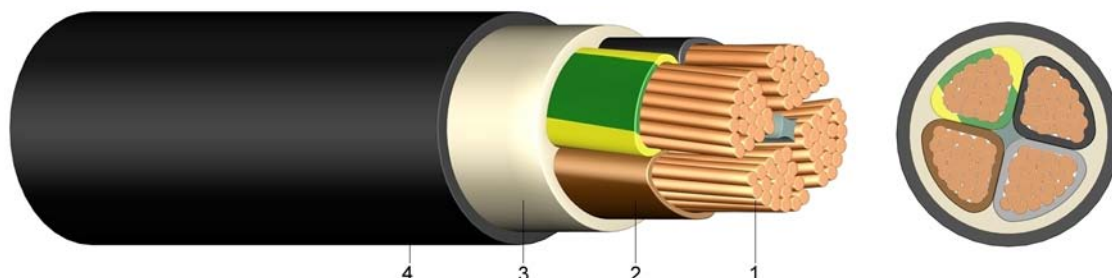
* The current carrying capacity of the cables depends on the number of cores loaded (see DIN VDE 0276-627)

NYN

PVC Insulated Heavy Current Cable 0,6/1kV Single and Multicore

Application:

This power cable is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground if no mechanical damage is to be expected.



Construction:

- 1 solid (RE) or stranded (RM/SM) bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 PVC core covering or taping
- 4 outer sheath of polyvinylchloride (PVC), black, UV-resistant

Information:

short circuit temperature on core (max. 5 sec.)
 $\leq 300\text{mm}^2 \rightarrow 160^\circ\text{C}$
 $> 300\text{mm}^2 \rightarrow 140^\circ\text{C}$

Standards:

DIN VDE 0276-603
 HD 603 S1:1994 + A2:2003
 DIN EN 60228 class 1 and 2 (construction)
 HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U		[V]	600 / 1000 Volt
Test voltage		[V] _{AC}	4000
Temperature range	in motion		- 5°C till +70°C
	fixed		-20°C till +70°C
Bending radius	single-core style	x diameter	15
	multi-core style	x diameter	12
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section	Copper figure	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air
mm ²	kg/km	appr. mm	appr. kg/km	A	A
1 x 4 RE	38,4	8	120	50	37
1 x 6 RE	57,6	9	131	62	47
1 x 10 RE	96,0	10	171	83	64
1 x 16 RE	153,6	11	233	107	84
1 x 25 RM	240,0	12	370	138	114
1 x 35 RM	336,0	14	480	164	139
1 x 50 RM	480,0	16	640	195	169
1 x 70 RM	672,0	17	850	238	213
1 x 95 RM	912,0	19	1.120	286	264
1 x 120 RM	1.152,0	21	1.375	325	307
1 x 150 RM	1.440,0	23	1.660	365	352
1 x 185 RM	1.776,0	25	2.050	413	406
1 x 240 RM	2.304,0	28	2.634	479	483
1 x 300 RM	2.880,0	30	3.295	541	557

Number of cores and nominal cross section		Copper figure	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air
mm ²		kg/km	appr. mm	appr. kg/km	A	A
1 x 400	RM	3.840,0	32	4.231	614	646
1 x 500	RM	4.800,0	34	5.284	693	747
1 x 630	RM	6.048,0	42	6.850	777	858
2 x 1,5	RE	28,8	11	220	27	20
2 x 2,5	RE	48,0	12	267	36	25
2 x 4	RE	76,8	14	342	47	34
2 x 6	RE	115,2	15	412	59	43
2 x 10	RE	192,0	16	510	79	59
2 x 16	RM	307,2	18	670	102	79
3 x 1,5	RE	43,2	13	244	27	20
3 x 2,5	RE	72,0	14	294	36	25
3 x 4	RE	115,2	16	393	47	34
3 x 6	RE	172,8	17	481	59	43
3 x 10	RE	288,0	18	645	79	59
3 x 16	RE	460,8	20	872	102	79
3 x 16	RM	460,8	20	872	102	79
3 x 25	RM	720,0	25	1.350	133	106
3 x 35	SM	1.008,0	25	1.460	159	129
3 x 50	SM	1.440,0	29	1.750	188	157
3 x 70	SM	2.016,0	32	2.400	232	199
3 x 95	SM	2.736,0	35	3.560	280	246
3 x 120	SM	3.456,0	38	4.310	318	285
3 x 150	SM	4.320,0	42	5.310	359	326
3 x 185	SM	5.328,0	47	6.630	406	374
3 x 240	SM	6.912,0	53	8.480	473	445
3 x 25/16	RM/RE	873,6	25	1.513	133	106
3 x 35/16	SM/RE	1.161,6	27	1.804	159	129
3 x 50/25	SM/RM	1.680,0	31	2.349	188	157
3 x 70/ 35	SM	2.352,0	35	3.117	232	199
3 x 95/ 50	SM	3.216,0	39	4.167	280	246
3 x 120/ 70	SM	4.128,0	44	5.190	318	285
3 x 150/ 70	SM	4.992,0	47	6.161	359	326
3 x 185/ 95	SM	6.240,0	53	7.673	406	374
3 x 240/120	SM	8.064,0	59	9.850	473	445
3 x 300/150	SM	10.080,0	65	11.900	535	511
4 x 1,5	RE	57,6	14	278	27	20
4 x 2,5	RE	96,0	15	340	36	25
4 x 4	RE	153,6	17	460	47	34
4 x 6	RE	230,4	18	570	59	43
4 x 10	RE	384,0	20	775	79	59
4 x 10	RM	384,0	20	775	79	59
4 x 16	RE	614,4	22	1.072	102	79
4 x 16	RM	614,4	22	1.072	102	79
4 x 25	RM	960,0	27	1.632	133	106
4 x 35	SM	1.344,0	27	1.959	159	129
4 x 50	SM	1.920,0	32	2.595	188	157
4 x 70	SM	2.688,0	36	3.488	232	199
4 x 95	SM	3.648,0	41	4.637	280	246
4 x 120	SM	4.608,0	43	5.689	318	285
4 x 150	SM	5.760,0	49	6.973	359	326
4 x 185	SM	7.104,0	54	8.663	406	374
4 x 240	SM	9.216,0	60	11.140	473	445

Number of cores and nominal cross section	Copper figure	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air
mm ²	kg/km	appr. mm	appr. kg/km	A	A
5 x 1,5 RE	72,0	15	317	*	*
5 x 2,5 RE	120,0	16	391	*	*
5 x 4 RE	192,0	18	537	*	*
5 x 6 RE	288,0	19	672	*	*
5 x 10 RE	480,0	21	921	*	*
5 x 10 RM	480,0	21	921	*	*
5 x 16 RE	768,0	24	1.294	*	*
5 x 16 RM	768,0	24	1.294	*	*
5 x 25 RM	1.200,0	29	2.004	*	*
5 x 35 RM	1.680,0	30	2.575	*	*
5 x 50 RM	2.400,0	36	3.193	*	*
5 x 70 RM	3.360,0	40	4.722	*	*
5 x 95 RM	4.560,0	46	6.393	*	*
5 x 120 RM	5.760,0	50	7.095	*	*
5 x 150 RM	7.200,0	59	8.240	*	*
7 x 1,5 RE	100,8	16	376	*	*
10 x 1,5 RE	144,0	19	495	*	*
12 x 1,5 RE	172,8	18	440	*	*
14 x 1,5 RE	201,6	20	494	*	*
16 x 1,5 RE	230,4	21	600	*	*
19 x 1,5 RE	273,6	22	614	*	*
21 x 1,5 RE	302,4	23	700	*	*
24 x 1,5 RE	345,6	24	769	*	*
30 x 1,5 RE	432,0	26	918	*	*
40 x 1,5 RE	576,0	29	1.250	*	*
7 x 2,5 RE	168,0	17	472	*	*
10 x 2,5 RE	240,0	20	530	*	*
12 x 2,5 RE	288,0	21	578	*	*
14 x 2,5 RE	336,0	22	680	*	*
16 x 2,5 RE	384,0	23	750	*	*
19 x 2,5 RE	456,0	24	870	*	*
21 x 2,5 RE	504,0	25	900	*	*
24 x 2,5 RE	576,0	26	1.035	*	*
30 x 2,5 RE	720,0	28	1.300	*	*
40 x 2,5 RE	960,0	31	1.700	*	*
7 x 4 RE	268,8	18	600	*	*
7 x 6 RE	403,2	20	760	*	*
7 x 10 RE	672,0	22	1.080	*	*

(N)YY – fine stranded

1 x 35 RF	336,0	16	518	164	139
1 x 50 RF	480,0	18	693	195	169
1 x 70 RF	672,0	19	863	238	213
1 x 120 RF	1.152,0	22	1.378	325	307
1 x 150 RF	1.440,0	24	1.645	365	352
1 x 185 RF	1.776,0	26	1.985	413	406
1 x 240 RF	2.304,0	29	2.569	479	483
1 x 300 RF	2.880,0	34	3.296	541	557

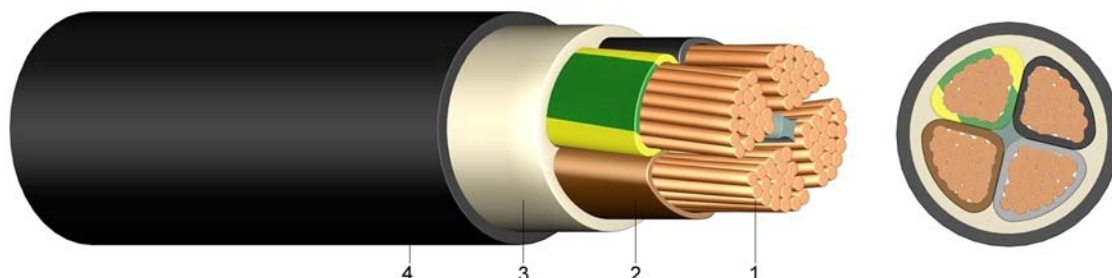
* The current carrying capacity of the cables depends on the number of cores loaded (see DIN VDE 0276-627)

E-Y2Y

PVC Insulated Heavy Current Cable with Copper Conductor and PE Outer Sheath

Application:

This power cable is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground if no mechanical damage is to be expected.



Construction:

- 1 solid (RE) or stranded (RM/SM) bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 PVC core covering or taping
- 4 outer sheath of polyethylene (PE), black, Shore-hardness >55
UV-resistant

Standards:

ÖVE K 23 and K 603
HD 603 S1:1994 + A2:2003
DIN EN 60228 class 1 and 2 (construction)
HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U		[V]	600 / 1000 Volt
Test voltage		[V] _{AC}	4000
Temperature range	in motion		- 5°C till +70°C
	fixed		-20°C till +70°C
Operating temperature	short circuit	°C	160
Short circuit time	max.	[sec]	5
Bending radius	single-core style	x diameter	15
	multi-core style	x diameter	12
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section	Copper figure	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air
mm ²	kg/km	appr. mm	appr. kg/km	A	A
4 x 6 RE	230,4	15	570	56	43
4 x 10 RE	384,0	20	775	75	60
4 x 10 RM	384,0	20	775	75	60
4 x 16 RE	614,4	21	1.100	98	80
4 x 16 RM	614,4	22	1.100	98	80
4 x 25 RM	960,0	25	1.632	128	106
4 x 35 SM	1.344,0	27	1.959	157	131
4 x 50 SM	1.920,0	32	2.595	185	159
5 x 6 RE	288,0	17	672	*	*
5 x 10 RE	480,0	21	921	*	*

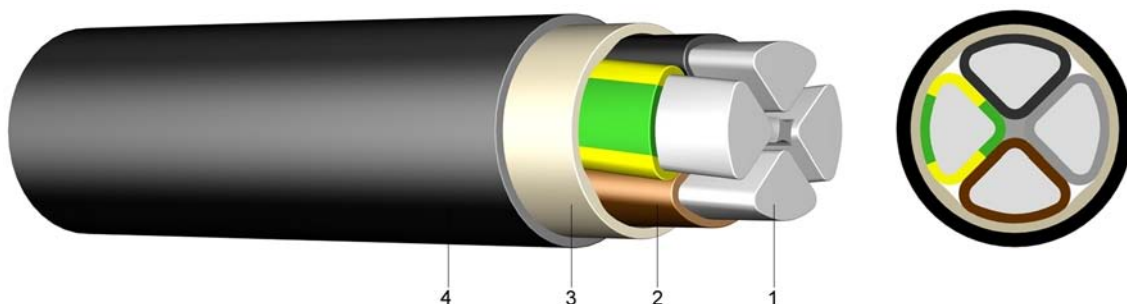
* The current carrying capacity of the cables depends on the number of cores loaded (see DIN VDE 0276-627)

E-AYY

PVC Insulated Cable with Aluminium Conductor

Application:

This power cable is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground if no mechanical damage is to be expected.



Construction:

- 1 solid (SE) or stranded (RM/SM) aluminium wires
- 2 core insulation of polyvinylchloride (PVC)
- 3 PVC core covering or taping
- 4 outer sheath of polyvinylchloride (PVC), black, UV-resistant

Information:

short circuit temperature at core (max. 5 sec.)
 $\leq 300 \text{ mm}^2 \rightarrow 160^\circ\text{C}$
 $> 300 \text{ mm}^2 \rightarrow 140^\circ\text{C}$

Standards:

ÖVE K 23 and K 603
 HD 603 S1
 DIN EN 60228 class 1 and 2 (construction)
 HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U

Test voltage

Temperature range

Bending radius

Flammability

[V]

[V]_{AC}

in motion

fixed

single-core style

multi-core style

standard

x diameter

x diameter

600 / 1000 Volt

4000

- 5°C till +70°C

-20°C till +70°C

15

12

EN 60332-1-2

Number of cores and nominal cross section	Aluminium figure	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air
mm ²	kg/km	appr. mm	appr. kg/km	A	A
1 x 25 RM	74	11	174	106	87
1 x 35 RM	103	12	209	127	107
1 x 50 RM	147	14	282	151	131
1 x 70 RM	206	16	363	185	166
1 x 95 RM	279	18	520	222	205
1 x 120 RM	353	19	557	253	239
1 x 150 RM	441	21	674	284	273
1 x 185 RM	544	24	826	322	317
1 x 240 RM	706	26	1.052	375	378
1 x 300 RM	882	29	1.282	425	437
1 x 400 RM	1.200	32	1.598	487	513
1 x 500 RM	1.510	36	2.022	558	600
1 x 630 RM	1.900	40	2.200	635	701
3 x 240/120 SM	2.470	55	4.215	364	338

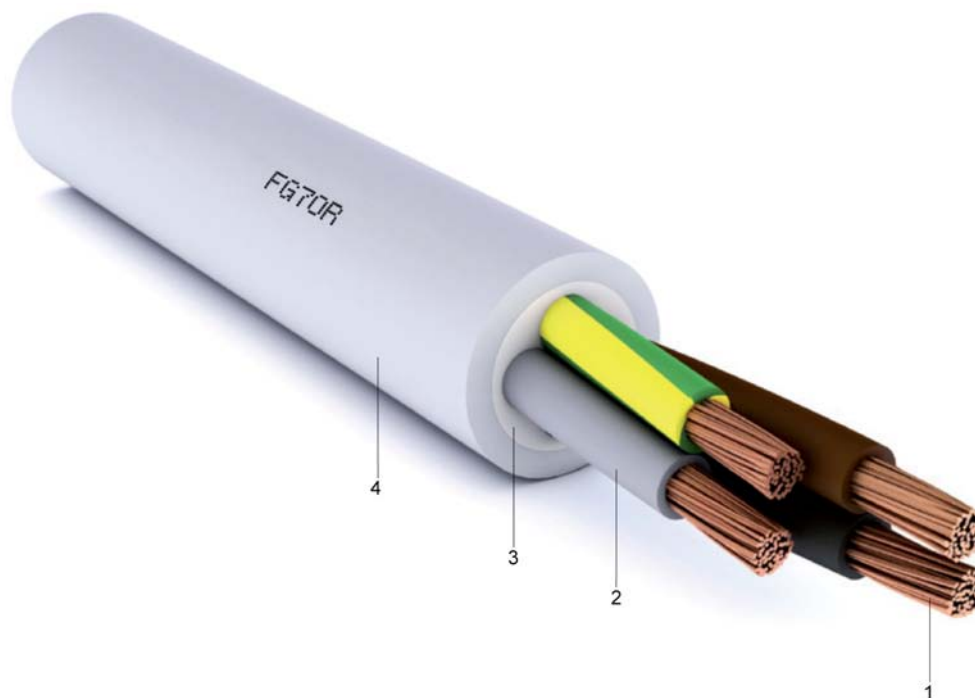
Number of cores and nominal cross section	Aluminium figure	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air
mm ²	kg/km	appr. mm	appr. kg/km	A	A
4 x 150 SE	1.764	45	2.594	275	246
4 x 25 RM	294	25	887	102	82
4 x 35 SM	412	26	796	123	100
4 x 50 SM	588	27	1.017	144	119
4 x 70 SM	823	30	1.312	179	152
4 x 95 SM	1.117	34	1.698	215	186
4 x 120 SM	1.411	40	2.459	245	216
4 x 150 SM	1.764	43	2.594	275	246
4 x 185 SM	2.176	50	3.777	313	285
4 x 240 SM	2.822	54	4.106	364	338
5 x 16 RM	235	22	675		
5 x 25 RM	368	26	1.018	102	81
5 x 35 RM	515	30	1.316	121	99
5 x 50 SM	735	32	1.549	144	119
5 x 70 SM	1.071	37	2.021	179	152
5 x 95 SM	1.484	41	2.598	215	186
5 x 120 SM	1.764	47	3.201	245	216
5 x 150 RM	2.218	56	4.300	275	246
5 x 185 RM	2.736	62	5.350	313	285
5 x 240 RM	3.530	71	7.580	364	338

FG7OR

Power cable insulated with high quality EPM-rubber, with PVC sheath, not propagating fire, with reduced corrosive gas emission

Application:

This power cable is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground if no mechanical damage is to be expected



Construction:

- 1 fine wired copper conductor, class 5
- 2 rigid EPM rubber
- 3 thermoplastic compound, fire resistant, non water absorbing
- 4 anti abrasive PVC compound, fire resistant, reduced water permeability

Information:

at short circuit of max. 5 sec.
 $\leq 250 \text{ mm}^2 \rightarrow 250^\circ\text{C}$
 $> 250 \text{ mm}^2 \rightarrow 220^\circ\text{C}$

Standards:

CEI 20-13
 IEC 60502-1
 CEI UNEL 35375 (cables with 1-5 cores)
 CEI UNEL 35377 (signal, with 6 and more cores)

Technical data:

Nominal voltage U_0/U

Test voltage

Temperature range

Bending radius

Flammability

in motion
 fixed

power (1-5 cores)

signal

standard

[V]

[V]_{AC}

x diameter

x diameter

600 / 1000 Volt

4000

- 0°C do $+90^\circ\text{C}$

- 15°C do $+90^\circ\text{C}$

4

6

EN 60332-1-2

Number of cores and nominal cross section	Copper figure	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air
mm ²	kg/km	cca mm	cca kg/km	A	A
1 x 1,5	14,4	5,8	47	21	24
1 x 2,5	24	6,3	60	27	33
1 x 4	38,4	6,7	78	35	45
1 x 6	57,6	7,4	103	44	58
1 x 10	96	8,3	146	59	80
1 x 16	153,7	9,5	204	77	107
1 x 25	241	11	300	100	135
1 x 35	336	12	399	121	169
1 x 50	480	14	550	150	207
1 x 70	672	16,1	781	184	268
1 x 95	912	18	1010	217	328
1 x 120	1155	19	1263	251	383
1 x 150	1440	22,3	1600	287	444
1 x 185	1776	23,7	1893	323	510
1 x 240	2305	26,4	2430	379	607
1 x 300	2880	31	3175	429	703
1 x 400	3840	35,7	4136	500	823

Number of cores and nominal cross section	Copper figure	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air
mm ²	kg/km	cca mm	cca kg/km	A	A
2 x 1,5 RE	28,8	9,6	131	23	26
2 x 2,5 RE	48	10,6	170	30	36
2 x 4 RE	76,8	11,4	214	39	49
2 x 6 RE	115,2	12,9	283	49	63
2 x 10 RE	192	14,6	407	66	86
2 x 16 RM	307,2	16,8	572	86	115
3 x 1,5 RE	43,2	10,0	148	19	23
3 x 2,5 RE	72	11,1	194	25	32
3 x 4 RE	115,2	12,0	254	32	42
3 x 6 RE	172,8	13,6	346	41	54
3 x 10 RE	288	15,5	497	55	75
3 x 16 RE	460,8	17,8	712	72	100
3 x 25 RM	720	21,5	1.062	93	127
3 x 35 SM	1008	25,1	1.492	114	158
3 x 50 SM	1440	27,6	1.972	141	192
3 x 70 SM	2016	32,6	2.856	174	246
3 x 95 SM	2736	38,7	3.905	206	298
3 x 120 SM	3456	41,1	4.474	238	346
3 x 150 SM	4320	46	5.400	272	399
3 x 35/25	1248	25	1.641	114	158
3 x 50/25	1680	29,6	2.252	141	192
3 x 70/35	2352	34,5	3.222	174	246
3 x 95/50	3216	39	4.195	206	298
3 x 120/70	4128	42	5.307	238	346
3 x 150/95	5232	49	6.869	272	399
4 x 1,5	57,6	11,4	178	19	23
4 x 2,5	96	12	231	25	32
4 x 4	153,7	13	308	32	42
4 x 6	230,5	14,6	418	41	54
4 x 10	384	16,8	620	55	75
4 x 16	614,4	19,4	886	72	100
4 x 25	960	23,6	1.338	93	127

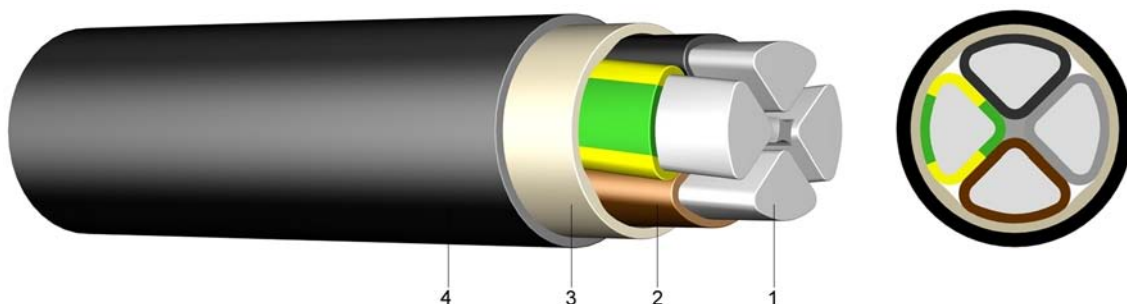
Number of cores and nominal cross section	Copper figure	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air
mm ²	kg/km	cca mm	cca kg/km	A	A
5 x 1,5 RE	72	12,2	212	19	23
5 x 2,5 RE	120	13	275	25	32
5 x 4 RE	192	14,1	370	32	42
5 x 6 RE	288	16	515	41	54
5 x 10 RE	480	18,7	770	55	75
5 x 16	768	21,5	1.102	72	100
5 x 25	1.200	26,1	1.658	93	127
5 x 35	1.680	29,6	2.269	114	158
5 x 50	2.400	34,5	3.043	141	192
7 x 1,5 RE	100,8	12,6	241	16	13
10 x 1,5 RE	144	15	343	16	13
12 x 1,5 RE	172,9	16,2	402	12,5	11
16 x 1,5 RE	230,5	17,6	471	12,5	11
19 x 1,5 RE	273,6	18,6	552	11,5	9
24 x 1,5 RE	345,6	21,6	707	11,5	9
7 x 2,5 RE	168	14,1	329	21	17,5
10 x 2,5 RE	240	17,6	501	21	17,5
12 x 2,5 RE	288	18	545	17,5	13,5
16 x 2,5 RE	384	20	686	17,5	13,5
19 x 2,5 RE	456	20,7	760	14	12
24 x 2,5 RE	576	24	1.000	14	12

NAYY

PVC Insulated Cable with Aluminium Conductor

Application:

This power cable is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground if no mechanical damage is to be expected.



Construction:

- 1 solid (SE) or stranded (RM/SM) aluminium wires
- 2 core insulation of polyvinylchloride (PVC)
- 3 PVC inner sheath (FM)
- 4 outer sheath of polyvinylchloride (PVC), black, UV-resistant

Information:

short circuit temperature at core (max. 5 sec.)
 $\leq 300 \text{ mm}^2 \rightarrow 160^\circ\text{C}$
 $> 300 \text{ mm}^2 \rightarrow 140^\circ\text{C}$

Standards:

DIN VDE 0276-603
 HD 603 S1
 DIN EN 60228 class 1 and 2 (construction)
 HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U

Test voltage

Temperature range

Bending radius

Flammability

[V]

[V]_{AC}

in motion

fixed

single-core style

multi-core style

standard

x diameter

x diameter

600 / 1000 Volt

4000

- 5°C till +70°C

-20°C till +70°C

15

12

EN 60332-1-2

Number of cores and nominal cross section	Aluminium figure	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air
mm ²	kg/km	appr. mm	appr. kg/km	A	A
1 x 16 RE	49	11	161		
1 x 25 RM	74	11	174	106	87
1 x 35 RM	103	12	209	127	107
1 x 50 RM	147	14	282	151	131
1 x 70 RM	206	16	363	185	166
1 x 95 RM	279	18	520	222	205
1 x 120 RM	353	19	557	253	239
1 x 150 RM	441	21	674	284	273
1 x 185 RM	544	24	826	322	317
1 x 240 RM	706	26	1.052	375	378
1 x 300 RM	882	29	1.282	425	437
1 x 400 RM	1.200	32	1.598	487	513
1 x 500 RM	1.510	36	2.022	558	600
1 x 630 RM	1.900	40	2.200	635	701

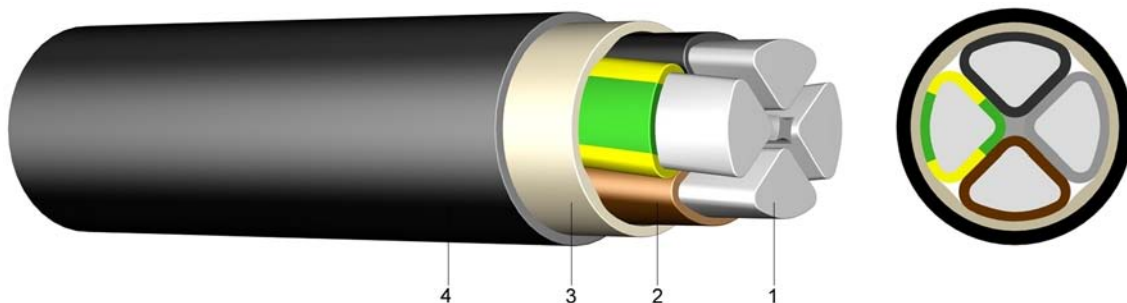
Number of cores and nominal cross section	Aluminium figure	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air
mm ²	kg/km	appr. mm	appr. kg/km	A	A
4 x 25 RE	294	27	887	102	82
4 x 35 RE	412	29	796	123	100
4 x 50 SE	588	31	1.017	144	119
4 x 70 SE	823	34	1.312	179	152
4 x 95 SE	1.140	40	1.698	215	186
4 x 120 SE	1.440	42	2.459	245	216
4 x 150 SE	1.764	51	2.594	275	246
4 x 185 SE	2.176	54	3.777	313	285
4 x 240 SE	2.822	60	4.106	364	338
4 x 35 RM	412	29	796	123	100
4 x 50 SM	588	31	1.017	144	119
4 x 70 SM	823	34	1.312	179	152
4 x 95 SM	1.140	40	1.698	215	186
4 x 120 SM	1.440	42	2.459	245	216
4 x 150 SM	1.764	51	2.594	275	246
4 x 185 SM	2.176	54	3.777	313	285
4 x 240 SM	2.822	60	4.106	364	338
4 x 300 SM	3.528	63	5.800	419	400
5 x 16 RM	245	25	858		
5 x 25 RM	383	29	1.214	102	81
5 x 35 RM	536	32	1.453	121	99
5 x 50 SM	781	35	1.855	144	119
5 x 70 SM	1.094	40	2.351	179	152
5 x 95 SM	1.484	45	3.071	215	186
5 x 120 SM	1.875	49	3.631	245	216
5 x 150 RM	2.218	58	4.800	275	246
5 x 185 RM	2.736	62	5.445	313	285
5 x 240 RM	3.530	71	6.950	364	338

E-AY2Y

PVC Insulated Heavy Current Cable with Aluminium Conductor and PE Outer Sheath

Application:

This power cable is suitable for fixed installations in cable ducts outdoors, in water or underground if no mechanical damage is to be expected.



Construction:

- 1 solid (RE/SE) or stranded (RM/SM) aluminium wire
- 2 core insulation of polyvinylchloride (PVC)
- 3 PVC core covering or taping
- 4 outer sheath of polyethylene (PE), black, Shore-hardness HD 55-60
UV-resistant

Standards:

ÖVE K 23 and K 603
HD 603 S1
DIN EN 60228 class 1 and 2 (construction)
HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U		[V]	600 / 1000 Volt
Test voltage		[V] _{Ac}	4000
Temperature range	in motion		- 5°C till +70°C
	fixed		-20°C till +70°C
Operating temperature	short circuit	°C	160
Bending radius	single-core style	x diameter	15
	multi-core style	x diameter	12
Short circuit time	max.	[sec]	5
Flammability	standard		EN 60332-1-2

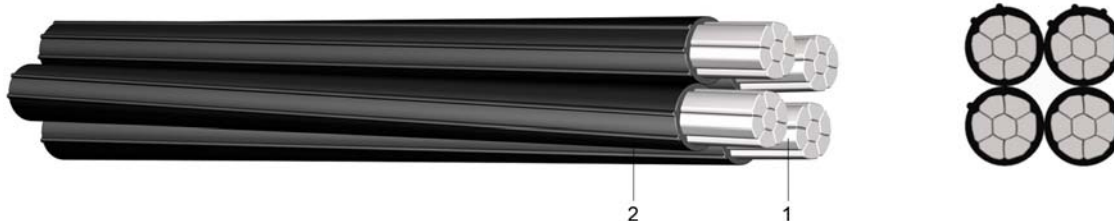
Number of cores and nominal cross section	Aluminium figure	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air
mm ²	kg/km	appr. mm	appr. kg/km	A	A
1 x 120 RM	348	20	525	389	302
3 x 240/120 SM	2.470	55	3.994	364	338
4 x 25 RE	294	24	769	102	82
4 x 50 SE	588	28	1.093	144	119
4 x 95 SE	1.117	37	1.930	215	186
4 x 150 SE	1.764	45	2.822	275	246
4 x 25 RM	294	24	769	102	82
4 x 35 SM	412	25	868	123	100
4 x 50 SM	588	28	1.091	144	119
4 x 95 SM	1.117	37	1.930	215	186
4 x 150 SM	1.764	43	2.449	275	246
4 x 185 SM	2.176	48	3.075	313	285
4 x 240 SM	2.822	57	4.509	364	338

E-A2Y

PE Insulated Overhead Line

Application:

This overhead line is particularly suited as a roof pylon cable outdoors, but not underground.



Construction:

1 stranded compacted aluminium wires
2 outer sheath of polyethylene (PE), black

Info:

NFA2X on request

Standards:

ÖVE / ÖNORM E8200-626
HD 626 S1

Technical data:

Nominal voltage U_0/U		[V]	600 / 1000 Volt
Test voltage		[V] _{AC}	3500
Temperature range	in motion		-20°C till +90°C
Operating temperature	short circuit	°C	120
Short circuit time	max.	[sec]	5
Bending radius	in motion	x diameter	18

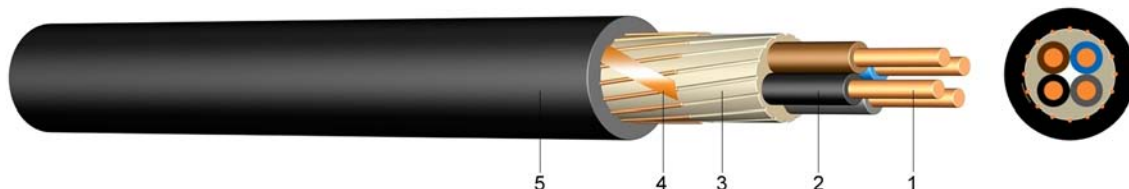
Number of cores and nominal cross section	Aluminium figure	max. overall diameter of insulation	Overall diameter	Weight	Current carrying capacity air
mm ²	kg/km	appr. mm	appr. mm	appr. kg/km	A
2 x 25 RM	147	9	17,4	210	80
4 x 25 RM	294	9	21,0	420	80
4 x 50 RM	588	13	27,5	740	125
4 x 70 RM	823	14	31,9	1.000	160
4 x 95 RM	1.117	16	36,7	1.350	185

NYCY

PVC Insulated Heavy Current Cable with Concentric Conductor

Application:

In dry, humid and wet locations, cable ducts, outdoors, underground and in water.



Construction:

- 1 solid (RE) bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 PVC core covering or taping
- 4 concentric conductor of copper wires and copper tape
- 5 outer sheath of polyvinylchloride (PVC), black

Standards:

DIN VDE 0276-603
DIN EN 60228 class 1 (construction)
HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U		[V]	600 / 1000 Volt
Test voltage		[V] _{AC}	4000
Temperature range	in motion		- 5°C till +70°C
	fixed		-20°C till +70°C
Operating temperature	short circuit	°C	160
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	12
Bending radius	in motion	x diameter	15
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section	Copper figure	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air
mm ²	kg/km	appr. mm	appr. kg/km	A	A
2 x 1,5 RE/ 1,5	51,8	12	225	27	20
2 x 2,5 RE/ 2,5	79,7	14	274	36	29
2 x 4 RE/ 4	122,9	15	366	47	39
2 x 6 RE/ 6	182,4	16	448	59	44
3 x 1,5 RE/1,5	70,1	13	240	27	20
3 x 2,5 RE/ 2,5	108,5	14	294	36	29
3 x 4 RE/ 4	161,3	16	413	47	39
3 x 6 RE/ 6	240,0	17	512	59	44
4 x 1,5 RE/1,5	84,5	14	271	27	20
4 x 2,5 RE/ 2,5	132,5	15	336	36	29
4 x 4 RE/ 4	199,7	17	477	47	39
4 x 6 RE/ 6	296,6	18	597	59	44
5 x 1,5 RE/1,5	98,9	15	305	*	*
5 x 2,5 RE/ 2,5	156,5	17	460	*	*
5 x 4 RE/ 4	238,1	20	610	*	*

Number of cores and nominal cross section	Copper figure	Overall diameter	Weight	Current carrying capacity ground A	Current carrying capacity air A
mm ²	kg/km	appr. mm	appr. kg/km		
5 x 6 RE/ 6	355,2	20	720	*	*
5 x 10 RE/ 10	600,0	23	1.080	*	*
7 x 1,5 RE/ 2,5	133,4	15	368	*	*
10 x 1,5 RE/ 2,5	175,7	18	483	*	*
12 x 1,5 RE/ 2,5	205,4	19	546	*	*
14 x 1,5 RE/ 2,5	234,2	20	601	*	*
16 x 1,5 RE/ 4	276,5	20	677	*	*
19 x 1,5 RE/ 4	319,7	22	747	*	*
24 x 1,5 RE/ 6	412,8	25	927	*	*
30 x 1,5 RE/ 6	498,2	26	1.081	*	*
7 x 2,5 RE/ 2,5	199,7	17	457	*	*
10 x 2,5 RE/ 4	286,1	20	633	*	*
12 x 2,5 RE/ 4	334,1	21	719	*	*
14 x 2,5 RE/ 6	402,2	22	803	*	*
16 x 2,5 RE/ 6	451,2	22	884	*	*
19 x 2,5 RE/ 6	522,2	24	900	*	*
24 x 2,5 RE/ 10	696,0	27	1.285	*	*
30 x 2,5 RE/ 10	840,0	28	1.418	*	*
7 x 4 RE/ 4	307,2	20	660	*	*
7 x 6 RE/ 6	469,4	25	790	*	*

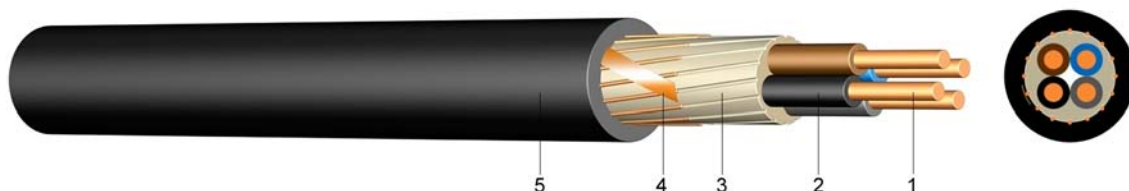
* The current carrying capacity of the cables depends on the number of cores loaded (see DIN VDE 0276-627)

E-YCY

PVC Insulated Cable with Concentric Conductor Screen Cross Section 16 mm²

Application:

In dry, humid and wet locations, cable ducts, outdoors, underground and in water.



Construction:

- 1 solid (RE) or stranded (RM/SM) bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 PVC core covering or taping
- 4 concentric conductor of copper wires and copper tape
- 5 outer sheath of polyvinylchloride (PVC), black

Standards:

DIN VDE 0276-603
DIN EN 60228 class 1 (construction)
HD 308 S2 (core identification)

Technical data:

Nominal voltage U ₀ /U		[V]	600 / 1000 Volt
Test voltage		[V] _{AC}	4000
Temperature range	in motion		- 5°C till +70°C
	fixed		-20°C till +70°C
Operating temperature	short circuit	°C	160
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	12
Bending radius	in motion	x diameter	15
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section	Copper figure	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air
mm ²	kg/km	appr. mm	appr. kg/km	A	A
4 x 1,5 RE/ 16	240,0	15	260	26	18
7 x 1,5 RE/ 16	283,2	17	540	*	*
10 x 1,5 RE/ 16	326,4	20	660	*	*
12 x 1,5 RE/ 16	355,2	20	700	*	*
14 x 1,5 RE/ 16	384,0	21	750	*	*
19 x 1,5 RE/ 16	456,0	23	900	*	*
24 x 1,5 RE/ 16	528,0	27	1.110	*	*
30 x 1,5 RE/ 16	614,4	28	1.260	*	*
3 x 2,5 RE/ 16	228,5	14	459	27	19
4 x 2,5 RE/ 16	278,4	16	330	34	25
5 x 2,5 RE/ 16	302,4	17	580	*	*
7 x 2,5 RE/ 16	350,4	18	630	*	*
10 x 2,5 RE/ 16	422,4	21	800	*	*
12 x 2,5 RE/ 16	470,4	22	890	*	*
14 x 2,5 RE/ 16	518,4	23	980	*	*
19 x 2,5 RE/ 16	638,4	26	1.180	*	*
24 x 2,5 RE/ 16	758,4	29	1.450	*	*

Number of cores and nominal cross section	Copper figure	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air
mm ²	kg/km	appr. mm	appr. kg/km	A	A
30 x 2,5 RE/ 16	902,4	30	1.630	*	*
2 x 4 RE/ 16	259,2	16	510	44	34
4 x 4 RE/ 16	336,0	18	630	44	34
5 x 4 RE/ 16	374,4	19	730	*	*
7 x 4 RE/ 16	451,2	24	950	*	*
2 x 6 RE/ 16	299,5	17	580	56	43
4 x 6 RE/ 16	412,8	19	750	56	43
5 x 6 RE/ 16	470,4	21	860	*	*
4 x 10 RE/ 16	566,4	22	970	75	60
5 x 10 RM/ 16	662,4	25	1.200	*	*
5 x 16 RM/ 16	950,4	27	1.475	*	*

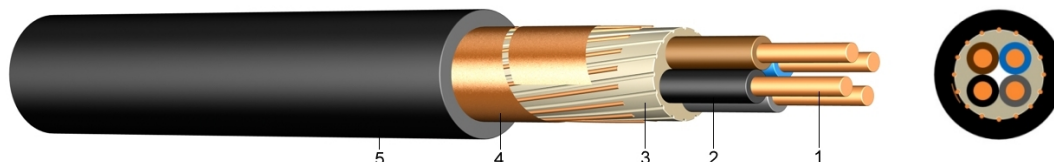
* The current carrying capacity of the cables depends on the number of cores loaded (see DIN VDE 0276-627)

E-XYCY

PVC Insulated Cable with Concentric Conductor Screen Cross Section 16 mm² and Coppertape

Application:

In dry, humid and wet locations, cable ducts, outdoors, underground and in water.



Construction:

- 1 solid (RE) or stranded (RM/SM) bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 PVC core covering or taping
- 4 concentric conductor of copper wires and overlapping copper tape
- 5 outer sheath of polyvinylchloride (PVC) black , UV-resistant

Standards:

adapted to ÖVE K23 and K 603
HD 603.S1
DIN EN 60228 class 1 (construction)
HD 308 S2 (core identification)

Technical Data:

Nominal Voltage U ₀ /U		[V]	600 / 1000 Volt
Test Voltage		[V] _{AC}	4000
Temperatur range	in motion		-5°C till +70°C
	fixed		-20°C till +70°C
Operating temperature	Short circuit	°C	160
Short circuit time	max .	in [sec]	5
Bending radius	Short circuit time	x diameter	12
	in motion	x diameter	15
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section	Copper figure	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air
mm ²	kg/km	appr. mm	appr. kg/km	A	A
4 x 1,5 RE/ 16	272,6	15	260	26	18
7 x 1,5 RE/ 16	313,0	17	540	*	*
12 x 1,5 RE/ 16	395,5	20	700	*	*
14 x 1,5 RE/ 16	450,2	21	750	*	*
19 x 1,5 RE/ 16	510,7	23	900	*	*
24 x 1,5 RE/ 16	595,2	27	1.110	*	*
30 x 1,5 RE/ 16	689,3	28	1.260	*	*
37 x 1,5 RE/ 16	793,9	27	1.284	*	*
61 x 1,5 RE/ 16	1.170,2	34	1.993	*	*
3 x 2,5 RE/ 16	271,7	14	280	36	25
4 x 2,5 RE/ 16	302,4	16	330	36	25
5 x 2,5 RE/ 16	333,1	17	580	*	*
7 x 2,5 RE/ 16	384,0	18	630	*	*
12 x 2,5 RE/ 16	521,3	22	890	*	*
19 x 2,5 RE/ 16	701,8	26	1.180	*	*

Number of cores and nominal cross section	Copper figure	Overall diameter	Weight	Current carrying capacity ground A	Current carrying capacity air A
mm ²	kg/km	appr. mm	appr. kg/km		
4 x 4 RE/ 16	370,6	18	630	47	34
4 x 6 RE/ 16	448,3	19	750	59	43
4 x 10 RE/ 16	609,6	22	970	79	59
4 x 16 RE/ 16	853,4	24	1.280	102	79
5 x 16 RE/ 16	1.077,1	27	1.445	*	*
5 x 35 RE/ 16	1.862,4	33	2.594	*	*

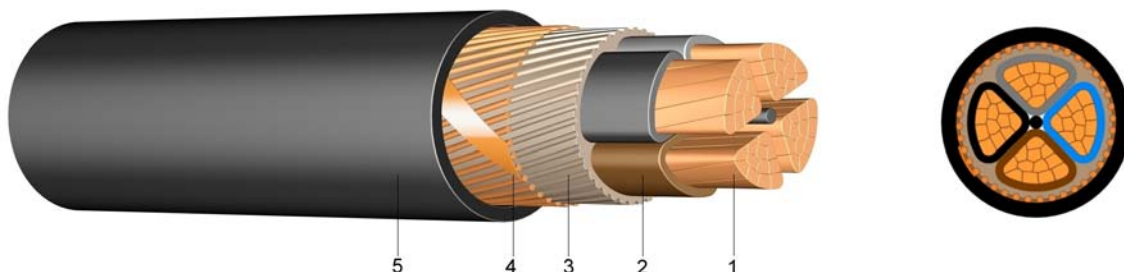
* The current carrying capacity of the cables depends on the number of cores loaded (see DIN VDE 0276-627)

NYCWX

PCV Insulated Heavy Current Cable with Concentric Conductor

Application:

In dry, humid and wet locations, cable ducts, outdoors, underground and in water.



Construction:

- 1 solid or stranded bare copper wire
- 2 core insulation of polyvinylchloride (PVC)
- 3 PVC core covering
- 4 concentric conductor of copper wires and copper tape applied helically
- 5 outer sheath of polyvinylchloride (PVC), black

Standards:

DIN VDE 0276-603
DIN EN 60228 class 1 (construction)
HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U		[V]	600 / 1000 Volt
Test voltage		[V] _{AC}	4000
Temperature range	in motion		- 5°C till +70°C
	fixed		-20°C till +70°C
Operating temperature	short circuit	°C	160
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	12
Bending radius	in motion	x diameter	15
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section	Copper figure	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air
mm ²	kg/km	appr. mm	appr. kg/km	A	A
2 x 10 RE/ 10	312,0	19	660	79	60
3 x 10 RE/ 10	408,0	20	760	79	60
2 x 16 RE/ 16	489,6	21	880	102	80
3 x 16 RE/ 16	643,2	22	1.040	102	80
3 x 25 RM/ 16	902,4	26	1.490	133	108
3 x 25 RM/ 25	1.003,2	26	1.580	133	108
3 x 35 SM/ 16	1.190,4	27	1.800	160	132
3 x 35 SM/ 35	1.401,6	29	1.880	160	132
3 x 50 SM/ 25	1.723,2	30	2.260	190	160
3 x 50 SM/ 50	1.999,7	31	2.460	190	160
3 x 70 SM/ 35	2.409,6	33	3.060	234	202
3 x 70 SM/ 70	2.796,5	34	3.310	234	202
3 x 95 SM/ 50	3.295,7	38	4.080	280	249
3 x 95 SM/ 95	3.791,0	40	4.510	280	249
3 x 120 SM/ 70	4.236,5	42	5.040	319	289
3 x 120 SM/120	4.785,6	43	5.490	319	289

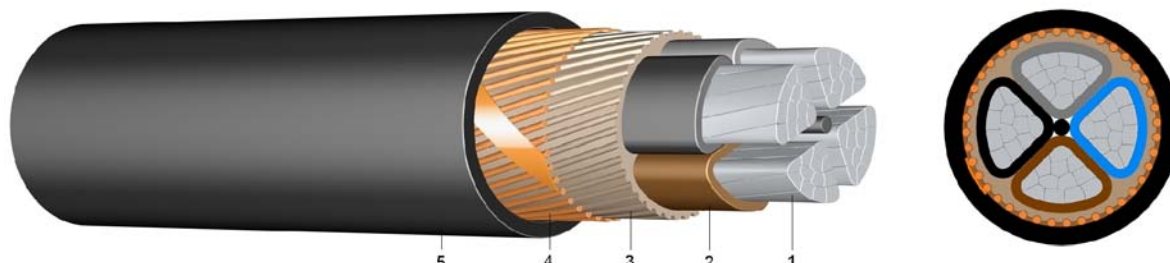
Number of cores and nominal cross section	Copper figure	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air
mm ²	kg/km	appr. mm	appr. kg/km	A	A
3 x 150 SM/ 70	5.100,5	46	6.040	357	329
3 x 150 SM/150	5.970,2	47	6.750	357	329
3 x 185 SM/ 95	6.383,0	51	7.510	402	377
3 x 240 SM/120	8.241,6	57	9.640	463	377
4 x 10 RE/ 10	504,0	21	890	79	60
4 x 16 RE/ 16	795,8	23	1.240	102	80
4 x 25 RM/ 16	1.142,4	28	1.800	133	108
4 x 35 SM/ 16	1.526,4	28	2.130	160	132
4 x 50 SM/ 25	2.203,2	33	2.870	190	160
4 x 70 SM/ 35	3.081,6	36	3.870	234	202
4 x 95 SM/ 50	4.207,7	43	5.303	280	249
4 x 120 SM/ 70	5.388,5	46	6.380	319	289
4 x 150 SM/ 70	6.540,5	51	7.730	357	329
4 x 185 SM/ 95	8.159,0	57	9.770	402	377
4 x 240 SM/120	10.476,5	64	12.540	463	443

NAYCWY

PCV Insulated Heavy Current Cable with Concentric Conductor

Application:

In dry, humid and wet locations, cable ducts, outdoors, underground and in water.



Construction:

- 1 solid or stranded bare aluminium wire
- 2 core insulation of polyvinylchloride (PVC)
- 3 PVC core covering
- 4 concentric conductor of copper wires and copper tape applied helically
- 5 outer sheath of polyvinylchloride (PVC), black

Standards:

DIN VDE 0276-603
DIN EN 60228 class 1 (construction)
HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U		[V]	600 / 1000 Volt
Test voltage		[V] _{AC}	4000
Temperature range	in motion		- 5°C till +70°C
	fixed		-20°C till +70°C
Operating temperature	short circuit	°C	160
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	12
Flammability	standard		EN 60332-1-2

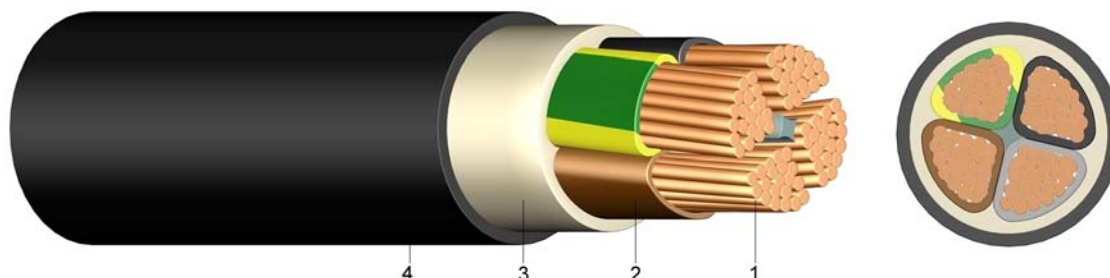
Number of cores and nominal cross section	Copper figure	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air	
mm²	kg/km	appr. mm	appr. kg / km	A	A	
3 x 50 SM/ 25	423,4	283,2	30,0	1.191	145	121
3 x 70 SM/ 35	593,3	393,6	33,0	1.536	180	155
3 x 95 SM/ 50	805,4	559,7	38,1	2.039	216	189
3 x 120 SM/ 70	1.016,6	780,5	41,0	2.464	246	220
3 x 150 SM/ 70	1.270,1	780,5	44,0	2.862	276	249
3 x 185 SM/ 95	1.567,7	1.055,0	52,0	3.696	287	313
3 x 240 SM/120	2.034,2	1.329,6	56,8	5.053	362	339
4 x 25 RM/ 16	282,2	182,4	28,0	1.110	103	83
4 x 35 SM/ 16	395,5	182,4	30,0	1.125	123	101
4 x 50 SM/ 25	564,5	283,2	33,0	1.472	145	121
4 x 70 SM/ 35	790,1	393,6	37,0	1.880	180	155
4 x 95 SM/ 50	1.072,3	559,7	42,0	2.525	216	189
4 x 120 SM/ 70	1.354,6	780,5	46,0	3.069	246	220
4 x 150 SM/ 70	1.693,4	780,5	50,0	3.642	276	249
4 x 185 SM/ 95	2.089,0	1.055,0	58,0	4.610	313	287
4 x 240 SM/120	2.709,1	1.329,6	63,0	6.269	362	339

(N)2XY

PVC-isolierte Starkstromkabel 0,6/1kV ein- und mehradrig

Application:

This power cable is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground if no mechanical damage is to be expected.


Construction:

- 1 solid (RE) or stranded (RM/SM) bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 PVC core covering or taping
- 4 outer sheath of polyethylene (PE), black, Shore-hardness >55

Standards:

adapted to DIN VDE 0276-603
DIN EN 60228 class 1 and 2 (construction)
HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U

[V]

600 / 1000 Volt

Test voltage

[V]_{AC}

4000

Temperature range

in motion

-5°C till +70°C

fixed

-20°C till +70°C

Bending radius

Single core

x diameter

15

Multi core

x diameter

12

Flammability

Standard

EN 60332-1-2

Number of cores and nominal cross section	Copper figure	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air
mm ²	kg/km	appr. mm	appr. kg/km	A	A
1 x 16 RM	153,6	9,3	211	115	102
1 x 25 RM	240,0	10,6	310	148	138
1 x 35 RM	336,0	11,7	401	177	170
1 x 50 RM	480,0	13,0	524	209	207
1 x 70 RM	672,0	14,9	731	256	263
1 x 95 RM	912,0	17,3	1.085	307	325
1 x 120 RM	1.152,0	18,5	1.310	349	380
1 x 150 RM	1.440,0	20,6	1.525	393	437
1 x 185 RM	1.776,0	23,1	1.868	445	507
1 x 240 RM	2.304,0	26,0	2.500	517	604
1 x 300 RM	2.880,0	28,4	3.180	583	697
3 x 1,5 RE	43,2	10,6	162	31	24
3 x 2,5 RE	72,0	11,5	205	40	32
3 x 4 RE	115,2	12,4	264	52	42
3 x 6 RE	172,8	13,5	340	64	53
3 x 10 RE	288,0	16,5	534	86	74
3 x 16 RM	460,8	18,9	761	112	98

Number of cores and nominal cross section	Copper figure	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air
mm ²	kg/km	appr. mm	appr. kg/km	A	A
3 x 25/ 16 SM	873,6	23,5	1.415	145	133
3 x 35/ 16 SM	1.161,6	25,5	1.717	174	162
3 x 50/ 25 SM	1.680,0	28,6	2.331	206	197
3 x 70/ 35 SM	2.352,0	35,9	3.278	254	250
3 x 95/ 50 SM	3.216,0	41,0	4.432	305	308
3 x 120/ 70 SM	4.128,0	42,0	5.538	348	359
3 x 150/ 70 SM	4.992,0	47,1	6.598	392	412
3 x 185/ 95 SM	6.240,0	52,2	8.366	444	475
3 x 240/120 SM	8.064,0	58,2	10.628	517	564
3 x 300/150 SM	10.080,0	63,8	13.164	585	649
4 x 1,5 RE	57,6	11,3	189	31	24
4 x 2,5 RE	96,0	12,3	243	40	32
4 x 4 RE	153,6	13,4	314	52	42
4 x 6 RM	230,4	14,6	408	64	53
4 x 10 RM	384,0	17,9	655	86	74
4 x 16 RM	614,4	20,5	944	112	98
4 x 25 RM	960,0	24,2	1.397	145	133
4 x 35 SM	1.344,0	26,9	1.806	174	162
4 x 50 SM	1.920,0	30,2	2.369	206	197
4 x 70 SM	2.688,0	35,4	3.365	254	250
4 x 95 SM	3.648,0	40,9	4.586	305	308
4 x 120 SM	4.608,0	44,2	5.516	348	359
4 x 150 SM	5.760,0	49,0	6.940	392	412
4 x 185 SM	7.104,0	55,8	8.645	444	475
4 x 240 SM	9.216,0	62,7	11.126	517	564
4 x 300 SM	11.520,0	68,4	13.688	585	649
5 x 1,5 RE	72,0	12,3	223	**	**
5 x 2,5 RE	120,0	13,4	289	**	**
5 x 4 RE	192,0	14,6	384	**	**
5 x 6 RE	288,0	16,0	502	**	**
5 x 10 RE	480,0	19,6	793	**	**
5 x 16 RE	768,0	22,6	1.125	**	**
5 x 25 RM	1.200,0	26,5	1.663	**	**
5 x 35 RM	1.680,0	29,5	2.175	**	**
7 x 1,5 RE	100,8	13,1	259	**	**
7 x 2,5 RE	168,0	14,3	341	**	**
9 x 1,5 RE	129,6	15,5	322	**	**
9 x 2,5 RE	216,0	17,0	428	**	**
10 x 1,5 RE	144,0	16,0	349	**	**
10 x 2,5 RE	240,0	17,6	465	**	**
12 x 1,5 RE	172,8	16,5	392	**	**
12 x 2,5 RE	288,0	18,2	529	**	**
14 x 1,5 RE	201,6	17,2	438	**	**
14 x 2,5 RE	336,0	19,0	596	**	**
15 x 1,5 RE	216,0	18,1	465	**	**
15 x 2,5 RE	360,0	20,0	633	**	**
19 x 1,5 RE	273,6	18,9	550	**	**
19 x 2,5 RE	456,0	20,9	758	**	**
21 x 1,5 RE	302,4	19,9	599	**	**
21 x 2,5 RE	504,0	22,0	827	**	**
24 x 1,5 RE	345,6	21,8	676	**	**
24 x 2,5 RE	576,0	24,2	935	**	**

* on enquiry

** The current carrying capacity of the cables depends on the number of cores loaded (see DIN VDE 0276-627)

Copper Rope

Application: For grounding purposes in heavy current systems.



Construction: 1 stranded compacted tinned or bare copper

Standards: soft style: IEC 60228 class 2
hard style: DIN VDE 48201
DIN EN 60228 class 2 (construction)

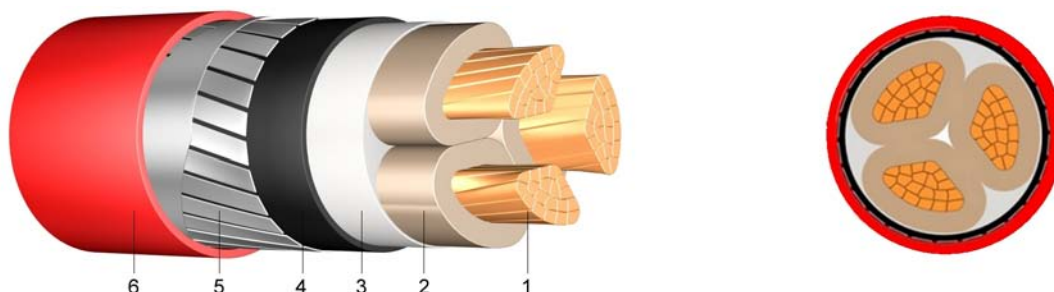
Number of cores and nominal cross section mm ²	Copper figure kg/km	Number of conductor min.	Overall diameter appr.mm	Weight appr. kg/km
soft, bare copper				
1 x 16	153,6	6	5,1	142
1 x 25	240,0	6	6,3	222
1 x 35	336,0	6	7,5	311
1 x 50	480,0	6	9,0	444
1 x 70	672,0	12	10,5	622
1 x 95	912,0	15	12,5	844
1 x 120	1.152,0	18	14,0	1.067
1 x 150	1.440,0	18	15,2	1.333
1 x 185	1.776,0	30	17,5	1.644
1 x 240	2.304,0	34	20,2	2.133
soft, tinned copper				
1 x 25	240,0	6	6,3	222
1 x 35	336,0	6	7,5	311
1 x 50	480,0	12	9,0	444
1 x 70	672,0	15	10,5	622
1 x 95	912,0	18	12,5	844
1 x 120	1.152,0	18	14,0	1.067
1 x 150	1.440,0	30	15,2	1.333
1 x 185	1.776,0	34	17,5	1.644
1 x 240	2.304,0	37	20,2	2.133
Number of cores and nominal cross section mm ²	Copper figure kg/km	Number of conductor exactly	Overall diameter appr.mm	Weight appr. kg/km
hard, bare copper				
1 x 35	336,0	7	7,5	311
1 x 50	480,0	7 / 19	9,0	444
1 x 95	912,0	19	12,5	844
1 x 120	1.152,0	19	14,0	1.067
1 x 150	1.440,0	37	15,2	1.333

(N)YFGY

Three-Core PVC Insulated Cable with Flat Wire Armour

Application:

To be laid directly in ground, in water, outdoors, indoors and in cable ducts if increased mechanical protection is required or if greater tensile stresses are to be expected during installation and operation.



Construction:

- 1 stranded bare copper
- 2 core insulation of polyvinylchloride (PVC-DIV4)
- 3 rubber core covering
- 4 inner sheath of polyvinylchloride (PVC-DMV5)
- 5 armour of galvanised flat steel wires and counter helix
- 6 outer sheath of polyvinylchloride (PVC), red

Standards:

DIN VDE 0271
DIN VDE 0276-603
DIN EN 60228 class 2 (construction)

Technical data:

Nominal voltage U_0/U		[V]	3600 / 6000 Volt
Test voltage		[V] _{AC}	11000
Temperature range	in motion		- 5°C till +70°C
	fixed		-20°C till +70°C
Operating temperature	short circuit	°C	160
Short circuit time	max.	[sec]	5
Bending radius	in motion	x diameter	15
Flammability	standard		EN 60332-1-2

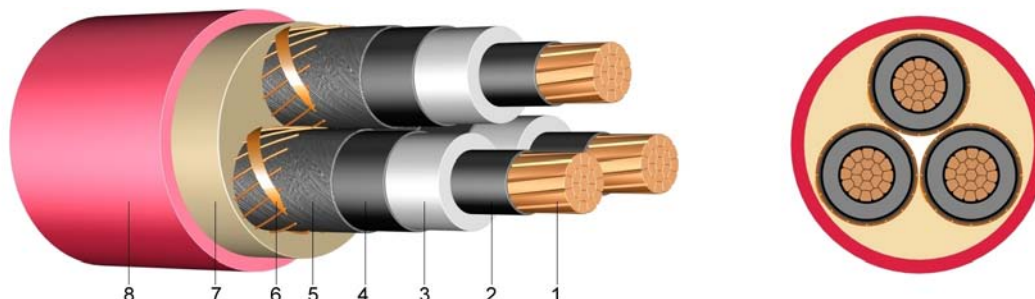
Number of cores and nominal cross section	Copper figure	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air
mm ²	kg/km	appr. mm	appr. kg/km	A	A
3 x 50 SM	1.440,0	41	3.520	175	165
3 x 70 SM	2.016,0	44	4.345	220	205
3 x 95 SM	2.736,0	47	5.330	260	250
3 x 120 SM	3.456,0	49	6.220	295	285
3 x 150 SM	4.320,0	52	7.120	335	325
3 x 185 SM	5.328,0	57	8.625	370	380
3 x 240 SM	6.912,0	59	9.885	425	430

N2XSEY

Three-Core XLPE Insulation Cable with PVC Outer Sheath

Application:

To be laid directly in ground, water, outdoors, indoors and in cable ducts e.g. in industrial and switchboard plants.



Construction:

- 1 stranded bare copper
- 2 inner layer of semi-conducting material
- 3 core insulation of cross-linked polyethylene
- 4 outer layer of semi-conducting material
- 5 semi-conducting tape
- 6 screen of copper wires
- 7 inner covering over laid-up cores
- 8 outer sheath of polyvinylchloride (PVC), red

Standards:

DIN VDE 0276-620
 HD 620 S1: 1996
 IEC 60502
 DIN EN 60228 class 2 (construction)

Technical data:

Nominal voltage U_0/U

Test voltage

Temperature range

Operating temperature

Short circuit time

Bending radius

Flammability

in motion
 fixed

short circuit

max.

min.

standard

[V]

[V]_{AC}

°C

[sec]

x diameter

6000 / 10000 Volt

21000

- 5°C till +70°C

-20°C till +70°C

250

5

15

EN 60332-1-2

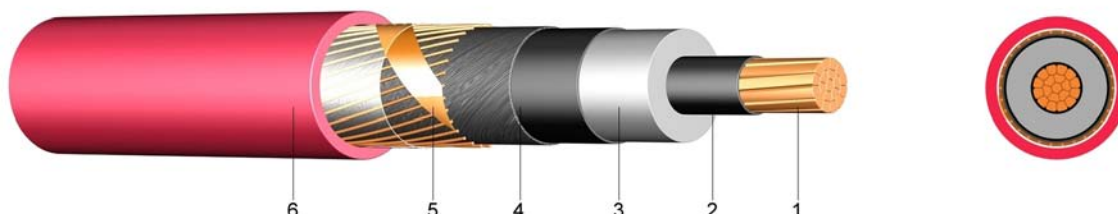
Number of cores and nominal cross section	Copper figure	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air
mm ²	kg/km	appr. mm	appr. kg/km	A	A
3 x 35 RM/16	1.209,6	49	2.600	213	213
3 x 50 RM/16	1.622,4	51	2.900	220	236
3 x 70 RM/16	2.198,4	55	3.350	261	265
3 x 95 RM/16	2.994,2	58	4.200	312	322
3 x 120 RM/16	3.638,4	62	5.050	355	370
3 x 150 RM/25	4.603,2	66	6.000	399	420
3 x 185 RM/25	5.611,2	69	7.200	451	481
3 x 240 RM/25	7.195,2	75	9.000	523	566

N2XSY

XLPE Insulated Single-Core Cable with PVC Outer Sheath

Application:

To be laid directly in ground, outdoors, indoors and in cable ducts.



Construction:

- 1 stranded (RM) bare copper
- 2 inner layer of semi-conducting material
- 3 core insulation of cross-linked polyethylene
- 4 outer layer of semi-conducting material
- 5 screen of copper wires
- 6 outer sheath of polyvinylchloride (PVC), red

Standards:

DIN VDE 0276-620
HD 620 S1: 1995
DIN EN 60228 class 2 (construction)

Technical data:

Test voltage	6 / 10 kV	[kV]	21 / 5 min.
	12 / 20 kV	[kV]	42 / 5 min.
	18 / 30 kV	[kV]	63 / 5 min.
Temperature range	in motion		- 5°C till +70°C
	fixed		-20°C till +70°C
Operating temperature	short circuit	°C	250
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	15
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Copper figure kg/km	Overall diameter appr. mm	Overall diameter max. value appr. mm	Weight appr. kg/km	Current carrying capacity ground A*	Current carrying capacity air A*
6 / 10 kV						
1 x 35 RM/16	518,4	23	28	900	187	197
1 x 50 RM/16	662,4	24	29	1.050	220	236
1 x 70 RM/16	854,4	26	31	1.300	268	294
1 x 95 RM/16	1.094,4	27	32	1.600	320	358
1 x 120 RM/16	1.334,4	29	34	1.850	363	413
1 x 150 RM/25	1.723,2	30	35	2.200	405	468
1 x 185 RM/25	2.059,2	32	37	2.600	456	535
1 x 240 RM/25	2.587,2	34	39	3.150	526	631
1 x 300 RM/25	3.163,2	36	40	3.750	591	722
1 x 400 RM/35	4.233,6	40	45	4.650	662	827
1 x 500 RM/35	5.193,6	43	47	5.750	739	921

Number of cores and nominal cross section mm ²	Copper figure kg/km	Overall diameter appr. mm	Overall diameter max. value appr. mm	Weight appr. kg/km	Current carrying capacity ground A*	Current carrying capacity air A*
12 / 20 kV						
1 x 35 RM/16	518,4	27	32	1.100	189	200
1 x 50 RM/16	662,4	28	33	1.250	222	239
1 x 70 RM/16	854,4	30	35	1.450	271	297
1 x 95 RM/16	1.094,4	31	36	1.750	323	361
1 x 120 RM/16	1.334,4	33	38	2.050	367	416
1 x 150 RM/25	1.723,2	34	39	2.400	409	470
1 x 185 RM/25	2.059,2	36	41	2.800	461	538
1 x 240 RM/25	2.587,2	39	44	3.400	532	634
1 x 300 RM/25	3.163,2	41	46	4.000	599	724
1 x 400 RM/35	4.233,6	44	49	4.950	671	829
1 x 500 RM/35	5.193,6	47	52	6.050	754	953

Number of cores and nominal cross section mm ²	Copper figure kg/km	Overall diameter appr. mm	Overall diameter max. value appr. mm	Weight appr. kg/km	Current carrying capacity ground A*	Current carrying capacity air A*
18 / 30 kV						
1 x 50 RM/16	662,4	33	38	1.450	225	241
1 x 70 RM/16	854,4	35	40	1.700	274	299
1 x 95 RM/16	1.094,4	36	41	2.050	327	363
1 x 120 RM/16	1.334,4	38	43	2.300	371	418
1 x 150 RM/25	1.723,2	39	44	2.700	414	472
1 x 185 RM/25	2.059,2	41	46	3.100	466	539
1 x 240 RM/25	2.587,2	43	48	3.700	539	635
1 x 300 RM/25	3.163,2	46	51	4.350	606	725
1 x 400 RM/35	4.233,6	49	54	5.300	680	831
1 x 500 RM/35	5.193,6	52	57	6.450	765	953

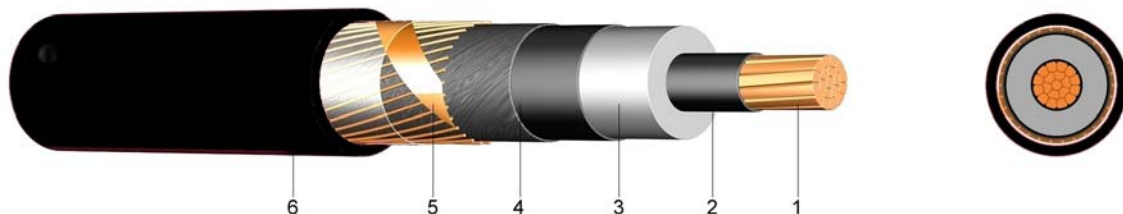
* trefoil touching arrangement

N2XS2Y

XLPE Insulated Single-Core Cable with PE Outer Sheath

Application:

To be laid directly in ground, outdoors, indoors and in cable ducts.



Construction:

- 1 stranded (RM) bare copper
- 2 inner layer of semi-conducting material
- 3 core insulation of cross-linked polyethylene
- 4 outer layer of semi-conducting material
- 5 screen of copper wires
- 6 outer sheath of polyethylene (PE), black

Standards:

DIN VDE 0276-620
HD 620 S1: 1996
DIN EN 60228 class 2 (construction)

Technical data:

Test voltage	6 / 10 kV	[kV]	21 / 5 min.
	12 / 20 kV	[kV]	42 / 5 min.
	18 / 30 kV	[kV]	63 / 5 min.
Temperature range	in motion		-20°C till +90°C
	fixed		-20°C till +90°C
Operating temperature	short circuit	°C	250
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	15

Number of cores and nominal cross section mm ²	Copper figure kg/km	Overall diameter appr. mm	Overall diameter max. value appr. mm	Weight appr. kg/km	Current carrying capacity ground A*	Current carrying capacity air A*
6 / 10 kV						
1 x 35 RM/16	518,4	23	28	820	187	197
1 x 50 RM/16	662,4	24	29	960	220	236
1 x 70 RM/16	854,4	26	31	1.150	269	292
1 x 95 RM/16	1.094,4	27	32	1.450	320	358
1 x 120 RM/16	1.334,4	29	34	1.700	363	413
1 x 150 RM/25	1.723,2	30	35	2.000	405	468
1 x 185 RM/25	2.059,2	32	37	2.350	456	535
1 x 240 RM/25	2.587,2	34	39	2.900	526	631
1 x 300 RM/25	3.163,2	36	41	3.550	591	722
1 x 400 RM/35	4.233,6	40	45	4.500	662	827
1 x 500 RM/35	5.193,6	43	48	5.550	744	949

Number of cores and nominal cross section mm²	Copper figure kg/km	Overall diameter appr. mm	Overall diameter max. value appr. mm	Weight appr. kg/km	Current carrying capacity ground A*	Current carrying capacity air A*
12 / 20 kV						
1 x 35 RM/16	518,4	27	32	1.000	189	200
1 x 50 RM/16	662,4	28	33	1.150	222	239
1 x 70 RM/16	854,4	30	35	1.350	271	297
1 x 95 RM/16	1.094,4	31	36	1.600	323	361
1 x 120 RM/16	1.334,4	33	38	1.850	367	416
1 x 150 RM/25	1.723,2	34	39	2.250	409	470
1 x 185 RM/25	2.059,2	36	41	2.600	461	538
1 x 240 RM/25	2.587,2	39	44	3.150	532	634
1 x 300 RM/25	3.163,2	41	46	3.800	599	724
1 x 400 RM/35	4.233,6	44	49	4.750	671	829
1 x 500 RM/35	5.193,6	47	52	5.800	754	953

Number of cores and nominal cross section mm²	Copper figure kg/km	Overall diameter appr. mm	Overall diameter max. value appr. mm	Weight appr. kg/km	Current carrying capacity ground A*	Current carrying capacity air A*
18 / 30 kV						
1 x 50 RM/16	662,4	33	38	1.350	225	241
1 x 70 RM/16	854,4	35	40	1.600	274	299
1 x 95 RM/16	1.094,4	36	41	1.900	327	363
1 x 120 RM/16	1.334,4	38	43	2.200	371	418
1 x 150 RM/25	1.723,2	39	44	2.550	414	472
1 x 185 RM/25	2.059,2	41	46	2.950	466	539
1 x 240 RM/25	2.587,2	43	48	3.500	539	635
1 x 300 RM/25	3.163,2	46	51	4.150	606	725
1 x 400 RM/35	4.233,6	49	54	5.150	680	831
1 x 500 RM/35	5.193,6	52	57	6.200	765	953

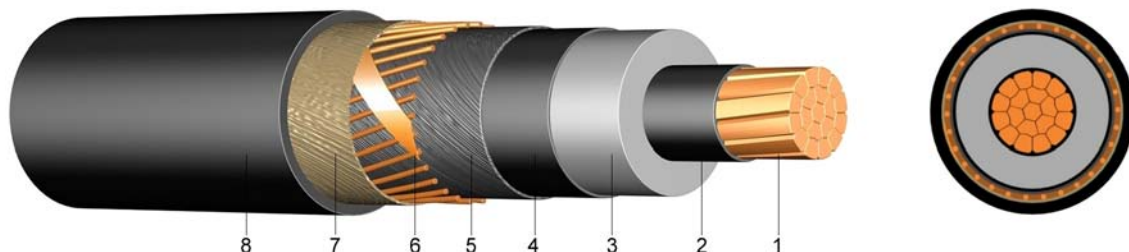
* trefoil touching arrangement

N2XS(F)2Y

Single-Core XLPE Insulated Cable with PE Outer Sheath, longitudinally watertight

Application:

To be laid directly in ground, in water, outdoors, indoors and in cable ducts.



Construction:

- 1 stranded (RM) bare copper wire
- 2 inner layer of semi-conducting material
- 3 core insulation of cross-linked polyethylene
- 4 outer layer of semi-conducting material
- 5 swellable tape
- 6 screen of copper wires
- 7 waterproofing tape
- 8 outer sheath of polyethylene (PE), black

Standards:

DIN VDE 0276-620
HD 620 S1 : 1995
DIN EN 60228 class 2 (construction)

Technical data:

Test voltage	6 / 10 kV	[kV]	21 / 5 min.
	12 / 20 kV	[kV]	42 / 5 min.
	18 / 30 kV	[kV]	63 / 5 min.
Temperature range	in motion		-20°C till +90°C
	fixed		-20°C till +90°C
Operating temperature	short circuit	°C	250
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	15

Number of cores and nominal cross section mm ²	Copper figure	Overall diameter	Overall diameter	Weight	Current carrying capacity ground	Current carrying capacity air
	kg/km	appr. mm	max. value appr. mm	appr. kg/km	A*	A*
6 / 10 kV						
1 x 35 RM/16	518,4	23	28	820	187	197
1 x 50 RM/16	662,4	24	29	960	220	236
1 x 70 RM/16	854,4	26	31	1.200	268	294
1 x 95 RM/16	1.094,4	27	32	1.450	320	358
1 x 120 RM/16	1.334,4	29	34	1.700	363	413
1 x 150 RM/25	1.723,2	30	35	2.000	405	468
1 x 185 RM/25	2.059,2	32	37	2.350	456	535
1 x 240 RM/25	2.587,2	34	39	2.900	526	631
1 x 300 RM/25	3.163,2	36	41	3.550	591	722
1 x 400 RM/35	4.233,6	40	45	4.500	662	827
1 x 500 RM/35	5.193,6	43	48	5.550	744	949

Number of cores and nominal cross section mm²	Copper figure kg/km	Overall diameter appr. mm	Overall diameter max. value appr. mm	Weight appr. kg/km	Current carrying capacity ground A*	Current carrying capacity air A*
12 / 20 kV						
1 x 50 RM/16	662,4	28	33	1.150	222	239
1 x 70 RM/16	854,4	30	35	1.350	271	297
1 x 95 RM/16	1.094,4	31	36	1.600	232	361
1 x 120 RM/16	1.334,4	33	38	1.850	367	416
1 x 150 RM/25	1.723,2	34	39	2.250	409	470
1 x 185 RM/25	2.059,2	36	41	2.600	461	538
1 x 240 RM/25	2.587,2	39	44	3.150	532	634
1 x 300 RM/25	3.163,2	41	46	3.800	599	724
1 x 400 RM/35	4.233,6	44	49	4.750	671	829
1 x 500 RM/25	5.193,6	47	52	6.450	750	927

Number of cores and nominal cross section mm²	Copper figure	Overall diameter	Overall diameter	Weight	Current carrying capacity ground A*	Current carrying capacity air A*
	kg/km	appr. mm	max. value appr. mm	appr. kg/km		
18 / 30 kV						
1 x 50 RM/16	662,4	33	38	1.350	225	241
1 x 95 RM/16	1.094,4	36	41	1.900	327	363
1 x 120 RM/16	1.334,4	38	43	2.200	371	418
1 x 150 RM/25	1.723,2	39	44	2.550	414	472
1 x 185 RM/25	2.059,2	41	46	2.950	466	539
1 x 240 RM/25	2.587,2	43	48	3.500	539	635
1 x 300 RM/25	3.163,2	46	51	4.150	606	725
1 x 400 RM/25	4.233,6	49	54	5.050	680	831
1 x 500 RM/35	5.193,6	52	57	6.200	765	953

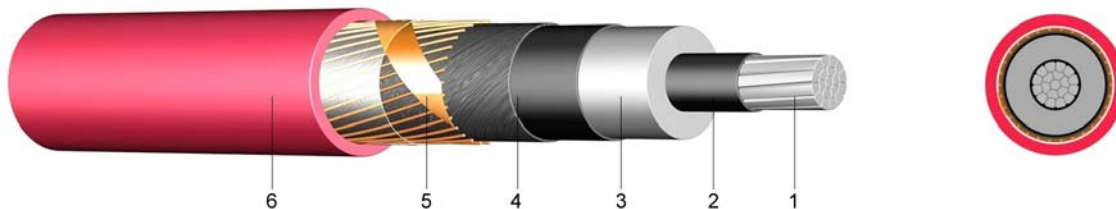
* trefoil touching arrangement

NA2XSY

XLPE Insulated Single-Core Cable with PVC Outer Sheath

Application:

To be laid directly in ground, outdoors, indoors and in cable ducts.



Construction:

- 1 stranded (RM) aluminium wires
- 2 inner layer of semi-conducting material
- 3 core insulation of cross-linked polyethylene
- 4 outer layer of semi-conducting material
- 5 screen of copper wires
- 6 outer sheath of polyvinylchloride (PVC), red

Standards:

DIN VDE0276-620
HD 620 S1: 1995
DIN EN 60228 class 2 (construction)

Technical data:

Test voltage	6 / 10 kV	[kV]	21 / 5 min.
	12 / 20 kV	[kV]	42 / 5 min.
	18 / 30 kV	[kV]	63 / 5 min.
Temperature range	in motion		- 5°C till +70°C
	fixed		-20°C till +70°C
Operating temperature	short circuit	°C	250
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	15
Flammability	standard		EN 60332-1-2

Number of cores and nominal cross section mm ²	Aluminium figure kg/km	Copper figure kg/km	Overall diameter appr. mm	Overall diameter max. value appr. mm	Weight appr. kg/km	Current carrying capacity ground A*	Current carrying capacity air A*
6 / 10 kV							
1 x 35 RM/16	103	182,4	23	28	700	145	153
1 x 50 RM/16	147	182,4	24	29	750	171	183
1 x 70 RM/16	206	182,4	26	31	850	208	228
1 x 95 RM/16	279	182,4	27	32	950	248	278
1 x 120 RM/16	353	182,4	29	34	1.050	283	321
1 x 150 RM/25	441	283,2	30	35	1.300	315	364
1 x 185 RM/25	544	283,2	32	37	1.400	357	418
1 x 240 RM/25	706	283,2	34	39	1.650	413	494
1 x 300 RM/25	882	283,2	36	40	1.850	466	568
1 x 400 RM/35	1.176	393,6	40	45	2.300	529	660

Number of cores and nominal cross section mm ²	Aluminium figure kg/km	Copper figure kg/km	Overall diameter appr. mm	Overall diameter max. value appr. mm	Weight appr. kg/km	Current carrying capacity ground A*	Current carrying capacity air A*
12 / 20 kV							
1 x 50 RM/16	147	182,4	28	33	950	172	185
1 x 70 RM/16	206	182,4	30	35	1.050	210	231
1 x 95 RM/16	279	182,4	31	36	1.150	251	280
1 x 120 RM/16	353	182,4	33	38	1.300	285	323
1 x 150 RM/25	441	283,2	34	39	1.500	319	366
1 x 185 RM/25	544	283,2	36	41	1.650	361	420
1 x 240 RM/25	706	283,2	39	44	1.850	417	496
1 x 300 RM/25	882	283,2	41	46	2.100	471	569
1 x 400 RM/35	1.176	393,6	44	49	2.550	535	660

Number of cores and nominal cross section mm ²	Aluminium figure kg/km	Copper figure kg/km	Overall diameter appr. mm	Overall diameter max. value appr. mm	Weight appr. kg/km	Current carrying capacity ground A*	Current carrying capacity air A*
18 / 30 kV							
1 x 50 RM/16	147	182,4	36	41	1.190	175	187
1 x 70 RM/16	206	182,4	37	42	1.315	214	232
1 x 95 RM/16	279	182,4	39	43	1.450	256	281
1 x 120 RM/16	353	182,4	40	45	1.580	290	323
1 x 150 RM/25	441	283,2	42	47	1.800	324	365
1 x 185 RM/25	544	283,2	44	49	1.965	366	418
1 x 240 RM/25	706	283,2	46	51	2.230	426	494
1 x 300 RM/25	882	283,2	49	53	2.470	479	564
1 x 400 RM/35	1.176	393,6	51	56	2.920	545	654

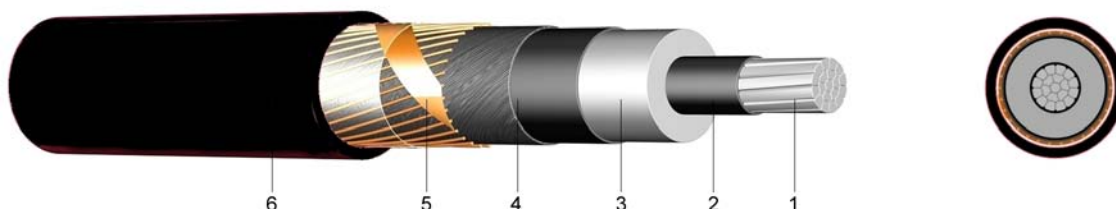
* trefoil touching arrangement

NA2XS2Y

XLPE Insulated Single-Core Cable with PE Outer Sheath

Application:

To be laid directly in ground, outdoors, indoors and in cable ducts.



Construction:

- 1 stranded (RM) aluminium wires
- 2 inner layer of semi-conducting material
- 3 core insulation of cross-linked polyethylene
- 4 outer layer of semi-conducting material
- 5 screen of copper wires
- 6 outer sheath of polyethylene (PE), black

Standards:

DIN VDE 0276-620
HD 620 S1: 1995
DIN EN 60228 class 2 (construction)

Technical data:

Test voltage	6 / 10 kV	[kV]	21 / 5 min.
	12 / 20 kV	[kV]	42 / 5 min.
	18 / 30 kV	[kV]	63 / 5 min.
Temperature range	in motion		-20°C till +70°C
	fixed		-20°C till +70°C
Operating temperature	short circuit	°C	250
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	15

Number of cores and nominal cross section mm ²	Aluminium figure kg/km	Copper figure kg/km	Overall diameter appr. mm	Overall diameter max. value appr. mm	Weight appr. kg/km	Current carrying capacity ground A*	Current carrying capacity air A*
6 / 10 kV							
1 x 35 RM/16	103	182,4	23	28	600	145	153
1 x 50 RM/16	147	182,4	24	29	670	171	183
1 x 70 RM/16	206	182,4	26	31	770	208	228
1 x 95 RM/16	279	182,4	27	32	880	248	278
1 x 120 RM/16	353	182,4	29	34	950	283	321
1 x 150 RM/25	441	283,2	30	35	1.150	315	364
1 x 185 RM/25	544	283,2	32	37	1.250	357	418
1 x 240 RM/25	706	283,2	34	39	1.500	413	494
1 x 300 RM/25	882	283,2	36	41	1.700	466	568
1 x 400 RM/35	1.176	393,6	40	45	2.100	529	660

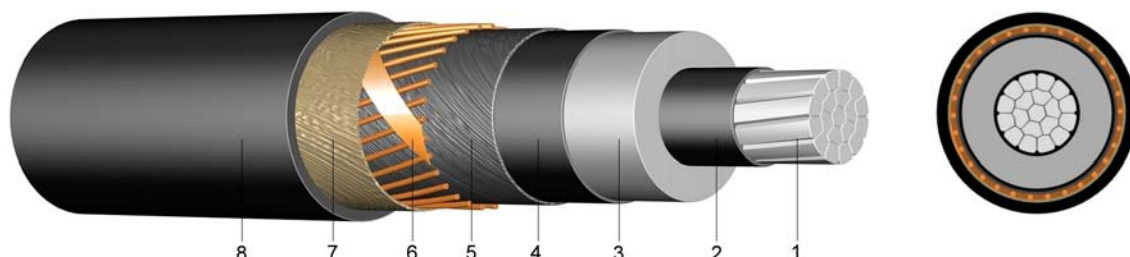
Number of cores and nominal cross section mm ²	Aluminium figure kg/km	Copper figure kg/km	Overall diameter appr. mm	Overall diameter max. value appr. mm	Weight appr. kg/km	Current carrying capacity ground A*	Current carrying capacity air A*
12 / 20 kV							
1 x 50 RM/16	147	182,4	28	33	820	172	185
1 x 70 RM/16	206	182,4	30	35	930	210	231
1 x 95 RM/16	279	182,4	31	36	1.050	251	280
1 x 120 RM/16	353	182,4	33	38	1.150	285	323
1 x 150 RM/25	441	283,2	34	39	1.350	319	366
1 x 185 RM/25	544	283,2	36	41	1.500	361	420
1 x 240 RM/25	706	283,2	39	44	1.750	417	496
1 x 300 RM/25	882	283,2	41	46	2.000	471	569
1 x 400 RM/35	1.176	393,6	44	49	2.350	535	660

Number of cores and nominal cross section mm ²	Aluminium figure kg/km	Copper figure kg/km	Overall diameter appr. mm	Overall diameter max. value appr. mm	Weight appr. kg/km	Current carrying capacity ground A*	Current carrying capacity air A*
18 / 30 kV							
1 x 50 RM/16	147	182,4	33	38	1.100	174	187
1 x 70 RM/16	206	182,4	35	40	1.200	213	232
1 x 95 RM/16	279	182,4	36	41	1.350	254	282
1 x 120 RM/16	353	182,4	38	43	1.450	289	325
1 x 150 RM/25	441	283,2	39	44	1.700	322	367
1 x 185 RM/25	544	283,2	41	46	1.850	364	421
1 x 240 RM/25	706	283,2	43	48	2.050	422	496
1 x 300 RM/25	882	283,2	46	51	2.350	476	568
1 x 400 RM/35	1.176	393,6	49	54	2.800	541	650

* trefoil touching arrangement

NA2XS(F)2Y Single-Core XLPE Insulated Cable with PE Outer Sheath, longitudinally watertight

Application: To be laid directly in ground, outdoors, in water, indoors and in cable ducts.



Construction:

- 1 stranded (RM) aluminium wire
- 2 inner layer of semi-conducting material
- 3 core insulation of cross-linked polyethylene
- 4 outer layer of semi-conducting material
- 5 swellable tape
- 6 screen of copper wires
- 7 waterproofing tape
- 8 outer sheath of polyethylene (PE), black

Standards:

- DIN VDE 0276-620
- HD 620 S1: 1995
- DIN EN 60228 class 2 (construction)

Technical data:

Test voltage	6 / 10 kV	[kV]	21 / 5 min.
	12 / 20 kV	[kV]	42 / 5 min.
	18 / 30 kV	[kV]	63 / 5 min.
Temperature range	in motion		-20°C till +70°C
	fixed		-20°C till +70°C
Operating temperature	short circuit	°C	250
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	15

Number of cores and nominal cross section mm ²	Aluminium figure kg/km	Copper figure kg/km	Overall diameter appr. mm	Overall diameter max. value appr. mm	Weight appr. kg/km	Current carrying capacity ground A*	Current carrying capacity air A*
6 / 10 kV							
1 x 50 RM/16	147	182,4	24	29	670	171	183
1 x 70 RM/16	206	182,4	26	31	770	209	226
1 x 95 RM/16	279	182,4	27	32	880	248	278
1 x 120 RM/16	353	182,4	29	34	950	283	321
1 x 150 RM/25	441	283,2	30	35	1.150	315	364
1 x 185 RM/25	544	283,2	32	37	1.250	357	418
1 x 240 RM/25	706	283,2	34	39	1.500	413	494
1 x 300 RM/25	882	283,2	36	41	1.700	466	568
1 x 400 RM/35	1.176	393,6	40	45	2.100	529	660
1 x 500 RM/35	1.479	393,6	43	48	2.450	602	767
1 x 630 RM/35	1.853	393,6	49	54	3.060	**	**

Number of cores and nominal cross section mm ²	Aluminium figure kg/km	Copper figure kg/km	Overall diameter appr. mm	Overall diameter max. value appr. mm	Weight appr. kg/km	Current carrying capacity ground A*	Current carrying capacity air A*
12 / 20 kV							
1 x 50 RM/16	147	182,4	28	33	820	172	185
1 x 70 RM/16	206	182,4	30	35	930	210	231
1 x 95 RM/16	279	182,4	31	36	1.050	251	280
1 x 120 RM/16	353	182,4	33	38	1.150	285	323
1 x 150 RM/25	441	283,2	34	39	1.350	319	366
1 x 185 RM/25	544	283,2	36	41	1.500	361	420
1 x 240 RM/25	706	283,2	39	44	1.750	417	496
1 x 300 RM/25	882	283,2	41	46	2.000	471	569
1 x 400 RM/35	1.176	393,6	44	49	2.350	535	660
1 x 500 RM/35	1.470	393,6	47	52	2.800	609	766
1 x 630 RM/35	1.903	393,6	52	57	3.400	**	**
1 x 800 RM/35	2.352	393,6	58	63	4.400	**	**

Number of cores and nominal cross section mm ²	Aluminium figure kg/km	Copper figure kg/km	Overall diameter appr. mm	Overall diameter max. value appr. mm	Weight appr. kg/km	Current carrying capacity ground A*	Current carrying capacity air A*
18 / 30 kV							
1 x 50 RM/16	147	182,4	33	38	1.100	174	187
1 x 70 RM/16	206	182,4	35	40	1.200	213	232
1 x 95 RM/16	279	182,4	36	41	1.350	254	282
1 x 120 RM/16	353	182,4	38	43	1.450	289	325
1 x 150 RM/25	441	283,2	39	44	1.700	322	367
1 x 185 RM/25	544	283,2	41	46	1.850	364	421
1 x 240 RM/25	706	283,2	43	48	2.050	422	496
1 x 300 RM/25	882	283,2	46	51	2.350	476	568
1 x 400 RM/35	1.176	393,6	49	54	2.800	541	650
1 x 500 RM/35	1.510	393,6	50	55	3.091	616	764
1 x 630 RM/35	1.853	393,6	58	63	3.790	**	**
1 x 800 RM/35	2.352	393,6	61	66	4.400	**	**

* trefoil touching arrangement

** for conductor cross-sections above 500 mm², to calculate according to the specific laying and operating conditions.

H07Z-U

Halogen-Free Single Core Wire

Application:

For the internal wiring of switching systems, equipment and lights as well as for domestic installations, however, not for outdoor use.



Construction:

- 1 solid bare or tinned copper
- 2 core insulation of halogen-free, cross-linked polyolefin copolymerisate (EI5)

Standards:

DIN VDE 0282-9
HD 22.9 S2+A1
DIN EN 60228 class 1 (construction)

Technical data:

Nominal voltage U_0/U		[V]	450 / 750 Volt
Test voltage		[V] _{AC}	2500
Temperature range	in motion		+5°C till +90°C
Operating temperature	short circuit	°C	250
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	6
Flammability	standard		EN 60332-1 IEC 60332-1

Nominal cross section mm ²	Colours	Copper figure kg/km	Overall diameter appr.mm	Calorific potential kWh/m	Weight appr. kg/km
1,5	bk/bl/br	14,4	2,8	0,37	19
	yg	14,4	2,8	0,37	19
2,5	bk/bl	24,0	3,4	0,44	31
	yg	24,0	3,4	0,44	31

H05Z-K

Halogen-Free Single Core Wire

Application:

For fixed installations in devices and in or on lights, as well as for the house installation, especially for uses by their one low creation is demanded of smoke and corrosive gases in the fire case, however not outside.



Construction:

- 1 fine-stranded bare or tinned copper
- 2 core insulation of halogen-free, cross-linked polyolefin copolymerisate (EI5)

Standards:

DIN VDE 0282-9
HD 22.9 S2+A1
DIN EN 60228 class 5 (construction)

Technical data:

Nominal voltage U_0/U		[V]	300 / 500 Volt
Test voltage		[V] _{AC}	2000
Temperature range	in motion		+5°C till +90°C
Operating temperature	short circuit	°C	250
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	6
Flammability	standard		EN 60332-1 IEC 60332-1

Nominal cross section mm ²	Colours	Copper figure kg/km	Overall diameter appr.mm	Calorific potential kWh/m	Weight appr. kg/km
0,5	bk/bl/br	4,8	2,2	0,23	9
	yg	4,8	2,2	0,23	9
0,75	bk/dbl/bl/br	7,2	2,4	0,26	12
	yg/gr/or/rd	7,2	2,4	0,26	12
1	bk/bl/br	9,6	2,5	0,29	15
	yg/wh/or/rd	9,6	2,5	0,29	15

H07Z-K

Halogen-Free Single Core Wire

Application:

For the installation in electrical conduit on or under plaster or in similar closed systems especially for applications where there is a requirement for low smoke and corrosive gas creation in the event of fire, however not outside.



Construction:

- 1 fine-stranded tinned or bare copper
2 core insulation of halogen-free, cross-linked polyolefin copolymerisate (EI5)

Standards:

DIN VDE 0282-9
HD 22.9 S2+A1
DIN EN 60228 class 5 (construction)

Technical data:

Nominal voltage U ₀ /U		[V]	450 / 750 Volt
Test voltage		[V] _{AC}	2500
Temperature range	fixed		+5°C till +90°C
Operating temperature	short circuit	°C	250
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	6
Flammability	standard		EN 60332-1 IEC 60332-1

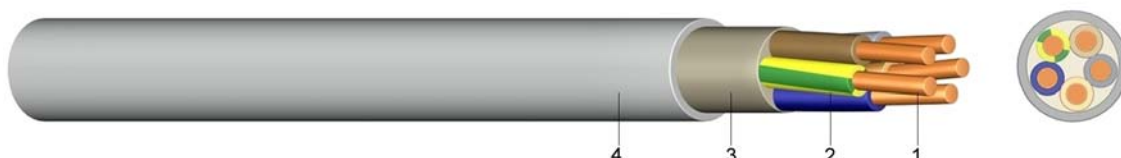
Nominal cross section mm ²	Colours	Copper figure kg/km	Overall diameter appr.mm	Calorific potential kWh/m	Weight appr. kg/km
1,5	bk/bl/br/dbl	14,4	2,9	0,40	20
	yg/gr/wh/or/rd	14,4	2,9	0,40	20
2,5	bk/bl/lbl/br	24,0	3,6	0,49	32
	yg/gy/rd	24,0	3,6	0,49	32
4	bk/bl/br	38,4	4,1	0,59	46
	yg/gy/rd	38,4	4,1	0,59	46
6	bk/bl/br	57,6	4,8	0,71	65
	yg/gy/rd	57,6	4,8	0,71	65
10	bk/bl	96,0	6,3	0,89	111
	yg	96,0	6,3	0,89	111
16	bk/bl/br	153,6	7,2	1,20	166
	yg	153,6	7,2	1,20	166
25	bk/bl/br	240,0	9,0	1,80	255
	yg	240,0	9,0	1,80	255
35	bk/bl	336,0	10,1	2,20	348
	yg	336,0	10,1	2,20	348
50	bk/bl	480,0	12,0	2,90	501
	yg	480,0	12,0	2,90	501
70	bk	672,0	13,6	3,70	685
	yg	672,0	13,6	3,70	685
95	bk	912,0	15,6	4,30	902
	yg	912,0	15,6	4,30	902

NHXMH

Halogen-Free Sheathed Wire with Improved Fire Behaviour

Application:

To be installed in buildings or industrial plants where many people and goods are concentrated. As they don't develop corrosive and halogen gases under the impact of fire, and the smoke and fume generation is also minimal, the damage caused is much smaller. They are destined for the installation on, in and under the wall-surface in dry, humid and wet locations as well as in brickwork or outdoors (when protected), but not directly into the earth.



Construction:

- 1 solid or stranded bare copper
- 2 core insulation of cross-linked polyethylene (2X11)
- 3 core covering of a halogen-free filling compound
- 4 outer sheath of halogen-free polymer (HM2), grey

Standards:

DIN VDE 0250-214
DIN EN 60228 class 1 and 2 (construction)
HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U

[V]

300 / 500 Volt

Test voltage

[V]_{AC}

2000

Temperature range

in motion

°C

-5°C till +70°C

Operating temperature

short circuit

°C

160

Short circuit time

max.

[sec]

5

Bending radius

in motion

x diameter

12

Flammability

standard

EN 50266-2-4

EN 60332-1

IEC 60332-3 Kat.C

Number of cores and nominal cross section	Copper figure	Cond. construction (appr. value)	Overall diameter	Calorific potential	Weight
mm ²	kg/km	mm	appr. mm	kWh/m	appr. kg/km
1 x 4	38,4	1 x 2,25	6,0	0,42	105
1 x 6	57,6	1 x 2,76	6,4	0,44	150
1 x 10	96,0	1 x 3,56	7,4	0,53	200
1 x 16 RM	153,6	7 x 1,70	8,6	0,63	295
2 x 1,5	28,8	1 x 1,38	8,7	0,39	113
2 x 2,5	48,0	1 x 1,38	9,5	0,45	145
3 x 1,5	43,2	1 x 1,38	9,1	0,43	130
3 x 2,5	72,0	1 x 1,78	9,9	0,50	168
3 x 4	115,2	1 x 2,25	11,2	0,63	234
3 x 6	172,8	1 x 2,76	12,7	0,79	319
3 x 10	288,0	1 x 3,56	15,3	1,09	494
4 x 1,5	57,6	1 x 1,38	9,7	0,50	152
4 x 2,5	96,0	1 x 1,78	10,6	0,58	201
4 x 4	153,6	1 x 2,25	12,5	0,83	296
4 x 6	230,4	1 x 2,76	13,7	0,92	388
4 x 10	384,0	1 x 3,56	16,5	1,29	606
4 x 16 RM	614,4	7 x 1,70	19,4	1,68	917

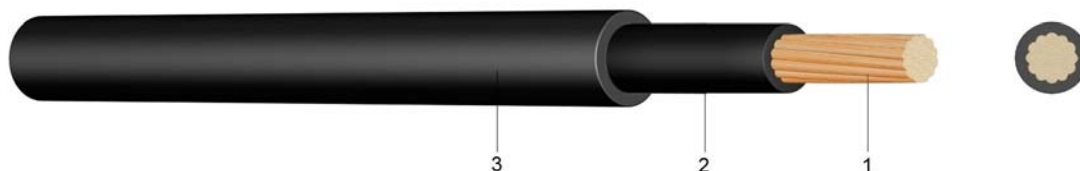
Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Calorific potential kWh/m	Weight appr. kg/km
5 x 1,5	72,0	1 x 1,38	10,4	0,59	177
5 x 2,5	120,0	1 x 1,78	11,5	0,69	241
5 x 4	192,0	1 x 2,25	13,5	0,96	352
5 x 6	288,0	1 x 2,76	15,3	1,16	485
5 x 10 RE	480,0	1 x 3,56	18,0	1,56	731
5 x 10 RM	480,0	7 x 1,35	18,0	1,56	731
5 x 16 RM	768,0	7 x 1,70	22,2	2,23	1.168
7 x 1,5	100,8	1 x 1,38	11,1	0,65	220
7 x 2,5	168,0	1 x 1,78	12,7	0,82	311
12 x 1,5	172,8	1 x 1,38	14,8	1,11	391

NSHXAFöu

Special Rubber Single Core Cable 1,8 / 3 kV Halogen-Free

Application:

For track bound vehicles and trackless trolley buses as well as for installations in dry locations, in switchboards and distributors up to 1.000 V as a short circuit and earth fault proof cable at the nominal voltage of U_o / U 1,8 / 3 kV.



Construction:

- 1 fine-stranded bare or tinned copper
- 2 EPR rubber insulation
- 3 outer sheath of halogen-free polymer, black, ozon resistant abrasion an oil resistant, flame retardant

Standards:

DIN VDE 0250 part 602
DIN EN 60228 class 5 (construction)

Technical data:

Nominal voltage U_o/U		[V]	1800 / 3000 Volt
Test voltage		[V] _{AC}	6000
Temperature range	in motion		-25°C till +70°C
	fixed		-40°C till +70°C
Operating temperature	short circuit	°C	200
Short circuit time	max.	[sec]	5
Bending radius	one time / fixed	x diameter	6
Bending radius	in motion	x diameter	10
Oil-resistant	standard		EN 60811-2-1
Flammability	standard		EN 60332-1-2

Nominal cross section	Copper figure	Cond. construction (appr. value)	Overall diameter	Current carrying capacity	Weight
mm ²	kg/km	mm	appr. mm	air A	appr. kg/km
2,5	24,0	50 x 0,26	7,5	41	70
4	38,4	56 x 0,31	9,0	55	90
6	57,6	84 x 0,31	9,5	70	120
10	96,0	80 x 0,41	11,0	98	180
16	153,6	126 x 0,41	13,0	132	250
25	240,0	196 x 0,41	15,0	176	390
35	336,0	276 x 0,41	16,5	218	470
50	480,0	396 x 0,41	18,0	276	625
70	672,0	360 x 0,51	20,5	347	880
95	912,0	475 x 0,51	24,0	416	1.190
120	1.152,0	608 x 0,51	26,0	488	1.430
150	1.440,0	756 x 0,51	28,0	566	1.750
185	1.776,0	925 x 0,51	31,0	644	2.160
240	2.304,0	1221 x 0,51	34,5	775	2.718
300	2.880,0	1530 x 0,51	30,6	898	3.050

H07ZZ-F

Halogen-Free Rubber Sheathed Cable

Application:

For indoor use and the temporary outdoor use. Especially for applications where allowed in case of fire, only small amounts of smoke.



Construction:

- 1 stranded bare copper (KL 5)
- 2 core insulation of extruded rubber compound
- 3 outer sheath of halogen-free rubber compound, black

Standards:

DIN VDE 0282-13
DIN EN 60228 Class 5 (construction)
HD 308 S2 (core identification)

Technical data:

Nominal voltage U₀/U

[V]

450 / 750 Volt

Test voltage

[V]_{AC}

2000

Temperature range

in motion

-5°C bis +50°C

Bending radius

in motion

x diameter

7

Flammability

standard

EN 50266-1

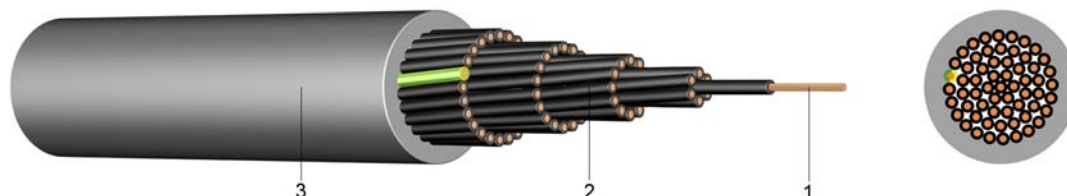
EN 50266-2-4

Number of cores and nominal cross section mm ²	Copper figure	Overall diameter appr. mm	Weight appr. kg/km
	kg/km		
1 x 16	153,6	12,1	259
1 x 25	240,0	14,1	375
1 x 35	336,0	16,1	492
1 x 50	480,0	18,5	675
1 x 70	672,0	20,9	908
1 x 95	912,0	22,9	1.171
1 x 120	1.152,0	25,7	1.445
1 x 150	1.440,0	28,3	1.783
1 x 185	1.776,0	31,0	2.125
1 x 240	2.304,0	34,3	2.733
1 x 300	2.880,0	37,7	3.348
2 x 1,5	28,8	9,7	109
2 x 2,5	48,0	11,7	158
2 x 10	192,0	19,7	539
3 G 1,5	43,2	10,5	134
3 G 2,5	72,0	12,5	196
4 G 1,5	57,6	11,7	166
4 G 2,5	96,0	13,8	241
4 G 4	153,6	16,0	336
4 G 6	230,4	17,8	449

Number of cores and nominal cross section mm ²	Copper figure kg/km	Overall diameter appr. mm	Weight appr. kg/km
4 G 10	384,0	23,7	833
4 G 16	614,4	26,9	1.138
4 G 25	960,0	32,7	1.714
4 G 35	1.344,0	36,8	2.204
4 G 50	1.920,0	42,6	3.029
4 G 70	2.688,0	48,3	4.121
4 G 95	3.648,0	54,7	5.361
4 G 120	4.608,0	59,5	6.546
4 G 150	5.760,0	65,5	8.095
4 G 185	7.104,0	72,0	9.652
4 G 240	9.216,0	81,5	12.614
4 G 300	11.520,0	90,5	17.045
5 G 1	48,0	11,6	168
5 G 1,5	72,0	12,8	206
5 G 2,5	120,0	15,1	297
5 G 4	192,0	17,7	422
5 G 6	288,0	19,8	567
5 G 10	480,0	26,0	1.010
5 G 16	768,0	29,8	1.400
5 G 25	1.200,0	36,0	2.096
7 G 1,5	100,8	14,8	315
12 G 1	115,2	15,0	450
18 G 1	172,8	18,0	625
24 G 1	230,4	22,0	810
36 G 1	345,6	32,0	1.150

HSLH FRNC Halogen-Free Control Cable with Improved Fire Behaviour - FRNC

Application: For installations in dry, humid and wet locations, but not outdoors. These cables are used for fix or for flexible applications - but not with high tensile load or for forced bending.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of halogen-free, cross-linked polyolefin copolymer
- 3 outer sheath of halogen-free, cross-linked polyolefin copolymer, grey

Standards:

- adapted to DIN EN 50266-2-4
- adapted to DIN EN 50267-2-2
- adapted to DIN EN 50268-2
- DIN EN 60228 class 5 (construction)
- core identification JZ: 1 core green/yellow, other cores black with figures
- core identification OZ: every core black with figures

Technical data:

Nominal voltage U_0/U		[V]	300 / 500 Volt
Test voltage		[V] _{AC}	2000
Temperature range	in motion		-5°C till +70°C
	fixed		-30°C till +70°C
Operating temperature	short circuit	°C	150
Short circuit time	max.	[sec]	5
Bending radius	in motion	x diameter	15
Flammability	standard		EN 50266-2-4 EN 60332-1 IEC 60332-3 Kat.C

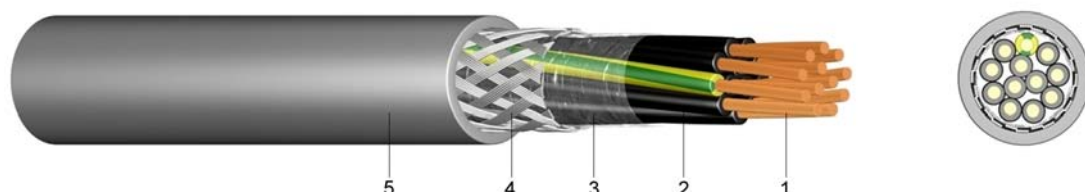
Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
2 x 0,75	14,4	24 x 0,21	5,4	47
3 x 0,75	21,6	24 x 0,21	5,7	56
4 x 0,75	28,8	24 x 0,21	6,2	69
5 x 0,75	36,0	24 x 0,21	6,8	83
7 x 0,75	50,4	24 x 0,21	7,4	104
12 x 0,75	86,4	24 x 0,21	9,9	172
18 x 0,75	129,6	24 x 0,21	12,4	263
25 x 0,75	180,0	24 x 0,21	14,4	352
34 x 0,75	244,8	24 x 0,21	15,9	512
2 x 1	19,2	32 x 0,21	5,7	55
3 x 1	28,8	32 x 0,21	6,0	67
4 x 1	38,4	32 x 0,21	6,6	83
5 x 1	48,0	32 x 0,21	7,2	100
7 x 1	67,2	32 x 0,21	8,0	130
12 x 1	115,2	32 x 0,21	10,6	212
18 x 1	172,8	32 x 0,21	12,7	314

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
25 x 1	240,0	32 x 0,21	15,3	429
2 x 1,5	28,8	30 x 0,26	6,3	72
3 x 1,5	43,2	30 x 0,26	6,7	88
4 x 1,5	57,6	30 x 0,26	7,3	110
5 x 1,5	72,0	30 x 0,26	8,1	135
7 x 1,5	100,8	30 x 0,26	8,9	174
12 x 1,5	172,8	30 x 0,26	12,0	289
18 x 1,5	259,2	30 x 0,26	14,4	433
25 x 1,5	360,0	30 x 0,26	17,4	596
34 x 1,5	489,6	30 x 0,26	19,6	786
2 x 2,5	48,0	50 x 0,26	7,6	110
3 x 2,5	72,0	50 x 0,26	8,1	137
4 x 2,5	96,0	50 x 0,26	8,9	174
5 x 2,5	120,0	50 x 0,26	10,0	217
7 x 2,5	168,0	50 x 0,26	12,7	306
12 x 2,5	288,0	50 x 0,26	14,9	467
4 x 4	153,6	56 x 0,31	10,8	267
5 x 4	192,0	56 x 0,31	12,1	331
7 x 4	268,8	56 x 0,31	13,4	432
4 x 6	230,4	84 x 0,31	13,0	388
5 x 6	288,0	84 x 0,31	14,5	480
4 x 10	384,0	80 x 0,41	16,2	616
5 x 10	480,0	80 x 0,41	18,1	766
4 x 16	614,4	128 x 0,41	18,9	908
5 x 16	768,0	128 x 0,41	21,2	1.134
4 x 25	960,0	182 x 0,41	23,5	1.620

HSLCH FRNC Halogen-Free Control Cable with EMV-Optimised Braided Screen and Improved Fire Behaviour - FRNC

Application:

For installations in dry, humid and wet locations but not outdoors. These cables are used for fix or for flexible applications - but not with high tensile load and for forced bending. Suitable as a signal and impulse cable in the control, measuring and signal technology. The copper braiding optimises protection against external interferences, like electromagnetic fields and stray frequencies.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of halogen-free, cross-linked polyolefin copolymer
- 3 wrapped in a plastic foil
- 4 screen of tinned copper wire braiding
- 5 outer sheath of halogen-free, cross-linked polyolefin copolymer, grey

Standards:

adapted to DIN EN 50266-2-4 and 50267-2-2
DIN EN 60228 class 5 (construction)
core identification JZ: 1 core green/yellow, other cores black with figures
core identification OZ: every core black with figures

Technical data:

Nominal voltage U_0/U		[V]	300 / 500 Volt
Test voltage		[V] _{AC}	2000
Temperature range	in motion		-5°C till +70°C
	fixed		-30°C till +70°C
Operating temperature	short circuit	°C	150
Short circuit time	max.	[sec]	5
Bending radius	in motion	x diameter	15
Flammability	standard		EN 50266-2-4 EN 60332-1 IEC 60332-3 Kat.C

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
2 x 0,75	39,4	24 x 0,21	6,2	55
3 x 0,75	49,0	24 x 0,21	6,5	70
4 x 0,75	58,6	24 x 0,21	7,0	87
5 x 0,75	69,1	24 x 0,21	7,7	106
7 x 0,75	85,4	24 x 0,21	8,3	129
12 x 0,75	132,5	24 x 0,21	10,9	211
18 x 0,75	202,6	24 x 0,21	12,7	307
25 x 0,75	268,8	24 x 0,21	15,0	413
34 x 0,75	319,7	24 x 0,21	17,3	523
2 x 1	49,0	32 x 0,21	6,5	79
3 x 1	59,5	32 x 0,21	6,8	88
4 x 1	71,0	32 x 0,21	7,4	106

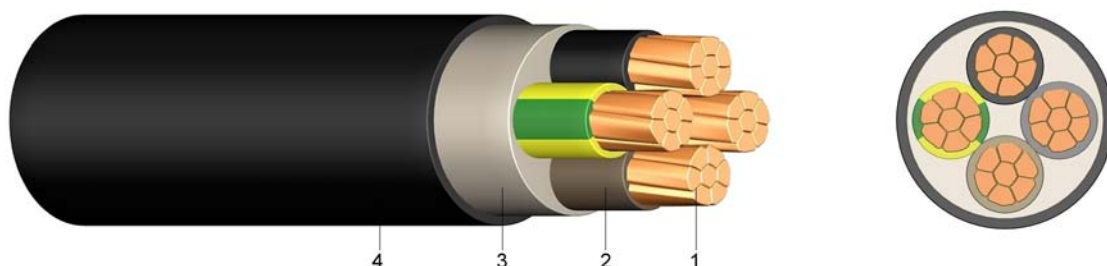
Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Weight appr. kg/km
5 x 1	84,5	32 x 0,21	8,1	124
7 x 1	107,5	32 x 0,21	8,8	155
12 x 1	177,6	32 x 0,21	12,3	232
18 x 1	257,3	32 x 0,21	14,7	332
25 x 1	342,7	32 x 0,21	16,0	460
2 x 1,5	62,4	30 x 0,26	7,1	91
3 x 1,5	78,7	30 x 0,26	7,5	112
4 x 1,5	96,0	30 x 0,26	8,5	141
5 x 1,5	114,2	30 x 0,26	8,9	161
7 x 1,5	147,8	30 x 0,26	9,9	206
12 x 1,5	257,3	30 x 0,26	14,7	323
18 x 1,5	358,1	30 x 0,26	15,5	517
25 x 1,5	508,8	30 x 0,26	18,1	705
3 x 2,5	113,3	50 x 0,26	9,0	157
4 x 2,5	141,1	50 x 0,26	9,9	201
5 x 2,5	169,0	50 x 0,26	11,0	248
7 x 2,5	242,9	50 x 0,26	13,9	306
12 x 2,5	353,3	50 x 0,26	15,9	499
4 x 4	238,1	51 x 0,30	11,7	291
5 x 4	234,2	51 x 0,30	12,8	364
4 x 6	329,3	76 x 0,30	13,9	437
7 x 6	509,8	76 x 0,30	18,2	700
4 x 10	574,1	77 x 0,40	17,4	685
5 x 10	595,2	77 x 0,40	19,5	824
4 x 16	809,3	119 x 0,40	20,6	972
4 x 25	1.174,1	182 x 0,40	25,3	1.443

N2XH

Halogen-Free Cable with Improved Fire Behaviour

Application:

Safety cables are used in all locations where a high degree of protection against fire and fire-damage has to be provided for human life and equipment and are, therefore, subject to high security requirements. These cables may be used indoors and outdoors. They may not be installed directly into the ground and into the water. This cable conforms to Safety Class II standards.



Construction:

- 1 solid or stranded bare copper
- 2 core insulation of halogen-free, cross-linked polyethylene
- 3 core covering of a halogen-free compound
- 4 outer sheath of halogen-free, cross-linked polymer compound, black

Standards:

DIN VDE 0276-604
 HD 604 S1 part 1 + part 5 G
 DIN EN 60228 class 1 and 2 (construction)
 HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U		[V]	600 / 1000 Volt
Test voltage		[V] _{AC}	4000
Temperature range	in motion		-5°C till +90°C
Operating temperature	short circuit	°C	250
Short circuit time	max.	[sec]	5
Bending radius	single core style	x diameter	15
	multi core style	x diameter	12
Flammability	standard		EN 50266-2-4 EN 60332-1 IEC 60332-3 Kat.C

Number of cores and nominal cross section mm ²	Copper figure kg/km	Overall diameter appr. mm	Calorific potential kWh/m	Weight appr. kg/km
1 x 4 RE	38,4	7,3	0,29	89
1 x 6 RE	57,6	7,8	0,33	112
1 x 10 RE	96,0	8,6	0,38	156
1 x 16 RM	153,6	9,8	0,46	226
1 x 25 RM	240,0	11,4	0,62	327
1 x 35 RM	336,0	12,6	0,71	429
1 x 50 RM	480,0	13,8	0,82	555
1 x 70 RM	672,0	15,7	1,00	765
1 x 95 RM	912,0	17,4	1,14	1.024
1 x 120 RM	1.152,0	19,0	1,32	1.263
1 x 150 RM	1.440,0	20,9	1,59	1.542
1 x 185 RM	1.776,0	23,1	1,91	1.918
1 x 240 RM	2.304,0	25,6	2,24	2.466
1 x 300 RM	2.880,0	28,1	2,58	3.065

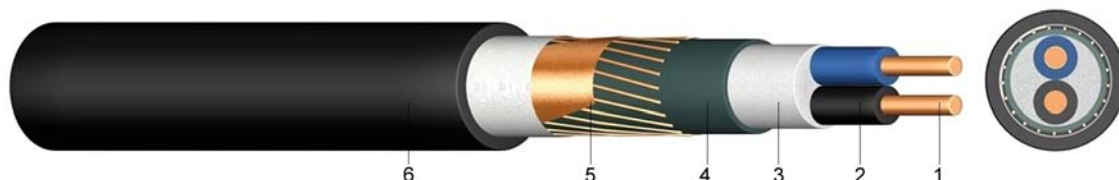
Number of cores and nominal cross section mm²			Copper figure	Overall diameter	Calorific potential	Weight
			kg/km	appr. mm	kWh/m	appr. kg/km
2 x	1,5	RE	30	9,3	0,45	125
2 x	2,5	RE	50	10,1	0,52	158
3 x	1,5	RE	45	9,7	0,51	142
3 x	2,5	RE	75	10,6	0,59	184
3 x	4	RE	120	11,7	0,70	247
3 x	6	RE	180	12,8	0,80	322
3 x	10	RE	300	14,9	1,02	480
3 x	16	RM	480	17,7	1,36	732
3 x	25	RM	750	24,0	2,25	1.200
3 x	35	RM	1.050	27,0	2,56	1.600
3 x	50	RM	1.500	29,0	3,19	1.800
3 x	50/25	SM/RM	1.750	32,0	3,53	2.200
3 x	70/35	SM/RM	2.450	37,0	4,31	2.950
3 x	95/50	SM	3.216	41,0	5,58	3.900
3 x	120/70	RM	4.300	45,0	6,58	4.800
3 x	150/70	RM	5.200	49,0	7,64	5.750
3 x	185/95	RM	6.500	55,0	9,42	7.200
3 x	240/120	RM	8.400	62,0	12,22	9.150
4 x	1,5	RE	60	10,4	0,60	166
4 x	2,5	RE	100	11,4	0,69	220
4 x	4	RE	160	12,6	0,84	298
4 x	6	RE	240	13,8	0,95	391
4 x	10	RE	400	16,3	1,26	599
4 x	16	RM	640	19,2	1,63	908
4 x	25	RM	1.000	23,9	2,48	1.413
4 x	35	RM	1.400	26,7	2,93	1.863
4 x	50	SM	2.000	29,1	3,76	2.362
4 x	70	SM	2.800	32,2	4,55	3.151
4 x	95	SM	3.800	37,2	5,72	4.339
4 x	120	SM	4.800	40,8	6,36	5.332
4 x	150	SM	6.000	50,0	7,14	6.350
5 x	1,5	RE	75	11,2	0,71	195
5 x	2,5	RE	125	12,3	0,84	260
5 x	4	RE	200	13,7	1,00	357
5 x	6	RE	300	15,4	1,21	486
5 x	10	RE	500	17,8	1,52	723
5 x	16	RE	800	21,6	2,17	1.138
5 x	16	RM	800	21,6	2,17	1.138
5 x	25	RM	1.250	27,0	3,14	1.420
5 x	35	RM	1.750	37,0	3,95	2.400
5 x	50	RM	2.400,0	33,7	4,79	3.030
7 x	1,5	RE	100,8	12,0	0,80	239
12 x	1,5	RE	172,8	16,0	1,29	395
19 x	1,5	RE	273,6	18,6	1,80	557
24 x	1,5	RE	345,6	22,2	2,35	736
30 x	1,5	RE	432,0	24,0	2,72	900
7 x	2,5	RE	168,0	15,0	1,31	400
12 x	2,5	RE	288,0	19,0	2,00	600
19 x	2,5	RE	456,0	22,0	2,69	840
24 x	2,5	RE	576,0	25,0	3,28	1.050
7 x	4	RE	268,8	14,9	1,48	457

N2XCH

Halogen-Free Cable with Concentric Conductor with Improved Fire Behaviour

Application:

Safety cables are used in all locations where a high degree of protection against fire and fire-damage has to be provided for human life and equipment and are, therefore, subject to high security requirements. These cables may be used indoors and outdoors. They may not be installed directly into the ground and into the water.



Construction:

- 1 solid or stranded bare copper
- 2 core insulation of halogen-free, cross-linked polyethylene compound
- 3 core covering of halogen-free compound
- 4 anti-twist tape
- 5 concentric conductor formed by copper wires with counter helix of copper tape
- 6 outer sheath of halogen-free, cross-linked polyethylene compound, black

Standards:

DIN VDE 0276-604
 HD 604 S1 part 1 + part 5 G
 DIN EN 60228 class 1 and 2 (construction)
 HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U		[V]	600 / 1000 Volt
Test voltage		[V] _{AC}	4000
Temperature range	in motion		-5°C till +90°C
Operating temperature	short circuit	°C	250
Short circuit time	max.	[sec]	5
Bending radius	min.	x diameter	15
Flammability	standard		EN 50266-2-4 EN 60332-1 IEC 60332-3 Kat.C

Number of cores and nominal cross section mm ²	Copper figure		Cond. construction (appr. value)	Overall diameter	Calorific potential	Weight
	kg/km		mm	appr. mm	kwh/m	appr. kg/km
2 x 1,5 RE/ 1,5	51,8		1 x 1,38	11,5	0,44	177
2 x 2,5 RE/ 2,5	79,7		1 x 1,78	12,7	0,55	226
2 x 4 RE/ 4	122,9		1 x 2,25	13,5	0,60	280
2 x 6 RE/ 6	182,4		1 x 2,72	13,6	0,66	286
2 x 10 RE/ 10	312,0		1 x 3,56	16,5	0,72	500
3 x 1,5 RE/ 1,5	70,1		1 x 1,38	11,3	0,48	196
3 x 2,5 RE/ 2,5	108,5		1 x 1,78	13,2	0,55	253
3 x 4 RE/ 4	161,3		1 x 2,25	16,0	0,64	336
3 x 6 RE/ 6	240,0		1 x 2,76	16,0	0,72	441
3 x 10 RE/ 10	408,0		1 x 3,56	18,5	0,85	659
3 x 16 RE/ 16	643,2		1 x 4,51	21,3	1,18	979
3 x 25 RM/ 16	902,4		7 x 2,17	24,4	1,59	1.289
3 x 35 RM/ 16	1.190,4		7 x 2,53	26,7	1,91	1.625

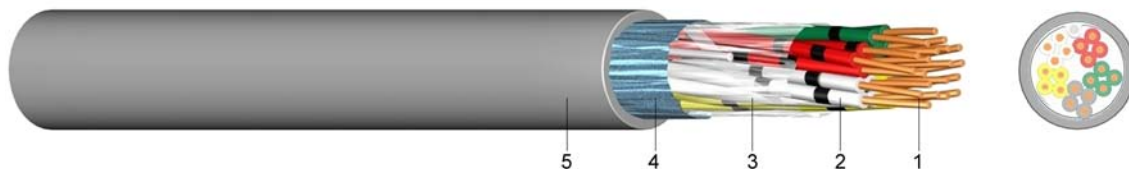
Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Overall diameter appr. mm	Calorific potential kwh/m	Weight appr. kg/km
3 x 50 SM/ 25	1.723,2	19 x 1,83	29,5	2,27	1.946
3 x 70 SM/ 35	2.409,6	14 x 2,58	34,7	2,78	2.742
3 x 95 SM/ 50	3.295,7	19 x 2,58	38,1	3,35	3.636
3 x 120 SM/ 70	4.236,5	24 x 2,58	42,5	3,86	4.606
3 x 150 SM/ 70	5.100,5	30 x 2,58	44,0	4,80	5.450
3 x 185 SM/ 95	6.383,0	37 x 2,58	47,0	5,99	6.930
3 x 240 SM/120	8.241,6	37 x 2,90	52,0	7,25	8.900
4 x 1,5RE/ 1,5	84,5	1 x 1,38	12,6	0,54	221
4 x 2,5RE/ 2,5	132,5	1 x 1,78	14,0	0,62	291
4 x 4 RE/ 4	199,7	1 x 2,25	15,2	0,72	393
4 x 6 RE/ 6	296,6	1 x 2,76	17,4	0,82	527
4 x 10 RE/ 10	504,0	1 x 3,56	19,9	1,00	783
4 x 16 RE/ 16	795,8	1 x 4,51	23,4	1,37	1.188
4 x 16 RM/ 16	795,8	7 x 1,70	23,4	1,37	1.188
4 x 25 RM/ 16	1.142,4	7 x 2,13	28,1	1,94	1.716
4 x 35 RM/ 16	1.526,4	7 x 2,52	31,1	2,27	2.193
4 x 50 SM/ 25	2.203,2	19 x 1,89	33,7	2,77	2.784
4 x 70 SM/ 35	3.081,6	19 x 2,17	37,2	5,46	3.675
4 x 95 SM/ 50	4.207,7	19 x 2,52	43,0	6,97	5.063
4 x 120 SM/ 70	5.388,5	37 x 2,03	47,2	7,84	6.307
4 x 150 SM/ 70	6.540,5	37 x 2,27	52,0	9,66	7.617
4 x 185 SM/ 95	8.159,0	37 x 2,52	57,3	11,60	9.462
4 x 240 SM/120	10.545,6	61 x 2,24	64,3	14,06	12.264
5 x 1,5RE/ 1,5	98,9	1 x 1,38	12,5	0,52	220
5 x 2,5RE/ 2,5	156,5	1 x 1,75	13,3	0,61	248
5 x 4 RE/ 4	238,1	1 x 2,22	14,4	0,69	343
5 x 6 RE/ 6	355,2	1 x 2,72	16,7	0,83	478
7 x 1,5RE/ 2,5	133,4	1 x 1,38	14,4	0,50	314
12 x 1,5RE/ 2,5	205,4	1 x 1,38	19,0	0,74	503
19 x 1,5RE/ 4	319,7	1 x 1,38	19,2	1,02	513
24 x 1,5RE/ 6	412,8	1 x 1,38	25,0	1,25	950
30 x 1,5RE/ 6	498,2	1 x 1,38	27,5	1,47	1.061
7 x 2,5RE/ 2,5	199,7	1 x 1,78	16,0	0,57	413
12 x 2,5RE/ 4	334,1	1 x 1,78	20,9	0,86	667
30 x 2,5RE/ 10	840,0	1 x 1,78	30,1	1,77	1.431

J-H(ST)H

Halogenfree Telecommunication Cable

Application:

These installation cables are suitable for fixed installations in telecommunication and are to be used in locations with fire hazard to reduce damage in case of fire.



Construction:

- 1 solid bare copper
- 2 core insulation of halogen-free polymer (HI 2)
- 3 layer of foil
- 4 static screen of plastic coated aluminium foil with drain wire
- 5 outer sheath of halogen-free polymer (HM 2), grey, Flame retardant

Information:

Cores twisted to star-quads, 5 quads a unit, unit to layers.
Layer identification with coloured tapes.

Standards:

DIN VDE 0815 (core identification)
DIN EN 60228 class 1 (construction)
DIN VDE 0207-24

Technical data:

Peak operating voltage		[V]	300 Volt
Temperature range	in motion fixed		- 5°C till +50°C -30°C till +70°C
Bending radius	in motion	x diameter	7,5
Flammability	standard		EN 50266-2-4 IEC 60332-3 Kat.C

Number of pairs and nominal conductor diameter mm	Copper figure kg/km	Insulation thickness mm	Overall diameter appr. mm	Calorific potential kWh/m	Weight appr. kg/km
2 x 2 x 0,6	12,5	1,0	6,0	0,17	49
4 x 2 x 0,6	23,0	1,0	8,6	0,29	82
6 x 2 x 0,6	34,6	1,0	9,0	0,34	99
10 x 2 x 0,6	56,6	1,0	10,4	0,44	135
20 x 2 x 0,6	111,4	1,0	12,8	0,69	223
30 x 2 x 0,6	165,1	1,0	14,9	0,92	306
40 x 2 x 0,6	218,9	1,0	16,7	1,14	386
50 x 2 x 0,6	273,6	1,4	18,7	1,45	485
80 x 2 x 0,6	436,8	1,4	22,6	2,10	723
100 x 2 x 0,6	545,3	1,6	25,2	2,62	902
1 x 2 x 0,8	10,6	1,0	6,5	0,15	60
2 x 2 x 0,8	24,0	1,0	6,8	0,22	66
4 x 2 x 0,8	39,4	1,0	9,9	0,37	113
6 x 2 x 0,8	59,5	1,0	10,4	0,43	141
10 x 2 x 0,8	98,9	1,2	12,2	0,60	200
20 x 2 x 0,8	194,9	1,4	15,5	0,95	342

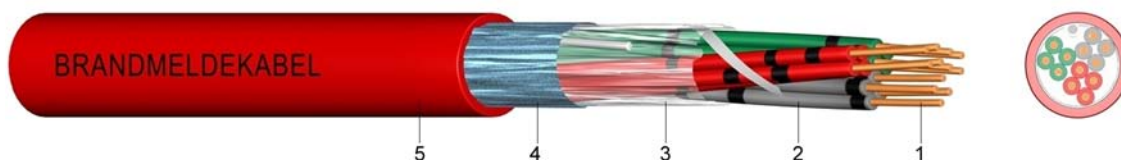
Number of pairs and nominal conductor diameter mm	Copper figure kg/km	Insulation thickness mm	Overall diameter appr. mm	Calorific potential kWh/m	Weight appr. kg/km
30 x 2 x 0,8	291,8	1,4	18,5	1,38	496
40 x 2 x 0,8	387,8	1,4	20,8	1,73	632
50 x 2 x 0,8	484,8	1,6	22,7	2,05	764
60 x 2 x 0,8	581,8	1,6	24,9	2,48	920

J-H(ST)H BMK

Halogen-Free and Flame Retardant Fire Alarm Cable

Application:

Suitable for fixed installations in telecommunication and are to be used in locations with fire hazard to reduce damage in case of fire.



Construction:

- 1 solid bare copper
- 2 core insulation of halogen-free polymer (HI 2)
- 3 layer of plastic foil
- 4 static screen of plastic coated aluminium foil with drain wire 0,6mm or 0,8mm
- 5 outer sheath of halogen-free polymer (HM 2) red with the marking "BRANDMELDEKABEL" (fire alarm cable)

Information:

Cores twisted to star-quads, 5 quads a unit, unit to layers.
Layer identification with coloured tapes.

Standards:

DIN VDE 0815 (core identification)
DIN EN 60228 class 1 (construction)
DIN VDE 0207-24

Technical data:

Peak operating voltage

[V]

300 Volt

Temperature range

in motion
fixed

- 5°C till +50°C
-30°C till +70°C

Bending radius

in motion

x diameter

7,5

Flammability

standard

EN 50266-2-4
IEC 60332-3 Kat.C

Number of pairs and nominal conductor diameter mm	Copper figure kg/km	Insulation thickness mm	Overall diameter mm	Calorific potential kWh/m	Weight appr. kg/km
1 x 2 x 0,8	10,6	1,0	6,5	0,15	60
2 x 2 x 0,8	24,0	1,0	6,8	0,22	66
4 x 2 x 0,8	39,4	1,0	9,9	0,37	113
6 x 2 x 0,8	59,5	1,0	10,4	0,43	141
10 x 2 x 0,8	97,9	1,2	12,2	0,60	200
20 x 2 x 0,8	194,9	1,4	15,5	0,95	342
40 x 2 x 0,8	387,8	1,4	20,8	1,80	632
50 x 2 x 0,8	484,8	1,6	22,7	2,05	764
60 x 2 x 0,8	581,8	1,6	24,9	2,48	920

J-H(ST)Hh EIB MSR Installation Cable with Static Screen European Installation Bus Halogen-Free Version

Application: For the installation on and under plaster in dry, humid and wet rooms as well as outside (by protected installation) in Strongly and weak stream arrangements, as BUS cable as well as as a MSR cable in strong stream arrangements. The transference of measuring values, the application in the process data processing as well as the use in the area of the tax technology and control technology are the main areas of application of this cable.



Construction:

- 1 solid bare copper
- 2 core insulation of halogen-free copolymere
- 3 layer of plastic foil
- 4 static screen of plastic laminated aluminium foil with drain wire
- 5 outer sheath of halogen-free copolymere, green or grey

Information: Cores twisted to starquads.

Standards: DIN VDE 0815 (core identification)
DIN EN 60228 class 1 (construction)
EIBA pecification

Technical data:

Peak operating voltage		[V]	300
Temperature range	in motion		-5°C till +50°C
Conductor resistance	max.	[Ohm/km]	73,2
Insulation resistance	min.	[MOhm/km]	100
Mutal capacitance	at 800 Hz	[nF] max.	100
Test voltage	Core / Core	[KV] 5min.	1
	Core and Screen on conductorsurface	[KV] 1min.	4
Flammability	standard		EN 50266-2-4 IEC 60332-1

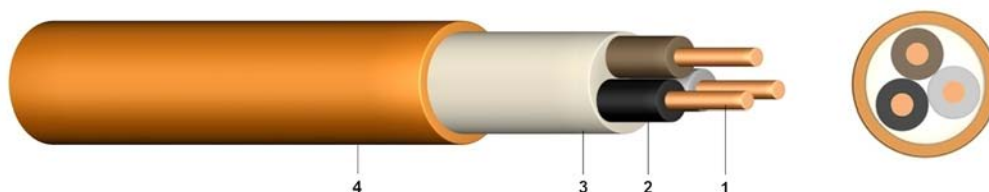
Number of pairs and nominal conductor diameter mm	Copper figure kg/km	Overall diameter appr. mm	Calorific potential kWh/m	Weight appr. kg/km
2 x 2 x 0,8	20,2	8,5	0,22	60

**(N)HXH
FE180/E30
KERAM**

**Halogen-Free Cable with
Circuit Integrity of 30 Minutes**

Application:

Safety cables are used in all locations where a high degree of protection against fire and fire-damage has to be provided for human life and equipment and are, therefore, subject to high security requirements. These cables may be used indoors and outdoors. They may not be installed directly into the ground and into the water. This cable conforms with Safety Class II standards. Functional integrity of 30 minutes and insulation integrity of 180 minutes.



Construction:

- 1 solid or stranded bare copper
- 2 core insulation of halogen-free, similar ceramic polymer compound (HXI 1)
- 3 halogen-free inner sheath
- 4 outer sheath of halogen-free polymere (HM4), orange

Information:

These cables fulfill the conditions of the tests to insulation integrity according to DIN VDE 0472-814/ 8.83 about 180 min. and IEC Public. 331 first edition 1970 to circuit integrity about 30 min. to DIN 4102-12 according to VDE 0100-710 and 0100-718.

Standards:

adapted to DIN VDE 0266
DIN VDE 0276-604
DIN VDE 0472-814
DIN EN 60228 class 1 and 2 (construction)
HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U		[V]	600 / 1000 Volt
Test voltage		[V] _{Ac}	4000
Temperature range	in motion		-5°C till +90°C
Operating temperature	short circuit	°C	250
Short circuit time	max.	[sec]	5
Bending radius	single core style	x diameter	15
	multi core style	x diameter	12
Flammability	standard		EN 50266-2-4 IEC 60332-3 Kat.C

Number of cores and nominal cross section mm ²	Copper figure kg/km	Overall diameter appr.mm	Calorific potential kWh/m	Weight appr. kg/km
1 x 16 RM	153,6	9,0	0,30	207
1 x 25 RM	240,0	10,6	0,40	307
1 x 35 RM	336,0	11,8	0,46	407
1 x 50 RM	480,0	13,1	0,54	535
1 x 70 RM	672,0	15,0	0,66	744
1 x 95 RM	912,0	17,0	0,80	1.009

Number of cores and nominal cross section mm ²		Copper figure kg/km	Overall diameter appr.mm	Calorific potential kWh/m	Weight appr. kg/km
1 x 120	RM	1.152,0	18,6	0,91	1.248
1 x 150	RM	1.440,0	20,6	1,14	1.538
1 x 185	RM	1.776,0	22,8	1,35	1.917
1 x 240	RM	2.304,0	26,3	1,56	2.521
1 x 300	RM	2.880,0	30,0	2,50	3.400
2 x 1,5	RE	28,8	10,2	0,45	145
2 x 2,5	RE	48,0	11,0	0,52	180
2 x 4	RE	76,8	11,8	0,57	224
2 x 6	RE	115,2	12,8	0,65	282
2 x 10	RE	192,0	14,4	0,78	393
2 x 16	RM	307,2	17,3	1,04	605
3 x 1,5	RE	43,2	10,6	0,50	165
3 x 2,5	RE	72,0	11,5	0,57	209
3 x 4	RE	115,2	12,4	0,64	268
3 x 6	RE	172,8	13,5	0,72	344
3 x 10	RE	288,0	15,6	0,90	506
3 x 16	RM	460,8	18,0	1,14	761
3 x 25	RM	720,0	22,3	1,63	1.160
3 x 35	RM	1.008,0	24,9	1,92	1.522
3 x 50	RM	1.440,0	27,7	2,30	1.980
3 x 70	RM	2.016,0	32,0	2,96	2.746
3 x 95	RM	2.736,0	36,5	3,67	3.712
3 x 25/16	RM	873,6	23,4	1,76	1.335
3 x 35/16	RM	1.161,6	25,7	2,02	1.683
3 x 50/25	RM	1.680,0	29,0	2,50	2.244
3 x 70/35	RM	2.352,0	33,4	3,18	3.101
3 x 95/50	RM	3.216,0	38,3	4,04	4.207
3 x 120/70	RM	4.128,0	42,6	4,92	5.315
4 x 1,5	RE	57,6	11,3	0,56	192
4 x 2,5	RE	96,0	12,3	0,64	249
4 x 4	RE	153,6	13,3	0,72	322
4 x 6	RE	230,4	14,5	0,82	418
4 x 10	RE	384,0	16,8	1,01	620
4 x 16	RM	614,4	19,8	1,31	944
4 x 25	RM	960,0	24,3	1,92	1.452
4 x 35	RM	1.344,0	27,1	2,23	1.906
4 x 50	RM	1.920,0	30,5	2,79	2.514
4 x 70	RM	2.688,0	35,3	3,58	3.497
4 x 95	RM	3.648,0	40,2	3,87	4.728
4 x 120	RM	4.608,0	44,5	5,37	5.882
4 x 150	RM	5.760,0	49,0	6,51	7.199
5 x 1,5	RE	72,0	12,2	0,66	228
5 x 2,5	RE	120,0	13,3	0,75	295
5 x 4	RE	192,0	14,4	0,84	386
5 x 6	RE	288,0	16,1	1,01	518
5 x 10	RE	480,0	18,3	1,22	755
5 x 16	RM	768,0	22,2	1,64	1.187
5 x 25	RM	1.200,0	26,6	2,29	1.773
5 x 35	RM	1.680,0	29,8	2,72	2.341
5 x 50	RM	2.400,0	33,7	3,44	3.100
7 x 1,5	RE	100,8	13,0	0,73	274
10 x 1,5	RE	144,0	16,4	1,01	397
12 x 1,5	RE	172,8	16,8	1,08	438
19 x 1,5	RE	273,6	19,2	1,41	606
24 x 1,5	RE	345,6	22,6	1,78	785
30 x 1,5	RE	432,0	23,7	2,02	917

Number of cores and nominal cross section mm ²	Copper figure kg/km	Overall diameter appr.mm	Calorific potential kWh/m	Weight appr. kg/km
7 x 2,5 RE	168,0	14,2	0,83	358
12 x 2,5 RE	288,0	18,0	1,24	580
19 x 2,5 RE	456,0	21,8	1,70	852
24 x 2,5 RE	576,0	25,0	2,05	1.054
30 x 2,5 RE	720,0	26,3	2,33	1.245

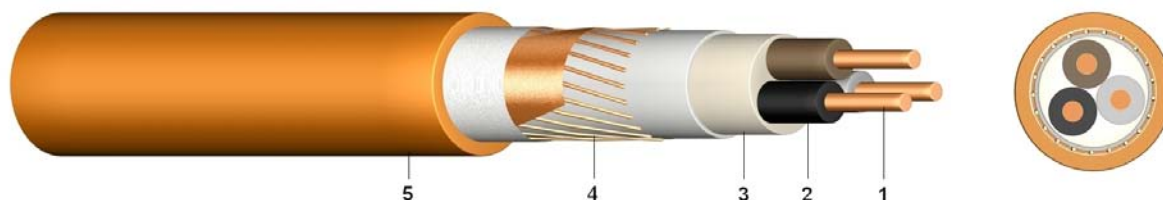
More types on enquiry

**(N)HXCH
FE180/E30
KERAM**

**Halogen-Free Cable with Concentric Conductor and
Circuit Integrity of 30 Minutes**

Application:

Safety cables are used in all locations where a high degree of protection against fire and fire-damage has to be provided for human life and equipment and are, therefore, subject to high security requirements. These cables may be used indoors and outdoors. They may not be installed directly into the ground and into the water. Functional integrity of 30 minutes and insulation integrity of 180 minutes.



Construction:

- 1 solid or stranded bare copper
- 2 core insulation of halogen-free, similar ceramic polymer compound (HXI 1)
- 3 halogen-free inner sheath
- 4 concentric conductor formed by copper wires with counter helix of copper tape
- 5 outer sheath of halogen-free polymer (HM 4), orange

Information:

These cables fulfil the conditions of the tests to insulation integrity according to DIN VDE 0472-814/ 8.83 about 180 min. and IEC Public. 331 first edition 1970 to circuit integrity about 30 min. to DIN 4102-12 according to VDE 0100-710 and 0100-718.

Standards:

adapted to DIN VDE 0266
DIN VDE 0276-604
DIN VDE 0472-814
DIN EN 60228 class 1 and 2 (construction)
HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U		[V]	600 / 1000 Volt
Test voltage		[V] _{AC}	4000
Temperature range	in motion		-5°C till +90°C
Operating temperature	short circuit	°C	250
Short circuit time	max.	[sec]	5
Bending radius	in motion	x diameter	12
Flammability	standard		EN 50266-2-4 IEC 60332-3 Kat.C

Number of cores and nominal cross section mm ²	Copper figure kg/km	Overall diameter appr.mm	Calorific potential kWh/m	Weight appr. kg/km
2 x 1,5 RE/1,5	51,8	10,8	0,40	133
2 x 2,5 RE/2,5	79,7	12,0	0,46	171
3 x 1,5 RE/1,5	70,1	11,2	0,50	166
3 x 2,5 RE/2,5	108,5	12,5	0,58	219
3 x 4 RE/4	161,3	13,4	0,66	291

Number of cores and nominal cross section mm ²	Copper figure kg/km	Overall diameter appr.mm	Calorific potential kWh/m	Weight appr. kg/km
3 x 6 RE/ 6	240,0	15,3	0,78	393
3 x 10 RE/ 10	408,0	17,0	0,92	576
3 x 16 RE/ 16	643,2	19,6	1,15	860
3 x 25 RM/ 16	1.003,2	23,0	1,57	1.194
3 x 35 RM/ 16	1.401,6	25,6	1,86	1.521
3 x 50 RM/ 25	1.999,7	28,8	2,28	2.037
3 x 70 RM/ 35	2.796,5	33,7	3,05	2.841
3 x 95 RM/ 50	3.791,0	38,2	3,73	3.840
3 x 120 RM/ 70	4.785,6	42,3	4,50	4.869
3 x 150 RM/ 70	5.100,5	46,6	5,63	5.844
3 x 185 RM/ 95	6.383,0	52,3	6,99	7.400
3 x 240 RM/120	8.241,6	59,7	9,08	9.661
4 x 1,5 RE/ 1,5	84,5	11,9	0,55	192
4 x 2,5 RE/ 2,5	132,5	13,3	0,64	254
4 x 4 RE/ 4	199,7	14,3	0,71	341
4 x 6 RE/ 6	296,6	16,3	0,85	471
4 x 10 RE/ 10	504,0	18,2	1,00	685
4 x 16 RM/ 16	795,8	21,1	1,24	1.035
4 x 25 RM/ 16	1.142,4	25,0	1,71	1.465
4 x 35 RM/ 16	1.526,4	27,8	2,03	1.886
4 x 50 RM/ 25	2.203,2	31,6	2,52	2.539
4 x 70 RM/ 35	3.081,6	37,0	3,39	3.556
4 x 95 RM/ 50	4.207,7	41,9	4,12	4.816
4 x 120 RM/ 70	5.388,5	46,6	5,05	6.101
4 x 150 RM/ 70	6.540,5	51,1	6,13	7.323
4 x 185 RM/ 95	8.159,0	57,6	7,73	9.285
4 x 240 RM/120	10.545,6	65,8	10,02	12.141
5 x 2,5 RE/ 2,5	302,4	14,3	0,65	283
5 x 6 RE/ 6	470,4	17,5	0,84	530
7 x 1,5 RE/ 2,5	133,4	14,2	0,69	274
12 x 1,5 RE/ 2,5	205,4	17,4	0,95	399
24 x 1,5 RE/ 6	412,8	23,7	1,55	744
30 x 1,5 RE/ 6	499,2	24,8	1,77	873
7 x 2,5 RE/ 2,5	199,7	15,4	0,77	348
12 x 2,5 RE/ 4	334,1	19,2	1,09	556
24 x 2,5 RE/ 10	696,0	26,1	1,76	1.027
30 x 2,5 RE / 10	840,0	27,4	2,02	1.216

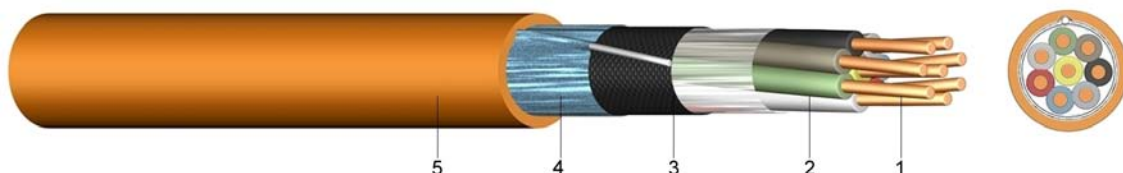
More types on enquiry

JE-H(ST)H E30

Halogen-Free and Flame Retardant Installation Cable for Industrial Electronics with Circuit Integrity of 30 Minutes

Application:

Suitable for fixed installations in telecommunication. They are to be used in locations with fire hazard and where insulation integrity of at least 180 minutes and circuit integrity of at least 30 minutes are required.



Construction:

- 1 solid bare copper
- 2 core insulation of halogen-free, similar ceramic polymer compound, Cores twisted to pairs and four twisted pairs in a bundle, bundle identification by Number characteristic helix (Z) or ring mark on core insulation (Si)
- 3 layer of plastic foil
- 4 static screen of plastic coated metal foil with a solid tinned drain wire 0,8mm
- 5 outer sheath of halogen-free polymer (HM 2), orange

Information:

These cables fulfil the conditions of the tests to insulation integrity according to DIN VDE 0472-814/ 8.83 about 180 min. and IEC Public. 331 first edition 1970 to circuit integrity about 30 min. to DIN 4102-12 according to VDE 0100-710 and 0100-718.

Standards:

DIN VDE 0815 (core identification)
DIN EN 60228 class 1 (construction)
DIN VDE 0207-24

Technical data:

Peak operating voltage		[V]	225 Volt
Temperature range	in motion fixed		- 5°C till +50°C -30°C till +70°C
Bending radius	in motion	x diameter	7,5
Flammability	standard		EN 50266-2-4 EN 60332-1 IEC 60332-3 Kat.C
Insulation resistance	standard min.	[MΩm/km]	100
Mutal capacitance		[Ωm/km]	73,2
	max.	[nF/km]	120
Capacitance unbalance 100m	max	[pF]	200

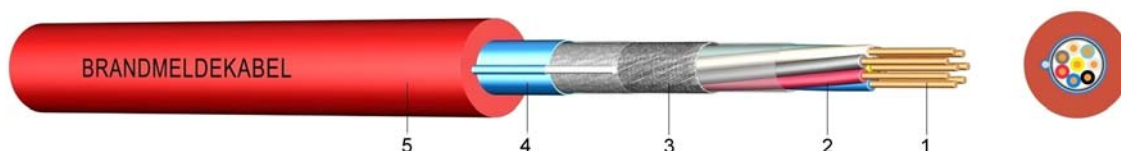
Number of pairs and nominal conductor diameter mm	Copper figure kg/km	Insulation thickness mm	Overall diameter appr. mm	Calorific potential kWh/m	Weight appr. kg/km
2 x 2 x 0,8	24,0	1,0	6,6	0,13	86
4 x 2 x 0,8	43,2	1,0	8,8	0,20	138
8 x 2 x 0,8	81,6	1,2	12,8	0,34	220
12 x 2 x 0,8	121,0	1,2	13,5	0,39	298
20 x 2 x 0,8	197,8	1,4	16,1	0,53	465
32 x 2 x 0,8	326,4	1,4	20,6	0,85	704

JE-H(ST)H BMK ...Bd E30

Halogen-Free and Flame Retardant Installation Cable for Fire Detection Circuits with Circuit Integrity of 30 Minutes

Application:

Suitable for fixed installations in fire detection circuits. They are to be used in locations with fire hazard and where an insulation integrity of at least 180 minutes and a circuit integrity of at least 30 minutes are required.



Construction:

- 1 solid bare copper
- 2 core insulation of halogen-free, similar ceramic polymer compound (HI 1), twisted
- 3 layer of plastic foil
- 4 static screen of plastic coated aluminium foil with a solid tinned drain wire 0,8 mm
- 5 outer sheath of halogen-free polymer (HM 2) red with the marking "BRANDMELDEKABEL" (fire alarm cable)

Information:

These cables fulfil the conditions of the tests to insulation integrity according to DIN VDE 0472-814/ 8.83 about 180 min. and IEC Public. 331 first edition 1970 to circuit integrity about 30 min. to DIN 4102-12 according to VDE 0100-710 and 0100-718.

Standards:

DIN VDE 0815 (core identification)
DIN EN 60228 class 1 (construction)
DIN VDE 0207-24

Technical data:

Peak operating voltage		[V]	225 Volt
Temperature range	in motion fixed		- 5°C till +50°C -30°C till +70°C
Bending radius	in motion	x diameter	7,5
Flammability	standard		EN 50266-2-4 EN 60332-1 IEC 60332-3 Kat.C
Insulation resistance	standard min.	[MΩ/km]	100
Mutal capacitance		[Ω/km]	73,2
	max.	[nF/km]	120
Capacitance unbalance 100m	max	[pF]	200

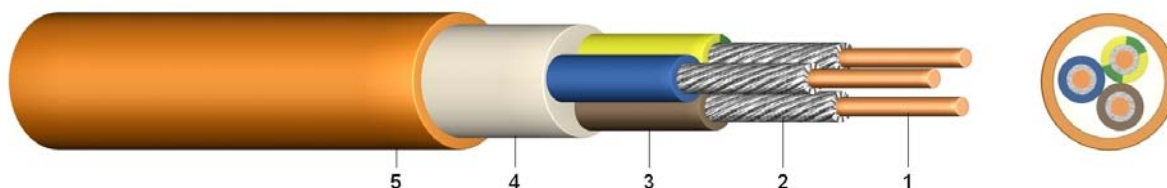
Number of pairs and nominal conductor diameter mm	Copper figure kg/km	Insulation thickness mm	Overall diameter appr.mm	Calorific potential kWh/m	Weight appr. kg/km
2 x 2 x 0,8	24,0	1,0	6,6	0,13	61
4 x 2 x 0,8	43,2	1,0	8,8	0,20	104
8 x 2 x 0,8	81,6	1,2	12,8	0,34	218
12 x 2 x 0,8	121,0	1,2	13,5	0,39	235
20 x 2 x 0,8	197,8	1,4	16,1	0,53	367

NHXX E90

Halogen-Free Cable with Circuit Integrity of 90 Minutes

Application:

Safety cables are used in all locations where a high degree of protection against fire and fire-damage has to be provided for human life and equipment and are, therefore, subject to high security requirements. These cables may be used indoors and outdoors. They may not be installed directly into the ground and into the water. Functional integrity of 90 minutes and insulation integrity of 180 minutes.



Construction:

- 1 solid or stranded bare copper
- 2 flame protective wrapping
- 3 core insulation of halogen-free polymer (HXI 1)
- 4 halogen-free core covering
- 5 outer sheath of halogen-free polymer (HM 4), orange

Information:

These cables fulfil the conditions of the tests to insulation integrity according to DIN VDE 0472-814/ 8.83 about 180 min. and IEC Public. 331 first edition 1970 to circuit integrity about 30 min. to DIN 4102-12 according to VDE 0100-710 and 0100-718.

Standards:

DIN VDE 0266
DIN VDE 0276-604
DIN EN 60228 class 1 and 2 (construction)
HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U		[V]	600 / 1000 Volt
Test voltage		[V] _{AC}	4000
Temperature range	in motion		-5°C till +90°C
Operating temperature	short circuit	°C	250
Short circuit time	max.	[sec]	5
Bending radius	single core style	x diameter	15
	multi core style	x diameter	12
Flammability	standard		EN 50266-2-4 IEC 60332-3 Kat.C

Number of cores and nominal cross section mm^2	Copper figure kg/km	Overall diameter appr. mm	Calorific potential kWh/m	Weight appr. kg/km
1 x 16 RM	153,6	10,5	0,42	250
1 x 25 RM	240,0	12,5	0,53	355
1 x 35 RM	336,0	13,5	0,60	460
1 x 50 RM	480,0	15,0	0,69	596
1 x 70 RM	672,0	16,5	0,83	810
1 x 95 RM	912,0	19,0	1,06	1.100
1 x 120 RM	1.152,0	20,5	1,15	1.350

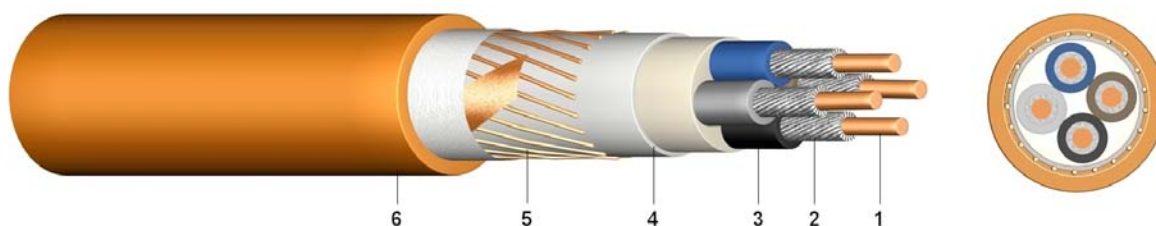
Number of cores and nominal cross section mm ²			Copper figure kg/km	Overall diameter appr.mm	Calorific potential kWh/m	Weight appr. kg/km
1 x 150	RM		1.440,0	22,5	1,38	1.650
1 x 185	RM		1.776,0	25,0	1,68	2.050
1 x 240	RM		2.304,0	28,0	1,84	2.650
1 x 300	RM		2.880,0	31,0	2,18	3.275
2 x 1,5	RE		28,8	14,3	0,69	275
2 x 2,5	RE		48,0	14,9	0,78	320
3 x 1,5	RE		43,2	15,0	1,02	315
3 x 2,5	RE		72,0	15,9	1,12	371
3 x 4	RE		115,2	16,7	1,21	435
3 x 6	RE		172,8	17,8	1,34	526
3 x 10	RE		288,0	19,5	1,54	691
3 x 16	RM		460,8	22,3	1,90	982
3 x 25	RM		720,0	25,8	2,48	1.392
3 x 35	RM		1.008,0	28,4	2,87	1.778
3 x 35/16	RM		1.161,6	29,5	3,06	1.964
3 x 50/25	RM		1.680,0	33,6	3,94	2.633
3 x 70/35	RM		2.352,0	38,1	4,81	3.563
3 x 95/50	RM		3.216,0	43,4	6,16	4.768
3 x 120/70	RM		4.128,0	46,9	6,96	5.856
4 x 1,5	RE		57,6	16,1	1,16	365
4 x 2,5	RE		96,0	17,0	1,27	429
4 x 4	RE		153,6	18,0	1,38	515
4 x 6	RE		230,4	19,2	1,54	628
4 x 10	RE		384,0	21,1	1,77	839
4 x 16	RM		614,4	24,3	2,19	1.210
4 x 25	RM		960,0	28,1	2,85	1.717
4 x 35	RM		1.344,0	31,0	3,29	2.209
4 x 50	RM		1.920,0	35,1	4,21	2.921
4 x 70	RM		2.688,0	40,0	5,20	3.980
4 x 95	RM		3.648,0	45,2	6,56	5.321
4 x 120	RM		4.608,0	49,0	7,38	6.475
4 x 150	RM		5.760,0	53,0	8,62	7.725
5 x 1,5	RE		72,0	17,4	1,34	429
5 x 2,5	RE		120,0	18,4	1,45	506
5 x 4	RE		192,0	19,5	1,59	612
5 x 6	RE		288,0	20,9	1,77	752
5 x 10	RE		480,0	23,0	2,04	1.009
5 x 16	RM		768,0	26,6	2,51	1.465
5 x 25	RM		1.200,0	30,9	3,35	2.105
5 x 35	RM		1.680,0	36,0	3,75	2.500
7 x 1,5	RE		100,8	18,6	1,57	497
12 x 1,5	RE		172,8	23,5	2,33	744
7 x 2,5	RE		168,0	19,8	1,74	599
12 x 2,5	RE		288,0	25,2	2,57	910

More types on enquiry

NHXCH E90 Halogen-Free Cable with Concentric Conductor and Circuit Integrity of 90 Minutes

Application:

Safety cables are used in all locations where a high degree of protection against fire and fire-damage has to be provided for human life and equipment and are, therefore, subject to high security requirements. These cables may be used indoors and outdoors. They may not be installed directly into the ground and into the water. Functional integrity of 90 minutes and insulation integrity of 180 minutes.



Construction:

- 1 solid or stranded bare copper
- 2 flame protective wrapping
- 3 core insulation of halogen-free polymer (HXI 1)
- 4 halogen-free inner sheath
- 5 concentric conductor formed by copper wires with counter helix of copper tape
- 6 outer sheath of halogen-free polymer (HM 4), orange

Information:

These cables fulfil the conditions of the tests to insulation integrity according to DIN VDE 0472-814/ 8.83 about 180 min. and IEC Public. 331 first edition 1970 to circuit integrity about 30 min. according to VDE 0100-710 and 0100-718.

Standards:

DIN VDE 0266
DIN VDE 0276-604
DIN EN 60228 class 1 and 2 (construction)
HD 308 S2 (core identification)

Technical data:

Nominal voltage U_0/U		[V]	600 / 1000 Volt
Test voltage		[V] _{AC}	4000
Temperature range	in motion	°C	-5°C till +90°C
Operating temperature	short circuit	°C	250
Short circuit time	max.	[sec]	5
Bending radius	in motion	x diameter	12,0
Flammability	standard		EN 50266-2-4 IEC 60332-3 Kat.C

Number of cores and nominal cross section mm ²	Copper figure kg/km	Overall diameter appr.mm	Calorific potential kWh/m	Weight appr. kg/km
2 x 1,5 RE/1,5	51,8	16,0	0,72	300
2 x 2,5 RE/2,5	79,7	17,0	0,81	350
3 x 1,5 RE/1,5	70,1	16,8	1,12	363
3 x 2,5 RE/2,5	108,5	17,9	1,24	434
3 x 4 RE/4	161,3	19,0	1,35	434
3 x 6 RE/6	240,0	21,0	1,49	434

Number of cores and nominal cross section mm ²	Copper figure kg/km	Overall diameter appr.mm	Calorific potential kWh/m	Weight appr. kg/km
3 x 10 RE/ 10	408,0	24,1	2,06	949
3 x 16 RE/ 16	643,2	27,3	2,43	1.340
3 x 25 RE/ 16	1.003,2	30,7	3,22	1.766
3 x 35 RE/ 16	1.401,6	33,3	3,64	2.172
3 x 50 RE/ 25	1.999,7	37,4	4,51	2.857
3 x 70 RE/ 35	2.796,5	42,5	5,58	3.839
3 x 95 RE/ 50	3.791,0	47,8	7,00	5.082
3 x 120 RE/ 50	4.785,6	51,4	7,83	6.204
3 x 150 RE/ 70	5.100,5	55,7	9,21	7.340
3 x 185 RE/ 95	6.383,0	61,7	11,07	9.142
3 x 240 RE/ 120	8.241,6	67,9	13,36	11.582
4 x 1,5 RE/ 1,5	84,5	18,0	1,11	450
4 x 2,5 RE/ 2,5	132,5	19,2	1,42	505
4 x 4 RE/ 4	199,7	20,3	1,53	608
4 x 6 RE/ 6	297,6	22,5	1,71	777
4 x 10 RE/ 10	504,0	26,4	2,42	1.153
4 x 16 RM/ 16	795,8	29,3	2,75	1.584
4 x 25 RM/ 16	1.142,4	33,1	3,67	2.120
4 x 35 RM/ 16	1.526,4	36,0	4,14	2.634
4 x 50 RM/ 25	2.203,2	41,1	5,38	3.524
4 x 70 RM/ 35	3.081,6	46,2	6,46	4.695
4 x 95 RM/ 50	4.207,7	52,0	8,09	6.242
4 x 120 RM/ 70	5.388,5	56,0	9,04	7.622
4 x 150 RM/ 70	6.540,5	61,0	10,78	9.096
4 x 185 RM/ 95	8.159,0	67,5	12,92	11.307
4 x 240 RM/120	10.545,6	74,4	15,60	14.359
7 x 1,5 RE/ 1,5	133,4	20,9	1,67	588
12 x 1,5 RE/ 2,5	205,4	26,2	2,57	620
24 x 1,5 RE/ 6	412,8	37,6	5,66	1.979
7 x 2,5 RE/ 2,5	199,7	22,1	1,91	696
12 x 2,5 RE/ 2,5	334,1	28,2	2,83	1.168
24 x 2,5 RE/ 2,5	696,0	41,0	6,56	2.465

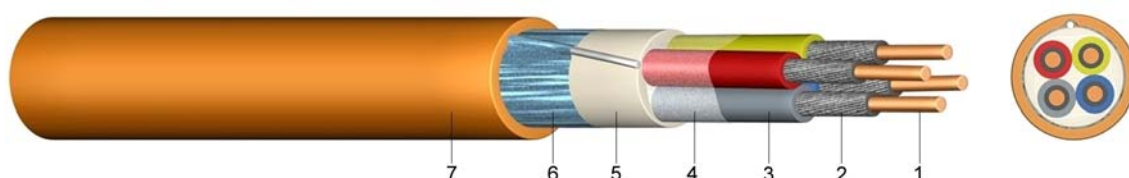
More types on enquiry

JE-H(ST)H E90

Halogen-Free and Flame Retardant Installation Cable for Industrial Electronics with Circuit Integrity of 90 Minutes

Application:

Suitable for fixed installations in telecommunication. They are to be used in locations with fire hazard and where insulation integrity of at least 180 minutes and circuit integrity of at least 90 minutes are required.



Construction:

- 1 solid bare copper
- 2 flame protective wrapping (MICA)
- 3 core insulation of halogen-free, cross-linked polymer, Cores twisted to pairs and four twisted pairs in a bundle, bundle identification by Number characteristic helix (Z) or ring mark on core insulation (Si)
- 4 core covering of foil
- 5 halogen-free inner sheath
- 6 static screen of plastic coated metal foil with a solid tinned drain wire 0,8 mm
- 7 outer sheath of halogen-free polymer (HM 2), orange

Information:

These cables fulfil the conditions of the tests to insulation integrity according to DIN VDE 0472-814/ 8.83 about 180 min. and IEC Public. 331 first edition 1970 to circuit integrity about 30 min. to DIN 4102-12 according to VDE 0100-710 and 0100-718.

Standards:

DIN VDE 0815 (core identification)
DIN EN 60228 class 1 (construction)
DIN VDE 0207-24

Technical data:

Peak operating voltage		[V]	225
Temperature range	in motion fixed		- 5°C till +50°C -30°C till +70°C
Bending radius	in motion	x diameter	7,5
Flammability	standard		EN 50226-2-4 EN 60332-1 IEC 60332-3 Kat.C
Insulation resistance	min.	[MΩ/km]	100
Mutal capacitance		[Ω/km]	73,2
	max.	[nF/km]	120
Capacitance unbalance 100m	max	[pF]	200

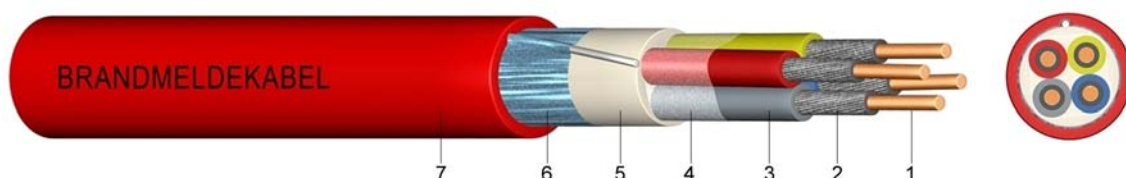
Number of pairs and nominal conductor diameter mm	Copper figure kg/km	Insulation thickness mm	Overall diameter appr.mm	Calorific potential kWh/m	Weight appr. kg/km
2 x 2 x 0,8	24,0	1,0	12,8	0,56	177
4 x 2 x 0,8	43,2	1,0	16,3	0,85	284
8 x 2 x 0,8	81,6	1,2	20,3	1,33	447
12 x 2 x 0,8	121,0	1,2	23,9	1,84	615
16 x 2 x 0,8	159,4	1,4	22,5	2,22	756
20 x 2 x 0,8	197,8	1,4	29,4	2,72	921

JE-H(ST)H BMK E90

Halogen-Free and Flame Retardant Installation Cables for Industrial Electronics with Circuit Integrity of 90 Minutes

Application:

Suitable for fixed installations in telecommunication. They are to be used in locations with fire hazard and where insulation integrity of at least 180 minutes and circuit integrity of at least 90 minutes are required.



Construction:

- 1 solid bare copper
- 2 core covering with glassfibre tape (MICA)
- 3 core insulation of halogen-free, cross-linked polymer, Cores twisted to pairs and four twisted pairs in a bundle, bundle identification by Number characteristic helix (Z) or ring mark on core insulation (Si)
- 4 layer of plastic foil
- 5 static screen of plastic laminated aluminium foil with a solid tinned drain wire 0,8 mm
- 6 outer sheath of halogen-free polymer (HM 2) red with the marking "BRANDMELDEKABEL" (fire alarm cable)

Information:

These cables fulfil the conditions of the tests to insulation integrity according to DIN VDE 0472-814/ 8.83 about 180 min. and IEC Public. 331 first edition 1970 to circuit integrity about 30 min. to DIN 4102-12 according to VDE 0100-710 and 0100-718.

Standards:

DIN VDE 0815 (core identification)
DIN EN 60228 class 1 (construction)
DIN VDE 0207-24

Technical data:

Peak operating voltage		[V]	225 Volt
Temperature range	in motion fixed		- 5°C till +50°C -30°C till +70°C
Bending radius	in motion	x diameter	7,5
Flammability	standard		EN 50226-2-4 EN 60332-1 IEC 60332-3 Kat.C
Insulation resistance	min.	[MΩm/km]	100
Mutal capacitance		[Ωm/km]	73,2
	max.	[nF/km]	120
Capacitance unbalance 100m	max	[pF]	200

Number of pairs and nominal conductor diameter mm	Copper figure kg/km	Insulation thickness mm	Overall diameter appr.mm	Calorific potential kWh/m	Weight appr. kg/km
2 x 2 x 0,8	24,0	1,0	12,8	0,56	177
4 x 2 x 0,8	43,2	1,0	16,3	0,85	284
8 x 2 x 0,8	81,6	1,2	20,3	1,33	447
12 x 2 x 0,8	121,0	1,2	23,9	1,84	615
16 x 2 x 0,8	159,4	1,4	26,6	2,22	756
20 x 2 x 0,8	197,8	1,4	29,4	2,72	921

JB-YY

Fire Alarm Cable

Application:

They are suitable for fixed installation indoors and are used for fire alarm systems.



Construction:

- 1 solid bare copper, Ø 0,8mm
- 2 core insulation of polyvinylchloride (PVC)
- 3 outer sheath of polyvinylchloride (PVC), red with the marking "BRANDMELDEKABEL" (fire alarm cable)

Standards:

DIN VDE 0815 (core identification)
DIN EN 60228 class 1 (construction)

Technical data:

Peak operating voltage		[V]	300 Volt
Test voltage		[V] _{AC}	800
Temperature range	in motion		- 5°C till +50°C
	fixed		-30°C till +70°C
Bending radius	in motion	x diameter	15
Flammability	standard		EN 60332-1-2
Insulation resistance	min.	[MΩ/km]	100
Mutal capacitance		[Ω/km]	73,2
	max.	[nF/km]	100

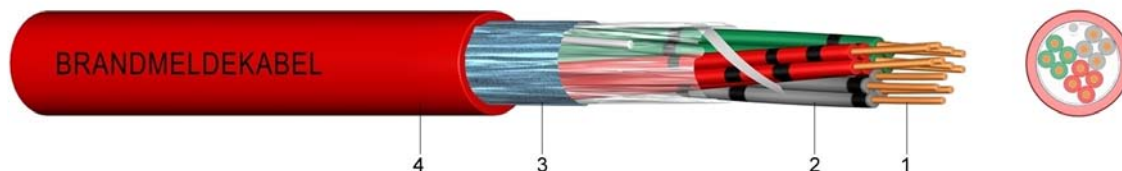
Number of cores and nominal conductor diameter mm	Copper figure kg/km	Insulation thickness mm	Overall diameter appr. mm	Weight appr. kg/km
2 x 0,8	9,6	1,1	5,2	35
3 x 0,8	14,4	1,1	5,5	44
4 x 0,8	19,2	1,1	5,9	51

JB-Y(ST)Y

Fire Alarm Cable

Application:

They are suitable for fixed installation indoors and are used for fire alarm systems.



Construction:

- 1 solid bare copper, $\varnothing$ 0,8mm
- 2 core insulation of polyvinylchloride (PVC)
- 3 static screen of plastic coated aluminium foil with a drain wire
- 4 outer sheath of polyvinylchloride (PVC), red with the marking "BRANDMELDEKABEL" (fire alarm cable)

Standards:

DIN VDE 0815 (core identification)
DIN EN 60228 class 1 (construction)

Technical data:

Peak operating voltage		[V]	300 Volt
Test voltage at 50 Hz	core / core	[V] _{AC}	800
	core / screen	[V] _{AC}	800
Temperature range	in motion		- 5°C till +50°C
	fixed		-30°C till +70°C
Bending radius	in motion	x diameter	15
Flammability	standard		EN 60332-1-2
Insulation resistance	min.	[MΩm/km]	100
Mutal capacitance		[Ωm/km]	73,2
	max.	[nF/km]	100

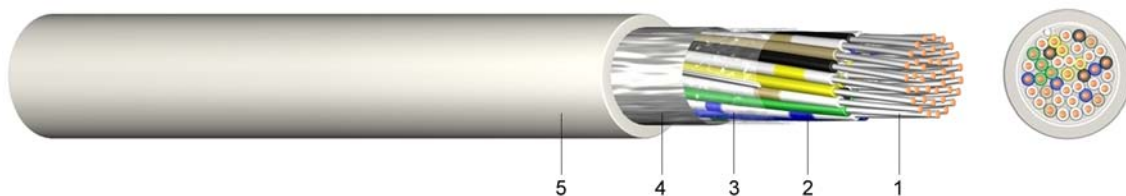
Number of cores and nominal conductor diameter mm	Copper figure kg/km	Insulation thickness mm	Overall diameter appr. mm	Weight appr. kg/km
1 x 2 x 0,8	10,6	1,1	5,5	38
2 x 2 x 0,8	20,2	1,1	6,1	54
4 x 2 x 0,8	39,4	1,1	8,7	94
5 x 2 x 0,8	49,9	1,1	9,4	114
6 x 2 x 0,8	59,5	1,1	10,1	135
10 x 2 x 0,8	98,9	1,3	13,1	205
12 x 2 x 0,8	118,1	1,3	13,5	235
20 x 2 x 0,8	194,9	1,3	15,6	352
30 x 2 x 0,8	291,8	1,5	19,4	522
40 x 2 x 0,8	387,8	1,5	20,9	663
50 x 2 x 0,8	484,8	1,7	23,7	832

F-vYAY

Installation Cable for Telecommunication

Application:

They are suitable for fixed installation indoors and are used for telecommunication purposes.



Construction:

- 1 solid bare copper, Ø 0,5mm
- 2 core insulation of polyvinylchloride (PVC)
- 3 cores are stranded in concentric layers
- 4 static screen of aluminium foil
- 5 outer sheath of polyvinylchloride (PVC), grey

Standards:

according to ÖVE K35 - 1997 (core identification)

Technical data:

Peak operating voltage		[V]	200 Veff / 300 Volt
Test voltage at 50 Hz	core / core	[V] _{AC}	500
	core / screen	[V] _{AC}	2000
Temperature range	in motion		- 5°C till +50°C
	fixed		-30°C till +70°C
Bending radius	in motion	x diameter	15
Flammability	standard		EN 60332-2-2
Insulation resistance	min.	[MΩm/km]	500
Mutal capacitance		[Ωm/km]	195,6
	max.	[nF/km]	100
Capacitance unbalance 100m	max	[pF]	500

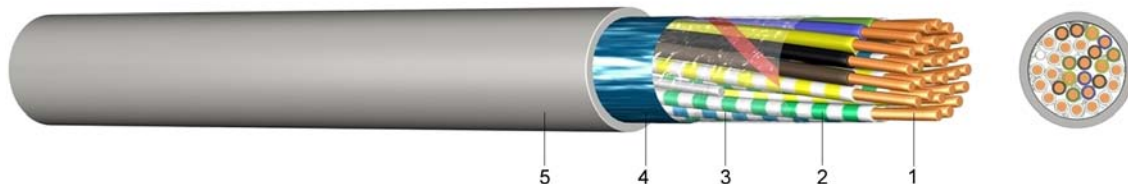
Number of pairs and nominal conductor diameter mm	Copper figure kg/km	Insulation thickness mm	Overall diameter appr. mm	Weight appr. kg/km
2 x 2 x 0,5	9,6	1,0	4,8	28
3 x 2 x 0,5	13,4	1,0	5,2	33
5 x 2 x 0,5	21,1	1,0	5,8	46
6 x 2 x 0,5	24,0	1,0	6,3	53
10 x 2 x 0,5	39,4	1,0	7,7	77
15 x 2 x 0,5	58,6	1,0	9,0	107
20 x 2 x 0,5	76,8	1,2	9,2	130
30 x 2 x 0,5	115,2	1,2	10,7	185
40 x 2 x 0,5	152,6	1,2	12,7	245
50 x 2 x 0,5	190,1	1,4	14,3	300
60 x 2 x 0,5	227,5	1,4	15,2	350
100 x 2 x 0,5	380,2	1,6	19,5	555

F-YAY

Installation Cable for Telecommunication

Application:

They are suitable for fixed installation indoors and are used for telecommunication purposes.



Construction:

- 1 solid bare copper Ø 0,6/0,8mm
- 2 core insulation of polyvinylchloride (PVC)
- 3 layer of plastic foil with copper drain wire
- 4 static screen of plastic laminated aluminium foil
- 5 outer sheath of polyvinylchloride (PVC), grey

Information:

conductor loop resistance:

core-Ø 0,6mm <135,8 Ohm/km

core-Ø 0,8mm < 73,2 Ohm/km

Standards:

according to ÖVE K35 - 1997 (core identification)
Flammability standard EN 60332-1-2 and 2-2

Technical data:

Peak operating voltage		[V]	200 Veff / 300 Volt
Test voltage at 50 Hz	core / core	[V] _{AC}	500
	core / screen	[V] _{AC}	2000
Temperature range	in motion		- 5°C till +50°C
	fixed		-30°C till +70°C
Bending radius	in motion	x diameter	15
Insulation resistance	min.	[MΩ/km]	500
Mutal capacitance	max.	[nF/km]	100
Capacitance unbalance 100m	max	[pF]	500

Number of pairs and nominal conductor diameter mm	Copper figure kg/km	Insulation thickness mm	Overall diameter appr. mm	Weight appr. kg/km
2 x 2 x 0,6	12,5	1,0	5,2	36
3 x 2 x 0,6	18,2	1,0	5,7	44
5 x 2 x 0,6	28,8	1,0	6,6	65
6 x 2 x 0,6	34,6	1,0	7,1	70
10 x 2 x 0,6	56,6	1,0	8,7	102
15 x 2 x 0,6	83,5	1,0	10,5	140
20 x 2 x 0,6	110,4	1,2	10,8	175
25 x 2 x 0,6	134,4	1,2	12,0	225
30 x 2 x 0,6	165,1	1,2	12,5	260
40 x 2 x 0,6	218,9	1,2	14,5	335
50 x 2 x 0,6	273,6	1,4	16,4	410
60 x 2 x 0,6	328,3	1,4	17,8	500
100 x 2 x 0,6	545,3	1,6	23,1	810

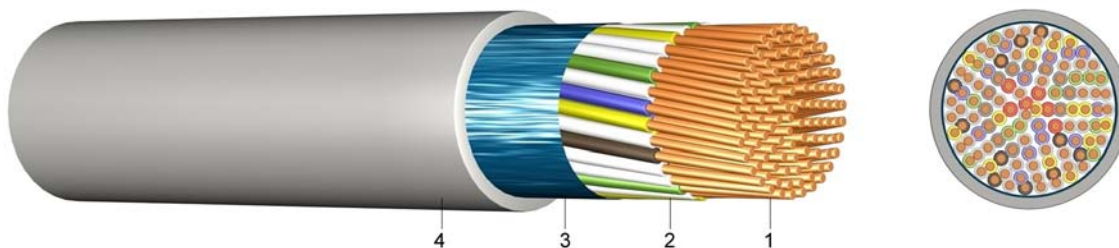
Number of pairs and nominal conductor diameter mm	Copper figure kg/km	Insulation thickness mm	Overall diameter appr.mm	Weight appr. kg/km
2 x 2 x 0,8	20,2	1,0	7,1	56
3 x 2 x 0,8	30,7	1,0	7,4	69
5 x 2 x 0,8	49,9	1,0	8,8	101
6 x 2 x 0,8	59,5	1,0	10,2	140
10 x 2 x 0,8	98,9	1,2	12,4	170
20 x 2 x 0,8	194,9	1,2	15,2	330
30 x 2 x 0,8	291,8	1,4	17,8	485
40 x 2 x 0,8	387,8	1,4	20,5	670
50 x 2 x 0,8	484,8	1,6	24,5	800
100 x 2 x 0,8	967,7	1,8	33,9	1.540

J-Y(ST)Y

Installation Cable for Telecommunication

Application:

They are suitable for fixed installation indoors and are used for telecommunication purposes.



Construction:

- 1 solid bare copper Ø 0,6/0,8mm
- 2 core insulation of polyvinylchloride (PVC)
- 3 static screen of plastic laminated aluminium foil with drain wire
- 4 outer sheath of polyvinylchloride (PVC), grey

Information:

conductor loop resistance:

core-Ø 0,6mm 130,0 Ohm/km

core-Ø 0,8mm 73,2 Ohm/km

Standards:

DIN VDE 0815 (core identification)
DIN EN 60228 class 1 (construction)
Flammability standard EN 60332-1-2 and 2-2

Technical data:

Peak operating voltage

Test voltage at 50 Hz

Temperature range

Bending radius

Insulation resistance

Mutal capacitance

Capacitance unbalance 100m

core / core
core / screen

[V]

[V]_{AC}

[V]_{AC}

in motion
fixed

in motion

min.

max.

max

x diameter

[MΩ/km]

[nF/km]

[pF]

300 Volt

800

800

- 5°C till +50°C

-30°C till +70°C

15

100

10

300

Number of pairs and nominal conductor diameter mm	Copper figure kg/km	Insulation thickness mm	Overall diameter appr. mm	Weight appr. kg/km
1 x 2 x 0,6	6,7	1,1	4,5	26
2 x 2 x 0,6	12,5	1,1	4,9	35
3 x 2 x 0,6	18,2	1,1	6,2	49
4 x 2 x 0,6	23,0	1,1	6,6	58
5 x 2 x 0,6	28,8	1,1	7,1	59
6 x 2 x 0,6	34,6	1,1	7,6	61
10 x 2 x 0,6	56,6	1,1	9,3	113
12 x 2 x 0,6	69,1	1,1	9,5	129
20 x 2 x 0,6	111,4	1,1	10,9	191
30 x 2 x 0,6	165,1	1,3	13,7	284
40 x 2 x 0,6	218,9	1,3	14,5	358
50 x 2 x 0,6	273,6	1,3	16,5	438
60 x 2 x 0,6	328,3	1,3	17,5	512
100 x 2 x 0,6	545,3	1,5	22,1	829

Number of pairs and nominal conductor diameter mm	Copper figure kg/km	Insulation thickness mm	Overall diameter appr. mm	Weight appr. kg/km
1 x 2 x 0,8	10,6	1,1	5,5	38
2 x 2 x 0,8	20,2	1,1	6,1	54
3 x 2 x 0,8	29,8	1,1	8,0	77
4 x 2 x 0,8	39,4	1,1	8,7	94
5 x 2 x 0,8	49,9	1,1	9,4	114
6 x 2 x 0,8	59,5	1,1	10,1	135
10 x 2 x 0,8	98,9	1,3	13,1	205
12 x 2 x 0,8	118,1	1,3	13,5	235
16 x 2 x 0,8	157,4	1,3	14,8	299
20 x 2 x 0,8	194,9	1,3	15,6	352
30 x 2 x 0,8	291,8	1,5	19,4	522
40 x 2 x 0,8	387,8	1,5	20,9	663
50 x 2 x 0,8	484,8	1,7	23,7	832
60 x 2 x 0,8	581,8	1,7	25,8	978

YYSch

PVC Insulated Telecommunication Cable

Application:

For indoor installation in conduits, cable ducts or on the wall surface. This cable is suitable for the application in intercom communicators but not admissible in heavy current installations.



Construction:

- 1 solid bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 outer sheath of polyvinylchloride (PVC), ivory or grey

Standards:

according to Factory standard

Technical data:

Peak operating voltage		[V]	65 Volt eff.
Test voltage		[V] _{AC}	500
Temperature range	in motion		+5°C till +50°C
Bending radius	in motion	x diameter	15
Flammability	standard		EN 60332-2-2
Insulation resistance	min.	[MΩm/km]	50
Conductor resistance	max.	[Ωm/km]	65

Number of cores and nominal conductor diameter mm	Copper figure kg/km	Overall diameter appr. mm	Weight appr. kg/km
2 x 0,6	5,4	3,0	12
3 x 0,6	8,1	3,2	16
4 x 0,6	10,8	3,4	20
5 x 0,6	13,4	3,7	26
6 x 0,6	16,1	4,0	29
10 x 0,6	26,9	6,0	54
16 x 0,6	43,2	6,8	78
26 x 0,6	69,9	8,2	110

YR

PVC Insulated Telecommunication Cable

Application:

For indoor installation in conduits, cable ducts or on the wall surface. This cable is suitable for the application in intercom communicators but not admissible in heavy current installations.



Construction:

- 1 solid bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 outer sheath of polyvinylchloride (PVC), white

Standards:

according to Factory standard

Technical data:

Peak operating voltage

[V]

100 Volt

Test voltage

[V]_{AC}

1000

Temperature range

in motion

+5°C till +50°C

Bending radius

in motion

x diameter

15

Flammability

standard

EN 60332-1-2

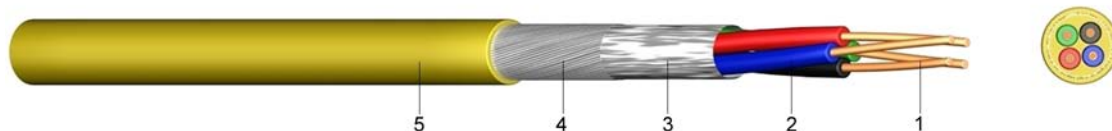
Number of cores and nominal cross section mm ²	Copper figure kg/km	Overall diameter appr.mm	Weight appr. kg/km
2 x 0,8	9,6	3,7	24
3 x 0,8	14,4	4,0	30
4 x 0,8	19,2	4,3	36
5 x 0,8	24,0	4,7	44
6 x 0,8	28,8	5,0	52
10 x 0,8	48,0	7,2	92

F-vYDvY

Telephone Modem Cable BTX Cable

Application:

For fixed installations in all types of plants with interference and radiation hazard of the audio and communication engineering. It is used as a data connection cable as well as a modem cable.



Construction:

- 1 solid tinned copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 layer of plastic foil
- 4 twisted braid of tinned copper wires
- 5 outer sheath of polyvinylchloride (PVC), yellow

Standards:

adapted to ÖVE-K50 / 1984

Technical data:

Peak operating voltage		[V]	300 Volt eff.
Temperature range	in motion		-5°C till +70°C
Flammability	standard		EN 60332-2-2
Impedance	0,1-2 Mhz	[Ohm]	850,0
Mutal capacitance	max.	[nF/km]	120
Capacitance unbalance 100m	max	[pF]	500
Aderwiderstand		[Ohm x km]	98,0

Number of cores and nominal conductor diameter mm²

Copper figure kg/km

Overall diameter appr.mm

Weight appr. kg/km

4 x 0,5/1

20,2

4,0

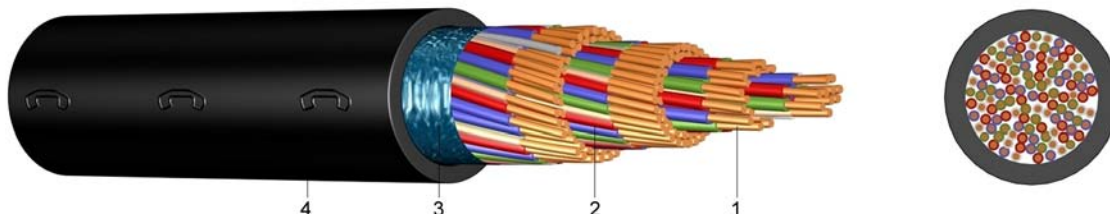
31

F-2YA2Y

Plastic Insulated Telecommunication Cable for Local Networks

Application:

They are suitable for the installation into the earth, in conduits, cable ducts and are used as network cables in industrial and operational plants, mainly in low-frequency installations.



Construction:

- 1 solid bare copper, $\varnothing$ 0,6/0,8mm
- 2 core insulation of polyethylene (PE)
- 3 static screen of aluminium foil with tinned copper drain wire, $\varnothing$ 0,5mm
- 4 outer sheath of polyethylene (PE), black

Information:

conductor loop resistance:

core- $\varnothing$ 0,6mm 130,0 Ohm/km
 core- $\varnothing$ 0,8mm 73,2 Ohm/km

Cores twisted to star-quads.

Core colours: transparent (or black by the start quad), red, green, blue

Standards:

adapted to austrian telecom standard

Technical data:

Peak operating voltage		[V]	200Veff / 300 Volt
Test voltage at 50 Hz	core / core	[V] _{AC}	500
	core / screen	[V] _{AC}	2000
Temperature range	in motion		-20°C till +90°C
Bending radius	in motion	x diameter	15
Insulation resistance	min.	[MΩ/km]	10000
Mutal capacitance	max.	[nF/km]	55
Capacitance unbalance 100m	max	[pF]	1500

Number of pairs and nominal conductor diameter mm	Copper figure kg/km	Insulation thickness mm	Overall diameter appr. mm	Weight appr. kg/km
2 x 2 x 0,6	12,5	1,8	7,1	46
6 x 2 x 0,6	34,6	1,8	9,3	86
10 x 2 x 0,6	56,6	1,8	10,5	120
20 x 2 x 0,6	110,4	1,8	14,2	210
30 x 2 x 0,6	165,1	1,8	16,5	280
40 x 2 x 0,6	218,9	1,8	17,0	355
50 x 2 x 0,6	273,6	1,8	18,5	425
60 x 2 x 0,6	328,3	1,8	19,5	485
100 x 2 x 0,6	545,3	2,0	26,5	820

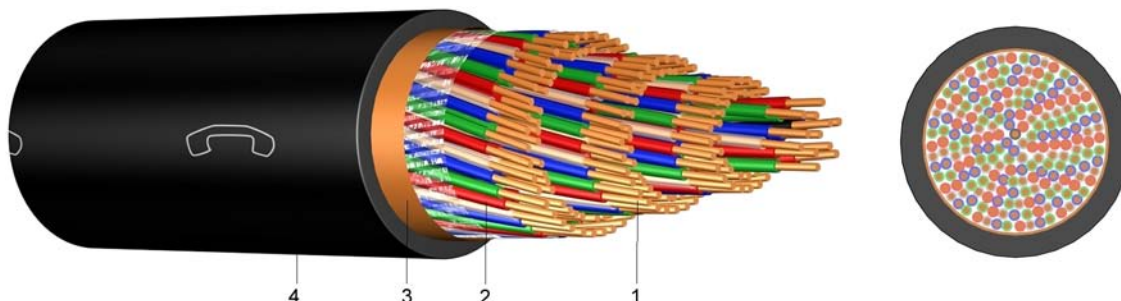
Number of pairs and nominal conductor diameter mm	Copper figure kg/km	Insulation thickness mm	Overall diameter appr.mm	Weight appr. kg/km
2 x 2 x 0,8	21,1	1,8	7,6	65
6 x 2 x 0,8	59,5	1,8	10,4	130
10 x 2 x 0,8	98,9	1,8	12,2	190
20 x 2 x 0,8	194,9	1,8	16,4	330
30 x 2 x 0,8	291,8	1,8	18,2	460
40 x 2 x 0,8	387,8	1,8	19,8	580
50 x 2 x 0,8	483,8	2,0	21,6	700
60 x 2 x 0,8	581,8	2,0	23,1	780
100 x 2 x 0,8	967,7	2,0	31,3	1.350

F-2YC2Y

Plastic Insulated Telecommunication Cable for Local Networks

Application:

They are suitable for the installation into the earth, in conduits, cable ducts and are used as network cables in industrial and operational plants, mainly in low-frequency installations.



Construction:

- 1 solid bare copper, Ø 0,6/0,8mm
- 2 core insulation of polyethylene (PE)
- 3 static screen of copper tape
- 4 outer sheath of polyethylene (PE), black

Information:

conductor loop resistance:

core-Ø 0,6mm 130,0 Ohm/km
core-Ø 0,8mm 73,2 Ohm/km

Cores twisted to star-quads.

Core colours: transparent (or black by the start quad), red, green, blue

Standards:

adapted to austrian telecom standard

Technical data:

Peak operating voltage		[V]	200 Veff / 300 Volt
Test voltage at 50 Hz	core / core	[V] _{AC}	500
	core / screen	[V] _{AC}	2000
Temperature range	in motion		-20°C till +90°C
Bending radius	in motion	x diameter	15
Insulation resistance	min.	[MΩ/km]	10000
Mutal capacitance	max.	[nF/km]	55
Capacitance unbalance 100m	max	[pF]	1500

Number of pairs and nominal conductor diameter mm	Copper figure kg/km	Insulation thickness mm	Overall diameter appr. mm	Weight appr. kg/km
2 x 2 x 0,6	30,2	1,8	8,6	78
6 x 2 x 0,6	67,2	1,8	10,1	110
10 x 2 x 0,6	93,1	1,8	11,5	150
20 x 2 x 0,6	166,1	1,8	15,0	250
30 x 2 x 0,6	232,3	1,8	16,5	320
40 x 2 x 0,6	292,3	1,8	17,8	400
50 x 2 x 0,6	355,7	1,8	19,2	480
60 x 2 x 0,6	415,7	1,8	19,9	550
100 x 2 x 0,6	654,7	2,0	25,0	865

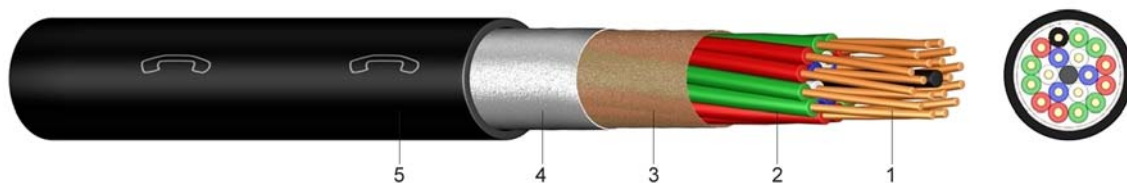
Number of pairs and nominal conductor diameter mm	Copper figure kg/km	Insulation thickness mm	Overall diameter appr.mm	Weight appr. kg/km
2 x 2 x 0,8	48,0	1,8	8,3	95
6 x 2 x 0,8	100,3	1,8	11,5	150
10 x 2 x 0,8	153,6	1,8	13,0	205
20 x 2 x 0,8	267,8	1,8	17,5	360
30 x 2 x 0,8	376,3	1,8	19,5	485
40 x 2 x 0,8	480,5	1,8	21,0	605
50 x 2 x 0,8	589,9	2,0	23,0	732
60 x 2 x 0,8	696,0	2,0	23,6	865
100 x 2 x 0,8	1.114,6	2,0	33,0	1.390

F-2YJA2Y

Plastic Insulated Telecommunication Cable for Local Networks, transversely and longitudinally water-proof

Application:

They are suitable for the installation into the earth, in conduits, cable ducts and are used as network cables in industrial and operational plants, mainly in low-frequency installations.



Construction:

- 1 solid bare copper, Ø 0,6/0,8mm
- 2 core insulation of polyethylene (PE)
- 3 the interstices of the cable are filled with jelly, one layer of plastic foil
- 4 screen of plastic laminated aluminium foil
- 5 outer sheath of polyethylene (PE), black

Information:

conductor loop resistance:

core-Ø 0,6mm 130,0 Ohm/km

core-Ø 0,8mm 73,2 Ohm/km

Cores twisted to star-quads.

Core colours: transparent (or black by the start quad), red, green, blue

Standards:

adapted to austrian telecom standard

Technical data:

Peak operating voltage		[V]	200 Veff / 300 Volt
Test voltage at 50 Hz	core / core	[V] _{AC}	500
	core / screen	[V] _{AC}	2000
Temperature range	in motion		-20°C till +90°C
Bending radius	in motion	x diameter	15
Insulation resistance	min.	[MΩ/km]	5000
Mutal capacitance	max.	[nF/km]	52
Capacitance unbalance 100m	max	[pF]	300

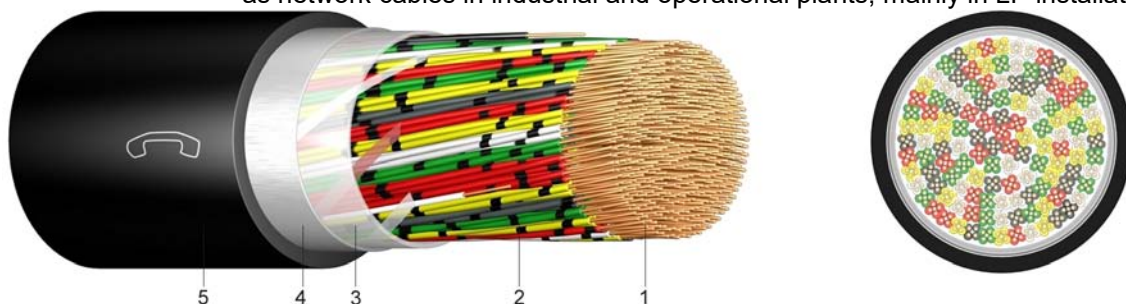
Number of pairs and nominal conductor diameter mm	Copper figure kg/km	Insulation thickness mm	Overall diameter appr. mm	Weight appr. kg/km
6 x 2 x 0,6	34,6	1,8	11,0	125
10 x 2 x 0,6	56,6	1,8	12,5	170
20 x 2 x 0,6	110,4	1,8	16,5	310
30 x 2 x 0,6	165,1	1,8	18,0	390
50 x 2 x 0,6	273,6	1,8	22,0	580
100 x 2 x 0,6	545,3	2,0	30,0	1.150
6 x 2 x 0,8	59,5	1,8	12,5	170
10 x 2 x 0,8	98,9	1,8	14,0	234
20 x 2 x 0,8	194,9	1,8	19,5	450
30 x 2 x 0,8	291,8	1,8	21,5	600
50 x 2 x 0,8	483,8	2,0	26,5	920
60 x 2 x 0,8	581,8	2,0	31,0	1.240

A-2Y(L)2Y

Plastic Insulated Telecommunication Cable for Local Networks

Application:

Suitable for the installation into the earth, in conduits, cable ducts and are used as network cables in industrial and operational plants, mainly in LF-installations.



Construction:

- 1 solid bare copper, $\varnothing$ 0,6/0,8mm
- 2 core insulation of polyethylene (PE)
- 3 layer of plastic foil
- 4 static screen of plastic laminated aluminium tape
- 5 outer sheath of polyethylene (PE), black

Information:

conductor loop resistance:

core- $\varnothing$ 0,6mm 130,0 Ohm/km
 core- $\varnothing$ 0,8mm 73,2 Ohm/km

Cores twisted to star-quads.

Standards:

DIN VDE 0816 (core identification)
 DIN EN 60228 class 1 (construction)

Technical data:

Peak operating voltage		[V]	225 Volt
Test voltage at 50 Hz	core / core	[V] _{AC}	500
	core / screen	[V] _{AC}	2000
Temperature range	in motion		-20°C till +50°C
	fixed		-20°C till +70°C
Bending radius	in motion	x diameter	15
Insulation resistance	min.	[MΩ/km]	5000
Mutal capacitance	max.	[nF/km]	52
Capacitance unbalance 100m	max	[pF]	800

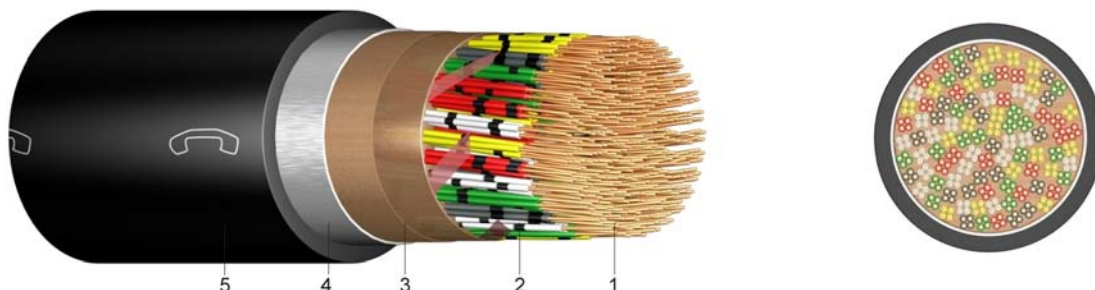
Number of pairs and nominal conductor diameter mm	Copper figure kg/km	Insulation thickness mm	Overall diameter appr. mm	Weight appr. kg/km
2 x 2 x 0,6	12,5	1,8	8,1	63
6 x 2 x 0,6	34,6	1,8	9,3	86
10 x 2 x 0,6	56,6	1,8	11,5	146
20 x 2 x 0,6	110,4	1,8	15,2	239
40 x 2 x 0,6	218,9	1,8	18,0	391
50 x 2 x 0,6	273,6	1,8	19,4	469
100 x 2 x 0,6	545,3	2,0	27,9	878
2 x 2 x 0,8	21,1	1,8	8,6	74
6 x 2 x 0,8	59,5	1,8	11,3	141
10 x 2 x 0,8	98,9	1,8	13,2	203
20 x 2 x 0,8	194,9	1,8	17,3	346
40 x 2 x 0,8	387,8	2,0	20,7	590
50 x 2 x 0,8	484,8	2,0	22,5	715

A-2YF(L)2Y

Plastic Insulated Telecommunication Cable for Local Networks, transver. and longitud.water-proof

Application:

Suitable for the installation into the earth, in conduits, cable ducts and are used as network cables in industrial and operational plants, mainly in LF-installations.



Construction:

- 1 solid bare copper, Ø 0,6/0,8mm
- 2 core insulation of polyethylene (PE)
- 3 the interstices of the cable are continuously filled with jelly, layer of plastic foil
- 4 static screen of plastic laminated aluminium tape
- 5 outer sheath of polyethylene (PE), black

Information:

conductor loop resistance:

core-Ø 0,6mm 130,0 Ohm/km
core-Ø 0,8mm 73,2 Ohm/km

Cores twisted to star-quads.

Standards:

DIN VDE 0816 (core identification)
DIN EN 60228 class 1 (construction)

Technical data:

Peak operating voltage		[V]	225 Volt
Test voltage at 50 Hz	core / core	[V] _{AC}	500
	core / screen	[V] _{AC}	2000
Temperature range	in motion		-20°C till +50°C
	fixed		-20°C till +70°C
Bending radius	in motion	x diameter	15
Insulation resistance	min.	[MΩm/km]	1500
Mutal capacitance	max.	[nF/km]	52
Capacitance unbalance 100m	max	[pF]	800

Number of pairs and nominal conductor diameter mm	Copper figure kg/km	Insulation thickness mm	Overall diameter appr. mm	Weight appr. kg/km
2 x 2 x 0,6	12,5	1,8	8,3	67
6 x 2 x 0,6	34,6	1,8	11,0	126
10 x 2 x 0,6	56,6	1,8	12,5	171
20 x 2 x 0,6	110,4	1,8	15,8	287
30 x 2 x 0,6	165,1	1,8	19,0	409
40 x 2 x 0,6	218,9	1,8	20,4	503
50 x 2 x 0,6	273,6	1,8	22,2	606
100 x 2 x 0,6	545,3	2,0	30,3	1.155
2 x 2 x 0,8	21,1	1,8	8,8	83
4 x 2 x 0,8	39,4	1,8	11,2	134
6 x 2 x 0,8	59,5	1,8	12,0	165

Number of pairs and nominal conductor diameter mm	Copper figure kg/km	Insulation thickness mm	Overall diameter appr. mm	Weight appr. kg/km
10 x 2 x 0,8	98,9	1,8	14,0	232
20 x 2 x 0,8	194,9	1,8	19,1	445
30 x 2 x 0,8	291,8	1,8	22,0	588
40 x 2 x 0,8	387,8	2,0	24,0	748
50 x 2 x 0,8	484,8	2,0	26,0	910
100 x 2 x 0,8	967,7	2,2	36,0	1.787
150 x 2 x 0,8	1.451,5	2,2	42,2	2.553

RG 58 C/U

Coaxial Cable 50 Ohm

Application:

For indoor installation as well as in industrial areas in conduits and cable ducts, for transmission of high frequency signals and power.



Construction:

- 1 fine-stranded tinned copper
construction: 19 x 0,18mm
- 2 core insulation of polyethylene (Dielectricum)
Ø ca. 2,95mm
- 3 screen of tinned copper braiding
- 4 outer sheath of polyvinylchloride (PVC), black

Information:

For underground laying PE outer sheath.
Special plastic in the halogen-free version.

Standards:

adapted to US Standard MIL -C - 17

Technical data:

Temperature range	in motion		-5°C till +70°C
Frequency range	F max	[GHz]	3,0
Insulation resistance	R iso	[MΩm/km]	10000
Impedance	ZL	[Ωm]	50 +/-2
Attenuation	100 MHz	[dB / 100m]	15,3
Capacitance	C	[NF / km]	100
Rel. velocity ratio	V rel	%	67,0
Electric strength	50Hz	[KV]eff	5
Bending radius	min.	[mm]	25
Operating peak voltage		[kV]	2,5

Type	Copper figure kg/km	Overall diameter appr.mm	Weight appr. kg/km
RG 58 C/U	18,2	5,0	35
RG 58 C/U for underground laying	18,2	5,0	35
RG 58 C/U halogen free	18,2	5,0	35

RG 59 B/U

Coaxial Cable 75 Ohm

Application:

For indoor installation as well as in industrial areas in conduits and cable ducts, for transmission of high frequency signals and power.



Construction:

- 1 copper-platinated steel (STAKU)
Ø ca. 0,584mm
- 2 core insulation of polyethylene (Dielectricum)
Ø ca. 3,7mm
- 3 screen of bare copper braiding
- 4 outer sheath of polyvinylchloride (PVC), black

Information:

For underground laying PE outer sheath.
Special plastic in the halogen-free version.

Standards:

adapted to US Standard MIL -C - 17

Technical data:

Temperature range	in motion		-5°C till +70°C
Frequency range	F max	[GHz]	3,0
Insulation resistance	R iso	[MΩm/km]	10000
Impedance	ZL	[Ωm]	75 +/-3
Conductor loop-resistance		[Ωm/km]	180,0
Attenuation	100 MHz	[dB / 100m]	11,1
Capacitance	C	[NF / km]	67
Rel. velocity ratio	V rel	%	67,0
Electric strength	50Hz	[KV]eff	7
Bending radius	min.	[mm]	30
Operating peak voltage		[kV]	3,5

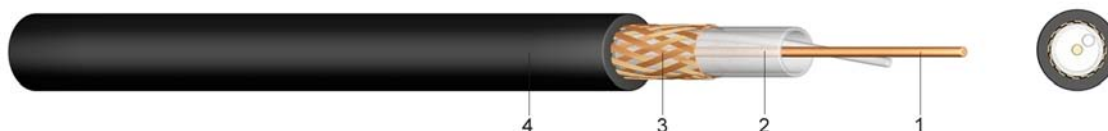
Type	Copper figure kg/km	Overall diameter appr. mm	Weight appr. kg/km
RG 59 B/U	23,0	6,2	51
RG 59 B/U for underground laying	23,0	6,2	51
RG 59 B/U halogen free	23,0	6,2	51
RG 59 + 2 x 0,75	38,4	5,2 x 9,7	59

RG 62 A/U

Coaxial Cable 93 Ohm

Application:

For indoor installation as well as in industrial areas in conduits and cable ducts, for transmission of high frequency signals and power.



Construction:

- 1 copper-platinated steel ($\varnothing$ ca. 0,64mm)
- 2 core insulation of polyethylene (Dielectricum)
 $\varnothing$ ca. 3,7mm
- 3 screen of bare copper braiding
- 4 outer sheath of polyvinylchloride (PVC), black

Information:

In the halogen-free version the outer sheath consists of a special halogen-free plastic.

Standards:

adapted to US Standard MIL - C - 17

Technical data:

Temperature range	in motion		-5°C till +70°C
Frequency range	F max	[GHz]	3,0
Insulation resistance	R iso	[M Ω m/km]	10000
Conductor loop-resistance		[Ω m/km]	155,0
Attenuation	100 MHz	[dB / 100m]	9,0
Capacitance	C	[NF / km]	45
Rel. velocity ratio	V rel	%	83,0
Electric strength	50Hz	[KV]eff	3
Bending radius	min.	[mm]	30
Operating peak voltage		[kV]	1,1

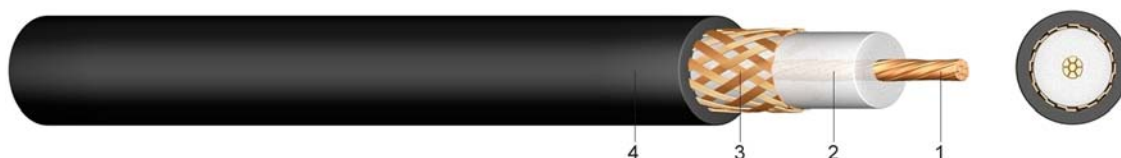
Type	Copper figure kg/km	Overall diameter appr.mm	Weight appr. kg/km
RG 62 A/U	22,1	6,2	55
RG 62 A/U halogen free	22,1	6,2	55

RG 213 U

Coaxial Cable 50 Ohm

Application:

For indoor installation as well as in industrial areas in conduits and cable ducts, for transmission of high frequency signals and power.



Construction:

- 1 stranded bare copper
construction: 7 x 0,75mm
- 2 core insulation of polyethylene (Dielectricum)
Ø ca. 7,3mm
- 3 screen of bare copper braiding
- 4 outer sheath of polyvinylchloride (PVC), black

Standards:

adapted to US Standard MIL - C - 17

Technical data:

Temperature range	in motion		-5°C till +70°C
Frequency range	F max	[GHz]	3,0
Insulation resistance	R iso	[MΩm/km]	10000
Impedance	ZL	[Ωm]	50 +/-2
Attenuation	100 MHz	[dB / 100m]	6,8
Capacitance	C	[NF / km]	100
Rel. velocity ratio	V rel	%	67,0
Electric strength	50Hz	[KV]eff	10
Bending radius	min.	[mm]	50
Operating peak voltage		[kV]	5,2

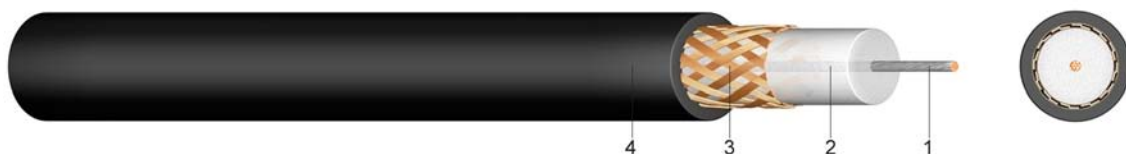
Type	Copper figure kg/km	Overall diameter appr.mm	Weight appr. kg/km
RG 213 U	73,0	10,3	154

RG 11 A/U

Coaxial Cable 75 Ohm

Application:

For indoor installation as well as in industrial areas in conduits and cable ducts, for transmission of high frequency signals and power.



Construction:

- 1 stranded tinned copper
construction: 7 x 0,40mm
- 2 core insulation of polyethylene (Dielectricum)
Ø ca. 7,3mm
- 3 screen of bare copper braiding
- 4 outer sheath of polyvinylchloride (PVC) or halogen-free polymere, black

Information:

In the halogen-free version the outer sheath consists of a special halogen-free plastic.

Standards:

adapted to US Standard MIL - C - 17

Technical data:

Temperature range	in motion		-5°C till +70°C
Frequency range	F max	[GHz]	3,0
Insulation resistance	R iso	[MΩm/km]	10000
Attenuation	100 MHz	[dB / 100m]	7,7
Capacitance	C	[NF / km]	67
Rel. velocity ratio	V rel	%	67,0
Electric strength	50Hz	[KV]eff	10
Bending radius	min.	[mm]	50
Operating peak voltage		[kV]	5,2

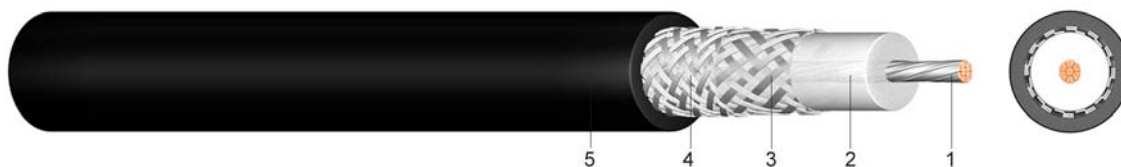
Type	Copper figure kg/km	Overall diameter appr.mm	Weight appr. kg/km
RG 11 A/U	53,8	10,2	125
RG 11 A/U halogen free	53,8	10,2	125

RG 214 U

Coaxial Cable 50 Ohm

Application:

For indoor installation as well as in industrial areas in conduits and cable ducts, for transmission of high frequency signals and power.



Construction:

- 1 stranded silvered copper
construction: 7 x 0,75mm
- 2 core insulation of polyethylene (Dielectricum)
Ø ca. 7,25mm
- 3 screen of silvered copper braiding
- 4 screen of silvered copper braiding
- 5 outer sheath of polyvinylchloride (PVC), black

Standards:

adapted to US Standard MIL - C - 17

Technical data:

Temperature range	in motion		-5°C till +70°C
Frequency range	F max	[GHz]	3,0
Impedance	ZL	[Ohm]	50 +/-2
Attenuation	100 MHz	[dB / 100m]	6,7
Capacitance	C	[NF / km]	100
Rel. velocity ratio	V rel	%	66,0
Electric strength	50Hz	[KV]eff	2
Bending radius	min.	[mm]	50

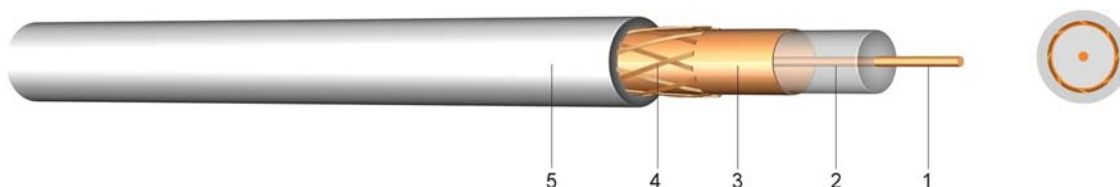
Type	Copper figure kg/km	Overall diameter appr.mm	Weight appr. kg/km
RG 214 U	113,3	10,8	195

2YCFGY

HF - Coaxial Cable 75 Ohm SAT - Conform

Application:

Suitable for applications in dry and humid locations as an aerial cable for community- and cable television networks. SAT-conform.



Construction:

- 1 solid bare copper
- 2 core insulation of polyethylene (Dielectricum)
- 3 static screen of copper foil
- 4 wide-meshed copper braiding
- 5 outer sheath of polyvinylchloride (PVC), white

Technical data:

Temperature range

Impedance

Attenuation

DC resistance

Bending radius

Shielding

in motion

ZL

100 MHz

300 Mhz

450 Mhz

850 Mhz

inner conductor

outer conductor

min.

[Ohm]

[dB / 100m]

[dB / 100m]

[dB / 100m]

[dB / 100m]

[Ohm / km]

[Ohm / km]

[mm]

[dB]

-5°C till +70°C

75 +/-3

8,4

16,0

19,5

27,1

47,0

23,0

30

75,0

Type

Copper
figure
kg/km

Overall
diameter
appr.mm

Weight
appr.
kg/km

2YCFGY 0,7/4,6

17,1

6,8

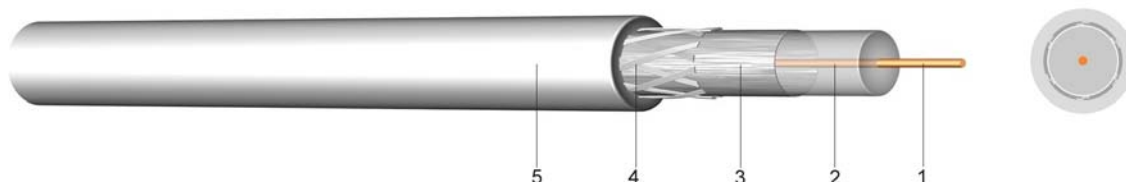
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2YALGY

HF - Coaxial Cable 75 Ohm SAT - Conform

Application:

Suitable for applications in dry and humid locations as an aerial cable for community- and cable television networks. SAT-conform.



Construction:

- 1 solid bare copper
- 2 core insulation of polyethylene (Dielectricum)
- 3 static screen of aluminium foil
- 4 wide-meshed bare copper braiding
- 5 outer sheath of polyvinylchloride (PVC), white

Technical data:

Temperature range
Attenuation

in motion

100 MHz

[dB / 100m]

-5°C till +70°C

8,2

300 Mhz

[dB / 100m]

15,7

450 Mhz

[dB / 100m]

19,0

850 Mhz

[dB / 100m]

26,7

DC resistance

inner conductor

[Ohm / km]

43,0

outer conductor

[Ohm / km]

19,0

Bending radius

min.

[mm]

30

Type

Copper
figure
kg/km

Overall
diameter
appr. mm

Weight
appr.
kg/km

2YALGY 0,7/4,4 **75 dB**

17,1

6,5

44

2YALGY 1,1/5,0 **100 dB digital**

17,5

6,8

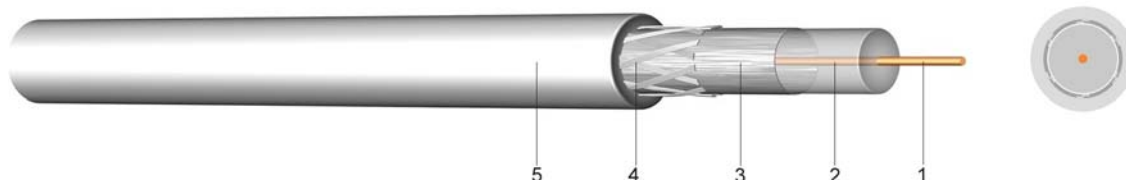
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2YAFCY

HF - Coaxial Cable 75 Ohm SAT - Conform

Application:

Suitable for applications in dry and humid locations as an aerial cable for community- and cable television networks. SAT-conform.



Construction:

- 1 solid bare copper
- 2 core insulation of polyethylene (Dielectricum)
- 3 static screen of aluminium foil
- 4 wide-meshed tinned copper braiding
- 5 outer sheath of polyvinylchloride (PVC), white

Technical data:

Temperature range

Impedance

Attenuation

DC resistance

Bending radius

Shielding

in motion

ZL

100 MHz

300 Mhz

450 Mhz

inner conductor

outer conductor

min.

[Ohm]

[dB / 100m]

[dB / 100m]

[dB / 100m]

[Ohm / km]

[Ohm / km]

[mm]

[dB]

-5°C till +70°C

75 +/-3

8,8

15,0

17,5

131,0

20,0

30

75,0

Type

Copper
figure
kg/km

Overall
diameter
appr.mm

Weight
appr.
kg/km

2YAFCY 0,75/4,8

12,5

7,0

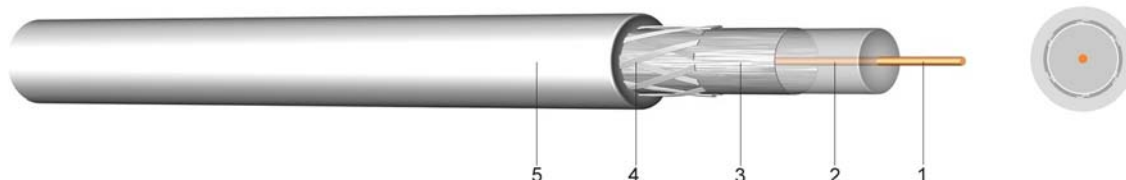
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02YAFCY

HF - Coaxial Cable 75 Ohm SAT - Conform

Application:

Suitable for applications in dry and humid locations as an aerial cable for community- and cable television networks. SAT-conform.



Construction:

- 1 solid bare copper
- 2 core insulation of polyethylene (PE)
- 3 static screen of aluminium foil
- 4 wide-meshed tinned copper braiding
- 5 outer sheath of polyvinylchloride (PVC), white

Technical data:

Impedance	ZL	[Ohm]	75 +/-3
Attenuation	100 MHz	[dB / 100m]	6,4
	300 Mhz	[dB / 100m]	11,1
	450 Mhz	[dB / 100m]	13,8
DC resistance	inner conductor	[Ohm / km]	131,0
	outer conductor	[Ohm / km]	20,0

Type	Copper figure kg/km	Overall diameter appr.mm	Weight appr. kg/km
02YAFCY 1,0/4,5	13,4	6,5	44

LiYY

Electronic Control Cable

Application:

To be installed in dry and humid rooms and used as a termination and connection cable in the control, measuring and signal technology.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 outer sheath of polyvinylchloride (PVC), grey

Information:

Peak operating voltage [V]:

0,14 mm² ... 350 Volt
all others ... 500 Volt

Test Voltage [V_{AC}]:

0,14 mm² ... 800 Volt
all others ... 1.200 Volt

Standards:

adapted to DIN VDE 0812
DIN EN 60228 class 5 (construction)
DIN 47100 or factory standard (core identification)

Technical data:

Temperature range

in motion
fixed

-5°C till +50°C
-40°C till +80°C

Bending radius

in motion

x diameter

10

Flammability

standard

EN 60332-1-2

Insulation resistance

min.

[MΩ/km]

100

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Conductor loop resistance Ohm/km	Overall diameter appr. mm	Weight appr. kg/km
2 x 0,14	2,7	18 x 0,10	138,0	3,2	12
3 x 0,14	4,0	18 x 0,10	138,0	3,4	15
4 x 0,14	5,4	18 x 0,10	138,0	3,6	17
5 x 0,14	6,7	18 x 0,10	138,0	3,9	22
6 x 0,14	8,1	18 x 0,10	138,0	4,2	25
7 x 0,14	9,4	18 x 0,10	138,0	4,2	26
8 x 0,14	10,8	18 x 0,10	138,0	4,5	29
10 x 0,14	13,4	18 x 0,10	138,0	5,2	35
12 x 0,14	16,1	18 x 0,10	138,0	5,6	43
16 x 0,14	21,5	18 x 0,10	138,0	6,1	52
18 x 0,14	24,2	18 x 0,10	138,0	6,9	65
21 x 0,14	28,2	18 x 0,10	138,0	6,9	79
24 x 0,14	32,2	18 x 0,10	138,0	7,6	89
30 x 0,14	40,3	18 x 0,10	138,0	8,0	106
2 x 0,25	4,8	14 x 0,16	75,5	3,8	25
3 x 0,25	7,2	14 x 0,16	75,5	4,0	29
4 x 0,25	9,6	14 x 0,16	75,5	4,3	31
5 x 0,25	12,0	14 x 0,16	75,5	4,7	38

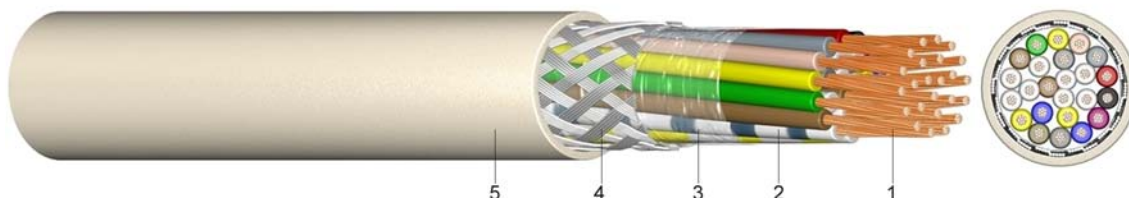
Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Conductor loop resistance Ohm/km	Overall diameter appr. mm	Weight appr. kg/km
6 x 0,25	14,4	14 x 0,16	75,5	5,1	42
7 x 0,25	16,8	14 x 0,16	75,5	5,4	48
8 x 0,25	19,2	14 x 0,16	75,5	5,7	54
10 x 0,25	24,0	14 x 0,16	75,5	6,8	65
12 x 0,25	28,8	14 x 0,16	75,5	7,0	75
16 x 0,25	38,4	14 x 0,16	75,5	7,7	95
18 x 0,25	43,2	14 x 0,16	75,5	8,3	101
24 x 0,25	57,6	14 x 0,16	75,5	9,4	143
30 x 0,25	72,0	14 x 0,16	75,5	10,3	172
36 x 0,25	86,4	14 x 0,16	75,5	11,1	196
2 x 0,34	6,5	19 x 0,16	57,5	4,2	28
3 x 0,34	9,8	19 x 0,16	57,5	4,4	30
4 x 0,34	13,1	19 x 0,16	57,5	4,8	40
5 x 0,34	16,3	19 x 0,16	57,5	5,5	44
7 x 0,34	22,9	19 x 0,16	57,5	5,9	60
10 x 0,34	32,6	19 x 0,16	57,5	7,6	77
12 x 0,34	39,2	19 x 0,16	57,5	7,8	97
16 x 0,34	52,2	19 x 0,16	57,5	8,7	114
18 x 0,34	58,8	19 x 0,16	57,5	9,1	135
24 x 0,34	78,3	19 x 0,16	57,5	11,0	171
36 x 0,34	117,5	19 x 0,16	57,5	12,5	244
2 x 0,5	9,6	16 x 0,21	37,8	4,7	25
3 x 0,5	14,4	16 x 0,21	37,8	5,0	35
4 x 0,5	19,2	16 x 0,21	37,8	5,6	42
5 x 0,5	24,0	16 x 0,21	37,8	6,1	49
7 x 0,5	33,6	16 x 0,21	37,8	6,9	73
10 x 0,5	48,0	16 x 0,21	37,8	8,6	120
12 x 0,5	57,6	16 x 0,21	37,8	8,9	130
16 x 0,5	76,8	16 x 0,21	37,8	10,2	152
18 x 0,5	86,4	16 x 0,21	37,8	10,2	159
24 x 0,5	115,2	16 x 0,21	37,8	12,5	250
36 x 0,5	172,8	16 x 0,21	37,8	14,5	315
3 x 0,75	21,6	24 x 0,21	25,3	5,6	64
5 x 0,75	36,0	24 x 0,21	25,3	6,9	77

LiYCY

Electronic Control Cable with Tinned Copper Braiding

Application:

To be installed in dry and humid rooms and used as a termination and connection cable in the control, measuring and signal technology.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 layer of plastic foil
- 4 braid of tinned copper wires
- 5 outer sheath of polyvinylchloride (PVC), grey

Information:

Peak operating voltage [V]:

0,14 mm² ... 350 Volt
all others ... 500 Volt

Test Voltage [V_{AC}]:

0,14 mm² ... 800 Volt
all others ... 1.200 Volt

Standards:

adapted to DIN VDE 0812
DIN EN 60228 class 5 (construction)
DIN 47100 or factory standard (core identification)

Technical data:

Temperature range

in motion
fixed

-5°C till +50°C

-40°C till +80°C

Flammability

standard

EN 60332-1-2

Bending radius

in motion

x diameter

10

Insulation resistance

min.

[MΩm/km]

100

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Conductor loop resistance Ohm/km	Overall diameter appr. mm	Weight appr. kg/km
2 x 0,14	12,5	18 x 0,10	138,0	3,7	21
3 x 0,14	14,4	18 x 0,10	138,0	3,9	25
4 x 0,14	16,3	18 x 0,10	138,0	4,1	29
5 x 0,14	19,2	18 x 0,10	138,0	4,6	35
6 x 0,14	22,1	18 x 0,10	138,0	4,9	38
7 x 0,14	24,0	18 x 0,10	138,0	5,0	41
8 x 0,14	25,0	18 x 0,10	138,0	5,0	45
10 x 0,14	28,8	18 x 0,10	138,0	5,5	49
12 x 0,14	31,7	18 x 0,10	138,0	6,3	61
14 x 0,14	34,6	18 x 0,10	138,0	6,7	67
16 x 0,14	48,0	18 x 0,10	138,0	7,0	81
18 x 0,14	51,8	18 x 0,10	138,0	7,3	92
20 x 0,14	58,6	18 x 0,10	138,0	7,6	104
24 x 0,14	73,9	18 x 0,10	138,0	8,3	118
25 x 0,14	75,8	18 x 0,10	138,0	8,5	120

Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Conductor loop resistance Ohm/km	Overall diameter appr. mm	Weight appr. kg/km
27 x 0,14	84,5	18 x 0,10	138,0	8,5	123
36 x 0,14	116,2	18 x 0,10	138,0	9,3	157
50 x 0,14	154,6	18 x 0,10	138,0	12,0	320
52 x 0,14	157,4	18 x 0,10	138,0	11,1	212
1 x 0,25	11,5	14 x 0,16	75,5	4,0	14
2 x 0,25	16,3	14 x 0,16	75,5	4,3	20
3 x 0,25	21,1	14 x 0,16	75,5	4,5	35
4 x 0,25	24,0	14 x 0,16	75,5	4,8	44
5 x 0,25	28,8	14 x 0,16	75,5	5,2	50
6 x 0,25	32,6	14 x 0,16	75,5	5,8	58
7 x 0,25	36,5	14 x 0,16	75,5	5,8	60
8 x 0,25	42,2	14 x 0,16	75,5	6,4	67
10 x 0,25	49,9	14 x 0,16	75,5	7,5	81
12 x 0,25	58,6	14 x 0,16	75,5	7,7	91
14 x 0,25	64,3	14 x 0,16	75,5	8,0	116
16 x 0,25	71,0	14 x 0,16	75,5	8,4	133
18 x 0,25	82,6	14 x 0,16	75,5	8,8	137
24 x 0,25	114,2	14 x 0,16	75,5	10,5	185
25 x 0,25	116,2	14 x 0,16	75,5	10,7	190
27 x 0,25	121,0	14 x 0,16	75,5	10,9	200
30 x 0,25	132,5	14 x 0,16	75,5	11,0	214
32 x 0,25	138,2	14 x 0,16	75,5	11,4	227
36 x 0,25	151,7	14 x 0,16	75,5	11,8	250
40 x 0,25	163,2	14 x 0,16	75,5	12,2	289
52 x 0,25	236,2	14 x 0,16	75,5	13,6	340
2 x 0,34	21,1	19 x 0,16	57,7	4,7	33
3 x 0,34	26,9	19 x 0,16	57,7	4,9	41
4 x 0,34	32,6	19 x 0,16	57,7	5,5	48
5 x 0,34	35,5	19 x 0,16	57,7	6,2	58
7 x 0,34	50,9	19 x 0,16	57,7	6,7	70
8 x 0,34	53,8	19 x 0,16	57,7	7,3	93
10 x 0,34	73,9	19 x 0,16	57,7	8,3	110
12 x 0,34	79,7	19 x 0,16	57,7	8,5	120
16 x 0,34	94,1	19 x 0,16	57,7	9,4	147
18 x 0,34	107,5	19 x 0,16	57,7	10,2	172
24 x 0,34	139,2	19 x 0,16	57,7	11,7	229
1 x 0,5	13,4	16 x 0,21	37,8	3,3	20
2 x 0,5	28,8	16 x 0,21	37,8	5,2	42
3 x 0,5	39,4	16 x 0,21	37,8	5,7	55
4 x 0,5	46,1	16 x 0,21	37,8	6,3	68
5 x 0,5	56,6	16 x 0,21	37,8	7,0	82
6 x 0,5	68,2	16 x 0,21	37,8	7,3	104
7 x 0,5	79,7	16 x 0,21	37,8	7,6	109
8 x 0,5	91,2	16 x 0,21	37,8	8,1	123
10 x 0,5	99,8	16 x 0,21	37,8	9,3	135
12 x 0,5	117,1	16 x 0,21	37,8	9,6	160
16 x 0,5	128,6	16 x 0,21	37,8	10,9	210
18 x 0,5	151,7	16 x 0,21	37,8	11,0	210
20 x 0,5	165,1	16 x 0,21	37,8	12,0	270
24 x 0,5	235,2	16 x 0,21	37,8	13,2	320
32 x 0,5	300,5	16 x 0,21	37,8	14,5	360
1 x 0,75	16,3	24 x 0,21	25,3	3,5	24
2 x 0,75	38,4	24 x 0,21	25,3	5,8	50
3 x 0,75	49,9	24 x 0,21	25,3	6,3	71
4 x 0,75	57,6	24 x 0,21	25,3	7,0	78
5 x 0,75	70,1	24 x 0,21	25,3	7,6	100
7 x 0,75	99,8	24 x 0,21	25,3	8,2	131

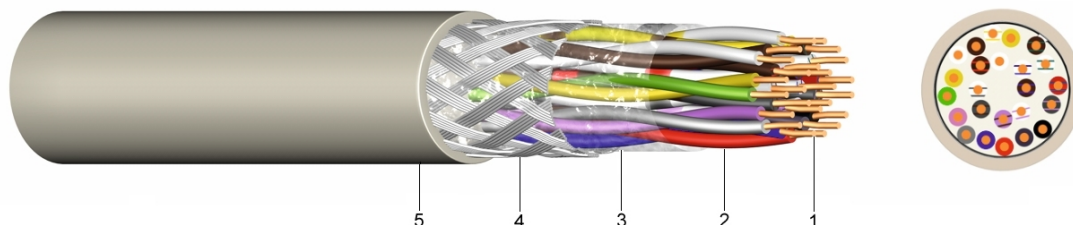
Number of cores and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Conductor loop resistance Ohm/km	Overall diameter appr. mm	Weight appr. kg/km
8 x 0,75	109,4	24 x 0,21	25,3	8,7	151
12 x 0,75	153,6	24 x 0,21	25,3	10,8	218
18 x 0,75	207,4	24 x 0,21	25,3	12,5	300
1 x 1	18,2	32 x 0,21	19,5	3,9	29
2 x 1	48,0	32 x 0,21	19,5	6,3	74
3 x 1	57,6	32 x 0,21	19,5	6,8	89
4 x 1	71,0	32 x 0,21	19,5	7,4	107
5 x 1	89,3	32 x 0,21	19,5	8,0	132
7 x 1	113,3	32 x 0,21	19,5	8,6	158
12 x 1	168,0	32 x 0,21	19,5	11,4	254
2 x 1,5	63,4	29 x 0,25	13,3	7,1	86
3 x 1,5	75,8	29 x 0,25	13,3	7,5	107
4 x 1,5	107,5	29 x 0,25	13,3	8,1	129
5 x 1,5	128,6	29 x 0,25	13,3	8,8	150
7 x 1,5	141,1	29 x 0,25	13,3	9,5	192
8 x 1,5	157,4	29 x 0,25	13,3	10,6	219

LiYCY TP

Paired Electronic Control Cable with Tinned Copper Braiding

Application:

To be installed in dry and humid rooms and used as a termination and connection cable in the control, measuring and signal technology.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 layer of plastic foil
- 4 screen of tinned copper wire braiding
- 5 outer sheath of polyvinylchloride (PVC), grey

Information:

Peak operating voltage [V]:

0,14 mm² ... 350 Volt
all others ... 500 Volt

Test Voltage [V_{AC}]:

0,14 mm² ... 800 Volt
all others ... 1.200 Volt

Attenuation at 800 Hz :

0,14mm² app. 2,3 dB/km
0,25mm² app. 1,9 dB/km
0,34mm² app. 1,5 dB/km
0,50mm² app. 1,3 dB/km
0,75mm² app. 1,1 dB/km

Standards:

adapted to DIN VDE 0812
DIN EN 60228 class 5 (construction)
DIN 47100 or factory standard (core identification)

Technical data:

Temperature range	in motion		-5°C till +50°C
	fixed		-40°C till +80°C
Bending radius	in motion	x diameter	10
Flammability	standard		EN 60332-1-2
Insulation resistance	min.	[MΩm/km]	100
Mutal capacitance	max.	[nF/km]	120

Number of pairs and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Conductor loop resistance Ohm/km	Overall diameter appr. mm	Weight appr. kg/km
2 x 2 x 0,14	23,0	18 x 0,10	276,0	5,8	34
3 x 2 x 0,14	25,9	18 x 0,10	276,0	6,2	43
4 x 2 x 0,14	39,4	18 x 0,10	276,0	6,8	50
5 x 2 x 0,14	44,2	18 x 0,10	276,0	7,7	70
6 x 2 x 0,14	51,8	18 x 0,10	276,0	7,9	81
8 x 2 x 0,14	56,6	18 x 0,10	276,0	8,6	93

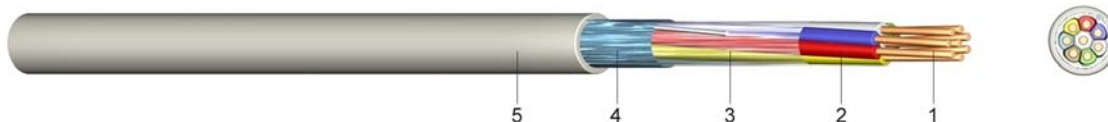
Number of pairs and nominal cross section mm ²	Copper figure kg/km	Cond. construction (appr. value) mm	Conductor loop resistance Ohm/km	Overall diameter appr. mm	Weight appr. kg/km
10 x 2 x 0,14	65,3	18 x 0,10	276,0	9,5	115
12 x 2 x 0,14	78,7	18 x 0,10	276,0	9,9	125
16 x 2 x 0,14	93,1	18 x 0,10	276,0	11,2	148
2 x 2 x 0,25	27,8	14 x 0,16	151,0	6,6	46
3 x 2 x 0,25	42,2	14 x 0,16	151,0	7,0	64
4 x 2 x 0,25	54,7	14 x 0,16	151,0	7,6	73
5 x 2 x 0,25	60,5	14 x 0,16	151,0	8,4	88
6 x 2 x 0,25	69,1	14 x 0,16	151,0	8,6	98
8 x 2 x 0,25	76,8	14 x 0,16	151,0	9,4	118
10 x 2 x 0,25	110,4	14 x 0,16	151,0	10,7	165
2 x 2 x 0,34	43,2	19 x 0,16	115,0	7,5	64
3 x 2 x 0,34	51,8	19 x 0,16	115,0	7,9	86
4 x 2 x 0,34	64,3	19 x 0,16	115,0	8,5	113
2 x 2 x 0,5	53,8	16 x 0,21	75,6	8,2	75
3 x 2 x 0,5	73,9	16 x 0,21	75,6	8,7	98
4 x 2 x 0,5	91,2	16 x 0,21	75,6	9,3	123
6 x 2 x 0,5	120,0	16 x 0,21	75,6	10,8	162
8 x 2 x 0,5	144,0	16 x 0,21	75,6	11,8	190
12 x 2 x 0,5	198,7	16 x 0,21	75,6	14,0	342
2 x 2 x 0,75	65,3	24 x 0,21	50,6	8,6	106
3 x 2 x 0,75	84,5	24 x 0,21	50,6	9,5	140
4 x 2 x 0,75	119,0	24 x 0,21	50,6	10,8	179
6 x 2 x 0,75	145,9	24 x 0,21	50,6	12,5	246
8 x 2 x 0,75	180,5	24 x 0,21	50,6	14,6	300
12 x 2 x 0,75	265,9	24 x 0,21	50,6	17,8	433
16 x 2 x 0,75	330,2	24 x 0,21	50,6	18,7	564

JE-Y(ST)Y

Cable for Industrial Electronics

Application:

Cables for industrial electronics are suitable for fixed installations in dry and humid rooms.



Construction:

- 1 solid bare copper
- 2 core insulation of polyvinylchloride (PVC), Cores twisted to pairs and four twisted pairs in a bundle, bundle identification by Number characteristic helix (Z) or ring mark on core insulation (Si)
- 3 layer of plastic foil
- 4 static screen of plastic coated aluminium foil with drain wire
- 5 outer sheath of polyvinylchloride (PVC), grey

Standards:

DIN VDE 0815 (core identification)
DIN EN 60228 class 1 (construction)

Technical data:

Peak operating voltage		[V]	225 Volt
Test voltage at 50 Hz	core / core	[V] _{AC}	500
	core / screen	[V] _{AC}	2000
Temperature range	in motion		-5°C till +50°C
	fixed		-30°C till +70°C
Bending radius	in motion	x diameter	15
Flammability	standard		EN 60332-1-2
Insulation resistance	min.	[MΩ/km]	100
Mutal capacitance		[Ω/km]	73,2
	max.	[nF/km]	100
Capacitance unbalance 100m	max	[pF]	200

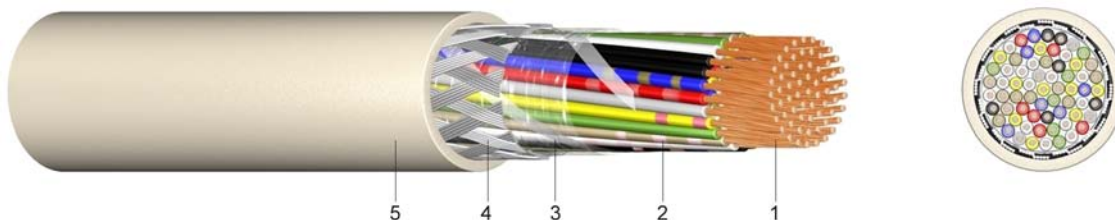
Number of pairs and nominal conductor diameter mm	Copper figure kg/km	Insulation thickness mm	Overall diameter appr. mm	Weight appr. kg/km
2 x 2 x 0,8 gy, bl	24,0	1,0	5,8	53
4 x 2 x 0,8 gy, bl	43,2	1,0	7,6	86
8 x 2 x 0,8 gy, bl	81,6	1,0	10,1	146
12 x 2 x 0,8 gy	121,0	1,0	10,7	196
16 x 2 x 0,8 gy, bl	159,4	1,2	12,2	260
20 x 2 x 0,8 gy	197,8	1,2	13,3	314
24 x 2 x 0,8 gy	236,2	1,2	14,0	364
32 x 2 x 0,8 gy, bl	313,9	1,4	18,0	496
40 x 2 x 0,8 gy	390,7	1,4	19,1	600

JE-LiYCY

Cable for Industrial Electronics

Application:

Cables for industrial electronics are suitable for fixed installations in dry and humid rooms.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of polyvinylchloride (PVC) , Cores twisted to pairs and four twisted pairs in a bundle, bundle identification by Number characteristic helix (Z) or ring mark on core insulation (Si)
- 3 layer of plastic foil
- 4 braid of tinned copper wires
- 5 outer sheath of polyvinylchloride (PVC), grey

Standards:

DIN VDE 0815 (core identification)
DIN EN 60228 class 5 (construction)

Technical data:

Peak operating voltage		[V]	225
Test voltage at 50 Hz	core / core	[V] _{AC}	500
	core / screen	[V] _{AC}	2000
Temperature range	in motion		-5°C till +50°C
	fixed		-30°C till +70°C
Bending radius	in motion	x diameter	10
Flammability	standard		EN 60332-1-2
Insulation resistance	min.	[MΩ/km]	100
Mutal capacitance		[Ω/km]	78,4
	max.	[nF/km]	100
Capacitance unbalance 100m	max	[pF]	200

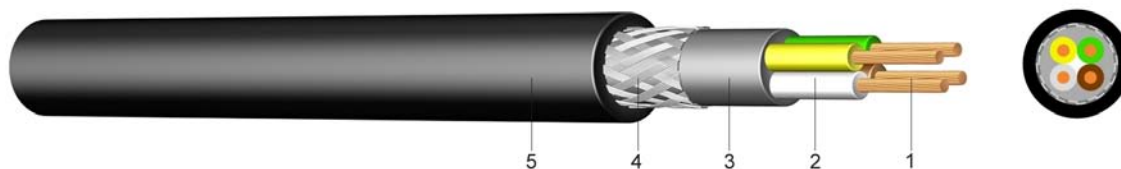
Number of pairs and nominal cross section mm ²	Copper figure kg/km	Insulation thickness mm	Overall diameter appr. mm	Weight appr. kg/km
2 x 2 x 0,5	49,0	1,0	7,0	81
4 x 2 x 0,5	83,5	1,0	9,5	137
8 x 2 x 0,5	138,2	1,0	13,0	248
12 x 2 x 0,5	188,2	1,2	15,0	307
16 x 2 x 0,5	239,0	1,2	16,5	375
20 x 2 x 0,5	287,0	1,2	18,5	461
24 x 2 x 0,5	334,1	1,2	20,5	595
32 x 2 x 0,5	426,2	1,4	23,0	719

YMLCM

Plastic Insulated Low-Frequency Cable with Copper Braiding

Application:

To be installed in dry and humid rooms as termination and connection cable in the low-frequency and studio technology.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 inner sheath
- 4 braid of bare copper wires
- 5 outer sheath of polyvinylchloride (PVC), black

Standards:

DIN EN 60228 class 5 (construction)
in according to DIN 47100 or factory standard (core identification)

Technical data:

Nominal voltage U_0/U		[V]	350
Test voltage		[V] _{AC}	800
Temperature range	in motion		+5°C till +50°C
Flammability	standard		EN 60332-1-2
Conductor resistance	max.	[Ohm/km]	26,0
Mutal capacitance	max.	[nF/km]	130

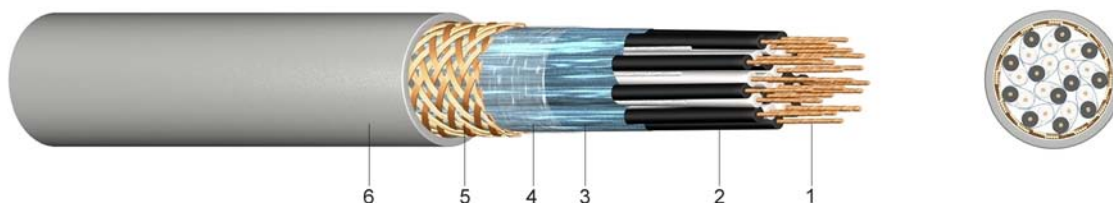
Number of cores and nominal cross section mm ²	Copper figure kg/km	Overall diameter appr. mm	Weight appr. kg/km
2 x 0,75	28,8	6,9	70
3 x 0,75	48,0	7,4	90
4 x 0,75	57,6	7,9	110

RS-2YCY PiMF

Pair Wise Screened Data Transmission Cable with Overall Bare Copper Braiding

Application:

These transmission cables are to be installed in dry and humid rooms. They are used in data processing and process controlling for high-speed transmission.



Construction:

- 1 fine-stranded bare copper with 0,5 mm² (7x0,30 mm diameter)
- 2 core insulation of polyvinylchloride (PVC)
- 3 each pair is screened with a static screen of plastic coated aluminium foil
- 4 static screen of plastic foil
- 5 braid of bare copper wires
- 6 outer sheath of polyvinylchloride (PVC), grey

Information:

Core identification: black / white (with figure on the white core, 1-1, 2-2,...)

For reinforced PVC outer sheath for underground laying type please send us an enquiry.

Technical data:

Temperature range	in motion		-5°C till +70°C
Insulation resistance	R iso	[MΩm/km]	5000
Conductor loop-resistance		[Ωm/km]	39,0
Attenuation	100 MHz	[dB / 100m]	4,5
Impedance	1 KHz	[Ωm]	465,0
	10 KHz	[Ωm]	155,0
	100 KHz	[Ωm]	115,0
Cross-talk attenuation	at 60 Hz	[dB/500m]	78,0

Number of pairs and nominal cross section mm ²	Copper figure kg/km	Overall diameter appr.mm	Weight appr. kg/km
2 x 2 x 0,5	73,9	8,0	100
3 x 2 x 0,5	88,3	8,8	120
4 x 2 x 0,5	107,5	9,7	145
6 x 2 x 0,5	147,8	11,9	210
8 x 2 x 0,5	180,5	13,2	270
12 x 2 x 0,5	282,2	15,4	375
16 x 2 x 0,5	337,9	18,2	420

J-Y(ST)Y EIB / KNX

MSR Installation Cable with Static Screen European Installation Bus

Application:

The installation in, on and under the wall surface, in dry, humid and wet locations as well as outdoors (if protected) is admissible. As BUS-installation cable (EIB-installation bus) it may be used in HV and LV installations, as control and instrumentation cable (MSR-cable) in HV installations. Suitable for the transmission of measuring data, for the installation in the processing and for the application in the field of the control technology.



Construction:

- 1 solid bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 layer of plastic foil
- 4 static screen of plastic coated aluminium foil with drain wire
- 5 outer sheath of polyvinylchloride (PVC)
green or grey

Information:

Cores twisted to starquads.
(see technical attachment)

Standards:

DIN VDE 0815 (core identification)
DIN EN 60228 class 1 (construction),
EIBA spezifikation

Technical data:

Peak operating voltage		[V]	300
Temperature range	in motion		-5°C till +50°C
	max. on conductor		+70°C
Conductor resistance	max.	[Ohm/km]	73,2
Insulation resistance	min.	[MOhm/km]	100
Mutal capacitance	at 800 Hz	[nF] max.	100
Test voltage	Core / Core	[KV] 5min.	1
	Core and Screen on conductorsurface	[KV] 1min.	4
Bending radius		x diameter	15

Number of pairs and nominal conductor diameter mm	Copper figure kg/km	Overall diameter appr.mm	Weight appr. kg/km
2 x 2 x 0,8	20,2	6,6	60

J-2Y(ST)Y ST ISDN Cable III Bd

Application: This Integrated Services Digital Network (ISDN) cable is to be used as a termination and connection cable for the transmission of analogue to digital signals up to 16 MHz. It is suitable for ISDN applications in this frequency range such as BTX or fax. Peculiarities of this cable are the cores which are stranded to star quads.



Construction:

- 1 solid bare copper
- 2 core insulation of polyethylene (PE)
- 3 layer of plastic foil
- 4 overall screen of plastic laminated aluminium foil with a tinned drain wire (Ø 0,6mm)
- 5 outer sheath of polyvinylchloride (PVC), grey

Information:

Test voltage:
 core/core 800 Volt (50Hz/1min.)
 core/screen .. 2.000 Volt (50Hz/1min.)

Standards: adapted to DIN VDE 0815 and 0816 (core identification)

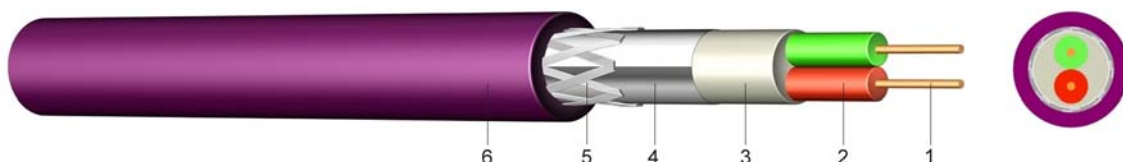
Technical data:

Peak operating voltage		[V]	300
Temperature range	in motion		-5°C till +50°C
Conductor resistance	max.	[Ohm/km]	130,0
Insulation resistance	min.	[GOhm/km]	5
Attenuation	1-100 MHz	[Ohm]±-15%	100
Mutal capacitance	nom.	[nF] max	52
Attenuation	1,0 MHz	[dB/100m]	35,0
	4,0 MHz	[dB/100m]	55,0
	10,0 MHz	[dB/100m]	73,0
	16,0 MHz	[dB/100m]	86,0
Cross-talk attenuation	1,0 MHz	[dB]	30,0
	10,0MHz	[dB]	30,0

Number of pairs and nominal conductor diameter mm	Copper figure kg/km	Overall diameter appr. mm	Calorific potential kWh/m	Tractive force N	Weight appr. kg/km
2 x 2 x 0,6	14,4	5,1	0,19	7	36
4 x 2 x 0,6	25,0	6,9	0,24	13	59
6 x 2 x 0,6	37,4	7,3	0,31	18	73
10 x 2 x 0,6	58,6	8,3	0,37	30	104
20 x 2 x 0,6	116,2	12,0	0,72	58	188
40 x 2 x 0,6	229,4	16,2	1,18	115	300
50 x 2 x 0,6	286,1	15,8	1,48	140	415

PROFIBUS DP Bus Line for Profibus L2 Fast Connect

Application: As an access and connection lines circuit in mechanical engineering, e.g., as a connection circuit between bus segments. By the special construction the circuit is suitable for the application with quick connection technology.



Construction:

- 1 solid bare copper
- 2 core insulation of polyvinylchloride (PVC) or polyethylene (PE)
- 3 inner sheath of polyvinylchloride (PVC)
- 4 static screen of plastic coated aluminium foil
- 5 braid of tinned copper wires
- 6 outer sheath of polyvinylchloride (PVC), magenta

Standards: according to DIN 19245 T3
EN 50170

Corresponds to Siemens No. 6XV1830-OEH10

Technical data:

Temperature range	in motion and fixed		-40°C till +70°C
Conductor resistance	max.	[Ohm/km]	57,1
Insulation resistance	min.	[MOhm/km]	1000
Attenuation	1,0-5,0 MHz	[Ohm]	150
Bending radius	min.	[mm]	150

Number of pairs and nominal conductor diameter mm	Copper figure kg/km	Overall diameter appr. mm	Weight appr. kg/km
1 x 2 x 0,64 vi	25,9	8,0	78
1 x 2 x 0,64 for earth-laying, sw	25,9	10,2	85
1 x 2 x 0,64 halogen-free, vi	25,9	8,2	70
1 x 2 x 0,64 Chain Cable, vi	25,9	8,5	62

For other types and standards please send us an inquiry.

INTERBUS

Application: The circuit can connect different components within automation devices. The twisted cores are also the basic element. Because all bus components are connected about that, costly parallel wiring can be avoided.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of polyethylene (PE)
- 3 layer of plastic foil
- 4 braid of tinned copper wires
- 5 outer sheath of polyvinylchloride (PVC), magenta

Information: More types and constructions on enquiry.

Standards: according to DIN 47100 or factory standard (core identification)

Technical data:

Temperature range	in motion		-5°C till +60°C
	not moved		-0°C till +50°C
Conductor resistance	max.	[Ohm/km]	83,0
Attenuation	1-100 MHz	[Ohm]±-15%	100
Mutal capacitance	nom.	[nF] max	50
Attenuation	1,0 MHz	[dB/100m]	2,7
	4,0 MHz	[dB/100m]	5,2
	10,0 MHz	[dB/100m]	8,4
	16,0 MHz	[dB/100m]	11,2

Number of pairs and nominal cross section mm ²	Copper figure kg/km	Overall diameter appr.mm	Weight appr. kg/km
3 x 2 x 0,22	37,4	7,4	70
3 x 2 x 0,25	38,4	7,9	75

CAN-BUS

Feld-Bus-Cable CAN

Application:

C(ontroller)A(rea)N(etwork)
serves as a system circuit in the industrial range. Professional bus, CAN bus as well as devices LON can be connected with this system solution.



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of foam skin polyethylene (PE)
- 3 layer of plastic foil
- 4 braid of tinned copper wires
- 5 outer sheath of polyvinylchloride (PVC), magenta

Information:

More types and constructions on enquiry.

Standards:

DIN 19245
ISO 11898
EN 50170
DIN 47100 or factory standard (core identification)

Technical data:

Temperature range	in motion		0°C till +50°C
Conductor resistance	max.	[Ohm/km]	39,0
Attenuation	1-100 MHz	[Ohm]+-15%	150
Mutal capacitance	nom.	[nF] max	40

Number of cores and nominal cross section mm ²	Copper figure kg/km	Overall diameter appr.mm	Weight appr. kg/km
2 x 2 x 0,5	59,3	9,8	80
1 x 2 x AWG 22/7	41,6	8,5	103

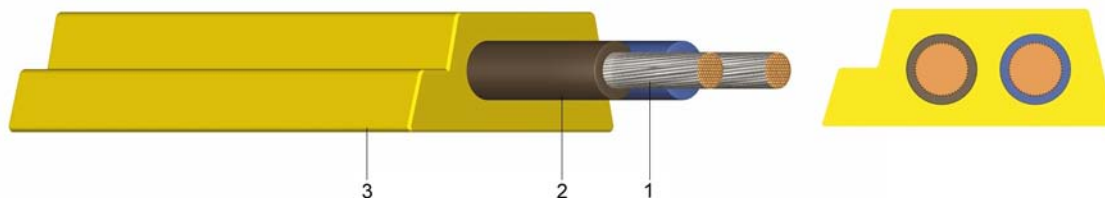
For other types and standards please send us an inquiry.

ASI-BUS

Field-Bus ASI

Application:

This fieldbus allows simultaneous transmission of both data and energy. Used for signal circuit within production machinery and machine tools



Construction:

- 1 fine-stranded tinned copper (CI.6)
- 2 core insulation of TPE (blue and brown)
- 3 outer sheath of TPE, rubber or PUR, yellow or black

Information:

More types and constructions on enquiry.

Standards:

DIN EN 60228 Class 6 (core construction)
Flammability : EN 60332-1

Technical data:

Temperature range	in motion		-30°C bis +105°C
	fixed		-40°C bis +105°C
Conductor resistance	Max.	[Ohm/km]	3,7
Insulation resistance	Min.	[MOhm/km]	20
capacity	app.	[pF/m] at 1 kHz	80
operating voltage	Max.	V	300

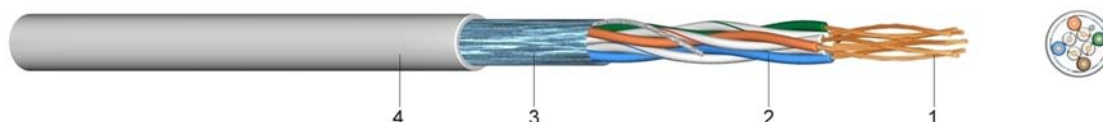
Number of cores and nominal cross section mm ²	Copper figure kg/km	Overall diameter appr.mm	Weight appr. kg/km
2 x 1,5 TPE bl	28,8	4,0 x 10,0	60
2 x 1,5 TPE ye	28,8	4,0 x 10,0	60
2 x 1,5 Rubber bl	28,8	4,0 x 10,0	60
2 x 1,5 PUR ye chain cable	28,8	4,0 x 10,0	60

LAN 200flex (FTP-Patch)

Patch Cable, Foil-Screened for Local Networks

Application:

In the device connection wiring as a patch, switching, or connecting lead for the use in switching cabinets as well as for the connection of data terminals.
Area of application: IEEE 802.3:10 Base T, 10 Base T Ethernet, 100 Base T, 1000 Base T, FDDI, ISDA, ATM



Construction:

- 1 fine-stranded bare copper
- 2 core insulation of polyethylene (PE)
- 3 static screen of plastic-laminated aluminium foil
- 4 outer sheath of polyvinylchloride (PVC), grey

Standards:

Category 5
TIA/EIA 568 B,
ISO/IEC 11801 2. Output
EN 50173-1
IEC 708-1 (core identification)

Technical data:

Temperature range	moved		0°C till +60°C	Bending rad.	under tension	8,0 x Ø
Loop impedance		[Ohm/100m]	29,0	Bending rad.	no tension	4,0 x Ø
Capacity	max.	[nF/km]	50			
Nom. Velocity of propagation	NVP nom.		77,0			
Attenuation	1-100 MHz	[Ohm]	100,0			
Capacity coupling (f=800 Hz)	K<100	[pF/100m]	150			
Insulation resistance		[GOhm/km]	5			

Number of pairs and nominal dimensions AWG Nr.	Copper figure kg/km	Overall diameter appr.mm	Calorific potential kWh/m	Tensile force N	Weight appr. kg/km
4 x 2 x AWG 26 PVC	14,4	4,9	0,11	30	24
4 x 2 x AWG 26 FRNC	14,4	4,9	0,11	30	24

LAN 200U (UTP)

Data Transmission Cable for Local Networks, Unscreened, Category 5

Application:

In the horizontal wiring as an installation cable for the transfer in cable canals as well as in pipes within telecommunication installations and data systems.
Area of application: IEEE 802.3:10 Base T, 10 Base T Ethernet, 100 Base T, 1000 Base T, FDDI, ISDA, ATM



Construction:

- 1 solid bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 outer sheath of polyvinylchloride (PVC), grey

Standards:

Category 5
TIA/EIA 568 B
ISO/IEC 11801 2. output
EN 50173-1
IEC 708-1 (core identification)

Technical data:

Temperature range	moved		0°C till +60°C	Bending rad.	under tension	8,0 x Ø
Loop impedance		[Ohm/100m]	19,0	Bending rad.	no tension	4,0 x Ø
Capacity	max.	[nF/km]	50			
Nom. Velocity of propagation	NVP nom.		77,0			
Attenuation	1-100 MHz	[Ohm]	100,0			
Capacity coupling (f=800 Hz)	K<100	[pF/100m]	150			
Insulation resistance		[GOhm/km]	5			

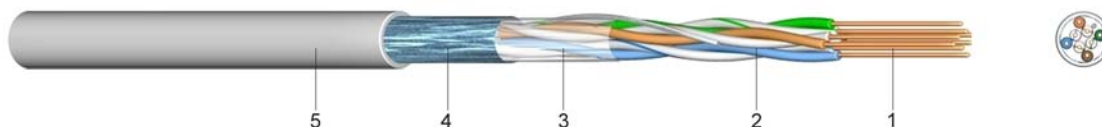
Number of pairs and nominal dimensions AWG Nr.	Copper figure kg/km	Overall diameter appr.mm	Calorific potential kWh/m	Tensile force N	Weight appr. kg/km
4 x 2 x AWG 24	17,0	4,9	0,10	80	26

LAN 200 (F/UTP)

Data Transmission Cable for Local Networks with Overall Shielding, Category 5

Application:

In the horizontal wiring as an installation cable for the transfer in cable canals as well as in pipes within telecommunication installations and data systems.
Area of application: IEEE 802.3:10 Base T, 10 Base T Ethernet, 100 Base T, 1000 Base T, FDDI, ISDA, ATM



Construction:

- 1 solid bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 layer of plastic foil
- 4 overall shielding of aluminium foil with a tinned drain wire Ø 0,5mm
- 5 outer sheath of polyvinylchloride (PVC) grey or halogen-free polymer compound, orange,

special colours on enquiry

Standards:

Category 5, ETIA-EIA 568 A 5
ISO/IEC 11801, EN 50173, EN 50288-2-1
PVC : IEC 332-1, DIN VDE 0472 part 804 type B
FRNC : IEC 332-1 and 3, IEC 754-2, IEC 1034-2
IEC 708-1 (core identification)

Technical data:

Temperature range	moved		0°C till +60°C	Bending rad. under tension	8,0 x Ø
Loop impedance		[Ohm/100m]	19	Bending rad. no tension	4,0 x Ø
Capacity	max.	[nF/km]	50		
Nom. Velocity of propagation	NVP nom.		71,0		
Attenuation	1-100 MHz	[Ohm]	100,0 +/- 15		
Coupling resistance	1-100 MHz	[mOhm/m]	10		
Capacity coupling (f=800 Hz)	K<100	[pF/100m]	15		
Insulation resistance		[GOhm/km]	>5		
Test voltage at 50 Hz		[V _{AC}]	1000		

Frequency [MHz]	Line attenuation α [dB/100m]		Next [dB] α_{NN}		ACR [dB]		ELFEXT [dB] α_{ELFEXT}		Return Loss R_L [dB]	
	nom.*	min. CAT 5e	nom.*	min. CAT 5e	nom.*	min. CAT 5e	nom.*	min. CAT 5e	nom.*	min. CAT 5e
1	1,9	2,1	68,3	65,3	66,4	63,2	64,8	64,0	21	20,0
4	3,9	4,1	59,3	56,3	55,4	52,2	52,8	52,0	24	23,0
10	6,3	6,5	53,3	50,3	47,0	43,8	44,8	44,0	26	25,0
16	8,1	8,3	50,3	47,3	42,2	39,0	41,0	40,0	26	25,0
20	9,1	9,3	48,8	45,3	39,2	36,0	39,0	38,0	26	25,0
31,25	11,3	11,7	45,9	42,9	34,6	31,2	35,0	34,0	24,6	23,6
62,5	16,5	17,0	41,4	38,4	24,9	21,3	29,2	28,0	22,5	21,5
100	21,0	22,0	38,3	35,3	17,3	13,3	25,3	24,0	21,2	20,1
125	22,8	24,9	37,3	34,3	14,5	9,4	23,3	22,0	20,4	19,4
200	27,0	-	35,3	-	8,3	-	20,9	-	19,0	-

* Category 5 - Values per ISO / IEC 11801, EN 50173, EN 50288-2-1

* Category 5 - Values per TIA / EIA - 568-A-5

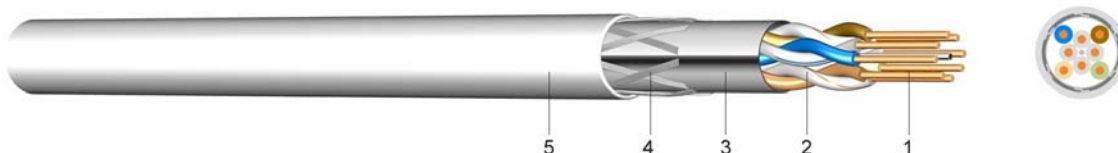
Number of pairs and nominal dimensions AWG Nr.	Copper figure kg/km	Overall diameter appr.mm	Calorific potential kWh/m	Tensile force N	Weight appr. kg/km
4 x 2 x AWG 24 PVC	17,3	6,0	0,12	80	41
4 x 2 x AWG 24 FRNC	17,3	6,0	0,12	80	41
2 x(4x2x x AWG 24) PVC	34,6	12,0x6,0	0,24	160	82

LAN 200C (SF/UTP)

Data Transmission Cable for Local Networks 2x Overall Shielding, Category 5

Application:

In the horizontal wiring as an installation cable for the transfer in cable canals as well as in pipes within telecommunication installations and data systems.
Area of application: IEEE 802.3:10 Base T, 10 Base T Ethernet, 100 Base T, 1000 Base T, FDDI, ISDA, ATM



Construction:

- 1 solid bare copper
- 2 core insulation of polyvinylchloride (PVC)
- 3 overall shielding of aluminium foil with a tinned drain Ø 0,5mm
- 4 screen of tinned copper braiding
- 5 outer sheath of polyvinylchloride (PVC) grey or halogen-free polymer compound, orange,

special colours on enquiry

Standards:

Category 5E TIA-EIA 568 A 5
ISO/IEC 11801, EN 50173, EN 50288-2-1
PVC : IEC 332-1, DIN VDE 0472 part 804 type B
FRNC : IEC 332-1 and 3, IEC 754-2, IEC 1034-2
IEC 708-1 (core identification)

Technical data:

Temperature range	moved		0°C till +60°C	Bending rad. under tension	8,0 x Ø
Loop impedance		[Ohm/100m]	19	Bending rad. no tension	4,0 x Ø
Capacity	max.	[nF/100m]	50		
Nom. Velocity of propagation	NVP nom.		77,0		
Attenuation	1-100 MHz	[Ohm]	100,0 +/- 15		
Coupling resistance	1-100 MHz	[mOhm/m]	10		
Capacity coupling (f=800 Hz)	K<100	[pF/100m]	15		
Insulation resistance		[GOhm/m]	>5		
Test voltage at 50 Hz		[V _{AC}]	700		

Frequency [MHz]	Line attenuation α [dB/100m]		Next [dB] α_{NN}		ACR [dB]		ELFEXT [dB] α_{ELFEXT}		Return Loss R_L [dB]	
	nom.*	max. CAT 5e	nom.*	min. CAT 5e	nom.*	min. CAT 5e	nom.*	min. CAT 5e	nom.*	min. CAT 5e
1	1,9	2,1	68,3	65,3	66,4	63,2	64,8	64,0	21,0	20,0
4	3,9	4,1	59,3	56,3	55,4	52,2	52,8	52,0	24,0	23,0
10	6,3	6,5	53,3	50,3	47,0	43,8	44,8	44,0	26,0	25,0
16	8,1	8,3	50,3	47,3	42,2	39,0	41,0	40,0	26,0	25,0
20	9,1	9,3	48,8	45,3	39,2	36,0	39,0	38,0	26,0	25,0
31,25	11,3	11,7	45,9	42,9	34,6	31,2	35,0	34,0	24,6	23,6
62,5	16,5	17,0	41,4	38,4	24,9	21,3	29,2	28,0	22,5	21,5
100	21,0	22,0	38,3	35,3	17,3	13,3	25,3	24,0	21,2	20,1
125	22,8	24,9	37,3	34,3	14,5	9,4	23,3	22,0	20,4	19,4
200	27,0	-	35,3	-	8,3	-	20,9	-	19,0	-

* Category 5 - Values per ISO / IEC 11801, EN 50173, EN 50288-2-1

* Category 5 - Values per TIA / EIA - 568-A-5

Number of pairs and nominal dimensions AWG Nr.	Copper figure kg/km	Overall diameter appr.mm	Calorific potential kWh/m	Tensile force N	Weight appr. kg/km
4 x 2 x AWG 24 PVC	37,4	6,5	0,15	120	60
4 x 2 x AWG 24 FRNC	37,4	6,5	0,15	120	60
2 x(4 x 2 x AWG 24) PVC	74,9	13,0x6,5	0,30	240	120

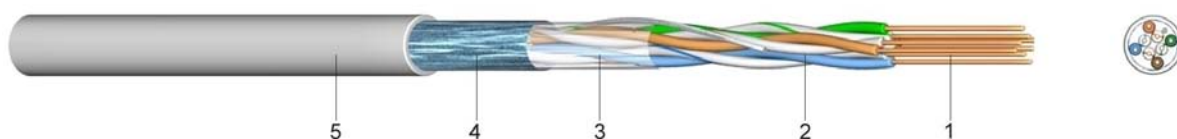
LAN 350 (F/UTP)

Data Transmission Cable for Local Networks with central-element and shield, Category 6

Application:

In the horizontal cabling as an installation for laying cable in cable channels and pipes inside of telecommunications equipment and data systems to 350 Mhz. Installation is very easy because of a central element (cross) no individual shield is required.

Usable for: 10Base-T, 100 Base-T, 1000 Base-T, CDDI/TPDDI, ISDN, ATM 155 Mbit/s, TP-PMD 125 Mbit/s, Token Ring 4/16 Mbit/s.



Construction:

- 1 Bare, solid copper conductor, Ø 0,55mm (AWG 24/1)
- 2 core insulation SFS Polyethylen
- 3 layer of plastic foil
- 4 plastic laminated aluminium foil
- 5 PVC-sheath or with halogen free sheath

Standards:

ISO/IEC 11801 2.Edition
EN 50173-1
TIA/EIA 568-B.2
IEC 61156-5
EN 50288-5-1

Technical data:

Temperature range	moved		0°C till +60°C	Bending rad. under tension	8,0 x Ø
Loop impedance		[Ohm/100m]	19	Bending rad. no tension	4,0 x Ø
Capacity	max.	[nF/100m]	50		
Nom. Velocity of propagation	NVP nom.		77,0		
Attenuation	1-100 MHz	[Ohm]	100,0 +/- 22		
Coupling resistance	1-100 MHz	[mOhm/m]	10		
Capacity coupling (f=800 Hz)	K<100	[pF/100m]	150		
Insulation resistance		[GOhm/m]	>5		
Test voltage at 50 Hz		[V _{AC}]	700		

Frequency [MHz]	Line attenuation α [dB/100m]		Next [dB] α_{NN}		ACR [dB]		Return Loss R_L [dB]	
	nom.*	max. CAT 6	nom.*	min. CAT 6	nom.*	min. CAT 6	nom.*	min. CAT 6
1	1,8	2,1	78	66	76,2	-	22	20,0
4	3,4	3,8	74	65	70,6	-	25	23,1
10	5,4	6,0	70	60	64,6	-	28	25,0
16	6,9	7,6	65	56	58,1	-	28	25,0
20	7,8	8,5	62	55	54,2	-	28	25,0
31,25	9,8	10,8	58	52	48,2	-	27	23,6
62,5	13,8	15,5	55	47	41,2	-	26	21,5
100	17,5	19,9	52	44	34,5	-	25	20,1
155	21,8	25,3	50	41	28,2	-	25	18,8
200	24,9	29,2	48	40	23,1	-	24	18,0
250	27,5	33,0	45	38	17,5	-	24	17,3
300	29,5	-	43	-	13,5	-	22	-
350	33,0	-	41	-	8,0	-	21	-

* Category 6 - Values per ISO / IEC 11801, EN 50173, EN 50288-2-1

* Category 6 - Values per TIA / EIA - 568-A-5

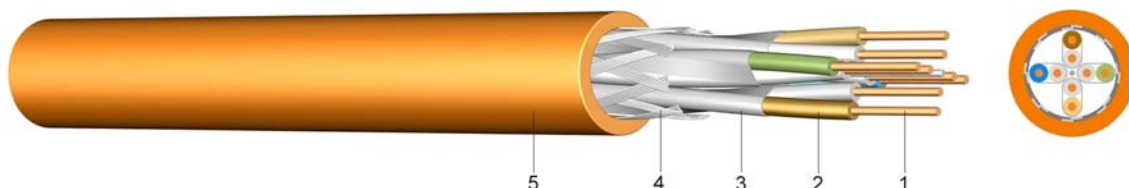
Number of pairs and nominal dimensions AWG Nr.	Copper figure kg/km	Overall diameter appr.mm	Calorific potential kWh/m	Tensile force N	Weight appr. kg/km
4 x 2 x AWG 24 FRNC	22,1	7,5	0,21	100	54

LAN 600 (S/FTP Pimf)

Data Transmission Cable for Local Networks with Pair Wise Screening and Overall Shielding according to a Draft of Category 7

Application:

This installation cable is suitable for horizontal laying in cable ducts and conduits in telecommunications and data transmission systems.
Useable for: ISDN , B-ISDN, IEEE 802.3 10 Base T Ethernet, IEEE 802.3 100 Base T Ethernet, IEEE 802.5 Token Ring, CDDI (FDDI on Cu), Gigabit-Ethernet , ATM, DQDB, Video.



Construction:

- 1 solid bare copper, $\varnothing$ 0,55mm or 0,64mm
- 2 core insulation of foam-skin polyethylene
- 3 pair wise shielding of plastic-laminated aluminium foil with a tinned drain wire $\varnothing$ 0,4
- 4 braid of tinned copper wires
- 5 outer sheath of polyvinylchloride (PVC) grey or halogen-free polymer compound, orange

Standards:

EN 50288-4-1
IEC 332-1 , IEC 54-2, IEC 1034-2
IEC 708-1 (core identification)

Technical data:

Temperature range	moved		0°C till +60°C	Bending rad.	under tension	8,0 x $\varnothing$
Loop impedance		[Ohm/100m]	14,5	Bending rad.	no tension	4,0 x $\varnothing$
Capacity	max.	[nF/100m]	50			
Nom. Velocity of propagation	NVP nom.		77,0			
Attenuation	1-100 MHz	[Ohm]	100,0 +/- 25			
Coupling resistance	1-100 MHz	[mOhm/m]	< 10			
Capacity coupling (f=800 Hz)	K<100	[pF/100m]	1500			
Insulation resistance		[GOhm/m]	>5			
Test voltage at 50 Hz		[V _{AC}]	700			

Frequency [MHz]	Line attenuation α [dB/100m]		Next [dB] α_{NN}		ACR [dB]		ELFEXT [dB] α_{ELFEXT}		Return Loss R_L [dB]	
	nom.*	max. CAT 7	nom.*	min. CAT 7	nom.*	min. CAT 7	nom.*	min. CAT 7	nom.*	min. CAT 7
1	1,9	2,0	85	80	83,1	78,1	80	78	24	-
4	3,4	3,6	85	80	81,6	76,4	80	78	24	23,1
10	5,5	5,7	85	80	79,5	74,3	76	74	26	25,0
16	7,0	7,2	85	80	78,0	72,8	72	70	26	25,0
20	7,8	8,1	85	80	77,2	71,9	70	68	26	25,0
100	18,2	18,5	77	72,4	58,8	53,9	56	54	21	20,1
155	22,8	23,4	75	69,6	52,2	46,2	53	51	20	18,8
200	26,0	26,8	74	67,9	48,0	41,4	50	48	19	17,3
300	32,0	33,3	70	65,3	38,0	32,0	46	44	19	17,3
600	47,0	48,9	65	60,8	18,0	11,9	40	38	19	17,3

* Category 7 - Values per ISO / IEC 11801, EN 50173

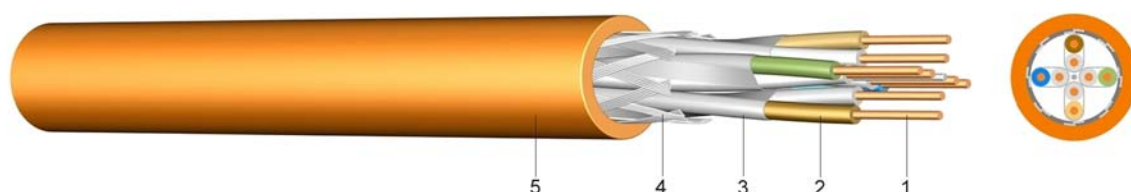
Number of pairs and nominal dimensions AWG Nr.	Copper figure kg/km	Overall diameter appr.mm	Calorific potential kWh/m	Tensile force N	Weight appr. kg/km
4 x 2 x AWG 23 PVC	42,2	7,5	0,17	190	68
4 x 2 x AWG 23 FRNC	42,2	7,5	0,17	190	68
4 x 2 x AWG 23 earth-laying,bk	42,2	7,5	0,17	190	68
2 x(4 x 2 x AWG 23) PVC	84,5	15,0x7,5	0,34	380	136
2 x(4 x 2 x AWG 23) FRNC	84,5	15,0x7,5	0,34	380	136

LAN 900 (S/FTP Pimf)

Data Transmission Cable for Local Networks with Pair Wise Screening and Overall Shielding Category 7

Application:

In the horizontal wiring as an installation cable for the transfer in cable canals as well as in pipes within telecommunication installations and data systems.
Area of application: ISDA, B-ISDA, IEEE 802.3 10 Base T Ethernet, IEEE 802.3 100 Base T Ethernet, IEEE 802.5 Token Ring CCDI (FDDI at Cu), Gigabit-Ethernet, ATM, DQDB, Video



Construction:

- 1 solid bare copper, $\varnothing$ 0,57mm
- 2 core insulation of foam-skin polyethylene
- 3 pair wise screen of plastic laminated aluminium foil with a tinned drain wire $\varnothing$ 0,4
- 4 braid of tinned copper wires
- 5 outer sheath of polyvinylchloride (PVC) yellow or halogen-free polymer compound orange

Standards:

EN 50288-4-1
IEC 332-1, IEC 754-2, IEC 1034-2
IEC 708-1 (core identification)

Technical data:

Temperature range	moved		0°C till +60°C	Bending rad. under tension	8,0 x $\varnothing$
Loop impedance		[Ohm/100m]	14,5	Bending rad. no tension	4,0 x $\varnothing$
Capacity	max.	[nF/100m]	50		
Nom. Velocity of propagation	NVP nom.		77,0		
Attenuation	1-100 MHz	[Ohm]	100,0 +/- 25		
Coupling resistance	1-100 MHz	[mOhm/m]	10		
Capacity coupling (f=800 Hz)	K<100	[pF/100m]	150		
Insulation resistance		[GOhm/m]	>5		
Test voltage at 50 Hz		[V _{AC}]	700		

Frequency [MHz]	Line attenuation α [dB/100m]		Next [dB] α_{NN}		ACR [dB]		ELFEXT [dB] α_{ELFEXT}		Return Loss R_L [dB]	
	nom.*	max. CAT 7	nom.*	min. CAT 7	nom.*	min. CAT 7	nom.*	min. CAT 7	nom.*	min. CAT 7
1	1,9	2,0	90	80,0	88,1	78,1	85	78	24,0	-
4	3,4	3,6	90	80,0	86,6	76,4	85	78	24,0	23,1
10	5,5	5,7	90	80,0	84,5	74,3	80	74	26,0	25,0
20	7,8	8,1	90	80,0	82,2	71,9	75	68	26,0	25,0
31,25	9,6	10,1	90	80,0	80,4	69,9	72	64	25,0	23,6
62,5	14,0	14,5	80	75,1	61,1	60,6	66	58	22,5	21,5
100	18,2	18,5	78	72,4	59,8	53,9	60	54	21,0	20,1
155	22,8	23,4	77	69,9	54,2	46,2	58	51	20,0	18,8
200	26,0	26,8	75	69,9	49,0	41,4	55	48	19,0	17,3
300	32,0	33,3	72	65,3	40,0	32,0	50	44	19,0	17,3
600	47,0	48,9	67	60,8	20,0	11,9	45	38	19,0	17,3
900	56,0	-	61	-	5,0	-	35	-	17,3	-

* Category 7 - Values per ISO / IEC 11801, EN 50173

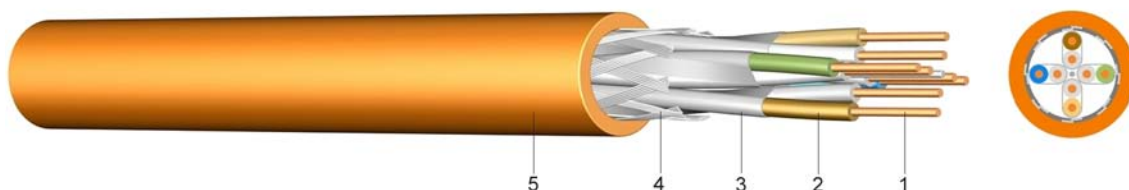
Number of pairs and nominal dimensions AWG Nr.	Copper figure kg/km	Overall diameter appr.mm	Calorific potential kWh/m	Tensile force N	Weight appr. kg/km
4 x 2 x AWG 23 PVC	42,2	8,0	0,17	190	74
4 x 2 x AWG 23 FRNC	42,2	8,0	0,16	190	74
2 x(4 x 2x AWG 23) PVC	84,5	16,0x8,0	0,35	380	148
2 x(4 x 2x AWG 23) FRNC	84,5	16,0x8,0	0,32	380	148

LAN 1200 (S/FTP Pimf)

Data Transmission Cable with Pair Wise Screening and Overall Shielding, Category 7

Application:

In the horizontal wiring as an installation cable for the transfer in cable canals as well as in pipes within telecommunication installations and data systems.
Area of application: ISDA, B-ISDA, IEEE 802.3 10 Base T Ethernet, IEEE 802.3 100 Base T Ethernet, IEEE 802.5 Token Ring CCDI (FDDI at Cu), Gigabit-Ethernet, ATM, DQDB, Video



Construction:

- 1 solid bare copper, $\varnothing$ 0,55mm or 0,64mm
- 2 core insulation of foam-skin polyethylene
- 3 pair wise shielding of plastic laminated aluminium with a tinned drain wire ($\varnothing$ 0,4)
- 4 braid of tinned copper wires
- 5 outer sheath of halogen-free polymer compound, yellow or orange

Standards:

Category 7
EN 50288-4-1
IEC 332-1, IEC 754-2, IEC 1034-2
IEC 708-1 (core identification)

Technical data:

Temperature range	moved		-20°C till +60°C	Bending rad. under tension	8,0 x $\varnothing$
Loop impedance		[Ohm/100m]	11,5	Bending rad. no tension	4,0 x $\varnothing$
Capacity	max.	[nF/100m]	50		
Nom. Velocity of propagation	NVP nom.		77,0		
Attenuation	1-100 MHz	[Ohm]	100,0 +/- 25		
Coupling resistance	1-100 MHz	[mOhm/m]	10		
Capacity coupling (f=800 Hz)	K<100	[pF/100m]	150		
Insulation resistance		[GOhm/m]	>5		
Test voltage at 50 Hz		[V _{AC}]	700		

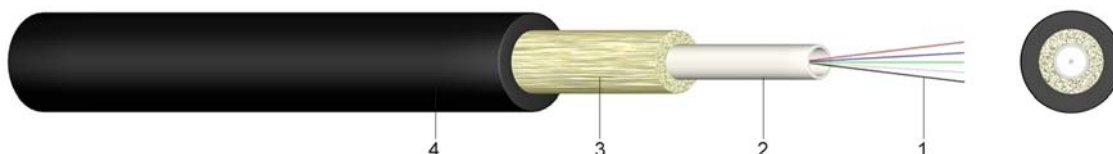
Frequency [MHz]	Line attenuation α [dB/100m]		Next [dB] α_{NN}		ACR [dB]		ELFEXT [dB] α_{ELFEXT}		Return Loss R_L [dB]	
	nom.*	max. CAT 7	nom.*	min. CAT 7	nom.*	min. CAT 7	nom.*	min. CAT 7	nom.*	min. CAT 7
1	2,0	-	90	78	88,0	-	85	-	23,0	-
4	3,2	3,5	90	78	86,8	-	85	75	24,0	23,0
10	5,1	5,4	90	78	84,9	-	80	71	26,0	25,0
20	6,5	6,8	90	78	83,5	-	75	65	26,0	25,0
62,5	13,4	13,7	90	78	76,6	-	65	55	23,5	22,5
100	17,0	17,5	83	76	66,0	-	61	51	22,5	21,5
200	24,5	25,3	78	71	53,5	-	55	45	21,0	20,0
300	31,1	31,5	77	69	45,9	-	51	41	20,1	19,1
600	45,0	46,3	75	64	30,0	-	45	35	18,6	17,6
900	56,9	58,3	73	62	16,1	-	42	32	17,7	16,7
1000	60,5	62,0	72	61	11,5	-	41	31	17,3	16,5
1200	67,0	69,0	70	60	3,0	-	39	29	17,3	16,1

* Category 7 - Values per ISO / IEC 11801, EN 50173

Number of pairs and nominal dimensions AWG Nr.	Copper figure kg/km	Overall diameter appr.mm	Calorific potential kWh/m	Tensile force N	Weight appr. kg/km
4 x 2 x AWG22 FRNC	49,9	8,5	0,19	150	78
2 x(4 x 2 x AWG22)FRNC	99,8	17,0x8,5	0,38	300	156

A-DQ(ZN)2Y Light Dielectric Outdoor Cable with or without A-DQ(ZN)B2Y Non-Metallic Rodent Protection

Application: This metal-free optical fibre outdoor cable is suitable for installations directly into the earth or in conduits in telecommunications and data processing systems. The stranded design (n x m) is available till 60 fibres, and with a multifunctional used reinforced glass roving braiding as a non-metallic stress relieving element and an armour for rodent protection.



Construction:

- 1 fibre glass with 50 or 62,5 µm
- 2 filled with waterproof gel
- 3 protection form rodent with glass roving
- 4 outer sheath of polyethylene (PE), black

Standards: adapted to DIN VDE 0888

Technical data:

Temperature range	transport / storage	-30°C till +70°C
	operational	-20°C till +70°C
Bending radius	under tension	x diameter
	no tension	x diameter
		20
		15

Description	Overall diameter appr. mm	Weight appr. kg/km	Crush strenght permanent N/dm	Tractive force installation / operation N
A-DQ(ZN)2Y				
4 G 50/125	11,0	90	3.000	3.000 / 2.000
8 G 50/125	11,0	90	3.000	3.000 / 2.000
12 G 50/125	11,0	90	3.000	3.000 / 2.000
16 G 50/125	11,0	90	3.000	3.000 / 2.000
24 G 50/125	11,0	90	3.000	3.000 / 2.000
4 G 62,5/125	11,0	90	3.000	3.000 / 2.000
8 G 62,5/125	11,0	90	3.000	3.000 / 2.000
12 G 62,5/125	11,0	90	3.000	3.000 / 2.000
24 G 62,5/125	11,0	90	3.000	3.000 / 2.000
A-DQ(ZN)B2Y				
4 G 50/125	11,5	105	4.000	5.000 / 3.000
8 G 50/125	11,5	105	4.000	5.000 / 3.000
12 G 50/125	11,5	105	4.000	5.000 / 3.000
16 G 50/125	11,5	105	4.000	5.000 / 3.000
24 G 50/125	11,5	105	4.000	5.000 / 3.000
4 G 62,5/125	11,5	105	4.000	5.000 / 3.000
8 G 62,5/125	11,5	105	4.000	5.000 / 3.000
12 G 62,5/125	11,5	105	4.000	5.000 / 3.000
24 G 62,5/125	11,5	105	4.000	5.000 / 3.000

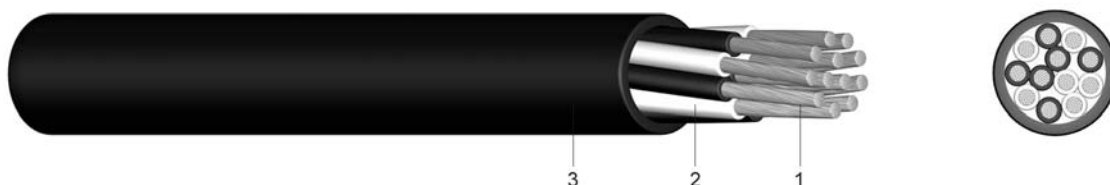
Further types in singlemode or multimode style upon request

90 E/N/P/C

PVC Insulated Compensating and Extension Cable

Application:

These cables are suitable for installations in dry, humid and wet locations as temperature measuring cables for areas such as the plastic industry in machine engineering, industrial oven construction as well as blast furnace plants in the steel industry. PVC-, fibre-glass- and asbestos-substitute insulated or sheathed compensating and extension cables are not suitable for open-air use except for the PVC-sheathed solid conductor type which can be used for underground laying, too.



Construction:

- 1 solid or fine-stranded conductor
conductor material, depending on the kind of elements
- 2 core insulation of polyvinylchloride (PVC)
- 3 outer sheath of polyvinylchloride (PVC)

Standards:

IEC 60584 (core identification)
Core identification and temperature ranges as download at: www.meinhart.at/service/download

Technical data:

Temperature range

in motion
fixed

-5°C till +70°C
-25°C till +70°C
EN 60332-1-2

Flammability

standard

Type	Number of cores	Materials	for	Conductor	Form	Overall	Weight
	cross section	per	thermo-	construct.		diameter	
	mm ²	DIN 60584	couple	appr.value		appr.	appr.
				mm		mm	kg/km
90E 9L	2 x 1,5	Fe-CuNi	Typ L	48 x 0,20	round	7,0	79
90N 9L	2 x 1,5	SoNiCr-SoNi	Typ K	48 x 0,20	round	7,0	79
90P 9L	2 x 1,5	SoPtRh-SoPt	Typ S	48 x 0,20	round	7,0	79
90C 9L	2 x 1,5	Cu-CuNi	Typ U	48 x 0,20	round	7,0	79
90E 9L	2 x 0,22	Fe-CuNi	Typ L	7 x 0,20	round	4,0	22
90N 9L	2 x 0,22	SoNiCr-SoNi	Typ K	7 x 0,20	round	4,0	22
90P 9L	2 x 0,22	SoPtRh-SoPt	Typ S	7 x 0,20	round	4,0	22
90C 9L	2 x 0,22	Cu-CuNi	Typ U	7 x 0,20	round	4,0	22
90E 12L	2 x 1,5	Fe-CuNi	Typ L	48 x 0,20	oval	4,3 x 7,0	69
90N 12L	2 x 1,5	SoNiCr-SoNi	Typ K	48 x 0,20	oval	4,3 x 7,0	69
90P 12L	2 x 1,5	SoPtRh-SoPt	Typ S	48 x 0,20	oval	4,3 x 7,0	69
90C 12L	2 x 1,5	Cu-CuNi	Typ U	48 x 0,20	oval	4,3 x 7,0	69
90E 12D	2 x 1,5	Fe-CuNi	Typ L	1 x 1,38	oval	4,2 x 6,8	61
90N 12D	2 x 1,5	SoNiCr-SoNi	Typ K	1 x 1,38	oval	4,2 x 6,8	61
90P 12D	2 x 1,5	SoPtRh-SoPt	Typ S	1 x 1,38	oval	4,2 x 6,8	61
90C 12D	2 x 1,5	Cu-CuNi	Typ U	1 x 1,38	oval	4,2 x 6,8	61

Type	Number of cores	cross section	Materials per DIN 60584	for thermo- couple	Conductor construct. appr.value mm	Form	Overall diameter appr. mm	Weight appr. kg/km
90. 9-4L	4 x 1,5		E / N / P / C		48 x 0,20	round	8,1	119
90. 9-6L	6 x 1,5		E / N / P / C		48 x 0,20	round	10,1	184
90. 9-12L	12 x 1,5		E / N / P / C		48 x 0,20	round	13,2	312
90. 9-16L	16 x 1,5		E / N / P / C		48 x 0,20	round	15,1	419
90. 9-20L	20 x 1,5		E / N / P / C		48 x 0,20	round	16,7	520
90. 9-24L	24 x 1,5		E / N / P / C		48 x 0,20	round	19,0	614
90. 9-32L	32 x 1,5		E / N / P / C		48 x 0,20	round	20,9	793
90. 9-36L	36 x 1,5		E / N / P / C		48 x 0,20	round	22,1	904
90. 9-40L	40 x 1,5		E / N / P / C		48 x 0,20	round	24,1	1.032

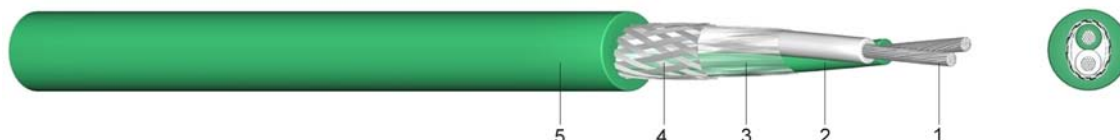
Further cross-sections and core-quantities as well as standards and configurations upon request

90 E/N/P/C

PVC Insulated Compensating and Extension Cable with Screening

Application:

These cables are suitable for installations in dry, humid and wet locations as temperature measuring cables for areas such as the plastic industry in machine engineering, industrial oven construction as well as blast furnace plants in the steel industry. PVC-, fibre-glass- and asbestos-substitute insulated or sheathed compensating and extension cables are not suitable for open-air use except for the PVC-sheathed solid conductor type which can be used for underground laying, too.



Construction:

- 1 solid or fine-stranded conductor, conductor material, depending on the kind of elements
- 2 core insulation of polyvinylchloride (PVC)
- 3 layer of plastic foil
- 4 screening of tinned copper braiding
- 5 outer sheath of polyvinylchloride (PVC)

Standards:

IEC 60584 (core identification)

Core identification and temperatur ranges as download at: www.meinhart.at/service/download

Technical data:

Temperature range

in motion
fixed

-5°C till +70°C

-25°C till +70°C

Flammability

standard

EN 60332-1-2

Type	Materials	for	Conductor	Form	Overall	Weight
Number of cores	per	thermo-	construct.		diameter	
cross section	DIN 60584	couple	appr.value		appr.	appr.
mm ²			mm		mm	kg/km
with Copper braid						
90E 5L 2 x 1,5	Fe-CuNi	Typ L	48 x 0,20	round	8,1	93
90N 5L 2 x 1,5	SoNiCr-SoNi	Typ K	48 x 0,20	round	8,1	93
90P 5L 2 x 1,5	SoPtRh-SoPt	Typ S	48 x 0,20	round	8,1	93
90C 5L 2 x 1,5	Cu-CuNi	Typ U	48 x 0,20	round	8,1	93
with Aluminium foil						
90E 5-022 2 x 0,22	Fe-CuNi	Typ L	7 x 0,20	round	4,0	31
90N 5-022 2 x 0,22	SoNiCr-SoNi	Typ K	7 x 0,20	round	4,0	31
90P 5-022 2 x 0,22	SoPtRh-SoPt	Typ S	7 x 0,20	round	4,0	31
90C 5-022 2 x 0,22	Cu-CuNi	Typ U	7 x 0,20	round	4,0	31
with Aluminium foil						
90E 20L 2 x 1,5	Fe-CuNi	Typ L	48 x 0,20	round	8,0	75
90N 20L 2 x 1,5	SoNiCr-SoNi	Typ K	48 x 0,20	round	8,0	75
90P 20L 2 x 1,5	SoPtRh-SoPt	Typ S	48 x 0,20	round	8,0	75
90C 20L 2 x 1,5	Cu-CuNi	Typ U	48 x 0,20	round	8,0	75

Type	Number of cores	Materials	for	Conductor	Form	Overall	Weight
	cross section	per	thermo-	construct.		diameter	
	mm ²	DIN 60584	couple	appr.value		appr.	appr.
				mm		mm	kg/km
with Aluminium foil							
90E 20D	2 x 1,5	Fe-CuNi	Typ L	1 x 1,38	round	8,2	82
90N 20D	2 x 1,5	SoNiCr-SoNi	Typ K	1 x 1,38	round	8,2	82
90P 20D	2 x 1,5	SoPtRh-SoPt	Typ S	1 x 1,38	round	8,2	82
90C 20D	2 x 1,5	Cu-CuNi	Typ U	1 x 1,38	round	8,2	82
90. 20-4D	4 x 1,5	E / N / P / C		1 x 1,38	round	10,8	137
90. 20-6D	6 x 1,5	E / N / P / C		1 x 1,38	round	12,4	186
90. 20-12D	12 x 1,5	E / N / P / C		1 x 1,38	round	16,3	362
90. 20-16D	16 x 1,5	E / N / P / C		1 x 1,38	round	16,8	423
90. 20-20D	20 x 1,5	E / N / P / C		1 x 1,38	round	20,3	542
90. 20-24D	24 x 1,5	E / N / P / C		1 x 1,38	round	22,5	638
90. 20-28D	28 x 1,5	E / N / P / C		1 x 1,38	round	24,2	749
90. 20-30D	30 x 1,5	E / N / P / C		1 x 1,38	round	24,2	788
90. 20-32D	32 x 1,5	E / N / P / C		1 x 1,38	round	25,1	847

Further cross-sections and core-quantities as well as standards and configurations upon request

90 E/N/P/C

Silicone Insulated Compensating and Extension Cable with or without Steel Wire Braiding

Application:

These cables are suitable for installations in dry, humid and wet locations as temperature measuring cables for areas such as the plastic industry in machine engineering, industrial oven construction as well as blast furnace plants in the steel industry. PVC-, fibre-glass- and asbestos-substitute insulated or sheathed compensating and extension cables are not suitable for open-air use except for the PVC-sheathed solid conductor type which can be used for underground laying, too.



Construction:

- 1 fine-stranded conductor, conductor material depending on kind of elements
- 2 core insulation of silicone (2GI1)
- 3 outer sheath of silicone (2GM1)
- 4 steel wire braiding

Standards:

IEC 60584 (core identification)

Core identification and temperatur ranges as download at: www.meinhart.at/service/download

Technical data:

Temperature range

in motion

fixed

temporary resilient

standard

-25°C till +180°C

-25°C till +180°C

+250°C

EN 60332-1-2

Flammability

Type	Materials per DIN 60584	for thermo-couple	Conductor construct. appr.value mm	Form	Overall. dieameter appr. mm	Weight appr. kg/km
without steel braid						
90E 15L 2 x 1,5	Fe-CuNi	Typ L	48 x 0,20	round	7,7	76
90N 15L 2 x 1,5	SoNiCr-SoNi	Typ K	48 x 0,20	round	7,7	76
90P 15L 2 x 1,5	SoPtRh-SoPt	Typ S	48 x 0,20	round	7,7	76
90C 15L 2 x 1,5	Cu-CuNi	Typ U	48 x 0,20	round	7,7	76
90E 3Ln 2 x 1,5	Fe-CuNi	Typ L	48 x 0,20	oval	5,2 x 7,4	62
90N 3Ln 2 x 1,5	SoNiCr-SoNi	Typ K	48 x 0,20	oval	5,2 x 7,4	62
90P 3Ln 2 x 1,5	SoPtRh-SoPt	Typ S	48 x 0,20	oval	5,2 x 7,4	62
90C 3Ln 2 x 1,5	Cu-CuNi	Typ U	48 x 0,20	oval	5,2 x 7,4	62
with steel braid						
90E 15LP 2 x 1,5	Fe-CuNi	Typ L	48 x 0,20	oval	7,8	105
90N 15LP 2 x 1,5	SoNiCr-SoNi	Typ K	48 x 0,20	oval	7,8	105
90P 15LP 2 x 1,5	SoPtRh-SoPt	Typ S	48 x 0,20	oval	7,8	105
90C 15LP 2 x 1,5	Cu-CuNi	Typ U	48 x 0,20	oval	7,8	105
90E 15LP 2 x 1,5	Fe-CuNi	Typ L	48 x 0,20	oval	6,0 x 8,2	85
90N 15LP 2 x 1,5	SoNiCr-SoNi	Typ K	48 x 0,20	oval	6,0 x 8,2	85
90P 15LP 2 x 1,5	SoPtRh-SoPt	Typ S	48 x 0,20	oval	6,0 x 8,2	85
90C 15LP 2 x 1,5	Cu-CuNi	Typ U	48 x 0,20	oval	6,0 x 8,2	85

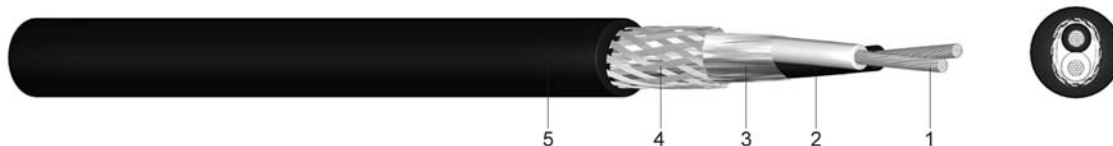
Further cross-sections and core-quantities as well as standards and configurations upon request

90 E/N/P/C

Silicone Insulated Compensating and Extension Cable with Screening

Application:

These cables are suitable for installations in dry, humid and wet locations as temperature measuring cables for areas such as the plastic industry in machine engineering, industrial oven construction as well as blast furnace plants in the steel industry. PVC-, fibre-glass- and asbestos-substitute insulated or sheathed compensating and extension cables are not suitable for open-air use except for the PVC-sheathed solid conductor type which can be used for underground laying, too.



Construction:

- 1 solid or fine-stranded conductor
conductor material, depending on the kind of elements
- 2 core insulation of silicone (2G11)
- 3 layer of plastic foil
- 4 screening of an aluminium foil with drain wire
- 5 outer sheath of silicone (2GM1)

Standards:

IEC 60584 (core identification)

Core identification and temperatur ranges as download at: www.meinhart.at/service/download

Technical data:

Temperature range

in motion
fixed
temporary resilient
standard

-25°C till +180°C
-25°C till +180°C
+250°C
EN 60332-1-2

Flammability

Type Number of cores cross section mm ²	Materials per DIN 60584	for thermo- couple	Conductor construct. appr.value mm	Form	Overall diameter appr. mm	Weight approx. kg/km
90E 6L 2 x 1,5	Fe-CuNi	Typ L	48 x 0,20	round	8,0	94
90E 6L 2 x 1,5	SoNiCr-SoNi	Typ K	48 x 0,20	round	8,0	94
90E 6L 2 x 1,5	SoPtRh-SoPt	Typ S	48 x 0,20	round	8,0	94
90E 6L 2 x 1,5	Cu-CuNi	Typ U	48 x 0,20	round	8,0	94
90E 6L 2 x 1,5	Fe-CuNi	Typ L	1 x 1,38	round	7,8	92
90E 6L 2 x 1,5	SoNiCr-SoNi	Typ K	1 x 1,38	round	7,8	92
90E 6L 2 x 1,5	SoPtRh-SoPt	Typ S	1 x 1,38	round	7,8	92
90E 6L 2 x 1,5	Cu-CuNi	Typ U	1 x 1,38	round	7,8	92

Further cross-sections and core-quantities as well as standards and configurations upon request

Capacity of Cable Drums

Cable	Lengths in m for drums with identification code and for drum sizes												
ø	061	071	081	091	101	121	141	161	181	201	221	250	251
6	1113	2024	2755										
7	845	1481	2340										
8	637	1064	1463	2731									
9	472	892	1152	2202	2866								
10	386	677	980	1768	2349								
11	314	564	761	1404	1912								
12	253	468	643	1206	1540								
13	237	385	542	1032	1339	2727							
14		364	454	881	1159	2265	2967						
15		297	430	749	1000	1991	2479						
16		239	358	632	860	1756	2205						
17		228	294	603	736	1545	1959						
18		218	281	505	705	1355	1737						
19		172	228	485	599	1184	1535	2722					
20		165	219	402	576	1139	1352	2435	2831				
21		159	211	387	485	991	1304	2172	2527				
22		122	167	315	468	856	1145	1931	2248				
23		117	161	304	389	827	999	1869	2172	2953			
24		113	156	294	377	709	967	1657	1927	2608			
25		110	151	285	365	688	839	1608	1867	2522			
26		80	116	226	299	668	814	1419	1650	2218			
27		78	113	221	290	567	700	1244	1450	2150	2861		
28		76	109	215	282	551	681	1211	1409	1879	2777		
29		73	106	209	226	462	663	1180	1371	1826	2450		2976
30		71	103	162	220	450	564	1028	1197	1583	2383		2893
31			76	157	214	438	550	1003	1166	1540	2089		2558
32			74	153	209	428	537	866	1009	1500	2035	2978	2491
33			72	150	204	352	451	846	985	1289	1984	2908	2428
34				146	158	344	441	828	962	1257	1726	2605	2134
35				108	154	336	431	707	824	1227	1685	2547	2083
36				105	151	329	422	692	806	1041	1646	2271	2035
37				103	148	265	348	678	788	1017	1418	2223	1774
38					144	259	341	664	772	994	1386	1969	1735
39					107	254	334	560	653	972	1356	1930	1697
40					105	249	327	549	640	812	1328	1892	1486
41					102	244	264	539	627	795	1130	1664	1435
42					100	190	259	529	615	779	1107	1633	1406
43						187	254	437	511	763	1085	1603	1199
44						183	249	430	502	749	1064	1574	1175
45						180	245	422	492	611	890	1373	1153
46						177	240	415	484	600	874	1349	1131
47						174	187	408	475	589	858	1326	1110
48						129	184	330	386	578	842	1144	931
49						127	181	325	380	568	828	1125	914
50						125	178	319	373	558	878	1107	898
51						123	175	314	367	442	666	1089	883
52						121	172	310	361	435	655	1072	869
53							170	305	356	428	644	912	713
54							126	230	280	421	634	898	701
55							124	235	276	414	624	885	690
56							122	232	271	408	614	872	679
57							121	228	267	401	488	860	668
58							119	225	263	304	480	719	658
59							117	222	260	300	473	709	649
60								219	256	295	466	699	639
61								216	252	291	460	689	609
62								161	190	287	453	680	501

Drum Assignment

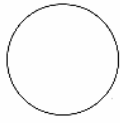
The smallest admissible drum core diameter with reference to cable and wire types

Types	Smallest drum core diameter
Wires for fixed installation	
Single core wire	$20 \times D_A$
Sheathed wires single core	$20 \times D_A$
Sheathed wires multicore	$15 \times D_A$
Flexible wires	$12 \times D_A$
Cable plastic insulated	
Single core ≤ 6 kV	$20 \times D_A$
Single core ≥ 10 kV	$25 \times D_A$
Stranded, including 95 mm ² ≤ 1 kV	$15 \times D_A$
Stranded, including 95 mm ² ≥ 6 kV	$20 \times D_A$
Stranded, including 95 mm ² ≥ 20 kV	$25 \times D_A$
Stranded, larger 95 mm ² ≤ 10 kV	$20 \times D_A$
Stranded, larger 95 mm ² ≥ 20 kV	$25 \times D_A$
Multicore ≤ 1 kV	$15 \times D_A$
Telecommunication cables and installation cables for telecommunications systems	
Plastic cables	$20 \times D_A$
Installation cables	$20 \times D_A$
Paper insulated cables with lead outer sheath	
Single core ≤ 10 kV	$25 \times D_A$
Single core ≥ 10 kV	$30 \times D_A$
Multicore, unarmoured ≥ 6 kV	$25 \times D_A$
Multicore, armoured ≥ 6 kV	$20 \times D_A$
Three-core SL type cable armoured ≥ 10 kV	$20 \times D_A$

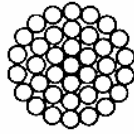
D_A = cable or wire diameter

Conductor Construction for Insulated Cables and Wires

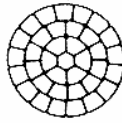
Conductor Construction



circular
solid
RE



circular
stranded
RM



circular
stranded
compacted
RM



sector-shaped
solid
SE



sector-shaped
stranded
SM

Construction and Conductor Resistance according DIN EN 60228 (VDE 0295)

Circular copper conductor

nominal cross section mm ²			solid (class 1) max. conductor diameter mm	stranded (class 2)				
				not compacted		compacted		
				number of single wires (min.)	max. conductor diameter	number of single wires (min.)	conductor diameter	
	bare Ohm / km	metal sheathed Ohm / km					minimum mm	maximum mm
0,5	36,0	36,7	0,9	7	1,1			
0,75	24,5	24,8	1,0	7	1,2			
1	18,1	18,2	1,2	7	1,4			
1,5	12,1	12,2	1,5	7	1,7			
2,5	7,41	7,56	1,9	7	2,2			
4	4,61	4,7	2,4	7	2,7			
6	3,08	3,11	2,9	7	3,3			
10	1,83	1,84	3,7	7	4,2			
16	1,15	1,16	4,6	7	5,3			
25	0,727	0,734		7	6,6	6	5,6	6,5
35	0,524	0,529		7	7,9	6	6,6	7,5
50	0,387	0,391		19	9,1	6	7,7	8,6
70	0,268	0,270		19	11,0	12	9,3	10,2
95	0,193	0,195		19	12,9	15	11,0	12,0
120	0,153	0,154		37	14,5	18	12,3	13,5
150	0,124	0,126		37	16,2	18	13,7	15,0
185	0,0991	0,100		37	18,0	30	15,3	16,8
240	0,0754	0,0762		61	20,6	34	17,6	19,2
300	0,0601	0,0607		61	23,1	34	19,7	21,6
400	0,0470	0,0475		61	26,1	53	22,3	24,6
500	0,0366	0,0369		61	29,2	53	25,3	27,6
630	0,0283	0,0286		91	33,2	53	28,7	32,5
800	0,0221	0,0224		91	37,6	-	-	-
1000	0,0176	0,0177		91	42,2	-	-	-

Sector-shaped copper conductor

nominal cross-section mm ²	max. conductor resistance at 20 °C Ohm / km	stranded (class 2) compacted	nominal cross-section mm ²	max. conductor resistance at 20 °C Ohm / km	stranded (class 2) compacted
		number of single wires (min.)			number of single wires (min.)
25	-	-	150	0,124	18
35	0,524	6	185	0,0991	30
50	0,387	6	240	0,0754	34
70	0,268	12	300	0,0601	34
95	0,193	15	400	0,0470	53
120	0,153	18	500	-	-

Fine-stranded and very fine stranded copper conductor

nominal cross-section mm ²	max. conductor resistance at 20 °C		max. conductor diameter	number & largest diameter of single wire	
	bare Ohm / km	metal-sheathed Ohm / km		fine-stranded (class 5) mm	very fine-stranded (class 6) mm
0,5	39,0	40,1	1,1	12 x 0,21	28 x 0,16
0,75	26,0	26,7	1,3	24 x 0,21	42 x 0,16
1	19,5	20,0	1,5	32 x 0,21	56 x 0,16
1,5	13,3	13,7	1,8	30 x 0,26	84 x 0,16
2,5	7,98	8,21	2,6	50 x 0,26	140 x 0,16
4	4,95	5,09	3,2	56 x 0,31	224 x 0,16
6	3,30	3,39	3,9	84 x 0,31	192 x 0,21
10	1,91	1,95	5,1	80 x 0,41	320 x 0,21
16	1,21	1,24	6,3	128 x 0,41	512 x 0,21
25	0,780	0,795	7,8	200 x 0,41	800 x 0,21
35	0,554	0,565	9,2	280 x 0,41	1120 x 0,21
50	0,386	0,393	11,0	400 x 0,41	705 x 0,31
70	0,272	0,277	13,1	356 x 0,51	990 x 0,31
95	0,206	0,210	15,1	485 x 0,51	1340 x 0,31
120	0,161	0,164	17,0	614 x 0,51	1690 x 0,31
150	0,129	0,132	19,0	765 x 0,51	2123 x 0,31
185	0,106	0,108	21,0	944 x 0,51	1470 x 0,41
240	0,0801	0,0817	24,0	1225 x 0,51	1905 x 0,41
300	0,0641	0,0654	27,0	1530 x 0,51	2385 x 0,41
400	0,0486	0,0495	31,0	2035 x 0,51	-
500	0,0384	0,0391	35,0	1768 x 0,61	-

Aluminium conductor

nominal cross-section mm ²	max. conductor resistance at 20 °C Ohm / km	circular conductor (class 2) stranded ¹ , compacted			sector-shaped conductor (class 2) stranded ² , compacted
		number of single wires (min.)	conductor diameter		number of single wires (min.)
			minimum (mm)	maximum (mm)	
25	1,20	6	5,6	6,5	6
35	0,868	6	6,6	7,5	6
50	0,641	6	7,7	8,6	6
70	0,443	12	9,3	10,2	12
95	0,320	15	11,0	12,0	15
120	0,253	15	12,5	13,5	15
150	0,206	15	13,9	15,0	15
185	0,164	30	15,5	16,8	30
240	0,125	30	17,8	19,2	30
300	0,100	30	20,0	21,6	30
400	0,0778	53	22,9	24,6	53
500	0,0605	53	25,7	27,6	-
630	0,0469	53	29,3	32,5	-

¹⁾ Single core circular conductor (class1) are permissible till 300 mm². The diameter of the non compacted conductor from 25 mm² till 630 mm² is to be taken from DIN EN 60332.

²⁾ Single core sector-shaped conductors (class1) are permissible from 50 mm² till 240 mm²

Conversion table for standard cross-sections

Comparison between the metrical and the American standard cross sections

AWG No.	Wire-Ø mm	Wire cross section	Conductor resistance max. Ohm/km	Metric cross-section *	AWG No.	Wire-Ø mm	Wire cross section	Conductor resistance max. Ohm/km	Metric cross-section *
28	0,320	0,0804	229		14	1,630	2,08	8,50	2,5
27	0,361	0,102	181		13	1,830	2,63	7,30	
26	0,404	0,128	146	0,14	12	2,050	3,31	5,75	4
25	0,455	0,162	114		11	2,300	4,17	4,54	
24	0,511	0,205	84	0,25	10	2,588	5,261	3,59	6
23	0,574	0,259	67		9	2,906	6,631	2,99	
22	0,643	0,324	54	0,34	8	3,264	8,367	2,25	10
21	0,724	0,412	43	0,5	7	3,665	10,55	1,79	
20	0,813	0,519	34		6	4,115	13,30	1,42	16
19	0,912	0,653	27	0,75	5	4,620	16,77	1,12	
18	1,020	0,823	21	1	4	5,189	21,15	0,89	25
17	1,150	1,04	16,90		3	5,827	26,67	0,70	
16	1,290	1,31	13,50	1,5	2	6,543	33,62	0,56	35
15	1,450	1,65	10,60		1	7,348	42,41	0,44	50

* Metric Nominal cross section satisfying the electrical requirements (Please note that there is no clear correlation, as regards cross section and conductor resistance, the requirements of the two systems differ. Above charts provide a guide to selecting the right section of cable shows)

Rating as per the National Electrical Code (NEC)

Extract from NEC Table 310-16

Permissible current ratings for single insulated copper conductors, nominal voltage from

0 to 2000 V, 60 °C-90 °C.

Not more than three loaded cores laid in one cable duct or in a multicore cable or in the ground.

Based on ambient temperature of 30 °C

Extract from NEC Table 310-17

Allowable Ampacities of single insulated conductors, nominal voltage from

0-2000 V, on Air,

Based on Ambient Temperature of 30 °C

Rating [A]			
nominal cross section	Temperature Rating of Conductor		
	60 °C	75 °C	90 °C
AWG			
18	-	-	14
16	-	-	18
14	20*	20	25
12	25*	25*	30
10	30	35*	40
8	40	50	55
6	55	65	75
4	70	85	95
3	85	100	110
2	95	115	130
1	110	130	150
1/0	125	150	170
2/0	145	175	195
3/0	165	200	225
4/0	195	230	260
250	215	255	290
300	240	285	320
350	260	310	350
400	280	355	380
500	320	380	430
600	355	420	475

Capacitance [A]			
nominal cross section	Temperature Rating of Conductor		
	60 °C	75 °C	90 °C
AWG			
18	-	-	18
16	-	-	24
14	25*	30*	35*
12	30*	35*	40*
10	40*	50*	55*
8	60	70	80
6	80	95	105
4	105	125	140
3	120	145	165
2	140	170	190
1	165	195	220
1/0	195	230	260
2/0	225	265	300
3/0	260	310	350
4/0	300	360	405
250	340	405	455
300	375	445	505
350	420	505	570
400	455	545	615
500	515	620	700
600	575	690	780

* Note

Unless otherwise specifically permitted in this Code, the over current protection for conductor types marked with a star shall not exceed 15 amperes for No. 14, 20 amperes for No. 10 copper, after any correction factors for ambient temperature and number of conductors have been applied.

Insulation and Sheath Materials

Overview of the most important polymers used in cable technology

thermoplastics (plastomere)		cross-linked thermoplast		thermoplastic elastomere	elastomere		duroplastic (duromere)
PVC	polyvinylchloride	XLPE (VPE)	cross-linked polyethylene	blends of polyolefinens and rubber	NR	natural rubber	EP epoxy resin
PE	polyethylene		cross-linked ethylene-copolymere	Three-masspolymere (Styrol-Alkylen-Styrol)	EPM	ethylene-propylene-rubber compounds	PUR polyurethane resin
EVA	ethylene-vinylacetate-copolymere (VA < 30%)			thermoplastic polyurethane (PUR) and polyester	SBR	Styrol-butadiene-rubber compounds	
EEA	ethylene-alkylacrylate-copolymer, e.g.: ethylene-ethylakrylate				EPDM	ethylene-propylene-terpolymer-rubber compounds	
EBA	ethylene-butylakrylate						
PP	polypropylene				IIR	butyl rubber	
PA	polyamide				CR	Polychloropren compounds	
ETFE	ethylene-tetrafluoric-ethylen-copolymere				EVA	ethylene-vinylacetate-copolymer (VA > 30%)	
FEP	tetrafluor-ethylene-hexafluor-propylene-copolymere				CSM	Chloro-sulfonated polyethylene compounds	
					CM	chlorinated polyethylene	
					SiK	silicone rubber	
					ECO	epichlorhydrin-rubber comp.	
					NBR	nitril-butadiene-rubber compounds	

Mechanical, Thermal, Electrical and Chemical Properties of Insulation and Sheath Materials

Designations				Properties (guide values)												
symbol	chemical	VDE	permissible operating tempera- ture to VDE C°	mechanical			thermal			electrical			chemical resistance (guide values)			
				tensile strength	elongation mm	resistance to abrasion	behaviour at low temperature	flame resistance	corrosive gases dur- ing a com- bustion	specific volume resistance	permittivity constant	factor of loss	oils - fats	solvents	diluted acids	water
	Thermoplastic															
PVC	polyvinylchloride compounds	Y	70-105	12,5-25	125-350	averance to good	averance to good	averance to good	hydrogen chloride	10 ¹² - 10 ¹⁵	4,0-6,5	10 ⁻² - 10 ⁻³	moderate to averance	averance	good	moderate
LDPE	low-density – polyethylene	2Y	70,00	10-20	400-600	averance	good	bad	-	> 10 ¹⁶	2,25-2,6	~ 10 ⁻⁴	moderate	moderate	very good	very good
HPE	high-density – polyethylene	2X	90,00	25-40	500-1000	good	good	bad	-	> 10 ¹⁶	2,4-2,5	~ 10 ⁻⁴	moderate	moderate	very good	very good
VPE	cross-linked polyethylene	2X	90,00	12,5-20	300-450	averance	good	bad	-	~ 10 ¹⁶	2,3-2,6	~ 10 ⁻⁴	moderate	moderate	very good	very good
	foamed polyethylene	02Y	70,00	8-12	350-500	-	good	bad	-	~ 10 ¹⁷	~ 1,6	~ 10 ⁻⁴	moderate	moderate	very good	very good
PA	polyamide	4Y	80,00	50-60	50-200	very good	good	good	-	~ 10 ¹⁵	~ 4,0	~ 10 ⁻² - 10 ⁻³	very good	good	very good	moderate
PUR	polyurethane	11Y	80,00	35-50	500-700	very good	good	moderate	-	~ 10 ¹²	~6,0	~ 10 ⁻²	good	good	averance	moderate
	Elastomers															
NR SBR	natural rubber styrol – butadien – rubber	G	60,00	5,0-10,0	300-600	moderate to averance	very good	bad	-	**	**	**	bad	bad	moderate	moderate
SiR	silicone rubber	2G	180,00	5,0-10,0	300-600	moderate	very good	averance to good	-	~ 10 ⁻¹⁵	~ 3,0	~ 10 ⁻³	good	bad	averance	very good
EPR	ethylene – propylene rubber compounds	3G	90,00	5,0-10,0	300-500	moderate to averance	good	averance to bad	-	~ 10 ¹² - 10 ⁻¹⁵	3,0 - 3,8	~ 10 ⁻² - 10 ⁻³	moderate to averance	averance	good	very good to good
EVM	ethylene – vinylacetate - Copolymer compounds	4G	120,00	8,0-12,0	200-350	moderate to averance	good	averance to moderate	-	~ 10 ¹³	~ 6,0	~ 10 ⁻²	moderate to averance	averance	moderate	moderate
CR	polychloroprene compounds	5G	60-90	5,0-20,0	500-800	averance to good	averance to good	good	hydrogen chloride	**	**	**	good to very good	moderate	good	averance
CM	chlorinated polyethylene compounds	9G	80-100	8,0-20,0	350-650	averance to good	averance	good	hydrogen chloride	**	**	**	good to very good	moderate	good	averance
CSM	clorosulfonated polyethylene compounds	6G	100,00	8,0-20,0	400-700	averance to good	averance	good	hydrogen chloride	**	**	**	good to very good	moderate	good	averance
	Special Compounds															
ohne	cross-linked flame retardant halogen-free polymere	H	70-90	5,0-1,2	> 125	moderate to averance	moderate	good to very good	-	-10 ¹³ - 10 ¹⁴	~ 4	10 ⁻² - 10 ⁻³	moderate to averance	averance	good	good
ohne	flame retardant halogen-free polymere, not cross-linked	H	70-90	5,0-1,2	> 125	moderate to averance	moderate	good	-	-10 ¹² - 10 ¹⁴	~ 4	~ 10 ⁻³	moderate	moderate	gut	moderate

Abbreviations Key for wires according to harmonized requirements

Type of designation and rated voltage	Designation ident	1. Part	2. Part	3. Part
	harmonized type	H		-
	acknowledged national type	A		
	Rated voltage U_0 / U			
	100 / 100 V	01		
	300 / 300 V	03		
	300 / 500 V	05		
	450 / 750 V	07		
Structure of the wires	Insulation material			
	PVC standard to + 70 °C	V		
	PVC heat resistant to + 90 °C	V2		
	PVC cold resistant to - 25 °C	V3		
	PVC cross- linked	V4		
	natural and /or synthetic rubber to + 60 °C	R		
	ethylene-propylene rubber to + 90 °C	B		
	synthetic rubber (EVA) to + 110 °C	G		
	silicone rubber heat resistant to + 180 °C	S		
	cross-linked halogen free compound	Z		
	halogen free thermoplastic compound	Z1		
	Sheath material			
	PVC standard to + 60 °C	V		
	PVC heat resistant to + 90 °C	V2		
	PVC cold resistant to - 25 °C	V3		
	PVC cross-linked	V4		
	PVC oil resistant	V5		
	polyurethane	Q		
	natural and / or synthetic rubber to + 60 °C	R		
	polychloroprene rubber to + 60 °C	N		
	special polychloroprene rubber compound	N2		
	synthetic rubber (EVA) to + 110 °C	G		
	fibreglass braid	J		
	textile braid	T		
	textile braid with flame retardant compound	T2		
	halogen free thermoplastic compound	Z		
	Spezial constructions			
	divisible flat cable	H		
	indivisible flat cable	H2		
	flat cable acc. to HD 359 with ≥ 3 cores	H6		
	spiral cables	H8		
	supporting element (textile or metal)	D3		
	Core inlet (no load-bearing element)	D5		
	copper braid screen over stranded cores	C4		
	construction of conductor			
	solid	-U		
	stranded	-R		
	fine stranded for fixed installation	-K		
	fine stranded for flexible installation	-F		
	very fine stranded for flexibel installation	-H		
	tinsel cord	-Y		
	fine stranded conductor for welding cables	-D		
	very fine stranded conductor for welding cables	-E		
number of cores and nominal cross section	number of cores	...		
	earth conductor			
	without earth conductor	X		
	with earth conductor (yellow green)	G		
	nominal cross section in mm²	...		

Examples of construction type abbreviations:

H07V-U 1,5 black	PVC-insulated Single Core Wire 1,5 mm ² , black with solid conductor
H07RN-F 3 G 2,5	Rubber Sheathed Cable, 3 cores, 2,5 mm ² , with earth conductor yellow green
H03VV-F 2 x 0,75	PVC Sheathed Wire, 2 cores, 0,75 mm ²

Abbreviations key for electricity cables

Constructing components	abbreviations		remark
	VDE	ÖVE	
National standard	N	-	
Adapted to the national standard	(N)	E-	E ... energy cable
conductor			
- of copper	-	-	no sign
- of aluminium	A	A	
Insulation			
- mass-impregnated paper	-	P	
- polyvinylchloride (PVC)	Y	Y	
- polyethylene (PE)	2Y	2Y	
- cross-linked polyethylene (VPE)	2X	2X	
- cross-linked polymer (flame retardant, halogen free)	HX	-	
Concentric conductor of copper			
- long-lay	C	C	
- in waveconal formation	CW	-	
Screen of copper			
- for single core cables or	S	C	
for multicore cables with a common screen	SE	CE	
- for multicore cables with a screen over each individual core	S(F)	CJ	
- longitudinally watertight	H	H	XLPE power cables
Individual screening of cores from metalised paper (Höchstädter Cable)			
Metal sheath of lead			
- for single core and multicore cables with a common sheath	K	M	
- for 3-core screened SL cables with an anti-corrosion protection on each sheath	EK	ME	
Polymer laminated sheath			
- longitudinally and radially with aluminium tape tightly bonded to the PE sheath	(FL)2Y	JA2Y	
Plastic sheath and inner protection			
- PVC sheath or extruded PVC protection	Y	Y	
- PVC (reinforced sheath)	YV	Y3V	
- PE sheath	2Y	2Y	
- PE (reinforced sheath)	2YV	2Y3V	
- FRNC	HX	NG	cross-linked polymer
- FRNC	H	NY	not cross-linked polymer
Armour			
- steel tape	B	B	
- flat steel tape	F	F	
- round steel tape	R	R	
- counter helix of galvanized steel tape	G	G	
- Aldrey - circular wires	R(AY)	R(AY)	
External protection			
- Compound jute fibre	A	U	
- further materials: compare inner protection			
Constructions			
- with yellow green core	-J	-J	with protective conductor
- without yellow green core	-O	-O	without protective conductor
- core colouring with numbers - construction J	-JZ	-JZ	with protective conductor
- core colouring with numbers - construction O	-OZ	-OZ	without protective conductor
Conductor design			
- circular solid	RE	RE	
- circular stranded	RM	RM	compacted or incompact
- fine stranded	F	F	
- sector shaped solid	SE	SE	
- sector shaped stranded	SM	SM	

Cables are designated with

- type abbreviation
- number of cores and nominal cross section in mm²
- abbreviation for type & form of the main conductor
- if applicable nominal cross section of the screen or the concentric conductor in mm²
- nominal voltage in kV

Cables are not designated with

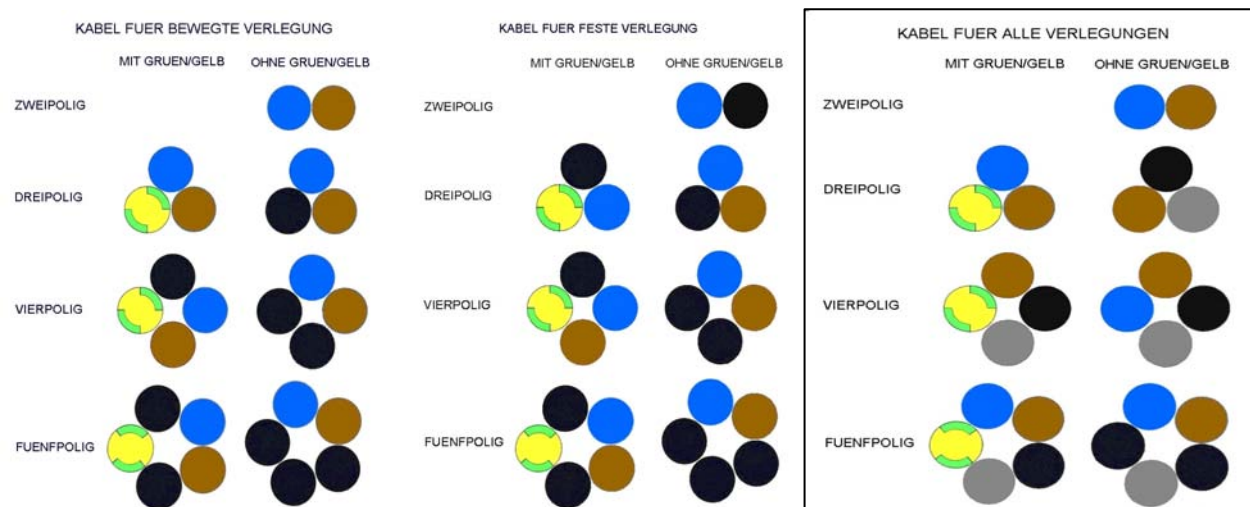
- copper conductor
- insulation of impregnated paper
- inner and outer conducting layer for cables with plastic insulation
- common core covering
- filling material
- inner serving of compounded jute yam

Abbreviations key for telecommunication cables

Construction components	VDE	ÖVE
Type		
- telecommunication cable	-	F
- outdoor cable	A	-
- outdoor cable with a construction for lightning protection	AB	-
- mining cable	G	-
- installation cable	J	-
- signal cable	S	-
Tinned conductor	-	v
Core insulation		
- PVC, polyvinylchloride	Y	Y
- PE, polyethylene	2Y	2Y
- foamed PE, foamed polyethylene	O2Y	-
Stranding components		
- stranded in pairs	P	-
- stranded in pairs with an individual static screen	P(ST)	-
- pairs in a metal foil	PiMF	-
- coaxial pair	KxP	-
- multiple twin-quad stranding (Dieselhorst-Martin)	DM	-
- star quad with use of phantom circuits	St	-
- star quad for short-range cables	STI	-
- star quad in subscriber's cables	STIII	-
- stranding in layers	Lg	-
- stranding in bundles	Bd	-
Armouring and screening		
- screen of copper tape over a PE inner sheath	K	-
- screen of copper tape	-	C
- screen of plastic coated aluminium foil	St	A
- earth wire	-	E
Sheath and protection sheath		
- lead sheath	M	-
- lead sheath with a hardening addition	Mz	-
- PVC sheath or protection sheath	Y	Y
- reinforced PVC protection sheath	Yv	Y3V
- PE sheath or protection sheath	2Y	2Y
- reinforced PE protection sheath	2Yv	2Y3V
- composite-layer sheath	(L)2Y	A2Y
- longitudinally and radially with aluminium tape tightly bonded to the PE sheath	(FL)2Y	JA2Y
- protection sheath made of jute and viscous mass	c	-
- filling of the interstices with petrol jelly	F	J
- steel tape	-	B
- flat wire	-	F
- round wire	-	R
- counter helix	-	G
Supporting element	-	T

Colour-Coding for Cables and Wires

Old schema off colour-coding acc. harmonized document HD 308 S1	New schema of colour-coding acc. harmonized document HD 308 S2 valid from 1.4.2006
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From six core: - J - Construction: 1 green-yellow core, further cores back with embossed numbering
- O – construction: All cores back with embossed numbering

Exceptions: a) 4-core with green-yellow alternative only for particular applications: Green-yellow, blue, brown, black
a) 3-core without green-yellow alternative only for particular applications: Blue, brown, black

What are the principal enhancements of the new system?

The principal enhancement is the introduction of the "grey" core colour for an outer conductor. The colours and the colour sequences in the cable are shown in the tables above. **The arrangement of the core colours for earth conductors and neutral lines is unchanged, that is: green-yellow and blue.**

DIN VDE 0293-308 (VDE 0293 part 308): 2003-01 provides for 2 exceptions whereby these variants, marked with the footnote "a)" or "b)", are applicable only for particular applications. These special applications are defined in DIN EN 60446 (VDE 0198): 1999-10, section 3.2.2. Accordingly for particular applications where there is no danger of confusion and no neutral line existing in the system, the blue core can be used as external conductor. However, no colour other than blue may be used for the neutral line. The colour light-blue is generally replaced by blue in this colour system.

Transitional period between old and new system with identification of cable cores and wires through colours

In general, standards cover comparable products. By referring to product standards in contracts it is possible to dispense with a considerable proportion of specification details. However there are exceptions, namely in the case of transitional periods with revised standards or "replacement standards" contingent on harmonisation. In this case the old and the new definitions are equally valid during the agreed transitional period. This applies also for the core identification of cables and wires. By harmonising the core colours of cables and wires through the installation technology standards committees, the wiring industry was granted the time period of 01.10.2001 to 01.04.2006, to change over its product range to the new core colours and to dispose of their existing stock with the old identification.

During the transitional period users of the cable and wiring, and the dealers, have the opportunity to complete projects that they have already started with the previously used products and reduce old stocks correspondingly. The electrical trade have indicated that from their side there should be no difficulties in effecting the changeover. The cable manufacturers intend to carry out the changeover as quickly as possible, but due to the various different operational conditions it is not possible to nominate a harmonised changeover date. The rough target for this is the end of 2003 so that from 01.01.2004 the proportion of products on the market with the new core identification system will increase sharply.

Core colour-coding of PVC control lines with 6 or more coloured cores

(In accordance with DIN VDE 293)

Core no.	Colour	Core no.	Colour	Core no.	Colour	Core no.	Colour	Core no.	Colour	Core no.	Colour
0	yellow-green	17	pink - white	34	orange-blue	51	transp. red	68	transp. white-black	85	beige-white-brown
1	white	18	orange-white	35	transp.-blue	52	beige-red	69	beige-white-black	86	red-white-grey
2	black	19	transp.-white	36	beige-blue	53	pink-violet	70	brown-white-blue	87	violet-white-grey
3	blue	20	beige-white	37	grey-brown	54	orange-violet	71	brown-white-blue	88	pink-white-grey
4	brown	21	blue-black	38	red-brown	55	transp.-violet	72	grey-white-blue	89	orange-white-grey
5	grey	22	brown-black	39	violet-brown	56	beige-violet	73	red-white-blue	90	transp-white-grey
6	red	23	grey-black	40	pink-brown	57	transp.-pink	74	violet-white-blue	91	beige-white-grey
7	violet	24	red-black	41	orange-brown	58	beige-pink	75	pink-white-blue	92	blue-white-red
8	pink	25	violet-black	42	transp.-brown	59	transp.-orange	76	orange-white-blue	93	brown-white-red
9	orange	26	pink-black	43	beige-brown	60	beige-orange	77	transp-white-blue	94	violet-white-red
10	transparent	27	orange-black	44	red-grey	61	blue-white-black	78	beige-white-blue	95	pink-white-red
11	beige	28	transp.-black	45	violet-grey	62	brown-white-black	79	grey-white-brown	96	orange-white-red
12	black-white	29	beige-black	46	pink-grey	63	grey-white-black	80	red-white-brown	97	brown-white-violet
13	brown-white	30	brown-blue	47	orange-grey	64	red-white-black	81	violet-white-brown	98	orange-white-violet
14	grey-white	31	grey-blue	48	transp.-grey	65	violet-white-black	82	pink-white-brown	99	brown-black-blue
15	red-white	32	red-blue	49	beige-grey	66	pink-white-black	83	orange-white-brown	100	grey-black-blue
16	violet-white	33	pink-blue	50	orange-red	67	orange-white-black	84	transp-white-brown	101	red-black-blue

Example core colours :

YSLY-JB 12 x 1.5: yellow/green, white, black, blue, brown, grey, red, violet, pink, orange, transparent, beige**YSLY-OB 12 x 1.5:** white, black, blue, brown, grey, red, violet, pink, orange, transparent, beige, black/white

Colour-Coding for Electronic Cables LiYY and LiYCY, acc. to DIN 47100 or factory standard

Core stranding				pairwise stranding				
Core-No.	Core colour	Core-No.	Core colour	Pair-No.			Core colour	
							a-core	b-core
1	white	23	white-red	1	23	45	white	brown
2	brown	24	brown-red	2	24	46	green	yellow
3	green	25	white-black	3	25	47	grey	pink
4	yellow	26	brown-black	4	26	48	blue	red
5	grey	27	grey-green	5	27	49	black	violet
6	pink	28	yellow-green	6	28	50	grey-pink	red-blue
7	blue	29	pink-green	7	29	51	white-green	brown-green
8	red	30	yellow-pink	8	30	52	white-yellow	yellow-brown
9	black	31	green-blue	9	31	53	white-grey	grey-brown
10	violet	32	yellow-blue	10	32	54	white-pink	pink-brown
11	grey-pink	33	green-red	11	33	55	white-blue	brown-blue
12	blue-red	34	yellow-red	12	34	56	white-red	brown-red
13	white-green	35	green-black	13	35	57	white-black	brown-black
14	brown-green	36	yellow-black	14	36	58	grey-green	yellow-grey
15	white-yellow	37	grey-blue	15	37	59	pink-green	yellow-pink
16	yellow-brown	38	pink-blue	16	38	60	green-blue	yellow-blue
17	white-grey	39	grey-red	17	39	61	green-red	yellow-red
18	grey-brown	40	pink-red	18	40	62	green-black	yellow-black
19	white-pink	41	grey-black	19	41	63	grey-blue	pink-blue
20	pink-brown	42	pink-black	20	42	64	grey-red	pink-red
21	white-blue	43	blue-black	21	43	65	grey-black	pink-black
22	brown-blue	44	red-black	22	44	66	blue-black	red-black

For more cores than listed the colour sequence is repeated. The first colour is the basic colour, the second colour is the colour of the ring marking. The distance between two rings is app. 7 mm. For the 4-core type differs from this pattern because the colours are white, yellow, brown and green.

JE-LiYCY und JE-Y(ST)Y acc. to DIN 57815

pair	1	2	3	4
a-core	blue	grey	green	white
b-core	red	yellow	brown	black

The cores are marked with the basic colour of the insulation which is repeated in the same sequence at each bundle.

Identification of the bundle - variante 1 "Bd Z"

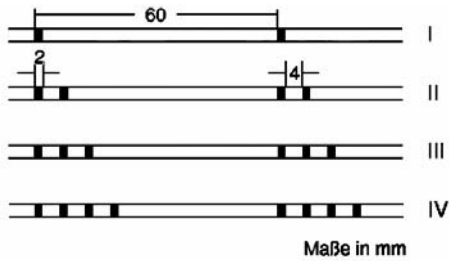
The bundles (4 pairs each) are clearly to be identified by a number helix.

Identification of the bundle - variante 2 "Bd Si"

bundle-No.	Colour of rings	Group of rings	helix
1 2 3 4	pink	I II III IIII	-
5 6 7 8	orange	I II III IIII	-
9 10 11 12	violet	I II III IIII	-
13 14 15 16	pink	I II III IIII	blue
17 18 19 20	orange	I II III IIII	red

The bundles are counted from inside to outside.

Ringidentification (group of rings)



Core Colouring of the Telecommunication Cables according to VDE

J-Y(ST)Y	J-YY
For the 2-paired installation cables: 1. pair a-core red, b-core black 2. pair a-core white, b-core yellow For all other cables: a-core 1st pair each layer red, at all the other pairs white; b-core blue, yellow, green, brown, black, colours are repeated Counting from outside to inside	The cores are to be identified by rings circuit 1 a-core without rings b-core ■ ■ ■ circuit 2 a-core ■ ■ ■ ■ b-core ■ ■ ■ ■ ■ ■ The basic colours of the insulation sheath of the 5 star quads of a bundle quad 1 red quad 2 green quad 3 grey quad 4 yellow quad 5 white The tracer bundles are marked by a red helix.

Layer Stranding of Installation Cables J-Y (ST) Y

Number of pairs	Number of pairs in layers					
	1	2	3	4	5	6
2	2					
4	4					
5	6					
10	2	8				
16	5	11				
20	1	6	13			
24	2	8	14			
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

A-2Y(L)2Y	A-2YF(L)2Y
The cores are to be identified by rings circuit 1 a-core without rings b-core ■ ■ ■ circuit 2 a-core ■ ■ ■ ■ b-core ■ ■ ■ ■ ■ ■ The basic colours of the insulation sheath of the 5 star quads of a basic bundle: quad 1 red quad 2 green quad 3 grey quad 4 yellow quad 5 white The tracer bundles are marked by a red helix.	The cores are to be identified by rings circuit 1 a-core without rings b-core ■ ■ ■ circuit 2 a-core ■ ■ ■ ■ b-core ■ ■ ■ ■ ■ ■ The basic colours of the insulation sheath of the 5 star quads of a basic bundle: quad 1 red quad 2 green quad 3 grey quad 4 yellow quad 5 white The tracer bundles are marked by a red helix.

Core Colouring of the Telecommunication Cables according to ÖVE [Austrian association of electrical engineers]

YR *
YYSch *
JB-YY *
* core colours acc. to the factory norm

F-vYAY, F-YAY						
pair-No.	colour of a-core	colour of b-core				
		blue	yellow	green	brown	black
1 ... 5	white-blue	1	2	3	4	5
6 ... 10	white-yellow	6	7	8	9	10
11 ... 15	white-green	11	12	13	14	15
16 ... 20	white-brown	16	17	18	19	20
21 ... 25	white-black	21	22	23	24	25
26 ... 30	red-blue	26	27	28	29	30
31 ... 35	red-yellow	31	32	33	34	35
36 ... 40	red-green	36	37	38	39	40
41 ... 45	red-brown	41	42	43	44	45
46 ... 50 *	red-black	46	47	48	49	50

* From the 51st pair the colour sequence is repeated.

F-2YA2Y, F-2YC2Y, F-2YJA2Y	
The cores are stranded in star quads. Two opposite cores of a quad build a talking circuit.	
core identification in a quad :	
circuit 1	a-core ... natural b-core ... red
circuit 2	c-core ... green d-core ... blue
One quad is marked as a tracer quad with a black a-core in each layer.	

Number of star quads in each layer

number of		number of star quads in each layer					
quads	pairs	1	2	3	4	5	6
25	50	3	8	14			
50	100	4	10	15	21		
75	150	3	9	15	21	27	
100	200	2	8	14	20	25	31

Core Colouring of the Data Transmission Cables Category 5

Colour-code according to IEC 708-1

Cable element	Colour of the insulation sheath			
	a-core			b-core
1	white (-blue)			blue
2	white (-orange)			orange
3	white (-green)			green
4	white (-brown)			brown
5	white			grey
6	red			blue
7	red			orange
8	red			green
9	red			brown
10	red			grey
Counting in pairs (to 10 pairs)				
Cable element	Colour of the insulation sheath			
	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
Counting in quads (to 5 quads)				

Guidelines for laying wiring in energy chains

Great care must be taken when laying wiring in energy chains.

As a matter of principle the following points should be adhered to:

1. The wires should be laid individually, loosely beside one another, insofar as this is possible. If wires of different diameters are being laid on top of each other or beside each other then it is recommended to use separating stays.
2. Permanently flexible wiring with an outer diameter < 10 mm, with which a separation using stays is not possible, should be gathered loosely together, arranged in a flexible conduit and laid in the energy supply chain. The diameter of the flexible conduit selected should be substantially larger than the sum of the individual cable diameters.
3. The wires must be able to move freely in the frame stays. For safety, 10% of the wiring diameter should be provided as free space.
4. It is necessary to carefully ensure that the wiring can pass through the curve radii without any constraint. Also with multi-layer laying the wires must have sufficient free space between one another through the curve radii.
5. The wires must be laid in the energy chain in such a way that they are not contorted (no twists). Therefore the wires must be unrolled from the drum or ring before laying (do not lift wires off in coils).
6. The weight distribution in the chain or in the chain stays should be symmetrical as far as possible. Heavy wires should be laid outwards, lighter supply lines towards the centre.
7. All wires must be strain-relieved at anchoring points and attachments. In doing so it must be ensured that the pressure on the outer sheath is spread over a large surface area. The clamping must be carried out carefully such that the cores in the wires are not crushed and yet that the wires are no longer able to slide.
8. In principle, only permanently flexible wiring should be used. It is essential to comply with the permitted bend radii.
9. When installing and laying energy chains the following standards (amongst others) must be complied with:

DIN VDE 0100

DIN VDE 0113

Instructions for transportation, storage and laying of category 5, category 6 or category 7 data cables

The LAN cabling must be protected from damage and moisture ingress.

This includes:

- Careful transportation (do not expose cable reel to any shock loading).
- Proper storage
- Provide end caps for ends
- Comply with storage and laying temperatures
- Checking the cable paths and preparing them for the wiring, i.e. smoothing, deburring, modifying bend radii etc. if necessary
- Use appropriate tools.
- Comply with permissible bend radii and draw forces (per corresponding table)
- Draw / reel cable off rotating reel (tangentially), never over the flange (head) or from the ring, in order to minimise torsion damage.
- Attach pressure relief devices (props) rather than having the coverings in direct contact with the cables.
- With flat wiring the bending is to be carried out on the small diameter.
- In order to comply with the EMC requirements (EN 55022) it is necessary to connect the screens all the way through.

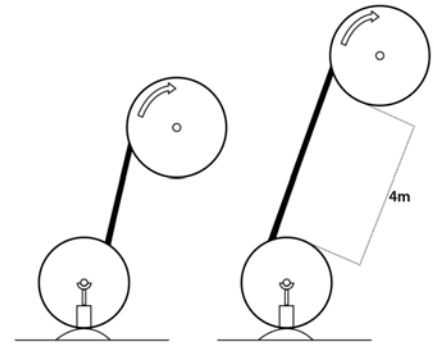
Installation and user guide:

The cables must be pulled from the delivered reel with a traction rope and pulling grip without twisting them.

It is imperative to avoid any deflection or pulling of cables over the edges.

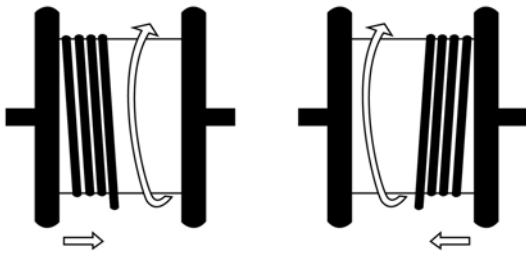
In the event of twisting, unwind the cable tangentially.

In any case, the cables must be installed on the device reel free of torsion. Select the distance between the delivery reel and the device reel as large as possible.



Wrong

Correct

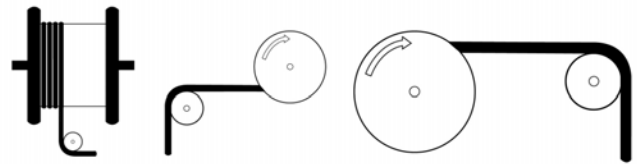


Correct

Wrong

The cables are produced with S-stranding (impact direction on the left) and they must be installed on the device drum in a manner that the cable moves at the start from left to right.

Avoid deflecting the cables into an S-curve.



Wrong

Correct

To avoid any crushing during the installation of the lines at the end of the track, use a pulling grip.



Survey sheets for download at: www.meinhart.at/service/download

Permissible Bending Radii for Laying on 20 °C (+/-10 °C) for harmonized wires acc. HD 516 S2:1997 + A1:2003 (DIN VDE 0298-300)

Wires for fixed installation (HD21 / HD22)

Nominale voltage to 0,6 / 1kV	Cable diameter mm			
	D ≤ 8	8 < D ≤ 12	12 < D ≤ 20	D > 20
for standard application	4D	5D	6D	6D
for carefully bending	2D	3D	4D	4D

Flexible Wires (HD21)

Nominale voltage to 0,6 / 1kV	Cable diameter mm			
	D ≤ 8	8 < D ≤ 12	12 < D ≤ 20	D > 20
fixed installation	3D	3D	4D	4D
freely moveable	5D	5D	6D	6D
at the entry to mobile devices and tools without mechanical load on the wiring	5D	5D	6D	6D
with mechanical load ¹	9D	9D	9D	10D
festooned as on a gantry crane	10D	10D	11D	12D
for repeated winding operations ¹	7D	7D	8D	8D
looped around via deflection pulley ¹	10D	10D	10D	10D
1) see 5.4.1 of this HD in connection with dynamic stress				

Flexible Wires (HD22)

Nominal voltage to 0,6 / 1kV	Cable diameter mm			
	D ≤ 8	8 < D ≤ 12	12 < D ≤ 20	D > 20
for fixed installations	3D	3D	4D	4D
free moveable	4D	4D	5D	6D
at the entry to mobile devices and tools without mechanical load on the wiring	4D	4D	5D	6D
with mechanical load ¹	6D	6D	6D	8D
festooned as on a gantry crane	6D	6D	6D	8D
for repeated winding operations ¹	6D	6D	6D	8D
looped around via deflection pulley ¹	6D	8D	8D	8D
1) see 5.4.1 of this HD in connection with dynamic stress				

Permissible Bending Radii for Laying on 20 °C (+/-10 °C) for not harmonized Wires (DIN VDE 0298-3)

Type	Nominal voltage to 0,6/1kV			Nom.voltage over 0,6/1kV
Wires for fixed installation	Overall Diameter of the cable or of a flat cable mm			
	up to 10	from 10 to 25	over 25	
for fixed installation	4D	4D	4D	6D
for forming	1D	2D	3D	4D

Type	Nominal voltage to 0,6/1kV				Nom.voltage over 0,6/1kV
For flexible applications	Overall Diameter of the cable or of a flat cable mm				
	up to 8	from 8 to 12	from 12 to 20	over 20	
for fixed installations	3D	3D	4D	4D	6D
in motion	3D	4D	5D	5D	10D
at entry	3D	4D	5D	5D	10D
for forced bendings ¹⁾ such as					
for reeling operation	5D	5D	5D	6D	12D
for cable trolley operation	3D	4D	5D	5D	10D
for cable chains	4D	4D	5D	5D	10D
for roller guidance system	7,5D	7,5D	7,5D	7,5D	15D

¹⁾ The suitability for this operation must be ensured by special construction characteristics.

For energy cables

acc. HD 603 S1:1994/A2:2003 and HD 620 S1:1996 and HD 621 S1:1996

plastic insulated cables				paper insulated cables with lead sheath	
multicore		single-core		multicore	single-core
to 1 kV	from 1 kV	to 1 kV	from 1 kV		
12D	15D	15D	15D	15D	25D

D = overall diameter of the cable

For telecommunication cables and installation cables for telecommunications systems

Cable type	minimum bending radius in mm
Installation cable (e.g. FvYAY, FYAY, J-Y(ST)Y ect.)	7,5D
Telecommunication cable for earth laying (e.g. F-2YA2Y, A-2YF(L)2Y ect.)	10D
DA = overall diameter of the cable	

Permissible Laying Temperatures

When laying power cables the cable temperature should not fall below:

- Paper insulated cable + 5 °C
- Plastic-insulated cable with PVC sheath + 5 °C
- XLPE-insulated cable with PE sheath - 20 °C

At lower temperatures the cables must be adequately warmed up beforehand. This can be done by storing them in a heated area (approx. 20 °C) for several days or by means of special hot air equipment.

Permissible Pull-forces for Laying

When laying power cables by machine, particular attention must be paid to the permissible tensile forces:

Pulling method	Constuction of cables	Tensile force
pulling head on the conductor	all types of cables	$F = A \cdot 50 \text{ N/mm}^2$ (Cable with Cu- conductor) $F = A \cdot 30 \text{ N/mm}^2$ (Cable with Al- conductor)
with cable stocking	all wire-armoured cables (e.g. NYFGY, NAYFGY ect.)	$F = K \cdot D^2$ ($K=9 \text{ N/mm}^2$)
	cables with metal sheath, without tension-proof armour (e.g. NKBA, NYKY, NAKLEY ect.)	$F = K \cdot D^2$ (single-sheathed cable $K=3 \text{ N/mm}^2$)
	(e.g. NEKEBA, NAEKEBA ect.)	(3-core single lead sheath cable $K=1 \text{ N/mm}^2$)
	plastic cables without metal sheath, plastic cables without armour (e.g. NYY, NYSY, NYSEY, NYCWY, NA2XS2Y ect.)	$F = A \cdot 50 \text{ N/mm}^2$ (Cu-conductor) $F = A \cdot 30 \text{ N/mm}^2$ (aluminium conductor)

If three single-core cables are laid simultaneously with a common cable stocking, the same max. pulling forces as they are applicable for single-core cables, are valid. For 3 laid single-core cables the calculation of the permissible pulling forces is based on 3 cables, whereas it is based on 2 cables if the 3 single-core cable are not laid-up.

A = total conductor cross-section in mm² (without screen and concentric protective conductor)

D = outside diameter of cable in mm.

| TESLA KABELI d.o.o. |

Industrijska 20 | 10431 Sveta Nedelja | Croatia
Tel: +385 (0)1 2362-900 | Fax: +385 (0)1 2362-901
info@teslacables.com | www.teslacables.com

| TESLA KABELI d.o.o. BEOGRAD |

Nehruova 51a/100 | 11070 Novi Beograd | Serbia
Tel: +381 11 3177-096 | Gsm: +381 64 2630-500
stevan.kugli@teslacables.com | www.teslacables.com