

ELEIROTTEK KABEL® **GROUP**

GAALNET® CABLES



ELETTROTEK KABEL [®] **GROUP**

Elettrotek Kabel was founded in Italy at the end of 2001.

We are focused in offering electrical wire & cable for SPECIAL applications in several different sectors, Industrial Automation in particular.

Through the years, the company expanded and created a network of branches and subsidiaries that exports to over 45 different countries all around the globe.

Elettrotek Kabel has warehouses in Italy, Switzerland, Germany, USA, Dubai and Abu Dhabi.

We are one of the first companies in the world that produces and distributes SPECIAL cables for use in the following industries: Industrial Automation, Iron & Steel, Mining, Port & Cranes, Marine and Oil & Gas.

This rapid expansion has been possible thanks to the competence of Elettrotek Kabel Group's management team and their constant focus on using only the highest quality products.

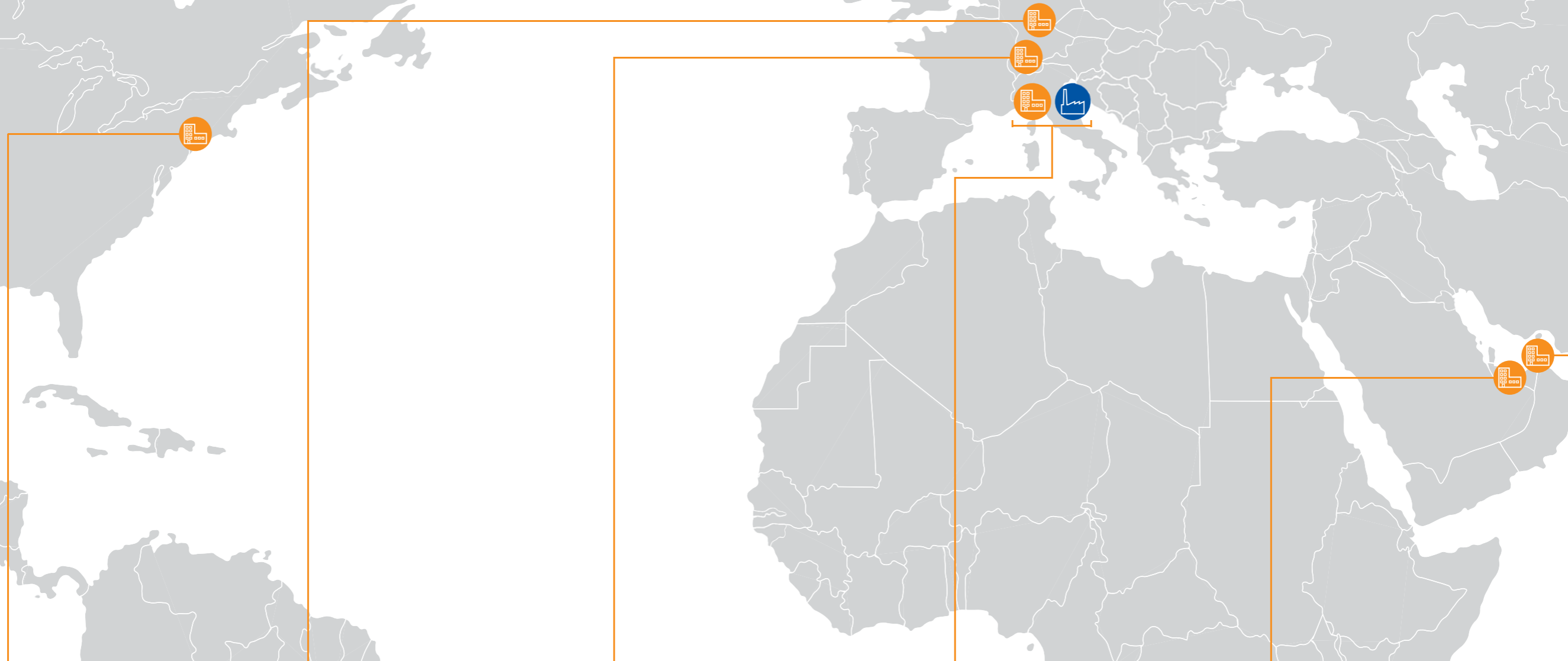
Elettrotek Kabel continues investing in the quality of our product lines and the customer care experience.

These elements have helped the company grow swiftly in a short period and have contributed in establishing Elettrotek Kabel's worldwide partnerships.



Roberto Gallingani
General manager

WORLDWIDE PRESENCE



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The Business Units:

STOCKS:



PRODUCTION PLANTS:



Certifications:

GOST-EAC



ISO 9001:2015



UL



CSA



LLOYD'S REGISTER



DNV-GL (in progress)



BUREAU VERITAS



ABS



RINA / RINAMIL



RMRS



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SECURITY CABLES



SECURITY CABLES

SECURITY CABLES

GAALNET® SECURITY ALARM CABLE C-4 U_o 400V

Screened cable for alarm systems, acc. to CEI UNEL 36762, Eca

ELETTROTEK KABEL® GAALNET® SECURITY ALARM CABLE C-4 U_o 400 V, Eca

ELETTROTEK KABEL® GAALNET® SECURITY ALARM CABLE C-4 U_o 400 V, Eca

Construction:

Conductor:	flexible plain annealed copper conductor Cl. 5, acc. to IEC 60228
Insulation:	PVC compound
Colour cores:	for signal cores (0,22 mm ²): white - red - yellow - green - grey - orange - light blue - brown - black - violet - blue - pink - white/brown - white/ violet - white/green - white/blue - white/ grey - white/yellow - white/black - white/ red - white/ light blue - white/pink - white/ orange for supply cores (0,50 mm ² and 0,75 mm ²): red + black
Stranding:	in layers
Screen:	aluminium/PET tape + tinned copper drain wire
Outer sheath:	blue (similar RAL 5015) (UV) or white (similar RAL 9003), PVC compound

Technical data:

Nominal voltage:	400 V
Test voltage:	
for WHITE sheath:	1,5 kV
for BLUE sheath:	2,5 kV
Temperature range:	-10°C up to +70°C
Min. bending radius	10 x d
Insulation resistance:	200 MOhm/Km at 20°C

Resistance:



Fire and flame retardant acc. to:
IEC 60332-3, CEI 20-22 II
IEC 60332-1-2, CEI 20-35



Halogen free acc. to:
CEI 20-38, CEI 20-37 (blue outer sheath)

Features:

Insulation and jacket acc. to CEI 20-11
Compound lead free acc. to CEI 20-52
Acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca
classification (CEI UNEL 35016), EN 13501-6
suitable for installation in a single conduit
or channel or bridge, without interposing
separators, with cable system of Category I°
marked "450/750" or "0,6/1 kV" (as required by CEI-UNEL 36762)
RoHS and CE approval



SECURITY CABLES

GAALNET® SECURITY ALARM CABLE C-4 Uo 400V

Screened cable for alarm systems, acc. to CEI UNEL 36762, Eca

ELETTROTEK KABEL® GAALNET® SECURITY ALARM CABLE C-4 Uo 400 V, Eca

ELETTROTEK KABEL® GAALNET® SECURITY ALARM CABLE C-4 Uo 400 V, Eca

Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
49230EWI020M2 2	2x0,22	3,3	4,4	15
49230EWI040M22	4x0,22	3,95	7,3	20
49230EWI060M22	6x0,22	4,4	10,2	26
49230EWI080M22	8x0,22	4,85	13,1	34
49230EWI100M22	10x0,22	5,35	16	40
49230EWI120M22	12x0,22	5,7	18,9	45
49230EWI200M22	20x0,22	7	32	68
49230EWI02BM22	2x0,22+2x0,50	4,55	10,1	28
49230EWI04BM22	4x0,22+2x0,50	5,05	13	36
49230EWI06BM22	6x0,22+2x0,50	5,4	15,9	43
49230EWI08BM22	8x0,22+2x0,50	5,85	18,8	48
49230EWI10BM22	10x0,22+2x0,50	6,15	21,7	57
49231EWI02BM22	2x0,22+2x0,75	5,05	12,3	36
49231EWI04BM22	4x0,22+2x0,75	5,3	15,2	42
49231EWI06BM22	6x0,22+2x0,75	5,85	18,1	49
49231EWI08BM22	8x0,22+2x0,75	6,4	21	54
49231EWI10BM22	10x0,22+2x0,75	6,7	23,9	61
49231EWI12BM22	12x0,22+2x0,75	6,9	28	65

The table is refer to WHITE (RAL 9003) outer sheath.

Other dimensions and colours available on request.

Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
49230EBI020M22	2x0,22	3,8	4,4	20
49230EBI040M22	4x0,22	4,2	7,3	26
49230EBI060M22	6x0,22	5	10,2	31
49230EBI080M22	8x0,22	5,3	13,1	42
49230EBI100M22	10x0,22	5,6	16	50
49230EBI02BM22	2x0,22+2x0,50	4,8	10,1	33
49230EBI04BM22	4x0,22+2x0,50	5,2	13	42
49230EBI06BM22	6x0,22+2x0,50	5,9	15,9	51
49230EBI08BM22	8x0,22+2x0,50	6,2	18,8	59
49230EBI10BM22	10x0,22+2x0,50	6,4	21,7	65
49231EBI02BM22	2x0,22+2x0,75	5,1	12,3	47
49231EBI04BM22	4x0,22+2x0,75	5,5	15,2	52
49231EBI06BM22	6x0,22+2x0,75	6,1	18,1	59
49231EBI08BM22	8x0,22+2x0,75	5,6	21	71
49231EBI10BM22	10x0,22+2x0,75	7,1	23,9	73

The table is refer to BLUE (RAL 5015) outer sheath.

Other dimensions and colours available on request.

SECURITY CABLES

GAALNET® MINI-COAXIAL 75 Ohm 100 V

Screened cable for audio/video data transmission, acc. to CEI UNEL 36762, EN 50575:2014 + A1:2016, Eca

ELETTROTEK KABEL® GAALNET® MINI COAX 75 Ohm 100 V, Eca

Construction:

Conductor:	solid plain annealed copper conductor Cl. 1, 1x0,40 mm
Insulation:	PEE compound
Colour core:	natural
Screen:	aluminium/PET tape + tinned copper braid, 72% covering
Outer sheath:	white (similar RAL 1013), PVC compound

Resistance:



Flame and fire retardant acc. to:
CEI 20-35, IEC 60332-1
CEI 20-22 II, IEC 60332-3

Technical data:

Nominal voltage:	100 V
Temperature range:	-20°C up to +70°C
Min. bending radius	10 x d
Conductor resistance:	max. 136 Ohm/km
Impedance:	75 ± 3 Ω
Capacitance:	53 pF/m
Return loss dB: <i>from 5 up to 30 MHz:</i>	max. 4
Propagation speed:	85%

Features:

insulation and jacket acc. to CEI 20-11
acc. to CEI 20-38
acc. to CEI 20-37
compound lead free acc. to CEI 20-52
acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca
classification (CEI UNEL 35016), EN 13501-6
suitable for installation in a single conduit
or channel or bridge, without interposing
separators, with cable system of Category I°
marked "450/750" or "0,6/1 kV" (as required by CEI-UNEL 36762)

RoHS and CE approval



ELECTRICAL CHARACTERISTICS:

Frequency MHz	Attenuation dB/100 m
2	2,9
3	3,6
4	4,2
5	4,7
6	5,2
7	5,6
8	5,9
10	6,5

Part no.	Nominal cross-section no. of pairs x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
86010BWH010M01	1 x 0,14	3,6	10	15

Other dimensions and colours available on request.

GAALNET® MINI-COAXIAL 75 Ohm + CTRL 300/500 V

Screened cable for audio/video data transmission, acc. to CEI UNEL 36762 C-4 (U_o = 400 V), EN 50575:2014 + A1:2016, Eca

ELETTROTEK KABEL® GAALNET® MINI-COAXIAL 75 Ohm + CTRL 300/500 V, Eca



Construction:

Conductor (coax):	solid plain annealed copper conductor Cl. 1, 1x0,40 mm
Conductor (power):	stranded plain annealed copper conductor
Insulation (power):	PVC type T11
Insulation (coax):	PEE compound
Colour cores (power):	red + black
Colour core (coaxial):	natural
Stranding:	in layers
Screen (power):	aluminium/PET tape + tinned copper drain wire
Screen (coaxial):	aluminium/PET tape + tinned copper braid, 65% covering
Outer sheath (coaxial):	blue (similar RAL 5015) or black (similar RAL 9005), halogen-free compound, type M1
Outer sheath:	white (similar RAL 1013), PVC type TM2

Technical data:

Nominal voltage U_o/U:	300/500 V
Test voltage:	
<i>conductors:</i>	4 kV x 5 min
<i>sheath:</i>	5 kV x 5 min
Temperature range:	-10°C up to + 70°C
Min. bending radius	10 x d
Conductor resistance (coax):	Max. 140/42 Ohm/km
Conductor resistance (power):	
<i>0,50 sqmm:</i>	39 OHm/km at 20°C
<i>0,75 sqmm:</i>	26 OHm/km at 20°C
<i>1 sqmm:</i>	19,5 OHm/km at 20°C
Impedance:	75 ± 3 Ω
Capacitance:	52 pF/m +/-2
Return loss dB:	
<i>from 5 up to 70 MHz:</i>	max. 28
<i>from 470 up to 1000 MHz:</i>	max. 20
<i>from 1000 up to 3000 MHz:</i>	max. 16
Propagation speed:	85%

Resistance:



Flame and fire retardant acc. to:
CEI 20-35, IEC 60332-1
CEI 20-22 II, IEC 60332-3

Features:

insulation and jacket acc. to CEI 20-11
compound lead free acc. to CEI 20-52
acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca
classification (CEI UNEL 35016), EN 13501-6
suitable for installation in a single conduit
or channel or bridge, without interposing
separators, with cable system of Category I°
marked "450/750" or "0,6/1 kV" (as required by CEI-UNEL 36762)
RoHS and CE approval



ELECTRICAL CHARACTERISTICS:

Frequency MHz	Attenuation dB/100 m
1	1,6
3,6	3,1
10	5
71,5	12,7
88,5	14,1
135	17,5
180	20,2
270	24,9
360	28,8
540	35,5
720	41,3
750	42
1000	48,9
1500	61,5
2250	80

Part no.	Nominal cross-section no. of pairs x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
86010DWM01BM01	1x0,14 + 2x0,5	6,2	11	57
86011DWM01BM01	1x0,14 + 2x0,75	6,5	16	63
86012DWM01BM01	1x0,14 + 2x1	7,5	21	76

Other dimensions and colours available on request.

GAALNET® COAXIAL RG59/U



ELETTROTEK KABEL® GAALNET® COAXIAL RG59/U

Construction:

Conductor:	solid copper clad steel conductor, 1x0,58 mm
Insulation:	PE compound
Colour core:	natural
Screen:	plain annealed copper braid, 46%
Outer sheath:	black (similar RAL 9005) or white (similar RAL 9003), PE compound

Features:

acc. to MIL Standard
UV resistant
RoHS and CE approval



Technical data:

Nominal voltage:	100 V
Temperature range:	-30°C up to +70°C
Min. bending radius:	
<i>fixed laying:</i>	30 mm
<i>flexible installation:</i>	60 mm
D.C. resistance:	
<i>inner:</i>	310 Ohm/km
<i>outer:</i>	33,7 Ohm/km
Impedance:	75 ± 3 Ω
Capacitance:	66 pF/m ± 2
Velocity of propagation:	66%
Min. return loss:	
<i>from 30 up to 300 MHz:</i>	28
<i>from 300 up to 1000 MHz:</i>	25
<i>from 1000 up to 2000 MHz:</i>	20
<i>from 2000 up to 3000 MHz:</i>	18
Screening efficiency:	
<i>from 5 up to 30 MHz:</i>	Transfer imp. (TI): /
<i>from 100 up to 900 MHz:</i>	Screening Att. (AS): min. 55 dB

ELECTRICAL CHARACTERISTICS AT 20°C:

Frequency MHz	Attenuation dB/100 m
50	7,7
200	16
300	19,9
470	25,4
862	35,3
1000	38,7

Part no.	Nominal cross-section no. of pairs x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
80060B7H010905	1 x 0,6	6,15	4,7	42

Other dimensions and colours available on request.

GAALNET® COAXIAL RG11/U



ELETTROTEK KABEL® GAALNET® COAXIAL RG11/U

Construction:

Conductor:	stranded tinned copper conductor, 7x0,40 mm
Insulation:	PE compound
Colour core:	natural
Screen:	plain annealed copper braid, 97%
Outer sheath:	black (similar RAL 9005), PVC compound

Features:

acc. to MIL - C - 117 standard
 UV resistant
 RoHS and CE approval



Technical data:

Nominal voltage:	100 V
Temperature range:	-30°C up to +70°C
Min. bending radius:	
<i>fixed laying:</i>	60 mm
<i>flexible installation:</i>	110 mm
D.C. resistance max.:	
<i>inner:</i>	20,5 Ohm/km
<i>outer:</i>	4,4 Ohm/km
Impedance:	75 ± 3 Ω
Capacitance:	67 pF/m ± 2
Velocity of propagation:	66%
Min. return loss:	
<i>from 30 up to 300 MHz:</i>	30
<i>from 300 up to 600 MHz:</i>	27
<i>from 600 up to 1000 MHz:</i>	25
<i>from 1000 up to 2000 MHz:</i>	22
Screening efficiency:	
<i>from 5 up to 30 MHz:</i>	Transfer imp. (TI): /
<i>from 100 up to 900 MHz:</i>	Screening Att. (AS): min. 57 dB

ELECTRICAL CHARACTERISTICS AT 20°C

Frequency MHz	Attenuation dB/100 m
5	1,2
10	1,7
50	4,2
100	6,3
200	9,3
400	13,8

Part no.	Nominal cross-section no. of pairs x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
80030B7H010902	7 x 0,4	10,3	57	145

Other dimensions and colours available on request.

GAALNET® COAXIAL 50 Ohm RT52

EN 50575:2014 + A1:2016, Eca



ELETTROTEK KABEL® GAALNET® COAXIAL 50 Ohm RT52, Eca



Construction:

Conductor:	solid plain annealed copper conductor Cl. 1, 1x2,5 mm
Insulation:	PEE compound
Colour core:	natural
1st screen:	plain annealed copper tape, 100% coverage, + PET tape
2nd screen:	plain annealed copper braid, 95% coverage
Outer sheath:	black (similar RAL 9005), PVC compound

Features:

acc. to EN 50117
acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca
classification (CEI UNEL 35016), EN 13501-6
RoHS and CE approval



Technical data:

Nominal voltage:	U ₀ /U 0,6/1 kV
Temperature range:	-20°C up to +70°C
Min. bending radius:	150 mm (<i>fixed laying</i>)
D.C. resistance max.:	
<i>inner:</i>	3,8 Ohm/km
<i>outer:</i>	5,3 Ohm/km
Impedance:	50 ± 3 Ω
Capacitance:	82 pF/m ± 2
Velocity of propagation:	85%
Min. return loss:	
<i>from 5 up to 470 MHz:</i>	26
<i>from 470 up to 1000 MHz:</i>	24
<i>from 1000 up to 2000 MHz:</i>	20
<i>from 2000 up to 3000 MHz:</i>	18
Transfer imp. (TI):	
<i>from 5 up to 30 MHz:</i>	max. 2,5 mΩ/m
Screening Att. (AS):	
<i>from 30 up to 1000 MHz:</i>	min. 100 dB
<i>from 1000 up to 2000 MHz:</i>	min. 110 dB
<i>from 2000 up to 3000 MHz:</i>	min. 95 dB

ELECTRICAL CHARACTERISTICS AT 20°C

Frequency MHz	Attenuation dB/100 m
50	0,9
200	2,9
300	6
470	9,3
862	13,1
1000	14,6
1750	20,3
2400	24,6

Part no.	Nominal cross-section no. of pairs x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
80220G7H010M50	1 x 2,5	10	88,5	145

Other dimensions and colours available on request.

GAALFLEX® CONTROL 500 FL OR UV

PVC control cable 450/750 V acc. to CEI UNEL 36762, EN 50575:2014 + A1:2016, Eca



ELETTROTEK KABEL® GAALFLEX® CONTROL 500 FL OR UV, Eca



Construction:

Conductor:	flexible plain annealed copper conductor Cl. 5, acc. to IEC 60228
Insulation:	PVC type T11
Colour cores:	DIN 47100
Stranding:	in layers
Outer sheath:	blue (similar RAL 5015), PVC type TM2

Resistance:



Flame and fire retardant acc. to:
CEI 20-35, IEC 60332-1
CEI 20-22 II, IEC 60332-3

Technical data:

Nominal voltage:	U ₀ /U 450/750 V
Test voltage:	
<i>conductors:</i>	4 kV x 5 min
<i>sheath:</i>	5 kV x 5 min
Temperature range	-10°C up to +70°C
Min. bending radius:	10 x d
Conductor resistance:	
<i>0,50 sqmm:</i>	39 OHm/km at 20°C
<i>1 sqmm:</i>	19,5 OHm/km at 20°C

Features:

insulation and jacket acc. to CEI 20-11
compound lead free acc. to CEI 20-52
acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca
classification (CEI UNEL 35016), EN 13501-6
suitable for installation in a single conduit
or channel or bridge, without interposing
separators, with cable system of Category I°
marked "450/750" or "0,6/1 kV" (as required by CEI-UNEL 36762)
UV resistant
RoHS and CE approval



Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
31450EB4020M05	2 x 0,5	5	9,6	35
31450EB4040M05	4 x 0,5	6	19,2	55
31450EB4060M05	6 x 0,5	6,4	28,8	58
31450EB4080M05	8 x 0,5	7,1	38,4	70
31450EB4100M05	10 x 0,5	8,5	48	90
31450EB4120M05	12 x 0,5	8,6	57,6	120
31450EB4020M10	2 x 1	6,4	19,2	63
31450EB4040M10	4 x 1	7,8	38,4	95

Other dimensions and colours available on request.

GAALNET® Y(St)Y

fire warning installation cable, acc. to UNEL 36762, EN 50575:2014 + A1:2016, Eca

ELETTROTEK KABEL® GAALNET® Y(st)Y Lg BRANDMELDE KABEL, Eca

Construction:

Conductor:	flexible plain annealed copper conductor Cl. 5, acc. to IEC 60228
Insulation:	PVC type Tl1
Colour cores:	red + black
Stranding:	in layers
Screen:	aluminium/PET tape + tinned copper drain wire
Outer sheath:	red (similar RAL 3000), PVC type TM2

Resistance:



Flame and fire retardant acc. to:
CEI 20-35, IEC 60332-1
CEI 20-22 II, IEC 60332-3

Technical data:

Nominal voltage:	Uo/U 450/750 V
Test voltage:	
<i>conductors:</i>	4 kV x 5 min
Temperature range	-10°C up to +70°C
Min. bending radius:	10 x d
Conductor resistance:	
<i>0,50 sqmm:</i>	39 OHm/km at 20°C
<i>0,75 sqmm:</i>	26 OHm/km at 20°C
<i>1 sqmm:</i>	19,5 OHm/km at 20°C
<i>1,5 sqmm:</i>	13,3 OHm/km at 20°C
Mutual capacitance:	147 pF/mt

Features:

fire warning installation cable

acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca

classification (CEI UNEL 35016), EN 13501-6

suitable for installation in a single conduit or channel or bridge, without interposing separators, with cable system of Category I° marked "450/750" or "0,6/1 kV" (as required by CEI-UNEL 36762)

RoHS and CE approval



Part no.	No. of cores x conductor diameter n x mm	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
49011ERM020M05	2 x 0,5	5,5	9,6	40
49011ERM020M07	2 x 0,75	5,9	14,4	47
49011ERM020M10	2 x 1	6,5	19,2	59
49011ERM020M15	2 x 1,5	7,3	28,8	80

Other dimensions and colours available on request.

FIRE RESISTANT CABLES



FIRE RESISTANT CABLES

FIRE RESISTANT CABLES

GAALFIRE 30 C-4 U₀ 400 V

acc. to CEI-UNEL 36762



ELETTROTEK KABEL® GAALFIRE 30 C-4 U₀ 400 V



Construction:

Conductor:	flexible plain annealed copper conductor Cl. 5, acc. to IEC 60228
Insulation:	silicone type EI2
Colour cores:	red + black
Outer sheath:	violet (RAL 4001 or 4005), thermoplastic polyolefine, halogen-free compound, type M1

Resistance:



Halogen free acc. to:
EN 50267-2-1
IEC 60754-1,
DIN VDE 0482 part.267-2-1



Fire resistant acc. to:
IEC 60331
EN 50200

Technical data:

Nominal voltage:	400 V
Test voltage:	2 kV
Temperature at conductor	
<i>in service:</i>	+ 90°C
<i>in short circuit:</i>	+ 250°C
Min. bending radius:	14 x d

Features:

fire warning installation cable

PH30: at 830 °C flame and shock for 30 minutes

suitable for installation in a single conduit or channel or bridge, without interposing separators, with cable system of Category I° marked "450/750" or "0,6/1 kV" (as required by CEI-UNEL 36762)

RoHS and CE approval



Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
49250EVM020M07	2X0,75	7,2	6,75	73
49250EVM020M10	2X1	7,4	9	95
49250EVM020M15	2X1,5	8,3	13,5	115
49250EVM020M25	2X2,5	9,5	22,5	160

Other dimensions and colours available on request.

FIRE RESISTANT CABLES

FG4OHMI PH30 FE180 100/100 V C-4 U_o 400 V

acc. to CEI-UNEL 36762



ELETTROTEK KABEL® FG4OHMI PH30 FE180 - C-4 U_o 400 V



Construction:

Conductor:	flexible plain annealed copper conductor Cl. 5, acc. to IEC 60228
Insulation:	silicone rubber compound
Colour cores:	red + black
Stranding:	in layers
Wrapping:	PET tape
Screen:	electrostatic screen of plastic and aluminium tape + tinned drain wire
Outer sheath:	red (similar RAL 3000), halogen free compound

Resistance:



Flame retardant and self extinguishing acc. to:
IEC 60332-1-2
DIN VDE 0482 part.266-2-4
EN 50266-2-4
IEC 60332-3-24



Fire resistant acc. to:
IEC 60331-21
EN 50200 PH30



Halogen-free acc. to:
DIN VDE 0482 part 267,
EN 50267-2-1
IEC 60754-1 (equivalent DIN VDE 0472 part 815)



Corrosiveness of conflagration gases acc. to:
DIN VDE 0482 part 267
EN 50267-2-2
IEC 60754-2 (equivalent DIN VDE 0472 part 813)



Smoke density acc. to:
IEC 61034-1-2,
DIN VDE 0482 part. 268-1-2,
EN 50268-1-2

Technical data:

Nominal voltage:	U _o /U 100/100 V
Test voltage:	2 kV
Temperature range:	-30°C up to +90°C
<i>installation:</i>	-5°C up to +60°C
Min. bending radius:	15 x d

Features:

fire warning installation cable

PH30: at 830 °C flame and shock for 30 minutes

FE180: insulation integrity for 180 min. acc. to IEC 60331-21

suitable for installation in a single conduit or channel or bridge, without interposing separators, with cable system of Category I° marked "450/750" or "0,6/1 kV" (as required by CEI-UNEL 36762)

RoHS and CE approval

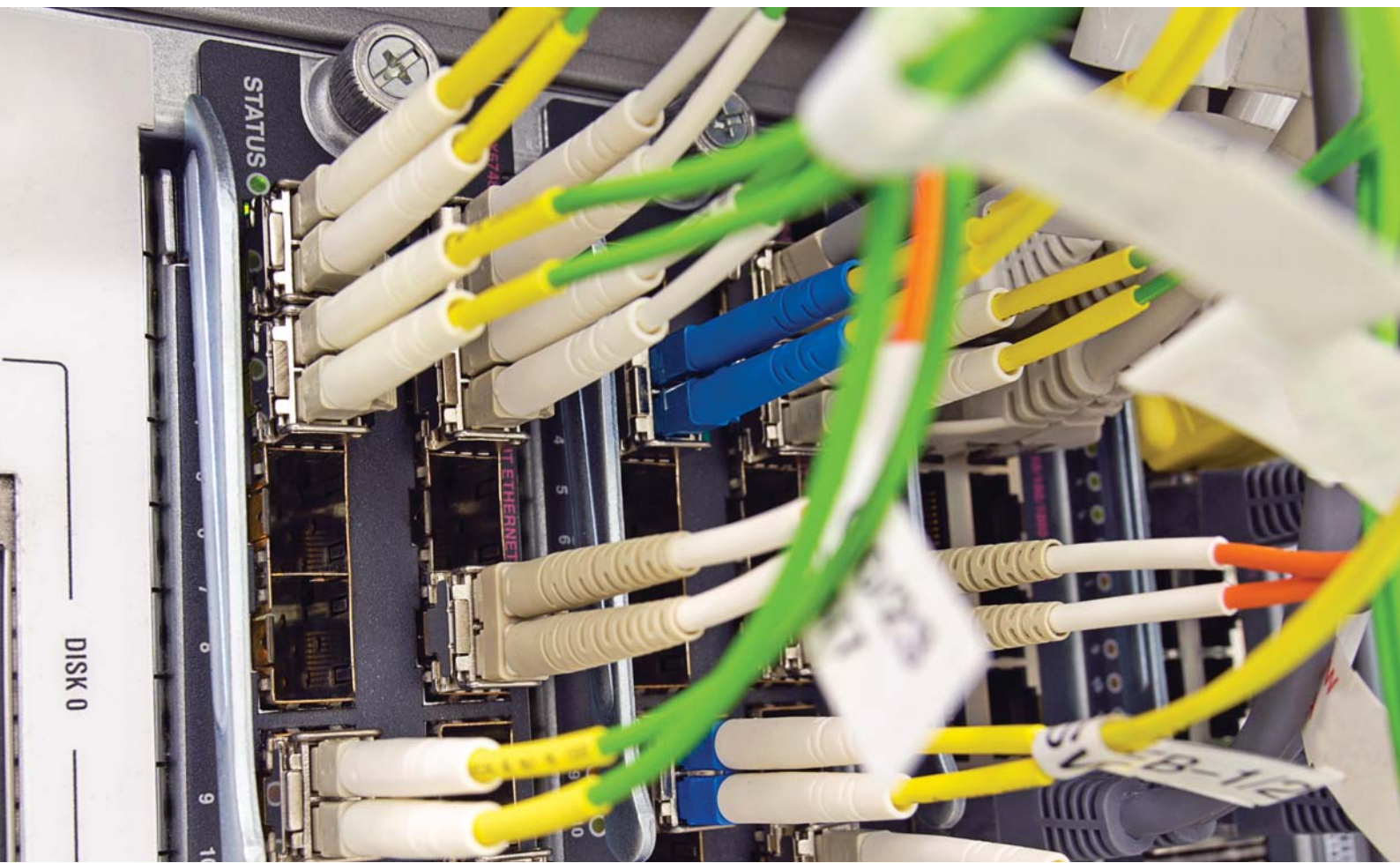


Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
49160BRM020M05	2X0,5	5,7	9,6	37
49160BRM020M07	2X0,75	6,3	16	49
49160BRM020M10	2X1	6,9	21	61
49160BRM020M15	2X1,5	7,6	28	75
49160BRM020M25	2X2,5	8,9	44	105
49160BRM040M10	4X1	8,1	38,4	96

Other dimensions and colours available on request.



NETWORK & HOME AUTOMATION CABLES



NETWORK & HOME AUTOMATION CABLES

GAALNET® U/UTP 5E PE Solid 100V

Voice and data transmission cables for outdoor use, acc. to CEI UNEL 36762, EN 50575:2014 + A1:2016, Eca



ELETTROTEK KABEL® GAALNET® U/UTP 5E PE Solid 100 V, Eca



Construction:

Conductor:	solid plain annealed copper conductor, Cl. 1, acc. to IEC 60228
Insulation:	PE compound
Colour cores:	1st. pair: white-blue - blue 2nd. pair: white-orange - orange 3th. pair: white-green - green 4th. pair: white-brown - brown
Stranding:	cores twisted in pairs, pairs twisted together
Filler:	jelly filling
Outer sheath:	black (similar RAL 9005), PE compound

Resistance:



Oil resistance acc. to:
IEC 60811-2-1

Technical data:

Nominal voltage:	100 V
Test voltage:	
AC (alternate current):	700 V
DC (direct current):	1000 V
Temperature range:	
operating temperature:	- 30°C up to + 80°C
installation temperature:	- 15°C up to + 50°C
Min. bending radius	6 x D
Loop resistance at 20°C:	190 Ohm/km
Insulation resistance:	5 GOhm/km
Resistance unbalance:	max. 2%
Capacitance at 1 KHz:	50 ± 5 nF/Km
Capacitance unbalance at 1 KHz:	max. 1600 pF/Km
Characteristic impedance:	100 Ω ± 5 Ω at 100 MHz
NVP value:	67 %
Return loss (min):	
from 4 up to 10 MHz:	20 + 5 lg(f)
from 10 up to 20 MHz:	25
from 20 up to 200 MHz:	25 - 7 lg(f/20)
Bandwidth (MHz):	200 MHz

Features:

- suitable for outdoor use
- UV resistant
- Water resistant
- acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca
- suitable for installation in a single conduit or channel or bridge, without interposing separators, with cable system of Category I^o marked "450/750" or "0,6/1 kV" (as required by CEI-UNEL 36762)
- acc. to CEI UNEL 3676
- RoHS and CE approval



ELECTRICAL CHARACTERISTICS AT 20°C

Frequency MHz	RL dB	Attenuation dB/100 m	NEXT dB	PS NEXT dB	ELFEXT dB	PS ELFEXT dB
1	20	2,1	65,3	62,3	63,8	60,8
4	23	4	56,3	53,3	51,8	48,8
10	25	6,3	50,3	47,3	43,8	40,8
16	25	8	47,2	44,2	39,7	36,7
20	25	9	45,8	42,8	37,8	34,8
30	23,8	11,2	43,1	40,1	34,3	31,3
45	22,5	13,9	40,5	37,5	30,7	27,7
60	21,7	16,2	38,6	35,6	28,2	25,2
80	20,8	18,9	36,7	33,8	25,7	22,7
100	20,1	21,3	35,3	32,3	23,8	20,8
120	19,5	23,6	34,1	31,1	22,2	19,2
130	19,3	24,7	33,6	30,6	21,5	18,5
155	18,8	27,2	32,4	29,5	20	17
175	18,4	29,2	31,6	28,6	19	16
200	18	31,5	30,8	27,8	17,8	14,8

Part no.	Nominal cross-section no. of pairs x AWG	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
71070B7X042A24	4x2x24/1	6,2	17,8	40

Other dimensions and colours available on request.

GAALNET® U/UTP 5E PVC 100 V

Voice and data transmission cables, acc. to CEI UNEL 36762, EN 50575:2014 + A1:2016, Eca

ELETTROTEK KABEL® GAALNET® U/UTP 5E PVC 100 V, Eca



Construction:

Conductor:	solid plain annealed copper conductor, Cl. 1, acc. to IEC 60228
Insulation:	PE compound
Colour cores:	1st. pair: white/blue - blue 2nd pair: white/orange - orange 3th. pair: white/green - green 4th. pair: white/brown - brown
Stranding:	cores twisted in pairs, pairs twisted together
Outer sheath:	grey (similar RAL 7035), PVC compound

Resistance:



Flame retardant acc. to:
EN 60332-1-2

Technical data:

Nominal voltage:	100 V
Test voltage:	
<i>alternate current (50 Hz):</i>	700 V
<i>direct current:</i>	1000 V
Temperature range:	
<i>operating temperature:</i>	-30°C up to +70°C
<i>installation temperature:</i>	-10°C up to +50°C
Min. bending radius	4 x d
Loop resistance at 20°C:	190 Ohm/km
Insulation resistance:	5 GOhm/km
Resistance unbalance:	max. 2%
Characteristic impedance:	100 ± 5 Ω
Capacitance at 1 KHz:	50 ± 5 nF/m
Capacitance unbalance at 1 kHz:	max. 1600 pF/Km
NVP value:	69%
Return loss (min.):	
<i>from 4 up to 10 MHz:</i>	20 + 5lg(f)
<i>from 10 up to 20 MHz:</i>	25
<i>from 20 up to 200 MHz:</i>	25 - 7lg(f)
Bandwidth:	200 MHz

Features:

suitable for indoor use

on request with LSOH outer sheath

acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca

classification (CEI UNEL 35016), EN 13501-6

suitable for installation in a single conduit or channel or bridge, without interposing separators, with cable system of Category I° marked "450/750" or "0,6/1 kV" (as required by CEI-UNEL 36762)

RoHS and CE approval



ELECTRICAL CHARACTERISTICS AT 20°C

Frequency MHz	RL dB	Attenuation dB/100 m	NEXT dB	PS NEXT dB	ELFEXT dB	PS ELFEXT dB
1	20	2,1	65,3	62,3	63,8	60,8
4	23	4	56,3	53,3	51,8	48,8
10	25	6,3	50,3	47,3	43,8	40,8
16	25	8	47,2	44,2	39,7	36,7
20	25	9	45,8	42,8	37,8	34,8
30	23,8	11,2	43,1	40,1	34,3	31,3
45	22,5	13,9	40,5	37,5	30,7	27,7
60	21,7	16,2	38,6	35,6	28,2	25,2
80	20,8	18,9	36,7	33,8	25,7	22,7
100	20,1	21,3	35,3	32,3	23,8	20,8
120	19,5	23,6	34,1	31,1	22,2	19,2
130	19,3	24,7	33,6	30,6	21,5	18,5
155	18,8	27,2	32,4	29,5	20	17
175	18,4	29,2	31,6	28,6	19	16
200	18	31,5	30,8	27,8	17,8	14,8

Part no.	Nominal cross-section no. of pairs x AWG	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
71010B8X042A24	4x2x24/1	4,8	15	28

Other dimensions and colours available on request.

GAALNET® U/UTP 5E PVC UV Solid 100V

Voice and data transmission cables for outdoor use, acc. to CEI UNEL 36762, EN 50575:2014 + A1:2016, Eca



ELETTROTEK KABEL® GAALNET® U/UTP 5E PVC UV 100 V, Eca



Construction:

Conductor:	solid plain annealed copper conductor, Cl. 1, acc. to IEC 60228
Insulation:	PE compound
Colour cores:	1st. pair: white/blue - blue 2nd pair: white/orange - orange 3th. pair: white/green - green 4th. pair: white/brown - brown
Stranding:	cores twisted in pairs, pairs twisted together
Outer sheath:	blue (similar RAL 5015), PVC UV compound

Technical data:

Nominal voltage:	100 V
Test voltage:	
alternate current (50 Hz):	700 V
direct current:	1000 V
Temperature range:	
operating temperature:	-30°C up to +70°C
installation temperature:	-10°C up to +50°C
Min. bending radius	
fixed laying:	4 x d
flexible installation:	6 x d
Loop resistance at 20°C:	190 Ohm/km
Insulation resistance:	5 GOhm/km
Resistance unbalance:	max. 2%
Characteristic impedance:	100 ± 5 Ω
Capacitance at 1 KHz:	50 ± 5 nF/m
Capacitance unbalance at 1 kHz:	max. 1600 pF/Km
NVP value:	69%
Return loss (min.):	
from 4 up to 10 MHz:	20 + 5lg(f)
from 10 up to 20 MHz:	25
from 20 up to 200 MHz:	25 - 7lg(f)
Bandwidth:	200 MHz

Resistance:



Flame retardant acc. to:
EN 60332-1

Features:

suitable for outdoor use

UV resistant

acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca

classification (CEI UNEL 35016), EN 13501-6

suitable for installation in a single conduit or channel or bridge, without interposing separators, with cable system of Category I^o marked "450/750" or "0,6/1 kV" (as required by CEI-UNEL 36762)

RoHS and CE approval



ELECTRICAL CHARACTERISTICS AT 20°C

Frequency MHz	RL dB	Attenuation dB/100 m	NEXT dB	PS NEXT dB	ELFEXT dB	PS ELFEXT dB
1	20	2,1	65,3	62,3	63,8	60,8
4	23	4	56,3	53,3	51,8	48,8
10	25	6,3	50,3	47,3	43,8	40,8
16	25	8	47,2	44,2	39,7	36,7
20	25	9	45,8	42,8	37,8	34,8
30	23,8	11,2	43,1	40,1	34,3	31,3
45	22,5	13,9	40,5	37,5	30,7	27,7
60	21,7	16,2	38,6	35,6	28,2	25,2
80	20,8	18,9	36,7	33,8	25,7	22,7
100	20,1	21,3	35,3	32,3	23,8	20,8
120	19,5	23,6	34,1	31,1	22,2	19,2
130	19,3	24,7	33,6	30,6	21,5	18,5
155	18,8	27,2	32,4	29,5	20	17
175	18,4	29,2	31,6	28,6	19	16
200	18	31,5	30,8	27,8	17,8	14,8

Part no.

Nominal cross-section
no. of pairs x AWG

Outer-Ø
ca. mm
± 10%

Copper weight
kg/km

Cable weight approx.
kg/km

71010BBX042A24

4x2x24/1

5,8

15

41

Other dimensions and colours available on request.

GAALNET® U/UTP 6 PE Solid 100 V

Voice and data transmission cables for outdoor use, acc. to CEI UNEL 36762, EN 50575:2014 + A1:2016, Fca



ELETTROTEK KABEL® GAALNET® U/UTP 6 PE Solid 100 V, Fca



Construction:

Conductor:	solid plain annealed copper conductor, Cl. 1, acc. to IEC 60228
Insulation:	PE compound
Colour cores:	1st. pair: white/blue - blue 2nd pair: white/orange - orange 3th. pair: white/green - green 4th. pair: white/brown - brown
Stranding:	cores twisted in pairs, pairs twisted together
Filler:	jelly filling
Outer sheath:	black (similar RAL 9005), PE compound

Resistance:



Oil resistance acc. to:
IEC 60811-2-1

Technical data:

Nominal voltage:	100 V
Test voltage:	
<i>alternate current (50 Hz):</i>	700 V
<i>direct current:</i>	1000 V
Temperature range:	
<i>operating temperature:</i>	-30°C up to +80°C
<i>installation temperature:</i>	-10°C up to +50°C
Min. bending radius:	6 x d
DC Loop resistance at 20°C:	165 Ohm/km
Insulation resistance:	min. 5 GOhm/km
Resistance unbalance:	max. 2%
Characteristic impedance at 100 MHz:	100 ± 5 Ω
Capacitance at 1 KHz:	50 ± 5 nF/m
Capacitance unbalance pair to ground at 1 kHz:	max. 1600 pF/Km
NVP value:	67%
Return loss (min.):	
<i>from 4 up to 10 MHz:</i>	20 + 5lg(f)
<i>from 10 up to 20 MHz:</i>	25
<i>from 20 up to 200 MHz:</i>	25 - 7lg(f)
Bandwidth:	350 MHz

Features:

suitable for outdoor use
UV resistant
Water resistant
acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Fca
classification (CEI UNEL 35016), EN 13501-6
suitable for installation in a single conduit or channel or bridge, without interposing separators, with cable system of Category I^o marked "450/750" or "0,6/1 kV" (as required by CEI-UNEL 36762)
RoHS and CE approval



ELECTRICAL CHARACTERISTICS AT 20°C

Frequency MHz	RL dB	Attenuation dB/100 m	NEXT dB	PS NEXT dB	ELFEXT dB	PS ELFEXT dB
1	20	2,1	66	64	66	64
4	23	3,8	65,3	63,3	58	55
10	25	6	59,3	57,3	50	47
16	25	7,6	56,2	54,2	45,9	42,9
20	25	8,5	54,8	52,8	44	41
30	23,8	10,5	52,1	50,1	40,5	37,5
45	22,5	13	49,5	47,5	36,9	33,9
60	21,7	15,1	47,6	45,6	34,5	31,4
80	20,8	17,7	45,8	43,8	32	28,9
100	20,1	19,9	44,3	42,3	30	27
120	19,5	22	43,1	41,1	28,4	25,4
150	18,9	24,8	41,7	39,7	26,5	23,5
180	18,3	27,5	40,5	38,5	24,9	21,9
200	18	29,1	39,8	37,8	24	21
220	17,7	30,7	39,2	37,2	23,1	20,1
250	17,3	33	38,3	36,3	22	19
280	17	35,2	37,6	35,6	21	18
300	16,8	36,6	37,1	35,1	20,5	17,5
320	16,6	38	36,7	34,7	19,9	16,9
350	16,3	40	36,1	34,1	19,1	16,1

Part no.	Nominal cross-section no. of pairs x AWG	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
71090B7X042A23	4x2x23/1	6,5	21	50

Other dimensions and colours available on request.

NETWORK & HOME AUTOMATION CABLES

GAALNET® U/UTP 6 PVC Solid 100 V

Voice and data transmission cables, acc. to CEI UNEL 36762, EN 50575:2014 + A1:2016, Eca

ELETTROTEK KABEL® GAALNET® U/UTP 6 PVC 100 V, Eca



Construction:

Conductor:	solid plain annealed copper conductor, Cl. 1, acc. to IEC 60228
Insulation:	PE compound
Colour cores:	1st. pair: white/blue - blue 2nd pair: white/orange - orange 3th. pair: white/green - green 4th. pair: white/brown - brown
Stranding:	cores twisted in pairs, pairs twisted together
Outer sheath:	grey (similar RAL 7035), PVC compound

Technical data:

Nominal voltage:	100 V
Test voltage:	
alternate current (50 Hz):	700 V
direct current:	1000 V
Temperature range:	
operating temperature:	-30°C up to +70°C
installation temperature:	-10°C up to +50°C
Min. bending radius	
fixed laying:	4 x d
flexible installation:	8 x d
DC Loop resistance at 20°C:	165 Ohm/km
Insulation resistance:	min. 5 GOhm/km
Resistance unbalance:	max. 2%
Characteristic impedance at 100 MHz:	100 ± 5 Ω
Capacitance at 1 KHz:	50 ± 5 nF/m
Capacitance unbalance pair to ground at 1 kHz:	max. 1600 pF/Km
NVP value:	69%
Return loss (min.):	
from 4 up to 10 MHz:	20 + 5lg(f)
from 10 up to 20 MHz:	25
from 20 up to 200 MHz:	25 - 7lg(f)
Bandwidth:	350 MHz

Resistance:



Flame retardant acc. to:
EN 60332-1

Features:

on request with LSOH outer sheath
acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca
classification (CEI UNEL 35016), EN 13501-6
suitable for installation in a single conduit or channel or bridge, without interposing separators, with cable system of Category I^o marked "450/750" or "0,6/1 kV" (as required by CEI-UNEL 36762)

RoHS and CE approval



ELECTRICAL CHARACTERISTICS AT 20°C

Frequency MHz	RL dB	Attenuation dB/100 m	NEXT dB	PS NEXT dB	ELFEXT dB	PS ELFEXT dB
1	20	2,1	66	64	66	64
4	23	3,8	65,3	63,3	58	55
10	25	6	59,3	57,3	50	47
16	25	7,6	56,2	54,2	45,9	42,9
20	25	8,5	54,8	52,8	44	41
30	23,8	10,5	52,1	50,1	40,5	37,5
45	22,5	13	49,5	47,5	36,9	33,9
60	21,7	15,1	47,6	45,6	34,5	31,4
80	20,8	17,7	45,8	43,8	32	28,9
100	20,1	19,9	44,3	42,3	30	27
120	19,5	22	43,1	41,1	28,4	25,4
150	18,9	24,8	41,7	39,7	26,5	23,5
180	18,3	27,5	40,5	38,5	24,9	21,9
200	18	29,1	39,8	37,8	24	21
220	17,7	30,7	39,2	37,2	23,1	20,1
250	17,3	33	38,3	36,3	22	19
280	17	35,2	37,6	35,6	21	18
300	16,8	36,6	37,1	35,1	20,5	17,5
320	16,6	38	36,7	34,7	19,9	16,9
350	16,3	40	36,1	34,1	19,1	16,1

Part no.

Nominal cross-section
no. of pairs x AWG

Outer-Ø
ca.mm
± 10%

Copper weight
kg/km

Cable weight approx.
kg/km

71030B8X042A23

4x2x23/1

5,8

19

41

Other dimensions and colours available on request.

GAALNET® U/UTP 6 PVC UV Solid 100 V

Voice and data transmission cables for outdoor use, acc. to CEI UNEL 36762, EN 50575:2014 + A1:2016, Eca



ELETTROTEK KABEL® GAALNET® U/UTP 6 PVC UV 100 V, Eca



Construction:

Conductor:	solid plain annealed copper conductor, Cl. 1, acc. to IEC 60228
Insulation:	PE compound
Colour cores:	1st. pair: white/blue - blue 2nd pair: white/orange - orange 3th. pair: white/green - green 4th. pair: white/brown - brown
Stranding:	cores twisted in pairs, pairs twisted together
Outer sheath:	blue (similar RAL 5015), PVC UV compound

Resistance:



Flame retardant acc. to:
EN 60332-1

Technical data:

Nominal voltage:	100 V
Test voltage:	
alternate current (50 Hz):	700 V
direct current:	1000 V
Temperature range:	
operating temperature:	-30°C up to +70°C
installation temperature:	-10°C up to +50°C
Min. bending radius	
fixed laying:	6 x d
flexible installation:	8 x d
DC Loop resistance at 20°C:	165 Ohm/km
Insulation resistance:	min. 5 GOhm/km
Resistance unbalance:	max. 2%
Characteristic impedance at 100 MHz:	100 ± 5 Ω
Mutual capacitance at 1 KHz:	50 ± 5 nF/m
Capacitance unbalance pair to ground at 1 kHz:	max. 1600 pF/Km
NVP value:	67%
Return loss (min.):	
from 4 up to 10 MHz:	20 + 5lg(f)
from 10 up to 20 MHz:	25
from 20 up to 200 MHz:	25 - 7lg(f)
Bandwidth:	350 MHz

Features:

suitable for outdoor use
UV resistant
acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Fca classification (CEI UNEL 35016), EN 13501-6
suitable for installation in a single conduit or channel or bridge, without interposing separators, with cable system of Category I^o marked "450/750" or "0,6/1 kV" (as required by CEI-UNEL 36762)

RoHS and CE approval



ELECTRICAL CHARACTERISTICS AT 20°C

Frequency MHz	RL dB	Attenuation dB/100 m	NEXT dB	PS NEXT dB	ELFEXT dB	PS ELFEXT dB
1	20	2,1	66	64	66	64
4	23	3,8	65,3	63,3	58	55
10	25	6	59,3	57,3	50	47
16	25	7,6	56,2	54,2	45,9	42,9
20	25	8,5	54,8	52,8	44	41
30	23,8	10,5	52,1	50,1	40,5	37,5
45	22,5	13	49,5	47,5	36,9	33,9
60	21,7	15,1	47,6	45,6	34,5	31,4
80	20,8	17,7	45,8	43,8	32	28,9
100	20,1	19,9	44,3	42,3	30	27
120	19,5	22	43,1	41,1	28,4	25,4
150	18,9	24,8	41,7	39,7	26,5	23,5
180	18,3	27,5	40,5	38,5	24,9	21,9
200	18	29,1	39,8	37,8	24	21
220	17,7	30,7	39,2	37,2	23,1	20,1
250	17,3	33	38,3	36,3	22	19
280	17	35,2	37,6	35,6	21	18
300	16,8	36,6	37,1	35,1	20,5	17,5
320	16,6	38	36,7	34,7	19,9	16,9
350	16,3	40	36,1	34,1	19,1	16,1

Part no.	Nominal cross-section no. of pairs x AWG	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
71030BBX042A23	4x2x23/1	6,9	19	56

Other dimensions and colours available on request.

GAALNET® U/UTP 6 LSZH solid 100V

Voice and data transmission cables, acc. to CEI UNEL 36762, EN 50575:2014 + A1:2016, Dca-S2, d0, a1



ELETTROTEK KABEL® GAALNET® U/UTP 6 LSZH 100 V, Dca



Construction:

Conductor:	solid plain annealed copper conductor, Cl. 1, acc. to IEC 60228
Insulation:	PE compound
Colour cores:	1st. pair: white/blue - blue 2nd pair: white/orange - orange 3th. pair: white/green - green 4th. pair: white/brown - brown
Stranding:	cores twisted in pairs, pairs twisted together
Outer sheath:	orange (similar RAL 2003), LSZH compound

Resistance:



Flame retardant acc. to:
EN 60332-1



Corrosiveness of conflagration gases acc. to:
IEC 60754-2
EN 50267-2-3



Low smoke density acc. to:
IEC 61034-2
EN 50268-2

Technical data:

Nominal voltage:	100 V
Test voltage:	
alternate current (50 Hz):	700 V
direct current:	1000 V
Temperature range:	
operating temperature:	-30°C up to +70°C
installation temperature:	-10°C up to +50°C
Min. bending radius	
fixed laying:	4 x d
flexible installation:	8 x d
DC Loop resistance at 20°C:	165 Ohm/km
Insulation resistance:	min. 5 GOhm/km
Resistance unbalance:	max. 2%
Characteristic impedance at 100 MHz:	100 ± 5 Ω
Capacitance at 1 KHz:	50 ± 5 nF/m
Capacitance unbalance pair to ground at 1 kHz:	max. 1600 pF/Km
NVP value:	69%
Return loss (min.):	
from 4 up to 10 MHz:	20 + 5lg(f)
from 10 up to 20 MHz:	25
from 20 up to 200 MHz:	25 - 7lg(f)
Bandwidth:	350 MHz

Features:

acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Dca-S2, d0, a1

classification (CEI UNEL 35016), EN 13501-6

suitable for installation in a single conduit or channel or bridge, without interposing separators, with cable system of Category I^o marked "450/750" or "0,6/1 kV" (as required by CEI-UNEL 36762)

RoHS and CE approval



ELECTRICAL CHARACTERISTICS AT 20°C

Frequency MHz	RL dB	Attenuation dB/100 m	NEXT dB	PS NEXT dB	ELFEXT dB	PS ELFEXT dB
1	20	2,1	66	64	66	64
4	23	3,8	65,3	63,3	58	55
10	25	6	59,3	57,3	50	47
16	25	7,6	56,2	54,2	45,9	42,9
20	25	8,5	54,8	52,8	44	41
30	23,8	10,5	52,1	50,1	40,5	37,5
45	22,5	13	49,5	47,5	36,9	33,9
60	21,7	15,1	47,6	45,6	34,5	31,4
80	20,8	17,7	45,8	43,8	32	28,9
100	20,1	19,9	44,3	42,3	30	27
120	19,5	22	43,1	41,1	28,4	25,4
150	18,9	24,8	41,7	39,7	26,5	23,5
180	18,3	27,5	40,5	38,5	24,9	21,9
200	18	29,1	39,8	37,8	24	21
220	17,7	30,7	39,2	37,2	23,1	20,1
250	17,3	33	38,3	36,3	22	19
280	17	35,2	37,6	35,6	21	18
300	16,8	36,6	37,1	35,1	20,5	17,5
320	16,6	38	36,7	34,7	19,9	16,9
350	16,3	40	36,1	34,1	19,1	16,1

Part no.	Nominal cross-section no. of pairs x AWG	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
72030BGX042A23	4x2x23/1	5,8	19	41

Other dimensions and colours available on request.

PROFIBUS 637 UL approval



ELETTROTEK KABEL® PROFIBUS 637 UL



Construction:

Conductor:	solid (39141) or stranded (39140) plain annealed copper conductor 7x0,25 mm -22/7 AWG
Insulation:	special PE compound acc. to DIN VDE 0819 part 103
Colour cores:	red, green
Stranding:	in layers
Screen:	aluminium tape and tinned copper braid
Outer sheath:	violet (RAL 4001 or 4005), PVC oil resistant compound, acc. to DIN VDE 0281 part 1

Resistance:



Self-extinguishing and flame retardant acc.to:
IEC 60332-1-2
EN 60332-1-2



Oil resistance acc. to:
DIN VDE 0281 part 1
DIN VDE 0473 part.811-2-1
DIN VDE 0207 part. 5



UV resistance acc.to:
UL1581 §1200 Std.

Technical data:

Peak operating voltage:	max. 350 V
UL Voltage:	(PROFIBUS 637): 300 V
Test voltage:	1,5 kV
Temperature range	(PROFIBUS 637): UL: up to +80°C
<i>fixed laying:</i>	-30°C up to +80°C
<i>flexible application:</i>	-5°C up to +80°C
Min. bending radius:	12 x d
Characteristic impedance 3-20 MHz:	150 Ω ± 10%

Features:

UL style: AWM style 2571 80°C 300V

RoHS and CE approval



Part no.	No.of cores x cross section n x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
39140CVB020A22	2 x 0,34	7,3	23,8	53
39141CVB020A22	2 x 0,34	7,3	23,8	53

Other dimensions and colours available on request.

NETWORK & HOME AUTOMATION CABLES

SPECIAL PROFIBUS 634 UL, UL approval, for cable tracks



ELETTROTEK KABEL® SPECIAL PROFIBUS 634 UL



Construction:

Conductor:	0,34 mm²: flexible plain annealed copper conductor, 19x0,16 mm - 22/19 AWG acc. to DIN VDE 0812 0,75 mm²: flexible plain annealed copper conductor Cl. 6, acc to IEC 60228, DIN VDE 0295 42x0,15 mm - AWG 19/42
Insulation:	0,34 mm²: special PE compound 0,75 mm²: special PP compound
Colour cores:	0,34 mm²: red, green 0,75 mm²: brown, light blue and green-yellow
Stranding:	0,34 mm²: in pair + PE fillers 0,75 mm²: In layers + fillers
Screen:	0,34 mm²: aluminium tape + PETP foil and tinned copper braid
Wrapping:	0,34 mm²: non-woven tape 0,75 mm²: non-woven tape
Outer sheath:	violet (RAL 4001 or 4005), PUR compound

Technical data:

Peak operating voltage:	max. 350 V
Voltage UL	300 V
Test voltage:	1,5 kV
Temperature range	-40°C up to +80°C
Min. bending radius:	
<i>fixed laying:</i>	10 x d
<i>flexible installation:</i>	15 x d
Max speed (main application):	250 m/min

Resistance:



Self-extinguishing and flame retardant acc.to:
UL 1581 1061,
IEC 60332-1-2
EN 60332-1-2



Oil resistance acc. to:
IEC 60811-2-1
ICEA S-82-552 and ASTM oil 1



Halogen-free acc. to:
IEC 60754-1
EN 50267-2-1



Corrosiveness of conflagration gases:
in compliance with IEC 60754-2
and EN 50267-2-2 + VDE 0482 part 267-2-2
no development of corrosive conflagration gases



UV resistance acc.to:
UL1581 §1200 Std.

Features:

AWM style 10493 - 20233 80°C 300 V

for SPEED and MINIMUM BENDING RADIUS
see pages from 2 to 8 of Automation and Flexidrum® catalogue

RoHS and CE approval



Electrical and Transmission proprieties at 20°C PROFIBUS UL:

Profinet bus

Max. DC cond. resistance	59,4 Ω x km
Max. capacitance at 800 Hz	30 nF/km
Impedance at 800 1-20 MHz	150 Ω (± 10%)
Max. attenuation at 9,6 kHz	4,2 dB/km
Max. attenuation at 38,4 kHz	5,2 dB/km
Max. attenuation at 4 MHz	2,3 dB/km
Max. attenuation at 16 MHz	44,0 dB/km
Dielectric strenght (cond/cond/ shield)	1,5 kVac/1 min.
Min. insulation resistance	5,0 Ω x km

Power conductors:

Max. DC cond. resistance	26,0 Ω x km
Dielectric strenght (cond/cond)	2,5 kVac/10 min.
Min. Insulation resistance	5,0 Ω x km

Part no.	No.of cores x cross section n x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
39180CVB020M03	2 x 0,34	8	30,9	74
39180CV403BM07	2 x 0,34+3 x 0,75	10,4	45	90

Other dimensions and colours available on request.



CAN-BUS 627

UL approval

ELETTROTEK KABEL® CAN-BUS 627 UL



Construction:

Conductor:	stranded plain annealed copper conductor, 7x0,25 mm - 22/7 AWG
Insulation:	special PE compound, acc. to DIN VDE 0207 part 2
Colour cores:	acc. to DIN 47100
Wrapping:	PETP foil
Screen:	tinned copper braid
Outer sheath:	violet (RAL 4001 or 4005), PVC oil resistant compound, acc. to DIN VDE 0281 part 1

Resistance:



Self-extinguishing and flame retardant acc.to:
IEC 60332-1-2
EN 60332-1-2



Oil resistance:
very good acc. to DIN VDE 0207 part 5

Technical data:

Peak operating voltage:	max. 350 V
Voltage:	UL: 300 V
Test voltage:	1,5 kV
Temperature range	UL: up to +80°C
<i>fixed laying:</i>	-30°C up to +70°C
<i>flexible application:</i>	-5°C up to +70°C
Min. bending radius:	7,5 x d
Characteristic impedance:	120 Ω (95 - 140 Ω)
Radiation resistance:	8 x 10 ⁶ cJ/kg

Features:

UL style: AWM style 2571 80°C 300V CE

RoHS and CE approval

good against acids, alkalines, solvents,hydraulic liquids etc.



Part no.	No.of cores x cross section n x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
39050CV4020A24	2 x 0,25	6	19	44
39050CV4020A22	2 x 0,34	6,4	21,8	47
39050CV4020A20	2 x 0,5	7,6	28,4	63
39050CV4020A19	2 x 0,75	9,6	39,6	93
39050CV4022A24	2x2x0,25	7,1	27,4	57
39050CV4022A22	2x2x0,34	7,7	33,5	66
39050CV4022A20	2x2x0,5	9,5	44,3	98
39050CV4022A19	2x2x0,75	13,5	80,8	174

Other dimensions and colours available on request.

NETWORK & HOME AUTOMATION CABLES

S CAN-BUS 628

UL approval, halogen-free for cable tracks



ELETTROTEK KABEL® S CAN-BUS 628 UL



Construction:

Conductor:	flexible plain annealed copper conductor, extra fine wires
Insulation:	special PE compound, acc. to DIN VDE 0207 part 2
Colour cores:	acc. to DIN 47100
Stranding:	in layers
Wrapping:	non-woven tapel
Inner sheath:	halogen-free compound
Screen:	tinned copper braid
Outer sheath:	violet (RAL 4001 or 4005), PUR type TMPU, acc. to DIN VDE 0281 part 10, (rough surface)

Resistance:



Self-extinguishing and flame retardant acc. to:
IEC 60332-1-2
EN 60332-1-2



Halogen free acc. to:
DIN VDE 0472 part 815+IEC 60754-1



Corrosiveness of conflagration gases:
in compliance with IEC 60754-2
and EN 50267-2-2 + VDE 0482 part 267-2-2,



Oil resistance acc. to:
DIN VDE 0282 part 10 + HD 22.10

Technical data:

Peak operating voltage:	max. 350 V
Voltage:	UL: 300 V
Test voltage:	1,5 kV
Temperature range	UL: up to +80°C
<i>fixed laying:</i>	-50°C up to +70°C
<i>flexible application:</i>	-40°C up to +70°C
Min. bending radius:	7,5 x d
Max speed (main application):	250 m/min
Characteristic impedance:	120 Ω (95 - 140 Ω)
Radiation resistance:	5 x 10 ⁶ cJ/kg

Features:

AWM style 20233 80°C 300 V

for SPEED see pages from 2 to 4 of Automation and Flexidrum® catalogue

RoHS and CE approval



Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
39060CV4020A24	2x0,25	7,9	20,2	71
39060CV4020A22	2x0,34	8,3	22,9	77
39060CV4020A20	2x0,50	8,7	29,0	74
39060CV4022A24	2x2x0,25	9,1	27,9	90
39060CV4022A22	2x2x0,34	9,6	32,7	97
39060CV4022A20	2x2x0,5	10,6	44,9	94

Other dimensions and colours available on request.



PROFINET 654 fixed installation, type A
PROFINET 655 fixed installation, type A, UL approval

ELETTROTEK KABEL® PROFIBUS 654



Construction:

- Conductor:** solid plain annealed copper conductor
- Insulation:** PE type LMD acc. to DIN VDE 0819 part 103
- Colour cores:** blue, yellow, white, orange
- Stranding:** in layers
- Wrapping:** PETP foil
- Screen:** tinned copper braid
- Outer sheath:** green (similar RAL 6018) PVC compound

Resistance:



Oil resistance acc.to:
 DIN VDE 0473 part.811-2-1 IEC 60811-2-1

Technical data:

- Peak operating voltage:** max. 350 V
- UL Voltage:** **(PROFINET 655):** 300 V
- Test voltage:** core/core 1,5 kV
core/screen 1,2 kV
- Temperature range** **(PROFINET 655) UL:** up to +80°C
fixed laying: -30°C up to +70°C
flexible application: -5°C up to +70°C
- Min. bending radius:** 5 x d
- Characteristic impedance:** 100Ω ± 5Ω, acc. to EN 50288-2-2 (CAT 5 acc. to EN 50173-1)
- Ohmic resistance at 20°C max.Ω/km:** 58, acc. to VDE 0812

Features:

AWM style 10578-2571 80°C 300V **(PROFINET 655)**

RoHS and CE approval



Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
39210CEX022M03	2 x 2 x 0,34	5,3	28	43
39220CEX022A22	2 x 2 x 0,34	5,9	30,4	51

Other dimensions and colours available on request.

NETWORK & HOME AUTOMATION CABLES

PROFINET 662 flexible application, type B
PROFINET 663 flexible application, type B, UL approval,
PROFINET 663 PLTC flexible application, type B, UL & PLTC approval



ELETTROTEK KABEL® PROFINET 663

ELETTROTEK KABEL® PROFINET 663 PLTC



Construction:

Conductor:	(PROFINET 663): flexible plain annealed copper conductor, fine wires acc. to VDE 0812
Insulation:	PE type L/MD acc. to DIN VDE 0819 part 103
Colour cores:	blue, yellow, white, orange
Stranding:	(PROFINET 663): in layers (star-quad construction)
Wrapping:	PETP foil
Inner sheath	PVC compound
Screen:	aluminium tape and tinned copper braid
Outer sheath:	green (similar RAL 6018), PVC compound

Resistance:



Self-extinguishing and flame retardant acc.to:
(PROFINET 663)
 EC 60332-1-2
 EN 60332-1-2,
 UL 1581 section 1061 CSA FT1



Oil resistance acc.to:
(PROFINET 663)
 DIN VDE 0473 part.811-2-1
 IEC 60811-2-1
 and ICEA S-82-552,



UV resistance acc.to
(PROFINET 663, PROFINET 663 PLTC):
 UL1581 §1200 Std.

Technical data:

Nominal voltage:	(PROFINET 662 and 663): 300 V (PROFINET 663 PLTC): 600 V
Test voltage:	(PROFINET 662 and 663): 1,5 kV (PROFINET 663 PLTC): 2 kV
Temperature range	(PROFINET 663): UL: up to +80°C
<i>fixed laying:</i>	-30°C up to +80°C
<i>flexible application:</i>	-5°C up to +80°C
Min. bending radius:	(PROFINET 663):
<i>fixed laying:</i>	5 x d
<i>flexible installation:</i>	10 x d
Characteristic impedance:	100Ω ± 5Ω, acc. to EN 50288-2-2 CAT 5 acc. to EN 50173-1)
Ohmic resistance at 20°C max.Ω/km:	58, acc. to VDE 0812

Features:

- AWM style 10578-2571 80°C 300V **(PROFINET 663)**
- AWM style 21694 80°C 600V **(PROFINET 663 PLTC)**
- RoHS and CE approval



Part no.	No.of cores x cross section n x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
39250CEX022M03 (PROFINET 662)	2 x 2 x 0,34	6	33,9	58
39261CEX014A22 (PROFINET 663)	1 x 4 x 0,34	6,5	33	74
39260FEX022A22 (PROFINET 663 PLTC)	2 x 2 x 0,34	6,6	36,2	67

Other dimensions and colours available on request.

PROFINET 678 fixed installation, type A SPECIAL PROFINET 678 UL flexible application, type B, UL approval



ELETTROTEK KABEL® SPECIAL PROFINET 678 UL



Construction:

Conductor:	(PROFINET 678): solid tinned copper conductor
Insulation:	PE compound
Colour cores:	white/blue, white/orange, white/green, white/brown
Stranding:	cores twisted in pairs, pairs twisted together
Wrapping:	aluminium tape (PROFINET 678)
Wrapping:	PETP foil (PROFINET 678 UL):
Screen:	tinned copper braid (PROFINET 678)
Screen:	aluminium tape + PETP foil and tinned copper braid (PROFINET 678 UL)
Outer sheath:	green (similar RAL 6018), PVC compound

Resistance:



Flame retardant acc.to:
UL 1581 1061, CSA FT1, IEC 60332-1
standard requirements **(PROFINET 678 UL)**



Oil resistance acc.to:
DIN VDE 0473 part. 811-2-1 IEC 60811-2-1
(PROFINET 678)
EN 50363-4-1, IEC 60811-2-1, DIN VDE 0472-803
UL 13 (60°C), acc. to ICEA S-82-552 and NEMA
WC55 **(PROFINET 678 UL)**



Sunlight resistant acc.to:
UL 1581 1200 standard requirement
(PROFINET 678 UL)

Technical data:

Peak operating voltage:	max. 350 V (PROFINET 678)
Nominal voltage:	125 V (PROFINET 678 UL)
Test voltage:	(PROFINET 678 UL) core/core 700 V x 1 min core/screen 700 V x 1 min
Temperature range	(PROFINET 678 UL):
<i>fixed laying:</i>	-30°C up to +80°C
<i>flexible application:</i>	-5°C up to +50°C
Min. bending radius:	
<i>fixed laying:</i>	5 x d
<i>sporadic movement:</i>	10 x d (PROFINET 678 UL)
Ohmic resistance at 20°C max.Ω/km:	max. 150, acc. to VDE 0812 (PROFINET 678)
Max. DC conductor resistance:	140 Ω/km (PROFINET 678 UL)
Capacitance at 800 hz:	48 pF/m (PROFINET 678 UL)
Max. capacitance unbalance:	1600 pF/km (PROFINET 678 UL)
Propagation velocity at 100 MHz:	approx. 75% (PROFINET 678 UL)
Characteristic impedance:	(PROFINET 678 UL) 100Ω (± 15%), CAT 5e
Min. Insulation resistance:	5 GΩ x km (PROFINET 678 UL)
Transfer impedance:	10 mΩ/m at 1 MHz, 4 mΩ/m at 10 MHz 4 mΩ/m at 30 MHz, 2 mΩ/m at 100 MHz (PROFINET 678 UL)
Standard reference:	IEC 61156-3, EN 50288-1, EN 50288-2-2 ISO IEC 11801

Features:

(UL) AWM style 1598 - 2571 30 V 80°C **(PROFINET 678 UL)**

RoHS and CE approval



NETWORK & HOME AUTOMATION CABLES

PROFINET 678 fixed installation, type A
SPECIAL PROFINET 678 UL flexible application, type B, UL approval



ELETTROTEK KABEL® SPECIAL PROFINET 678 UL



PROFINET 678 UL

Frequency (MHz)	ATTENUATION (dB/100 m)		NEXT (dB)		PS NEXT (dB)		PS EL-FEXT (dB/100m)		PS ACR (dB/100 m)		RETURN LOSS (dB)	
	max. - STD	typical	min. - STD	typical	min.	min.	min - STD	typical	min.	typical	min. STD	typical
1	3,2	2,5	65,3	71,0	62,3	69,0	60,8	69,0	62,1	68,5	-	29,0
4	6,0	5,2	56,3	63,0	53,3	61,0	48,8	57,0	50,3	57,8	24,1	32,0
10	9,5	8,4	50,3	58,0	47,3	56,0	40,8	51,0	40,8	49,6	25,0	32,0
16	12,1	11	47,2	56,0	44,2	54,0	36,7	47,0	35,1	45,0		
20	13,6	12,5	45,8	54,0	42,8	52,0	34,8	45,0	32,2	41,5		
31,25	17,1	16,0	42,9	50,0	39,9	48,0	30,9	42,0	25,8	34,0	23,6	30,0
62,5	24,8	23,6	38,4	45,0	35,4	43,0	24,9	36,0	13,6	21,4	21,5	28,0
100	32,0	29,9	35,3	43,0	32,3	41,0	20,8	32,0	3,3	13,1	20,1	26,0
155,52		37,4		40,0		38,0	-	26,0	-	2,6	-	24,0
200		42,8		37,0		35,0	-	22,0	-	-	-	23,0

Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
39290CEX042M01	4x2x0,14	6,2	33	49
39300BEX042A26	4x2x0,14	6,2	33,0	54

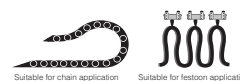
Other dimensions and colours available on request.

NETWORK & HOME AUTOMATION CABLES

SPECIAL PROFINET 681 continuously flexible, type C
SPECIAL PROFINET 682 continuously flexible, UL approval



ELETTROTEK KABEL® SPECIAL PROFINET 681



Construction:

Conductor: **(PROFINET 681):**
flexible tinned copper conductors
extra fine wires
(PROFINET 682):
flexible plain annealed copper
conductors extra fine wires

Insulation: halogen free compound

Colour cores: white/blue, white/orange, white/green,
white/brown

Stranding: cores twisted in pairs







Wrapping: non-woven tape

Screen: aluminium tape and tinned copper braid

Wrapping: non-woven tape

Outer sheath: green (similar RAL 6018) PUR
compound

Resistance:

-  **Self-extinguishing and flame retardant acc.to:**
IEC 60332-1
(SPECIAL PROFINET 682)
-  **Halogen-free acc.to:**
DIN VDE 0472, part 815,
EN 50267-2-2,
IEC 60754-1
(SPECIAL PROFINET 681 & 682)
-  **Corrosiveness of conflagration gases acc. to:**
EN 50267-2-2,
IEC 60754-2
(SPECIAL PROFINET 682)
-  **Oil resistance acc.to:**
DIN VDE 0282 part 10 + HD 22.10
(SPECIAL PROFINET 681)
IEC 60811-2-1,
ICEA S-82-552 and ASTM-oil 1
(SPECIAL PROFINET 682)
-  **UV resistant / Sunlight resistant acc. to:**
UL1581§1200
(SPECIAL PROFINET 682)
-  **MUD resistance acc.to:**
NEK 606
(SPECIAL PROFINET 682)

Technical data:

Peak operating voltage: max. 350 V

Test voltage: core/core 1,5 kV
core/screen 1,2 kV

Temperature range

fixed laying: -40°C up to +90°C

flexible application: -30°C up to +70°C

Min. bending radius:

fixed laying: 5 x d


flexible installation: 10 x d

continuously flexible: 12 x d

Max speed (main application): 250 m/min

Characteristic impedance: 100Ω ± 5Ω, acc. to EN 50288-2-2
(CAT 5 acc. to EN 50173-1)

Features:

 AWM 10493-20233 300V/80°C CE
(SPECIAL PROFINET 682)

acc. to standards:
EN 50288-1,
EN 50288-2-2,
EN 50173,
IEC 61156-3,
ISO/IEC 11801
(SPECIAL PROFINET 682)

for SPEED see pages from 2 to 4
of Automation and Flexidrum® catalogue

RoHS and CE approval



Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
39320CEX042M01	4x2x0,14	7,2	35,5	58
39330CEX042A26	4x2x0,14	7,3	35,5	60

Other dimensions and colours available on request.

GAALFLEX® CONTROL 500 FL OR

PVC control cable 450/750 V, DIN 4100, acc. to CEI UNEL 36762, Eca

ELETTROTEK KABEL® GAALFLEX® CONTROL 500 FL OR, Eca



Construction:

Conductor:	flexible plain annealed copper conductor Cl.5, acc.to IEC 60228
Insulation:	PVC type R2
Colour cores:	DIN 47100
Stranding:	in layers
Outer sheath:	grey (similar RAL 7001), PVC type TM2

Resistance:



Fire and flame retardant acc. to:
IEC 60332-3, CEI 20-22 II
IEC 60332-1-2, CEI 20-35

Technical data:

Nominal voltage:	U ₀ /U 450/750 V
Test voltage:	4 kV
Temperature range	-10°C up to +70°C
Min. bending radius:	
<i>fixed laying:</i>	6 x d
<i>flexible installation:</i>	10 x d

Features:

insulation and jacket acc. to CEI 20-11
compound lead free acc. to CEI 20-52
acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca
classification (CEI UNEL 35016), EN 13501-6
suitable for installation in a single conduit or channel or bridge, without interposing separators, with cable system of Category I° marked "450/750" or "0,6/1 kV" (as required by CEI-UNEL 36762)

RoHS and CE approval



Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
31450E54020M02	2 x 0,25	3,7	4,8	20
31450E54030M02	3 x 0,25	3,9	7,2	23
31450E54040M02	4 x 0,25	4,3	9,6	29
31450E54060M02	6 x 0,25	5,2	14,4	43
31450E54080M02	8 x 0,25	5,7	19,2	53
31450E54020M03	2 x 0,35	4,3	6,7	27
31450E54030M03	3 x 0,35	4,6	10,1	32
31450E54040M03	4 x 0,35	5	13,4	39
31450E54060M03	6 x 0,35	6	20,2	57
31450E54080M03	8 x 0,35	6,7	26,9	72
31450E54020M05	2 x 0,5	4,5	9,6	31
31450E54030M05	3 x 0,5	4,8	14,4	37
31450E54040M05	4 x 0,5	5,3	19,2	47
31450E54060M05	6 x 0,5	6,4	28,8	69
31450E54080M05	8 x 0,5	7,1	38,4	86
31450E54100M05	10 x 0,5	8,5	48	120
31450E54120M05	12 x 0,5	8,6	57,6	126
31450E54140M05	14 x 0,5	9	67,2	142
31450E54160M05	16 x 0,5	9,5	76,8	160
31450E54180M05	18 x 0,5	10	86,4	180
31450E54200M05	20 x 0,5	10,1	96	205
31450E54240M05	24 x 0,5	12,2	115,2	256
31450E54020M07	2 x 0,75	5,2	14,4	43
31450E54030M07	3 x 0,75	5,6	21,6	52
31450E54040M07	4 x 0,75	6,1	28,8	64
31450E54050M07	5 x 0,75	7,3	36	83
31450E54060M07	6 x 0,75	7,4	43,2	95
31450E54080M07	8 x 0,75	8,2	57,6	119
31450E54100M07	10 x 0,75	10	72	168

Other dimensions and colours available on request.

GAALFLEX® CONTROL 500 FL OR

PVC control cable, acc. to CEI 20-22/2 comparable to (as far applicable) IEC 60332-3A, 450/750 V

ELETTROTEK KABEL® GAALFLEX® CONTROL 500 FL OR



Construction:

Conductor:	flexible plain annealed copper conductor Cl.5, acc.to CEI 20-29, DIN VDE 0295
Insulation:	PVC type T11, acc. to CEI 20-11, VDE 0207
Colour cores:	black cores with consecutive numbers acc. to EN 50334, green-yellow from 3 cores
Stranding:	in layers
Outer sheath:	grey (RAL 7001) PVC type TM2, acc. to CEI 20-11, VDE 0207

Technical data:

Nominal voltage:	U ₀ /U 450/750 V (fixed use protected)
Test voltage:	4 kV
Temperature range	
<i>fixed laying:</i>	-40°C up to +80°C
<i>flexible application:</i>	-5°C up to +70°C
Min. bending radius:	
<i>fixed laying:</i>	4 x d
<i>flexible installation:</i>	15 x d

Resistance:



Flame retardant and Self-extinguishing acc. to:

CEI 20-22/1
CEI 20-22/2 comparable to (as far applicable)
IEC 60332-3A
CEI 20-22/4 IV° Ed. 1996



Corrosiveness of conflagration gases acc. to:

CEI 20-37/2 II° Ed. 1997
comparable to (as far applicable)
EN 50267-2
IEC 60754-2



Oil resistance acc. to:

CEI 20-34/2-1
CEI EN 60811-2-1



Water resistance acc. to :

IEC 60811-402
EN 50396

Features:

acc. to CEI 20-11, CEI 20-20/1, CEI 20-20 IV° Ed. 1996

flexible

numbered cores

small bending radius

on request black outer sheath

RoHS and CE approval



Part no.	No.of cores x cross section n x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
31450E51020M05	2 x 0,5	4,8	9,6	34
31450E50031M05	3 G 0,5	5,1	14,4	41
31450E50041M05	4 G 0,5	5,5	19,2	49
31450E50051M05	5 G 0,5	6,3	24	64
31450E50061M05	6 G 0,5	6,8	28,8	75
31450E50071M05	7 G 0,5	6,8	33,6	78
31450E50081M05	8 G 0,5	8,1	38,4	105
31450E50091M05	9 G 0,5	8,5	43,2	116
31450E50101M05	10 G 0,5	8,6	48	121
31450E50121M05	12 G 0,5	9,1	57,6	139
31450E50141M05	14 G 0,5	9,5	67,2	154
31450E50161M05	16 G 0,5	10	76,8	172
31450E50181M05	18 G 0,5	10,8	86,4	199
31450E50191M05	19 G 0,5	10,8	91,2	202
31450E50241M05	24 G 0,5	12,5	115,2	266
31450E50251M05	25 G 0,5	12,5	120	270
31450E50341M05	34 G 0,5	14,9	163,2	378
31450E50371M05	37 G 0,5	14,9	177,6	388
31450E50421M05	42 G 0,5	15,9	201,6	441
31450E50501M05	50 G 0,5	17,6	240	536
31450E50561M05	56 G 0,5	18,4	268,8	590
31450E50611M05	61 G 0,5	18,7	292,8	620

NETWORK & HOME AUTOMATION CABLES

GAALFLEX® CONTROL 500 FL OR

PVC control cable, acc. to CEI 20-22/2 comparable to (as far applicable) IEC 60332-3A , 450/750 V

ELETTROTEK KABEL® GAALFLEX® CONTROL 500 FL OR



Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
31450E51020M07	2 x 0,75	5,2	14,4	42
31450E50031M07	3 G 0,75	5,5	21,6	51
31450E50041M07	4 G 0,75	6,2	28,8	66
31450E50051M07	5 G 0,75	6,8	36	80
31450E50061M07	6 G 0,75	7,6	43,2	99
31450E50071M07	7 G 0,75	7,6	50,4	104
31450E50081M07	8 G 0,75	9	57,6	136
31450E50091M07	9 G 0,75	9,4	64,8	150
31450E50101M07	10 G 0,75	9,6	72	160
31450E50121M07	12 G 0,75	9,9	86,4	177
31450E50141M07	14 G 0,75	10,6	100,8	204
31450E50161M07	16 G 0,75	11,1	115,2	227
31450E50181M07	18 G 0,75	12	129,6	262
31450E50191M07	19 G 0,75	12	136,8	267
31450E50241M07	24 G 0,75	13,8	172,8	347
31450E50251M07	25 G 0,75	13,9	180	356
31450E50341M07	34 G 0,75	16,5	244,8	495
31450E50371M07	37 G 0,75	16,5	266,4	510
31450E50421M07	42 G 0,75	17,8	302,4	589
31450E50501M07	50 G 0,75	19,4	360	700
31450E50561M07	56 G 0,75	20,6	403,2	787
31450E50611M07	61 G 0,75	20,9	439,2	827
31450E51020M10	2 x 1	5,5	19,2	49
31450E50031M10	3 G 1	6,1	28,8	64
31450E50041M10	4 G 1	6,6	38,4	79
31450E50051M10	5 G 1	7,2	48,0	95
31450E50061M10	6 G 1	8	57,6	116
31450E50071M10	7 G 1	8	67,2	123
31450E50081M10	8 G 1	9,5	76,8	161
31450E50091M10	9 G 1	10	86,4	179
31450E50101M10	10 G 1	10,4	96	196
31450E50121M10	12 G 1	10,7	115,2	217
31450E50141M10	14 G 1	11,2	134,4	244
31450E50161M10	16 G 1	12	153,6	279
31450E50181M10	18 G 1	12,7	172,8	313
31450E50191M10	19 G 1	12,7	182,4	320
31450E50241M10	24 G 1	14,9	230,4	426
31450E50251M10	25 G 1	14,9	240	432
31450E50341M10	34 G 1	17,7	326,4	602
31450E50371M10	37 G 1	17,7	355,2	622
31450E50421M10	42 G 1	19,2	403,2	721
31450E50501M10	50 G 1	20,9	480	856
31450E50561M10	56 G 1	22,1	537,6	958
31450E50611M10	61 G 1	22,4	585,6	1008
31450E51020M15	2 x 1,5	6,3	28,8	68
31450E50031M15	3 G 1,5	6,7	43,2	84
31450E50041M15	4 G 1,5	7,5	57,6	108
31450E50051M15	5 G 1,5	8,2	72	131
31450E50061M15	6 G 1,5	9,1	86,4	160
31450E50071M15	7 G 1,5	9,1	100,8	171
31450E50081M15	8 G 1,5	10,8	115,2	221
31450E50091M15	9 G 1,5	11,3	129,6	245
31450E50101M15	10 G 1,5	11,8	144	269
31450E50121M15	12 G 1,5	12,1	172,8	298
31450E50141M15	14 G 1,5	12,7	201,6	336
31450E50161M15	16 G 1,5	13,6	230,4	385
31450E50181M15	18 G 1,5	14,4	259,2	433
31450E50191M15	19 G 1,5	14,4	273,6	443
31450E50241M15	24 G 1,5	16,8	345,6	583
31450E50251M15	25 G 1,5	16,8	360	594
31450E50341M15	34 G 1,5	20	489,6	827
31450E50371M15	37 G 1,5	20	532,8	858
31450E50421M15	42 G 1,5	21,6	604,8	989
31450E50501M15	50 G 1,5	23,8	720	1190
31450E50561M15	56 G 1,5	25,1	806,4	1328
31450E50611M15	61 G 1,5	25,4	878,4	1398

NETWORK & HOME AUTOMATION CABLES

GAALFLEX® CONTROL 500 FL OR

PVC control cable, acc. to CEI 20-22/2 comparable to (as far applicable) IEC 60332-3A , 450/750 V

ELETTROTEK KABEL® GAALFLEX® CONTROL 500 FL OR



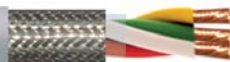
Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
31450E51020M25	2 x 2,5	7,7	48	105
31450E50031M25	3 G 2,5	8,2	72	132
31450E50041M25	4 G 2,5	9,1	96	167
31450E50051M25	5 G 2,5	10	120	205
31450E50071M25	7 G 2,5	11,1	168	268
31450E50081M25	8 G 2,5	13,3	192	348
31450E50101M25	10 G 2,5	14,3	240	416
31450E50121M25	12 G 2,5	15	288	475
31450E50141M25	14 G 2,5	15,7	336	535
31450E50161M25	16 G 2,5	16,7	384	608
31450E50181M25	18 G 2,5	17,9	432	692
31450E50251M25	25 G 2,5	20,9	600	952
31450E50341M25	34 G 2,5	24,9	816	1325
31450E51020M40	2 x 4	9,2	76,8	155
31450E50031M40	3 G 4	9,7	115,2	194
31450E50041M40	4 G 4	10,9	153,6	251
31450E50051M40	5 G 4	12,1	192	312
31450E50071M40	7 G 4	13,4	268,8	407
31450E51020M60	2 x 6	10,8	115,2	221
31450E50031M60	3 G 6	11,5	172,8	281
31450E50041M60	4 G 6	12,8	230,4	360
31450E50051M60	5 G 6	14,3	288	450
31450E50071M60	7 G 6	15,9	403,2	591
31450E50031M61	3 G 10	14,7	288	463
31450E50041M61	4 G 10	16,3	384	591
31450E50051M61	5 G 10	18,2	480	738
31450E50071M61	7 G 10	20	672	958
31450E50031M62	3 G 16	17	460,8	363
31450E50041M62	4 G 16	18,8	614,4	864
31450E50051M62	5 G 16	21,2	768	1089
31450E50071M62	7 G 16	23,6	1075,2	1439
31450E50041M63	4 G 25	23,7	960,0	1359
31450E50051M63	5 G 25	26,6	1200	1705
31450E50071M63	7 G 25	29,5	1680	2246
31450E50041M64	4 G 35	26,9	1344	1826
31450E50051M64	5 G 35	30,2	1680	2291
31450E50031M65	3 G 50	31,1	1440	2181
31450E50041M65	4 G 50	34,2	1920	2767
31450E50041M66	4 G 70	39,2	2688	3733

Other dimensions and colours available on request.

GAALFLEX® CONTROL 500 CY FL OR

PVC control cable with overall copper screen 450/750 V, DIN 47100, acc. to CEI UNEL 36762, Eca

ELETTROTEK KABEL® GAALFLEX® CONTROL 500 CY FL OR, Eca



Construction:

Conductor:	flexible plain annealed copper conductor Cl.5, acc. to IEC 60228
Insulation:	PVC type R2
Colour cores:	DIN 47100
Stranding:	in layers
Wrapping:	aluminium/PET tape
Screen:	tinned copper braid
Outer sheath:	grey (similar RAL 7001), PVC type TM2

Technical data:

Nominal voltage:	U ₀ /U 450/750 V
Test voltage:	
<i>conductors:</i>	4 kV x 5 min
<i>sheath:</i>	5 kV x 5 min
Temperature range	-10°C up to +70°C
Min. bending radius:	
<i>fixed laying:</i>	6 x d
<i>flexible installation:</i>	10 x d

Resistance:



Fire and flame retardant acc. to:
IEC 60332-3, CEI 20-22 II
IEC 60332-1-2, CEI 20-35

Features:

insulation and jacket acc. to CEI 20-11
compound lead free acc. to CEI 20-52
acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca
classification (CEI UNEL 35016), EN 13501-6
suitable for installation in a single conduit or channel or bridge, without interposing separators, with cable system of Category I° marked "450/750" or "0,6/1 kV" (as required by CEI-UNEL 36762)

RoHS and CE approval



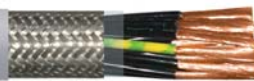
Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
31460E54020M02	2 x 0,25	4,5	4,8	27
31460E54030M02	3 x 0,25	4,8	7,2	33
31460E54040M02	4 x 0,25	5,1	9,6	39
31460E54050M02	5 x 0,25	5,4	12	48
31460E54060M02	6 x 0,25	5,9	14,4	55
31460E54080M02	8 x 0,25	6,3	19,2	65
31460E54100M02	10 x 0,25	7,4	24	86
31460E54120M02	12 x 0,25	7,5	28,8	89
31460E54140M02	14 x 0,25	7,9	33,6	100
31460E54160M02	16 x 0,25	8,3	38,4	114
31460E54020M03	2 x 0,35	5	6,7	33
31460E54030M03	3 x 0,35	5,3	10,1	40
31460E54040M03	4 x 0,35	5,7	13,4	48
31460E54050M03	5 x 0,35	6,1	16,8	59
31460E54060M03	6 x 0,35	6,7	20,2	71
31460E54080M03	8 x 0,35	7,2	26,9	85
31460E54100M03	10 x 0,35	8,3	33,6	105
31460E54120M03	12 x 0,35	8,5	40,3	115
31460E54020M05	2 x 0,5	5,4	9,6	37
31460E54030M05	3 x 0,5	5,7	14,4	44
31460E54040M05	4 x 0,5	6,1	19,2	55
31460E54050M05	5 x 0,5	6,6	24	67
31460E54060M05	6 x 0,5	7,2	28,8	80
31460E40080M05	8 x 0,5	7,8	38,4	99
31460E54100M05	10 x 0,5	9,2	48	127
31460E54120M05	12 x 0,5	9,4	57,6	135
31460E54160M05	16 x 0,5	10,3	76,8	176
31460E54240M05	24 x 0,5	13,1	115,2	273
31460E54020M07	2 x 0,75	6	14,4	49
31460E54030M07	3 x 0,75	6,4	21,6	61
31460E54040M07	4 x 0,75	6,9	28,8	74
31460E54050M07	5 x 0,75	7,4	36	92
31460E54060M07	6 x 0,75	8,1	43,2	108
31460E54080M07	8 x 0,75	8,9	57,6	133
31460E54100M07	10 x 0,75	10,4	72	175

Other dimensions and colours available on request.

GAALFLEX® CONTROL 500 CY FL OR

PVC control cable with overall copper screen, acc. to CEI 20-22/2 comparable to (as far applicable) IEC 60332-3A, 450/750 V

ELETTROTEK KABEL® GAALFLEX® CONTROL 500 CY FL OR



Construction:

Conductor:	flexible plain annealed copper conductor Cl.5, acc.to IEC 60228, DIN VDE 0295
Insulation:	PVC type T11, acc. to CEI 20-11, VDE 0207
Colour cores:	black cores with consecutive numbers acc. to EN 50334, green-yellow from 3 cores
Stranding:	in layers
Wrapping:	PETP foil
Screen:	tinned copper braid
Outer sheath:	grey (RAL 7001) PVC type TM2, acc. to CEI 20-11, VDE 0207

Resistance:



Flame retardant and Self-extinguishing acc. to:
CEI 20-22/1
CEI 20-22/2 comparable to (as far applicable)
IEC 60332-3A
CEI 20-22/4 IV° Ed. 1996



Corrosiveness of conflagration gases acc. to:
CEI 20-37/2 II° Ed. 1997
comparable to (as far applicable)
EN 50267-2
IEC 60754-2



Oil resistance acc. to:
CEI 20-34/2-1
CEI EN 60811-2-1



Water resistance acc. to:
IEC 60811-402
EN 50396

Technical data:

Nominal voltage:	Uo/U 450/750 V (fixed use protected)
Test voltage:	4 kV
Temperature range	
<i>fixed laying:</i>	-40°C up to +80°C
<i>flexible application:</i>	-5°C up to +70°C
Min. bending radius:	
<i>fixed laying:</i>	6 x d
<i>flexible installation:</i>	20 x d

Features:

acc. to CEI 20-11, CEI 20-20/1, CEI 20-20 IV° Ed. 1996
flexible
numbered cores
small bending radius
on request black outer sheath
RoHS and CE approval



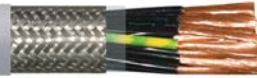
Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
31460E51020M05	2 x 0,5	5,4	22,4	43
31460E50031M05	3 G 0,5	5,7	27,3	51
31460E50041M05	4 G 0,5	6,3	36,6	68
31460E50051M05	5 G 0,5	6,9	41,7	79
31460E50071M05	7 G 0,5	7,6	56	101
31460E50121M05	12 G 0,5	9,7	90,1	159
31460E50141M05	14 G 0,5	10,1	99,8	176
31460E50161M05	16 G 0,5	10,8	109,2	198
31460E50181M05	18 G 0,5	11,4	123,6	222
31460E50251M05	25 G 0,5	13,5	178,1	310
31460E50341M05	34 G 0,5	15,7	229,3	405
31460E51020M07	2 x 0,75	6	27,3	52
31460E50031M07	3 G 0,75	6,3	39	68
31460E50041M07	4 G 0,75	6,8	46,3	80
31460E50051M07	5 G 0,75	7,6	58,4	102
31460E50071M07	7 G 0,75	8,2	73,3	122

NETWORK & HOME AUTOMATION CABLES

GAALFLEX® CONTROL 500 CY FL OR

PVC control cable with overall copper screen, acc. to CEI 20-22/2 comparable to (as far applicable) IEC 60332-3A, 450/750 V

ELETTROTEK KABEL® GAALFLEX® CONTROL 500 CY FL OR



Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
31460E50121M07	12 G 0,75	10,7	119	199
31460E50141M07	14 G 0,75	11,2	137,8	226
31460E50161M07	16 G 0,75	11,9	152,3	255
31460E50181M07	18 G 0,75	12,6	171,3	285
31460E50251M07	25 G 0,75	14,9	246	397
31460E50341M07	34 G 0,75	17,3	319	519
31460E50371M07	37 G 0,75	17,3	340,6	544
31460E50421M07	42 G 0,75	18,6	385,1	630
31460E50501M07	50 G 0,75	20,2	450,8	723
31460E50611M07	61 G 0,75	21,7	538,3	857
31460E51020M10	2 x 1	6,3	36,6	63
31460E50031M10	3 G 1	6,7	46,3	77
31460E50041M10	4 G 1	7,2	60,8	97
31460E50051M10	5 G 1	8	70,9	117
31460E50071M10	7 G 1	8,6	95	146
31460E50121M10	12 G 1	11,3	152,6	236
31460E50141M10	14 G 1	12,0	171,5	269
31460E50161M10	16 G 1	12,6	195,3	303
31460E50181M10	18 G 1	13,7	230,4	357
31460E50251M10	25 G 1	15,7	306,1	464
31460E50341M10	34 G 1	18,5	409,1	627
31460E50371M10	37 G 1	18,5	437,9	658
31460E50421M10	42 G 1	20,0	494,2	761
31460E50501M10	50 G 1	21,7	579,1	873
31460E50611M10	61 G 1	23,4	692,8	1046
31460E51020M15	2 x 1,5	6,9	46,5	76
31460E50031M15	3 G 1,5	7,5	65,6	103
31460E50041M15	4 G 1,5	8,1	80,5	125
31460E50051M15	5 G 1,5	9,0	99,9	156
31460E50071M15	7 G 1,5	9,7	133,3	195
31460E50121M15	12 G 1,5	12,7	214,5	315
31460E50141M15	14 G 1,5	13,7	259,2	378
31460E50161M15	16 G 1,5	14,4	296,6	428
31460E50181M15	18 G 1,5	15,4	325,3	478
31460E50251M15	25 G 1,5	17,8	434,1	630
31460E50341M15	34 G 1,5	21,0	580,5	850
31460E50371M15	37 G 1,5	21,0	623,7	895
31460E50421M15	42 G 1,5	22,6	704,3	1032
31460E50501M15	50 G 1,5	25,0	861,8	1235
31460E50611M15	61 G 1,5	26,6	1033,5	1464
31460E51020M25	2 x 2,5	8,3	71,2	112
31460E50031M25	3 G 2,5	9,0	99,9	151
31460E50041M25	4 G 2,5	9,7	128,5	189
31460E50051M25	5 G 2,5	10,8	152,4	230
31460E50071M25	7 G 2,5	11,9	205,1	296
31460E50121M25	12 G 2,5	15,8	354,1	500
31460E50141M25	14 G 2,5	16,7	410,7	579
31460E50161M25	16 G 2,5	17,7	458,3	653
31460E50181M25	18 G 2,5	18,7	514,5	730
31460E50251M25	25 G 2,5	21,7	699,1	973
31460E50341M25	34 G 2,5	25,9	958	1346
31460E51020M40	2 x 4	9,8	109,5	163
31460E50031M40	3 G 4	10,5	147,6	213
31460E50041M40	4 G 4	11,5	190,6	269
31460E50051M40	5 G 4	12,7	233,7	334
31460E51020M60	2 x 6	11,4	152,4	221
31460E50031M60	3 G 6	12,3	214,5	300
31460E50041M60	4 G 6	13,8	288,4	399
31460E50051M60	5 G 6	15,3	354,1	494
31460E51020M61	3 G 10	15,5	353,9	480
31460E50031M61	4 G 10	17,1	458,4	619
31460E50041M61	5 G 10	19,2	562,7	776
31460E51020M62	3 G 16	18,0	543,4	698
31460E50031M62	4 G 16	19,8	705,2	900
31460E50041M62	5 G 16	22,2	867,1	1125

Other dimensions and colours available on request.

NETWORK & HOME AUTOMATION CABLES

GAALFLEX® CONTROL 500

acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca

ELETTROTEK KABEL® GAALFLEX® CONTROL 500, Eca



Construction:

Conductor:	flexible plain annealed copper conductor Cl.5, acc.to IEC 60228, DIN VDE 0295
Insulation:	special PVC compound
Colour cores:	black cores with consecutive numbers acc. to EN 50334, green-yellow from 3 cores
Stranding:	in layers
Outer sheath:	grey (RAL 7001) special PVC compound

Resistance:



Flame retardant and Self-extinguishing acc. to:
DIN VDE 0482 part 265-2-1
EN 50265-2-1
IEC 60332-1-2



Oil resistance acc. to:
DIN VDE 0473 part 811-2-1
IEC EN 60811-2-1
UL 758 80°C

Technical data:

Nominal voltage:	U ₀ /U 300/500 V
Test voltage:	4 kV
Temperature range	
<i>fixed laying:</i>	-40°C up to +80°C
<i>flexible application:</i>	-15°C up to +80°C
Min. bending radius:	4 x d

Features:

flexible
numbered cores
small bending radius
on request black outer sheath (identified with "7" on the 7th number of the Part no.)
acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca
classification (CEI UNEL 35016), EN 13501-6
RoHS and CE approval



Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
31010D51020M05	2 x 0,5	4,7	9,6	37
31010D50031M05	3 G 0,5	4,9	14,4	43
31010D50041M05	4 G 0,5	5,3	19,2	52
31010D50051M05	5 G 0,5	5,7	24	64
31010D50071M05	7 G 0,5	6,7	33,6	80
31010D50081M05	8 G 0,5	7,0	38,4	99
31010D50091M05	9 G 0,5	7,6	43,2	110
31010D50101M05	10 G 0,5	8,1	48	117
31010D50121M05	12 G 0,5	8,6	57,6	132
31010D50141M05	14 G 0,5	9	67,2	148
31010D50161M05	16 G 0,5	9,5	76,8	171
31010D50181M05	18 G 0,5	10,4	86,4	189
31010D50211M05	21 G 0,5	10,9	100,8	225
31010D50251M05	25 G 0,5	12,1	120	260
31010D50301M05	30 G 0,5	12,6	144	298
31010D50341M05	34 G 0,5	13,8	163,2	341
31010D50401M05	40 G 0,5	14,8	192	399
31010D50421M05	42 G 0,5	15,2	201,6	414
31010D50501M05	50 G 0,5	17,5	240	485
31010D50611M05	61 G 0,5	18	292,8	529
31010D50651M05	65 G 0,5	18,5	312	619
31010D50801M05	80 G 0,5	20,1	384	752

NETWORK & HOME AUTOMATION CABLES

GAALFLEX® CONTROL 500

acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca

ELETTROTEK KABEL® GAALFLEX® CONTROL 500, Eca



Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
31010D51020M07	2 x 0,75	5	14,4	47
31010D50031M07	3 G 0,75	5,3	21,6	59
31010D50041M07	4 G 0,75	6	28,8	71
31010D50051M07	5 G 0,75	6,6	36	84
31010D50071M07	7 G 0,75	7,1	50,4	110
31010D50081M07	8 G 0,75	7,9	57,6	136
31010D50091M07	9 G 0,75	8,5	64,8	152
31010D50101M07	10 G 0,75	8,9	72	159
31010D50121M07	12 G 0,75	9,5	86,4	181
31010D50141M07	14 G 0,75	10,3	100,8	203
31010D50161M07	16 G 0,75	10,7	115,2	234
31010D50181M07	18 G 0,75	11,1	129,6	258
31010D50211M07	21 G 0,75	12,6	151,2	305
31010D50251M07	25 G 0,75	13,3	180	354
31010D50301M07	30 G 0,75	14,4	216	417
31010D50341M07	34 G 0,75	15,2	244,8	473
31010D50401M07	40 G 0,75	16,2	288	546
31010D50421M07	42 G 0,75	16,6	302,4	565
31010D50501M07	50 G 0,75	18,2	360	672
31010D50611M07	61 G 0,75	20	439,2	803
31010D50651M07	65 G 0,75	20,9	468	869
31010D50801M07	80 G 0,75	22,2	576	1040
31010D51020M10	2 x 1	5,3	19,2	53
31010D50031M10	3 G 1	5,6	28,8	67
31010D50041M10	4 G 1	6,3	38,4	82
31010D50051M10	5 G 1	6,9	48	101
31010D50071M10	7 G 1	7,6	67,2	128
31010D50081M10	8 G 1	8,3	76,8	157
31010D50091M10	9 G 1	9,2	86,4	181
31010D50101M10	10 G 1	9,5	96	189
31010D50121M10	12 G 1	10	115,2	211
31010D50141M10	14 G 1	10,8	134,4	244
31010D50161M10	16 G 1	11,4	153,6	273
31010D50181M10	18 G 1	12,2	172,8	309
31010D50211M10	21 G 1	13	201,6	363
31010D50251M10	25 G 1	14,1	240	422
31010D50301M10	30 G 1	15,3	288	488
31010D50341M10	34 G 1	16,3	326,4	556
31010D50401M10	40 G 1	17,6	384	651
31010D50421M10	42 G 1	18,1	403,2	677
31010D50501M10	50 G 1	19,5	480	792
31010D50611M10	61 G 1	21,1	585,6	959
31010D50651M10	65 G 1	22,4	624	1024
31010D50801M10	80 G 1	24,2	768	1243

NETWORK & HOME AUTOMATION CABLES

GAALFLEX® CONTROL 500

acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca

ELETTROTEK KABEL® GAALFLEX® CONTROL 500, Eca



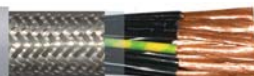
Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
31010D51020M15	2 x 1,5	6,1	28,8	71
31010D50031M15	3 G 1,5	6,5	43,2	87
31010D50041M15	4 G 1,5	7	57,6	109
31010D50051M15	5 G 1,5	8	72	130
31010D50071M15	7 G 1,5	8,6	100,8	172
31010D50081M15	8 G 1,5	9,4	115,2	210
31010D50091M15	9 G 1,5	10,4	129,6	234
31010D50101M15	10 G 1,5	10,5	144	246
31010D50121M15	12 G 1,5	11,1	172,8	282
31010D50141M15	14 G 1,5	12,2	201,6	325
31010D50161M15	16 G 1,5	12,7	230,4	365
31010D50181M15	18 G 1,5	13,7	259,2	413
31010D50211M15	21 G 1,5	14,7	302,4	486
31010D50251M15	25 G 1,5	16,1	360	570
31010D50301M15	30 G 1,5	17,1	432	669
31010D50341M15	34 G 1,5	19	489,6	760
31010D50401M15	40 G 1,5	20,1	576	891
31010D50421M15	42 G 1,5	20,5	604,8	926
31010D50501M15	50 G 1,5	22,8	720	1089
31010D50611M15	61 G 1,5	24,2	878,4	1315
31010D50651M15	65 G 1,5	24,7	936	1419
31010D50801M15	80 G 1,5	27,8	1152	1709
31010D51020M25	2 x 2,5	7,2	48	107
31010D50031M25	3 G 2,5	7,9	72	133
31010D50041M25	4 G 2,5	8,6	96	166
31010D50051M25	5 G 2,5	9,5	120	205
31010D50071M25	7 G 2,5	10,6	168	264
31010D50081M25	8 G 2,5	11,7	192	327
31010D50091M25	9 G 2,5	12,8	216	368
31010D50101M25	10 G 2,5	13,6	240	384
31010D50121M25	12 G 2,5	14,1	288	441
31010D50141M25	14 G 2,5	14,9	336	508
31010D50161M25	16 G 2,5	15,7	384	572
31010D50181M25	18 G 2,5	16,9	432	641
31010D50211M25	21 G 2,5	18,1	504	766
31010D50251M25	25 G 2,5	19,8	600	888
31010D50031M40	3 G 4	9,3	115,2	196
31010D50041M40	4 G 4	10,5	153,6	247
31010D50051M40	5 G 4	11,4	192	305
31010D50071M40	7 G 4	12,8	268,8	400
31010D50121M40	12 G 4	16,9	461	660
31010D50031M60	3 G 6	10,9	172,8	286
31010D50041M60	4 G 6	12,1	230,4	353
31010D50051M60	5 G 6	13,5	288	443
31010D50071M60	7 G 6	14,9	403,3	580
31010D50041M61	4 G 10	15,5	384	600
31010D50051M61	5 G 10	17,3	480	750
31010D50071M61	7 G 10	19,0	672	981
31010D50041M62	4 G 16	18,8	614,4	918
31010D50051M62	5 G 16	20,5	768	1138
31010D50071M62	7 G 16	23	1075,2	1494
31010D50041M63	4 G 25	22,6	960	1438
31010D50051M63	5 G 25	25,6	1200	1803
31010D50071M63	7 G 25	28,2	1680	2362
31010D50041M64	4 G 35	26	1344	1985
31010D50051M64	5 G 35	29,4	1680	2483
31010D50071M64	7 G 35	33,3	2352	3259
31010D50041M65	4 G 50	32,3	1920	2714

Other dimensions and colours available on request.

GAALFLEX® CONTROL 500 CY Lean

acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca

ELETTROTEK KABEL® GAALFLEX® CONTROL 500 CY Lean, Eca



Construction:

Conductor:	flexible plain annealed copper conductor Cl.5, acc. to IEC 60228, DIN VDE 0295
Insulation:	PVC type T11
Colour cores:	black cores with consecutive numbers acc. to EN 50334, green-yellow from 3 cores
Stranding:	in layers
Wrapping:	PETP foil
Screen:	tinned copper braid
Outer sheath:	grey (RAL 7001) PVC type TM2

Resistance:



Flame retardant and Self-extinguishing acc. to:
DIN VDE 0482 part 265-2-1
EN 50265-2-1
IEC 60332-1-2



Oil resistance acc. to:
DIN EN 50290-2-22
VDE 0819-102, TM54

Technical data:

Nominal voltage:	U ₀ /U 300/500 V
Test voltage:	3 kV acc. to DIN VDE 0281 part 2 + HD 21.1
Temperature range	
<i>fixed laying:</i>	-40°C up to +80°C
<i>flexible application:</i>	-5°C up to +70°C
Min. bending radius:	
<i>fixed laying:</i>	6 x d
<i>flexible installation:</i>	20 x d

Features:

good EMC characteristics
flexible
numbered cores
on request black outer sheath
acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca
classification (CEI UNEL 35016), EN 13501-6
RoHS and CE approval



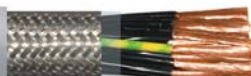
Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
31080D51020M05	2 x 0,5	5,5	23,7	45,1
31080D50031M05	3 G 0,5	5,8	27,3	52,3
31080D50041M05	4 G 0,5	6,3	36,6	67,4
31080D50051M05	5 G 0,5	6,9	41,7	79,1
31080D50061M05	6 G 0,5	7,5	51,3	96,2
31080D50071M05	7 G 0,5	7,5	56,1	99,6
31080D50081M05	8 G 0,5	8,8	66,3	129,2
31080D50101M05	10 G 0,5	9,4	75,9	139,2
31080D50121M05	12 G 0,5	9,7	90,1	160,3
31080D50181M05	18 G 0,5	11,5	123,6	224,3
31080D50191M05	19 G 0,5	11,5	128,4	227,7
31080D50251M05	25 G 0,5	13,4	177,8	308,1
31080D50341M05	34 G 0,5	15,7	229,3	407,3
31080D50411M05	41 G 0,5	16,9	271,2	485
31080D50421M05	42 G 0,5	16,9	276	492
31080D50501M05	50 G 0,5	18,4	322,6	565,5
31080D50611M05	61 G 0,5	19,7	383,7	667

NETWORK & HOME AUTOMATION CABLES

GAALFLEX® CONTROL 500 CY Lean

acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca

ELETTROTEK KABEL® GAALFLEX® CONTROL 500 CY Lean, Eca



Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
31080D51020M07	2 x 0,75	5,9	33,3	57,3
31080D50031M07	3 G 0,75	6,3	39	67,5
31080D50041M07	4 G 0,75	6,9	46,4	81,2
31080D50051M07	5 G 0,75	7,5	58,5	100,7
31080D50061M07	6 G 0,75	8,2	66,1	117,6
31080D50071M07	7 G 0,75	8,2	73,3	122,8
31080D50081M07	8 G 0,75	9,6	85,5	157,9
31080D50101M07	10 G 0,75	10,3	104,5	176,5
31080D50121M07	12 G 0,75	10,7	118,9	198,2
31080D50181M07	18 G 0,75	12,6	171,4	286
31080D50191M07	19 G 0,75	12,6	178,6	291,1
31080D50251M07	25 G 0,75	14,8	246,1	394,3
31080D50341M07	34 G 0,75	17,3	319,2	522,7
31080D50411M07	41 G 0,75	18,7	377,8	623,1
31080D50421M07	42 G 0,75	18,7	385	632,7
31080D50501M07	50 G 0,75	20,3	450,9	728,2
31080D50611M07	61 G 0,75	21,7	538,4	861,6
31080D51020M10	2 x 1	6,3	36,6	64,5
31080D50031M10	3 G 1	6,7	46,3	76,7
31080D50041M10	4 G 1	7,3	60,7	98,1
31080D50051M10	5 G 1	8	70,8	116,9
31080D50061M10	6 G 1	8,7	85,5	141,4
31080D50071M10	7 G 1	8,7	95,1	148,3
31080D50081M10	8 G 1	10,2	109,3	188,5
31080D50101M10	10 G 1	11	133,2	210,4
31080D50121M10	12 G 1	11,4	152,4	237,7
31080D50181M10	18 G 1	13,7	230,6	357,1
31080D50191M10	19 G 1	13,7	240,2	363,9
31080D50251M10	25 G 1	15,8	306,1	465,9
31080D50341M10	34 G 1	18,5	409	628,6
31080D50411M10	41 G 1	20	484,5	750,2
31080D50421M10	42 G 1	20	494,1	762,3
31080D50501M10	50 G 1	21,8	579,2	878,6
31080D50611M10	61 G 1	23,3	693	1041,7
31080D50031M15	3 G 1,5	7,4	65,6	101,1
31080D50041M15	4 G 1,5	8,1	80,4	123,9
31080D50051M15	5 G 1,5	8,9	99,9	153,8
31080D50061M15	6 G 1,5	9,8	118,9	185,2
31080D50071M15	7 G 1,5	9,8	133,3	195,4
31080D50081M15	8 G 1,5	11,5	152,4	247,3
31080D50101M15	10 G 1,5	12,4	185,8	277,3
31080D50121M15	12 G 1,5	12,8	214,6	315,2
31080D50181M15	18 G 1,5	15,4	325,3	475
31080D50191M15	19 G 1,5	15,4	339,7	485,2
31080D50251M15	25 G 1,5	17,8	442,6	631,3
31080D50341M15	34 G 1,5	20,9	580,5	841,8
31080D50411M15	41 G 1,5	22,6	689,6	1006
31080D50421M15	42 G 1,5	22,6	704	1023,1
31080D50501M15	50 G 1,5	24,9	862	1220,4
31080D50611M15	61 G 1,5	26,6	1033,3	1450,3
31080D50031M25	3 G 2,5	8,9	99,9	148,1
31080D50041M25	4 G 2,5	9,8	128,5	188,6
31080D50051M25	5 G 2,5	10,8	152,5	227,6
31080D50071M25	7 G 2,5	11,8	205,2	291,2
31080D50081M25	8 G 2,5	14,2	249,8	387,6
31080D50101M25	10 G 2,5	15,3	306,1	437,1
31080D50121M25	12 G 2,5	15,9	354,1	498,7
31080D50181M25	18 G 2,5	18,8	514,6	727,1
31080D50191M25	19 G 2,5	18,8	538,6	744,2
31080D50251M25	25 G 2,5	21,8	699,2	968,8
31080D50031M40	3 G 4	10,5	147,7	210,8
31080D50041M40	4 G 4	11,5	190,8	274,1
31080D50051M40	5 G 4	12,8	233,8	333,9
31080D50071M40	7 G 4	14,3	326,6	442,9

Other dimensions and colours available on request.

GAALFLEX® CONTROL 500 H

acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca



ELETTROTEK KABEL® GAALFLEX® CONTROL 500 H, Eca



Construction:

Conductor:	flexible plain annealed copper conductor Cl.5, acc.to IEC 60228, DIN VDE 0295
Insulation:	halogen-free compound type T16
Colour cores:	black cores with consecutive numbers acc. to EN 50334, green-yellow from 3 cores
Stranding:	in layers
Outer sheath:	grey (RAL 7001) halogen-free compound type TM7

Resistance:



Flame retardant and Self-extinguishing acc. to:

DIN VDE 0482 part 265-2-1
EN 50265-2-1
IEC 60332-2-1 (flame spread on a single cable)
IEC 60332-3-24 respectively IEC 60332-3-25 (flame spread on vertical cable or wire bundle)



Halogen-free acc. to:

DIN VDE 0482, part 267
EN 50267-2-1
IEC 60754-1



Corrosiveness of conflagration gases acc. to:

DIN VDE 0482 part 267
EN 50267-2-2
IEC 60754-2



Low smoke density acc. to:

DIN VDE 0482 part. 268-1-2,
IEC 61034-1-2,
EN 50268-1-2

Technical data:

Nominal voltage:	U ₀ /U 300/500 V
Test voltage:	3 kV
Temperature range	
<i>fixed laying:</i>	-40°C up to +70°C
<i>flexible application:</i>	-15°C up to + 70°C
Min. bending radius:	
<i>fixed laying:</i>	4 x d
<i>flexible installation:</i>	15 x d

Features:

flexible
acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca
classification (CEI UNEL 35016), EN 13501-6
RoHS and CE approval



Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
31030D51020M05	2 x 0,5	4,8	9,6	34
31030D50031M05	3 G 0,5	5,1	14,4	41
31030D50041M05	4 G 0,5	5,5	19,2	50
31030D50051M05	5 G 0,5	6,3	24,0	63
31030D50071M05	7 G 0,5	6,8	33,6	78
31030D50121M05	12 G 0,5	9,1	57,6	139
31030D50141M05	14 G 0,5	9,6	67,2	160
31030D50181M05	18 G 0,5	10,8	86,4	199
31030D50251M05	25 G 0,5	12,5	120	269
31030D50341M05	34 G 0,5	14,9	163,2	377
31030D51020M07	2 x 0,75	5,2	14,4	42
31030D50031M07	3 G 0,75	5,5	21,6	51
31030D50041M07	4 G 0,75	6,2	28,8	66
31030D50051M07	5 G 0,75	6,8	36,0	80
31030D50071M07	7 G 0,75	7,6	43,2	94
31030D50121M07	12 G 0,75	9,9	86,4	177
31030D50181M07	18 G 0,75	12	129,6	261
31030D50341M07	34 G 0,75	16,5	245	493
31030D50371M07	37 G 0,75	16,5	266,4	509

NETWORK & HOME AUTOMATION CABLES

GAALFLEX® CONTROL 500 H

acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca



ELETTROTEK KABEL® GAALFLEX® CONTROL 500 H, Eca



Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
31030D51020M10	2 x 1	5,5	19,2	50
31030D50031M10	3 G 1	6,1	28,8	64
31030D50041M10	4 G 1	6,6	38,4	78
31030D50051M10	5 G 1	7,2	48	95
31030D50071M10	7 G 1	8	57,6	117
31030D50101M10	10 G 1	8	67,2	124
31030D50121M10	12 G 1	10,4	96	194
31030D50161M10	16 G 1	10,7	115,2	209
31030D50181M10	18 G 1	12	153,6	277
31030D50251M10	25 G 1	12,7	172,8	313
31030D50341M10	34 G 1	14,9	240	433
31030D50371M10	37 G 1	17,7	326,4	601
31030D50411M10	41 G 1	17,7	355,2	622
31030D51020M15	2 x 1,5	6,3	28,8	67
31030D50031M15	3 G 1,5	6,7	43,2	83
31030D50041M15	4 G 1,5	7,5	57,6	107
31030D50051M15	5 G 1,5	8,2	72	131
31030D50071M15	7G 1,5	9,1	100,8	170
31030D50121M15	12 G 1,5	12,1	172,8	297
31030D50181M15	18 G 1,5	14,4	259,2	428
31030D50251M15	25 G 1,5	16,8	360	590
31030D50341M15	34 G 1,5	20	489,6	817
31030D50371M15	37 G 1,5	20	532,8	848
31030D51020M25	2 x 2,5	7,7	48	104
31030D50031M25	3 G 2,5	8,2	72	130
31030D50041M25	4 G 2,5	9,1	96	166
31030D50051M25	5 G 2,5	10	120	204
31030D50071M25	7G 2,5	11,1	168	265
31030D50121M25	12 G 2,5	15	288	470
31030D50181M25	18 G 2,5	17,9	432	687
31030D50251M25	25 G 2,5	20,9	600	943
31030D50341M25	34 G 2,5	24,9	816	1.312
31030D51020M40	2 x 4	9,2	76,8	153
31030D50031M40	3 G 4	9,7	115,2	194
31030D50041M40	4 G 4	10,9	153,6	248
31030D50051M40	5 G 4	12,1	192	310
31030D50071M40	7G 4	13,4	268,8	404
31030D51020M60	2 x 6	10,8	115,2	220
31030D50031M60	3 G 6	11,5	172,8	280
31030D50041M60	4 G 6	12,8	230,4	358
31030D50051M60	5 G 6	14,3	288	448
31030D50071M60	7G 6	15,9	403,2	584
31030D50031M61	3 G 10	14,5	288	452
31030D50041M61	4 G 10	16,3	384	585
31030D50051M61	5 G 10	18,2	480	730
31030D50071M61	7G 10	20	672	952
31030D50031M62	3 G 16	17	460,8	669
31030D50041M62	4 G 16	19	614,4	866
31030D50051M62	5 G 16	21,2	768	1.079
31030D50071M62	7 G 16	23,6	1075,2	1.424
31030D50041M63	4 G 25	23,7	960	1.345
31030D50051M63	5 G 25	26,6	1200	1.687
31030D50041M64	4 G 35	26,9	1344	1.812
31030D50051M64	5 G 35	30,2	1680	2.270
31030D50041M65	4 G 50	34,2	1920	2.746

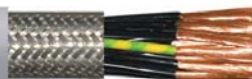
Other dimension and colours available on request.

GAALFLEX® CONTROL 500 CH Lean

acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca



ELETTROTEK KABEL® GAALFLEX® CONTROL 500 CH lean, Eca



Construction:

Conductor:	flexible plain annealed copper conductor Cl.5, acc.to IEC 60228, DIN VDE 0295
Insulation:	halogen-free compound type TI6
Colour cores:	black cores with consecutive numbers acc. to EN 50334, green-yellow from 3 cores
Stranding:	in layers
Screen:	tinned copper braid
Outer sheath:	grey (RAL 7001) halogen-free compound type TM7 acc. to IEC 60092-353

Resistance:



Flame retardant and Self-extinguishing acc. to:

DIN VDE 0482 part 265-2-1
EN 50265-2-1
IEC 60332-2-1 (flame spread on a single cable)
IEC 60332-3-24 respectively IEC 60332-3-25 (flame spread on vertical cable or wire bundle)



Halogen-free acc. to

DIN VDE 0482, part 267
EN 50267-2-1
IEC 60754-1



Corrosiveness of conflagration gases acc. to:

DIN VDE 0482 part 267
EN 50267-2-2
IEC 60754-2



Low smoke density acc. to:

DIN VDE 0482 part. 268-1-2,
IEC 61034-1-2,
EN 50268-1-2

Technical data:

Nominal voltage:	U ₀ /U 300/500 V
Test voltage:	2 kV
Temperature range	
<i>fixed laying:</i>	-40°C up to +70°C
<i>flexible application:</i>	-15°C up to + 70°C
Min. bending radius	
<i>fixed laying:</i>	6 x d
<i>flexible installation:</i>	15 x d

Features:

good EMC critical environments.
acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca
classification (CEI UNEL 35016), EN 13501-6
RoHS and CE approval



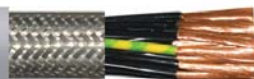
NETWORK & HOME AUTOMATION CABLES

GAALFLEX® CONTROL 500 CH Lean

acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca



ELETTROTEK KABEL® GAALFLEX® CONTROL 500 CH lean, Eca



Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
31090D51020M05	2 x 0,5	5,5	22,4	43,7
31090D50031M05	3 G 0,5	5,8	27,3	52,3
31090D50041M05	4 G 0,5	6,3	36,6	67,4
31090D50051M05	5 G 0,5	6,9	41,7	79,1
31090D50071M05	7 G 0,5	7,5	56,1	99,6
31090D50121M05	12 G 0,5	9,7	90,1	160,3
31090D50181M05	18 G 0,5	11,5	123,6	224,3
31090D50251M05	25 G 0,5	13,4	177,8	308,1
31090D51020M07	2 x 0,75	5,9	31,6	55,7
31090D50031M07	3 G 0,75	6,3	39	67,5
31090D50041M07	4 G 0,75	6,9	46,4	81,2
31090D50051M07	5 G 0,75	7,5	58,5	100,7
31090D50071M07	7 G 0,75	8,2	73,3	122,8
31090D50121M07	12 G 0,75	10,7	118,9	198,2
31090D50181M07	18 G 0,75	12,6	171,4	286
31090D50251M07	25 G 0,75	14,8	246,1	394,3
31090D51020M10	2 x 1	6,3	36,6	62,6
31090D50031M10	3 G 1	6,7	46,3	76,7
31090D50041M10	4 G 1	7,3	60,7	98,1
31090D50051M10	5 G 1	8	70,8	116,9
31090D50071M10	7 G 1	8,7	95,1	148,3
31090D50121M10	12 G 1	11,4	152,4	237,7
31090D50181M10	18 G 1	13,7	230,6	357,1
31090D50251M10	25 G 1	15,8	306,1	465,9
31090D51020M15	2 x 1,5	6,9	46,5	76,4
31090D50031M15	3 G1,5	7,4	65,6	101
31090D50041M15	4 G1,5	8,1	80,4	123,8
31090D50051M15	5 G1,5	8,9	99,9	153,6
31090D50121M15	12 G1,5	12,8	214,6	315
31090D50181M15	18 G 1,5	15,4	325,3	474,6
31090D50251M15	25 G 1,5	17,8	442,6	630,8
31090D51020M25	2x2,5	8,3	71	111,8
31090D50031M25	3G2,5	8,9	99,9	148,1
31090D50041M25	4G2,5	9,8	128,5	188,7
31090D50051M25	5G2,5	10,8	152,5	227,7
31090D50071M25	7G2,5	11,8	205,2	291,3
31090D50121M25	12G2,5	15,9	354,1	498,9
31090D50031M40	3G4	10,5	147,7	210,6
31090D50041M40	4G4	11,5	190,8	269,6
31090D50051M40	5G4	12,8	233,8	333,6
31090D50071M40	7G4	14,3	326,6	442,5
31090D50031M60	3G6	12,3	214,6	297,6
31090D50041M60	4G6	13,8	288,2	396
31090D50051M60	5G6	15,3	354,1	490,8
31090D50041M61	4G10	17,1	458,4	616,8
31090D50051M61	5G10	19,1	562,6	766,2
31090D50041M62	4G16	19,9	705,3	893,4
31090D50051M62	5G16	22,2	867,2	1111
31090D50041M63	4G25	24,6	1075,7	1358,5
31090D50041M64	4G35	27,9	1468	1803,1
31090D50041M65	4G50	35	2085,3	2663,6
31090D50041M66	4G70	40	2886,3	3579,1

Other dimension and colours available on request.

GAALNET® VIDEO DOOR PHONE CABLE

acc. to CEI UNEL 36762, EN 50575:2014 + A1:2016, Fca

ELETTROTEK KABEL® GAALNET® VIDEO DOOR PHONE CABLE

Construction:

Conductor:	flexible plain annealed copper conductor Cl. 5, acc. to IEC 60228
Insulation:	PE compound
Colour cores:	brown, white/brown
Stranding:	in layers
Outer sheath:	grey (similar RAL 7001), PVC type TM2

Resistance:



Fire and flame retardant acc. to:
IEC 60332-3, CEI 20-22 II
IEC 60332-1-2, CEI 20-35

Technical data:

Nominal voltage:	U ₀ /U 300/500 V
Test voltage:	
<i>conductors:</i>	4 kV x 5 min
<i>sheath:</i>	5 kV x 5 min
Temperature range	-10°C up to +70°C
Min. bending radius:	10 x d
Insulation resistance:	5 GOhm/km
impedance:	100 Ω ± 10%
Mutual capacitance:	49 pF/mt

Features:

insulation and jacket acc. to CEI 20-11
compound lead free acc. to CEI 20-52
acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Fca
classification (CEI UNEL 35016), EN 13501-6
suitable for installation in a single conduit
or channel or bridge, without interposing
separators, with cable system of Category I°
marked "450/750" or "0,6/1 kV" (as required by CEI-UNEL 36762)
RoHS and CE approval



Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
75010D5X012M05	1x2x0,5	4,5	9,6	22
75010D5X012M10	1x2x1	6,8	19,2	41,5

Other dimension and colours available on request.

GAALNET® H05VVH2-F

ELETTROTEK KABEL® GAALNET® H05VVH2-F

Construction:

Conductor:	flexible plain annealed copper conductor Cl. 5, acc. to IEC 60228
Insulation:	PVC type T11
Colour cores:	acc. to HD 308 S2
Stranding:	cores laying parallel
Outer sheath:	black (similar RAL 9005) or white (similar RAL 9010), PVC type TM2

Resistance:



Fire and flame retardant acc. to:
IEC 60332-3, CEI 20-22 II
IEC 60332-1-2, CEI 20-35

Technical data:

Nominal voltage:	U ₀ /U 300/500 V
Test voltage:	2,5 kV
Temperature range	-10°C up to +70°C
Min. bending radius:	10 x d
Insulation resistance:	20 MΩm/km

Features:

insulation and jacket acc. to CEI 20-11
compound lead free acc. to CEI 20-52
RoHS and CE approval



Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
87040D.3020M05	2 x 0,5	3,2 x 5,2	9,6	28
87040D.3020M07	2 x 0,75	3,5 x 5,5	14,4	37
87040D.3020M10	2 x 1	6,5 x 4,3	19,2	48

*The point inside the part number refers to the different colors in which outer sheath can be produced. Each color has different letter.

Other dimension and colours available on request.

NETWORK & HOME AUTOMATION CABLES

GAALNET® BUS BUILDING AUTOMATION

acc. to CEI UNEL 36762, EN 50575:2014 + A1:2016, Eca

ELETTROTEK KABEL® GAALNET® BUS BUILDING AUTOMATION

ELETTROTEK KABEL® GAALNET® BUS BUILDING AUTOMATION

Construction:

Conductor:	solid plain annealed copper conductor Cl. 1, 1x0,80 mm
Insulation:	PVC type T11
Colour cores:	
<i>single-pair:</i>	red + black
<i>multi-pair:</i>	red + black + yellow + white
Stranding:	in pair(s)
Screen:	aluminium/PET tape + tinned bare copper drain wire, 100% coverage
Outer sheath:	red (similar RAL 3000) or green (similar RAL 6018), PVC type TM2 or LSZH compound

Resistance:



Fire and flame retardant acc. to:
IEC 60332-3, CEI 20-22 II
IEC 60332-1-2, CEI 20-35

Technical data:

Nominal voltage Uo/U:	250/250 V
Test voltage:	2 kV x 5 min
Temperature range	-30°C up to +70°C
Min. bending radius:	10 x d
Insulation resistance:	5 GOhm/km
Mutual capacitance:	100 pF/mt

Features:

insulation and jacket acc. to CEI 20-11
compound lead free acc. to CEI 20-52
acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca
classification (CEI UNEL 35016), EN 13501-6
suitable for installation in a single conduit or channel or bridge, without interposing separators, with cable system of Category I° marked "450/750" or "0,6/1 kV" (as required by CEI-UNEL 36762)

RoHS and CE approval



The table is refer to PVC outer sheath.

Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
75020C.M012M08	1 x 2 x 0,8	4,2	15,4	33
75020C.M022M08	2 x 2 x 0,8	5,5	30,7	50

Other dimension and colours available on request.

The table is refer to LSZH outer sheath.

Part no.	No. of cores x cross section n x mm ²	Outer-Ø ca. mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
75030C.M012M08	1 x 2 x 0,8	4,2	15,4	26
75030C.M022M08	2 x 2 x 0,8	5,5	30,7	48

*The point inside the part number refers to the different colors in which outer sheath can be produced. Each color has different letter.

Other dimension and colours available on request.

AUDIO & SATELLITE CABLES



AUDIO & SATELLITE CABLES

GAALNET® Li-YZ PVC FLAT 300 V

EN 50575:2014 + A1:2016, Eca

ELETTROTEK KABEL® GAALNET® Li-YZ PVC FLAT 300 V, Eca

Construction:

Conductor: flexible plain annealed copper conductor
Cl. 5, acc. to IEC 60228

Outer sheath: red/black, white/black or transparent,
PVC compound

Resistance:



Flame and fire retardant acc. to:
CEI 20-35, IEC 60332-1
CEI 20-22 II, IEC 60332-3

Technical data:

Nominal voltage: 300 V

Test voltage: 2,5 kV

Temperature range: -10°C up to +70°C

Min. bending radius: 10 x d

Conductor resistance:

0,5 mm²: max. 39 Ohm/km

0,75 mm²: max. 26 Ohm/km

1 mm²: max. 19,5 Ohm/km

1,5 mm²: max. 13,3 Ohm/km

2,5 mm²: max. 7,98 Ohm/km

Capacitance: 46 pF/m

Features:

insulation and jacket acc. to CEI 20-11

compound lead free acc. to CEI 20-52

acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca
classification (CEI UNEL 35016), EN 13501-6

RoHS and CE approval



GAALNET® Li-YZ PVC FLAT 300 V

EN 50575:2014 + A1:2016, Eca

ELETTROTEK KABEL® GAALNET® Li-YZ PVC FLAT 300 V, Eca

BLACK + RED

Part no.	No. of cores x cross-section n x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
87020CXM020M05	2 x 0,5	2 x 4,1	10	17
87020CXM020M07	2 x 0,75	2,3 x 4,7	14	24
87020CXM020M10	2 x 1	2,55 x 5,3	19	33
87020CXM020M15	2 x 1,5	2,9 x 5,9	29	38
87020CXM020M25	2 x 2,5	3,5 x 7	48	55

BLACK + WHITE

Part no.	No. of cores x cross-section n x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
87020CXX020M03	2 x 0,35	1,70 x 3,4	7	12
87020CXX020M05	2 x 0,5	2 x 4,1	10	17

TRANSPARENT + TRANSPARENT

Part no.	No. of cores x cross-section n x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
87020CXY020M07	2 x 0,75	2,2 x 4,4	14	23
87020CXY020M10	2 x 1	2,45 x 4,9	19	28
87020CXY020M15	2 x 1,5	2,9 x 5,9	29	41
87020CXY020M20	2 x 2	3,2 x 6,5	38	54
87020CXY020M30	2 x 3	3,9 x 7,9	58	80

Other dimensions and colours available on request.

GAALNET® SAT-COAXIAL CCS 100 V

CCS-AL/PET/AL-CuSn BRAID-PVC, EN 50575:2014 + A1:2016, Eca

ELETTROTEK KABEL® GAALNET® SAT-COAXIAL CCS 100 V, Eca

Construction:

Conductor:	solid copper clad steel conductor, 1x0,41 mm
Insulation:	PEE compound
Colour core:	blue
Screen:	Al/PET/Al + tinned copper braid, 55% coverage
Wrapping:	PET tape
Outer sheath:	white (similar RAL 9003), PVC compound

Features:

acc. to standard EN 50117-2-4
acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca
classification (CEI UNEL 35016), EN 13501-6
RoHS and CE approval



Technical data:

Nominal voltage:	100 V
Test voltage:	3 kV
Temperature range:	-20°C up to +70° C
Min. bending radius	
<i>single bend:</i>	15 mm
<i>multiple bend:</i>	30 mm
D.C. resistance max.:	
<i>inner:</i>	620 Ohm/km
<i>outer:</i>	35 Ohm/km
Tensile strength:	120 N
Characteristic impedance:	75 Ω ± 3 Ω
Capacitance:	55 ± 2 pF/m
Velocity ratio:	83 %
Return loss (min.):	
<i>from 5 up to 470 MHz:</i>	26 dB
<i>from 470 up to 1000 MHz:</i>	23 dB
<i>from 1000 up to 2000 MHz:</i>	18 dB
Transfer imp. (TI):	
<i>from 5 up to 30 MHz:</i>	max. 15 mΩ/m
Screening Att. (AS):	
<i>from 30 up to 1000 MHz:</i>	min. 75 dB
<i>from 1000 up to 2000 MHz:</i>	min. 80 dB
<i>from 2000 up to 3000 MHz:</i>	min. 65 dB

ELECTRICAL CHARACTERISTICS AT 20°C

Frequency MHz	Attenuation dB/100 m
5	3,9
50	10,9
200	21,2
470	33,2
862	45,1
1000	48,7
1750	65,4
2150	73
2400	77,4
3000	87

Part no.	Nominal cross-section no. of pairs x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
84030BWN010927	1 x 0,41	3,6	3,4	15,8

Other dimensions and colours available on request.

GAALNET® SAT-COAXIAL Cu 100 V

Cu - AL/PET-AL braid - PVC 100 V, EN 50575:2014 + A1:2016, Eca

ELETTROTEK KABEL® GAALNET® SAT-COAXIAL Cu 100 V, Eca

Construction:

Conductor:	solid plain annealed copper conductor Cl. 1, 1x0,80 mm or 1x1,13 mm
Insulation):	PEE compound
Colour core:	natural
Screen:	Al/PET + aluminium braid, 40% coverage
Wrapping:	PET tape
Outer sheath:	white (similar RAL9003), PVC compound

Features:

acc. to standard EN 50117-2-4
acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca
classification (CEI UNEL 35016), EN 13501-6
RoHS and CE approval



Technical data:

Nominal voltage:	100 V
Test voltage:	
0,8 mm ² :	3 kV
1,13 mm ² :	4,5 kV
Temperature range:	-20°C up to +70°C
Min. bending radius	
single bend (0,8 mm ²):	25 mm
multiple bend (0,8 mm ²):	50 mm
single bend (1,13 mm ²):	35 mm
multiple bend (1,13 mm ²):	70 mm
Tensile strength:	
0,8 mm ² :	90 N
1,13 mm ² :	150 N
Characteristic impedance:	75 ± 3 Ω
Capacitance:	52 ± 2 pF/m
Velocity ratio:	85 %
Return loss (min.):	
from 5 up to 470 MHz:	28 dB (0,8 mm ²) / 30 dB (1,13 mm ²)
from 470 up to 1000 MHz:	26 dB
from 1000 up to 2000 MHz:	20 dB
from 2000 up to 3000 MHz:	18 dB
Screening Att. (AS):	
from 30 up to 1000 MHz:	75 dB
from 1000 up to 2000 MHz:	70 (0,8 mm ²) / 65 dB (1,13 mm ²)
from 2000 up to 3000 MHz:	60 dB

ELECTRICAL CHARACTERISTICS AT 20°C (0,8 mm²)

Frequency MHz	Attenuation dB/100 m
5	2,1
50	5,6
200	11,1
470	17
862	23
1000	24,9
1750	33,5
2150	37,4
2400	40,9
3000	45

ELECTRICAL CHARACTERISTICS AT 20°C (1,13 mm²)

Frequency MHz	Attenuation dB/100 m
5	1,5
50	4,3
200	8,1
470	12,6
862	16,9
1000	18,9
1750	25,4
2150	28,5
2400	30,2
3000	34

Part no.	Nominal cross-section no. of pairs x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
84040BWH010928	1 x 0,8	5	5	22
84050BWH010929	1 x 1,13	6,8	9	40

Other dimensions and colours available on request.

GAALNET® SAT-COAXIAL Cu 100 V

Cu - AL/PET/AL - CuSn braid - PVC, EN 50575:2014 + A1:2016, Eca

ELETTROTEK KABEL® GAALNET® SAT-COAXIAL Cu 100 V, Eca

Construction:

Conductor:	solid plain annealed copper conductor Cl. 1, 1x0,80 mm or 1x1,13 mm
Insulation:	PEE compound
Colour core:	blue
Screen:	Al/PET/Al + tinned copper braid, 40% coverage
Wrapping:	PET tape
Outer sheath:	white (similar RAL 9003), PVC compound

Features:

acc. to standard EN 50117-2-4
acc. to CPR UE 305/11, EN 50575:2014 + A1:2016, Eca
classification (CEI UNEL 35016), EN 13501-6
RoHS and CE approval



Technical data:

Nominal voltage:	100 V
Test voltage:	
0,8 mm ² :	3 kV
1,13 mm ² :	4,5 kV
Temperature range:	-20°C up to +70°C
Min. bending radius	
single bend (0,8 mm ²):	25 mm
multiple bend (0,8 mm ²):	50 mm
single bend (1,13 mm ²):	35 mm
multiple bend (1,13 mm ²):	70 mm
Tensile strength:	
0,8 mm ² :	90 N
1,13 mm ² :	150 N
Characteristic impedance:	75 Ω ± 3 Ω
Capacitance:	55 ± 2 pF/m
Velocity ratio:	85 %
Return loss (min.):	
from 5 up to 470 MHz:	28 dB (0,8 mm ²) / 30 dB (1,13 mm ²)
from 470 up to 1000 MHz:	26 dB
from 1000 up to 2000 MHz:	20 dB
from 2000 up to 3000 MHz:	18 dB
Transfer imp. (TI):	
from 5 up to 30 MHz:	max. 15 mΩ/m
Screening Att. (AS):	
from 30 up to 1000 MHz:	75 dB
from 1000 up to 2000 MHz:	80 dB
from 2000 up to 3000 MHz:	65 dB (0,8 mm ²) / 75 dB (1,13 mm ²)

ELECTRICAL CHARACTERISTICS AT 20°C (0,8 mm²)

Frequency MHz	Attenuation dB/100 m
5	2,1
50	5,6
200	11,1
470	17
862	23
1000	24,9
1750	33,5
2150	37,4
2400	40,9
3000	45

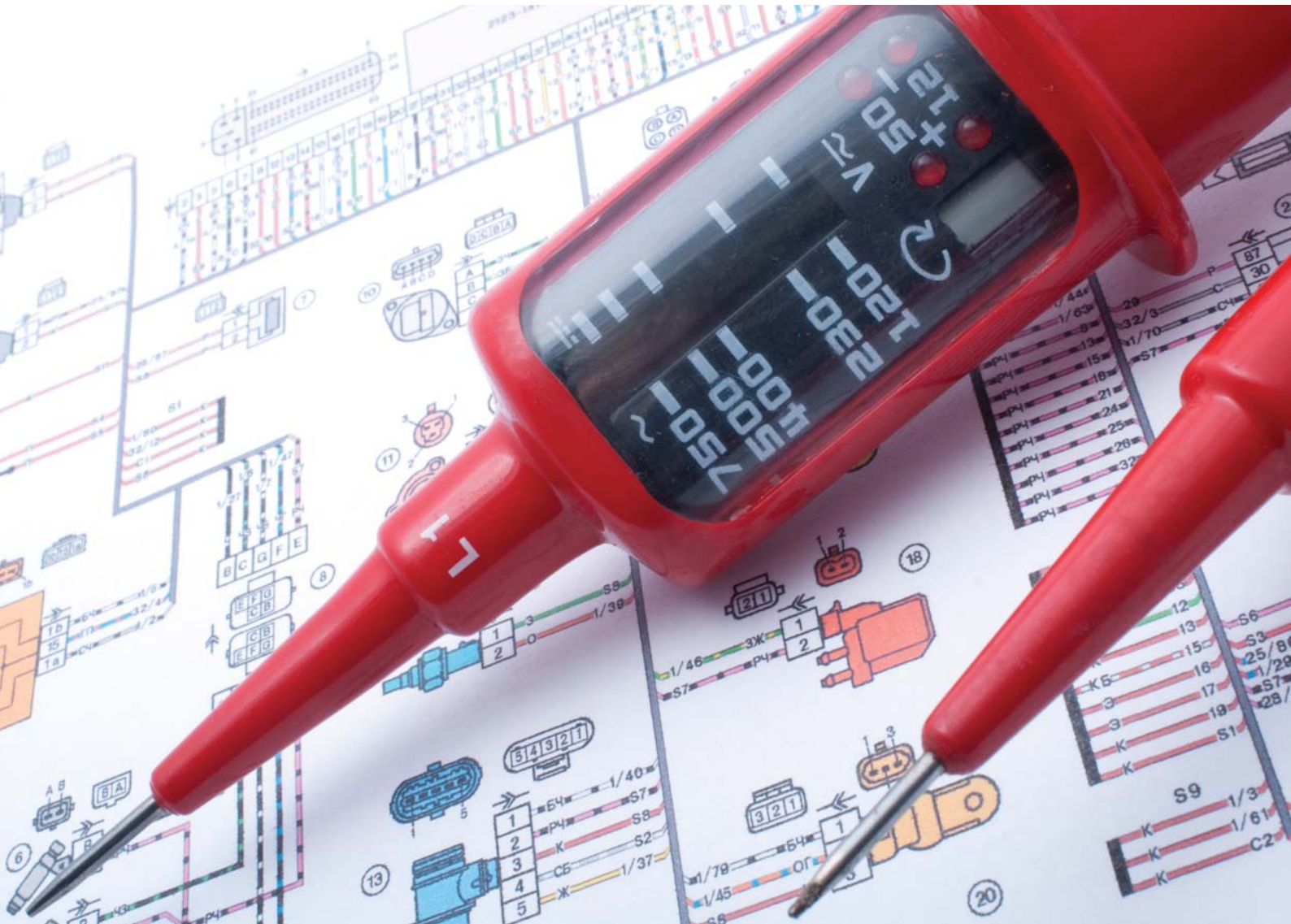
ELECTRICAL CHARACTERISTICS AT 20°C (1,13 mm²)

Frequency MHz	Attenuation dB/100 m
5	1,5
50	4,3
200	8,1
470	12,6
862	16,8
1000	18,5
1750	25,1
2150	27,9
2400	30,2
3000	33,5

Part no.	Nominal cross-section no. of pairs x mm ²	Outer-Ø ca.mm ± 10%	Copper weight kg/km	Cable weight approx. kg/km
84060BWN010930	1 x 0,8	5	9	25,9
84070BWN010924	1 x 1,13	6,7	14	43,9

Other dimensions and colours available on request.

TECHNICAL DATA



TECHNICAL DATA INDEX

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CONSTRUCTION CODE

ITALIAN SYSTEM according to UNEL 3501 I-2000	EUROPEAN SYSTEM according to CEI 20-27/CENELEC HD 361
Conductor flexibility rating	Reference standards
A Aluminum conductor	H conforms with harmonized standards
F Stranded flexible round conductor	A Suitable to IEC standard
FF Stranded very flexible round conductor	N not suitable to IEC standard
R Stranded rigid (compacted) conductor	
U Solid conductor	Rated voltage Uo/U
Type and quality of insulation	03 300/300V
E Thermoplastic polyethylene compound	05 300/500V
E4 Cross-linked polyethylene compound at 85°C	07 450/750V
G Natural and/or synthetic rubber compound at 60°C	1 600/1000V
G4 Silicone rubber compound at 180°C	Sheath insulating material
G7 High module ethylene propylene rubber compound at 90°C	B Ethylene propylene rubber at operating temperature of 60°C
G8 Ethylene propylene rubber compound at 85°C also for cables without protective covering	G Ethylene-vinyl acetylene
G9 Cross-linked elastomeric compound with low emission of smoke and toxic and corrosive gases at 90°C, also for cables without protective covering	J Glass fibre
G10 Cross-linked elastomeric compound with low emission of smoke and toxic and corrosive gases at 90°C	M Mineral
G19 Cross-linked elastomeric compound with low emission of smoke and toxic and corrosive gases at 90°C	N Polychloroprene
G20 Cross-linked insulating compound with low emission of smoke and toxic and corrosive gases at 90°C	N2 Special polychloroprene compound for welding machines cables
M9 Thermoplastic compound with low emission of smoke and toxic and corrosive gases at 70°C	N4 Chloro-sulphurine or chlorinated polyethylene
R Polyvinyl chloride compound at 70°C, T11 and T12 type	N8 Special water resistant polychloroprene compound
R2 Polyvinyl chloride compound at 70°C, R2 type	Q Polyurethane
R4 Polyamide resin compound	Q4 Polyamide
R5 Fluorocarbon resin compound	R Ethylene propylene rubber and equivalent synthetic elastomer at operating temperature of 60°C
R5F Fluorocarbon resin compound - tetrafluorine ethylene-esafuorine propylene copolymer (FEP)	S Silicone rubber
R5M Fluorocarbon resin compound - tetrafluorine ethylene-perfluorine methylvinylether copolymer (MFA)	T Textile braid (impregnated if necessary) on the cores
R5P R5P Fluorocarbon resin compound - tetrafluorine ethylene-pperfluorine propilvinylether copolymer (PFA)	T6 Textile braid (impregnated if necessary) on each cores of multicores cables
R7 Polyvinyl chloride compound at 90°C, T13 type	V Polyvinyl chloride (or PVC)
T4 Tissue impregnated with oils and resins	V2 PVC compound at operating temperature of 90°C
V Glass tissue (impregnated if necessary)	V3 PVC compound for cables installed at low temperatures
T One or more glass/mica tapes or closed braid of glass	V4 Cross-linked PVC
Screen and concentric conductors	V5 Special oil resistant PVC compound
O Concentric copper conductor	Z Cross-linked polyolefin-based compound with low emission of smoke and toxic and corrosive gases in case of combustion
H Metallized paper or carbon-copy or aluminum tape	Z1 Thermoplastic compound with low emission of smoke and toxic and corrosive gases in case of combustion
H1 Copper tape, flat wire or wire screen	Metallic covering (concentric conductors and shields)
H2 Copper braid screen	C Copper concentric conductor
H3 Double copper braid screen	C4 Copper braid screen collectively applied on the cores
H4 Longitudinal corrugated steel tape	A7 Aluminum screen
H5 Longitudinal laminated aluminum tape	C5 Copper braid screen individually applied on the cores
Armour (metallic covering)	C7 Copper tape, hot wire, or wire screen
A Smooth aluminum sheath or metallic braid screen	Armour
F Steel wire armouring	Z2 Steel wire armouring
H5 Longitudinal laminated aluminum tape armouring	Z3 Flat steel wire armouring
L Lead alloy sheath	Z4 Steel tape armouring
N Steel tape armouring	Z5 Steel wire braid
P Lead sheath	Shape and special design
Z Steel flat wires	H "Strippable" flat cables
Sheath (non metallic covering)	H2 "Not strippable" flat cables
E Thermoplastic compound, Ez type	H6 Flat cable with 3 cores or more, in conformity with HD 359 or EN 50214
E4 Cross-linked polyethylene compound, E4M type	H7 Extruded double layer insulated cable
G Natural and/or synthetic rubber compound, Gy	H8 Extensible cord
G6 Chloro-sulphurine polyethylene compound, G6M type	Extensible cord
K Neoprene or similar compound, Ky, Kn, Kz type	D Flexible conductor for arc welding machine cables acc. to HD 22 Part 6 (different flexibility from HD 383 standard, class 5)
R Polyvinyl chloride compound, TM1, TM2 type, Rz type	E Very flexible conductor for arc welding machine cables acc. to HD 22 Part 6 (different flexibility from HD 383 standard, class E)
R4 Polyamide resin compound	F Flexible conductor for a flexible cable (acc. to HD 383 standard, class 5)
M1 Thermoplastic compound with low emission of smoke and toxic and corrosive gases	H Very flexible conductors for a flexible cable (acc. to HD 383 standard, class 6)
M2 Elastomeric compound with low emission of smoke and toxic and corrosive gases, M2 type	K Flexible conductor for fixed installation (acc. to HD 383 standard, class 5)
M3 Elastomeric compound with low emission of smoke and toxic and corrosive gases, M3 type	R Stranded rigid conductor
M4 Elastomeric compound with low emission of smoke and toxic and corrosive gases, M4 type	U Rigid bare conductor
T1 Binding with glass tape	Y Copper-similar conductor
T Textile braid (impregnated if necessary)	
T2 T2 Special textile braid (impregnated if necessary)	
Cable shape	
O Assembled cores (with covering if necessary), with or without fillers to form a round cable	
D Cores as above, close together in parallel (flattened cable outside)	
X Assembled cores as above, with triplex assembly	
W Cores joined in parallel with an intermediary furrow	
W1 Cores joined in parallel with an intermediary insulating filler	
Self-supporting element	
S Metallic rope, embedded in a non-metallic sheath	
Y Textile or metallic rope among the cores or externally tied to the cable	

COSTRUCION CODE

Power cables acc. to VDE 0250	Harmonized cables acc. to VDE 0281/0282	Telecommunication cables acc. to VDE 0815/0816	Power cables acc. to VDE 0276
1. Reference standards	1. Reference standards	1. Reference standards	1. Reference standards
N according to VDE	H Harmonized type (HAR)	A outdoor cable	N according to VDE
N)/X with reference to VDE	A authorized national standards	G mining cable	(N) with reference to VDE
2. Sheath insulating material	2. Nominal voltage	J installation cable	2. Conductor
Y PVC	01 100 V	L equipment wire	- copper
4Y polyamide	03 300/300 V	S switch cable	A aluminum
5Y PTFE (teflon)	05 300/500 V	Li equipment wire with fine stranded conductor	3. Sheath insulating material
6Y FEP (teflon)	07 450/750 V	RD rhenomatic-cable	Y PVC
9Y polypropylene	11 600/1000 V	RE instrumentation cable	2Y PE
11Y polyurethane (PUR)	3. Sheath insulating material	2. Additional specifications	2X XLPE
2X XLPE	V PVC	B lightning protection	H LSOH compound
G elastomer	V2 PVC (90 °C)	J Induction protection	4. Concentric conductor
2G silicon	V3 PVC cold-resistant	E Industry-electronics	C Concentric copper conductor
3G EPR-rubber	B EPR-rubber (90 °C)	3. Sheath insulating material	CW Concentric copper conductor reversing lay up
4G EVA	G EVA	Y PVC	5. Screen
5G polychloroprene	E PE	2Y PE	S common copper shield
HX LSOH	R natural or synthetic rubber	02Y cell-PE	SE individually screened cores
3. Cable description	S silicon rubber	02YS foam-Skin	6. Metal sheath
A single-core	X XLPE	5Y PTFE (teflon)	K lead
D solid wire	Z LSOH -compound	6Y FEP (teflon)	7. Inner protection or plastic sheath (see 3.insulation materials)
AF single-core, fine stranded	4. Sheath materials	7Y ETFE (teflon)	8. Armouring
F flexible wire for fittings	V PVC	P paper	F flat steel wire
L fluorescent tube cable	V2 PVC (90 °C)	4. Special construction	R round steel wire
LH connecting cable for light mechanical load	V3 PVC cold-resistant	F petrol jelly filler	G steel tape
MH connecting cable for middle mechanical load	V4 PVC cross-linked	L aluminum sheath	9. Outer sheath (see 3.insulation materials)
SH connecting cable for, heavy mechanical load	V5 PVC oil-resistant	LD corrugated aluminum sheath	10. Protective conductor
SSH connecting cable for special mechanical load	R natural or synthetic rubber	(L) laminated aluminum sheath	-J with green/yellow core
SL control/welding cable	N chloroprene rubber	C copper braid screen	-O without green/yellow core
S control cable	N2 chloroprene rubber for welding cables	(St) screen of plastic coated aluminum foil	11. Number of cores
LS light control cable	N4 chloroprene rubber heat- resistant	(K) copper tape screen	12. Conductor form
FL flat cable	N8 chloroprene rubber (water-resistant)	(B) amouring	RE round, solid
Si silicon cable	J glass fibre braid	(Z) steel wire amouring	RM round, stranded
Z twin cable	T textile braid	(Zg) strain-bearing element with glass yarn bundles	SE sector shaped, solid
GL glass fibre	T6 textile over each core	(ZN) strain-bearing element non metallic	SM sector shaped, stranded
Li stranded wires acc.to.VDE 0812	Q polyurethane (PUR)	W corrugated steel sheath	
LIF fine stranded wires acc. to VDE 0812	Q4 polyamide	M lead sheath	
4. Special constructions	Z LSOH -compound	Mz special lead sheath	
T strength member	5. Special constructions	b amouring	
o oil-resistant	C concentric copper conductor	c jute jacket + bituminous compound	
u flame resistant	C4 copper braided screen	E compound with embedded tape	
w heat-/weather resistant	H flat, divisible cords	5. Sheathing materials (see 3.insulation materials)	
FE fire resistant	H2 flat, non divisible cords	6. Number of elements (number of stranding elements)	
C screen	H6 flat, non divisible cords for elevators	7. Stranding elements	
S steel wire armouring	H7 two-layer insulating jacket	8. Conductor diameter	
5. Sheath materials (see 2. insulation materials)	H8 helical cord	2 pair	
P polyurethane (PUR)	6. Conductor form	4 quad	
6. Protective conductor	U round, solid	6. Conductor form	
-J with green/yellow core	R round, stranded	U round, solid	
-O without green/yellow core	K fine stranded, (fixed installation)	R round, stranded	
7. Number of cores	F fine stranded (flexible cords)	K fine stranded, (fixed installation)	
8. Cross-section of conductor	H fine stranded (highly flexibile)	F fine stranded (flexible cords)	
	Y tensile conductor	H fine stranded (highly flexibile)	
	D fine stranded for welding cables	Y tensile conductor	
	E fine stranded for welding cables (highly flexibile)	D fine stranded for welding cables	
	7. Number of cores	E fine stranded for welding cables (highly flexibile)	
	8. Protective conductor	7. Number of cores	
	X without green/yellow core	8. Protective conductor	
	G with green/yellow core	9. Type of stranding	
	9. Cross-section of conductor	F star quad (railway)	
		St star quad with phantom circuit (long distance)	
		St I star quad (long distance)	
		St III star quad (subscriber line)	
		TF star quad for carrier frequency	
		PiMF pair in metal foil DIMF triple in metal foil	
		ViMF quad in metal foil	
		10. Stranding layout	
		Lg stranding in layer	
		Bd stranding in unit	

COSTRUCTION CODE

Fiber-optic cables acc. to VDE 0888	
1. Application	
J	indoor cable
A	outdoor cable
AT	outdoor cable, breakout type
A/J*	universal cable for outdoor and indoor use
ADSS*	metal-free, self-supporting overhead cable
2. Tube	
V	tight-buffer
D	loose-tube, filled
W	hollow-tube, filled
E	loose-tube, flexible
3. Constructions	
ZS	metal strain relief element/strain relief element in cable-core assembly
S	metal stranding element in cable-core assembly
F	filling compound for filling of stranding interstices in the cable-core assembly
OF	special filling compound for filling of stranding interstices
Q	longitudinal cable-core assembly water-tightness via expanding material
4. Cable sheath	
Y	PVC sheath
H	halogen-free, flame resistant plastic sheath
2Y	PE sheath
4Y	PA sheath
11Y	PUR sheath
(L)2Y	aluminum multi-layer sheath
(SR)2Y	corrugated steel tape reinforcement under PE sheath
(ZN)2Y	non-metallic strain relief element under PE sheath
(ZN)B2Y	non-metallic strain relief element and rodent-protection under PE sheath
(ZN)BH	non-metallic strain relief element and rodent-protection under halogen-free, flame resistant plastic sheath
(ZN)(L)2Y	non-metallic strain relief element under aluminum multi-layer sheath
(ZN)(SR)2Y	non-metallic strain relief element under corrugated steel tape reinforcement with PE sheath
	number of tubes with one fiber for hollow-core cables
	number of loose-tubes for number of fibers per loose-tube for loose-tube cables
5. Type	
E	single-mode fibers
G	graded-index fiber (multi-mode)
Core	Ø in µm for graded index multimode fibers or
Field	Ø in µm for single-mode fibers
	cladding Ø in µm
	coefficient of attenuation in dB/km
5. Wavelength	
B	850 nm
F	1300 nm bei G, 1310nm for E
H	1550 nm
6. Bandwidth	
	MHz * 1 km for G or coefficient of dispersion in ps/(nm* km) for E
LG	concentric, stranded
SZ	SZ-stranding

STRANDING COMPOSITION

STRAND MAKE-UP ACCORDING TO DIN VDE 0295 and IEC 60228

Cross section mm ²	Stranded wires	Multi-Stranded wires	Fine wires	Extra-fine wires
	Class 2 DIN VDE 0295		Class 5 DIN VDE 0295	Class 6 DIN VDE 0295
	1	2	3	4
	Number of single wires x wire Ø mm	Number of single wires x wire Ø mm	Number of single wires x wire Ø mm	Number of single wires x wire Ø mm
0,05				
0,08				
0,09				
0,14			± 18x0,1	± 18x0,1
0,25			± 14x0,15	± 32x0,1
0,34		7x0,25	± 19x0,15	± 42x0,1
0,38		7x0,27	± 12x0,2	± 21x0,15
0,5	7x0,30	7x0,30	± 16x0,2	± 28x0,15
0,75	7x0,37	7x0,37	± 24x0,2	± 42x0,15
1,0	7x0,43	7x0,43	± 32x0,2	± 56x0,15
1,5	7x0,52	7x0,52	± 30x0,25	± 84x0,15
2,5	7x0,67	19x0,41	± 50x0,25	± 140x0,15
4	7x0,85	19x0,52	± 56x0,3	± 224x0,15
6	7x1,05	19x0,64	± 84x0,3	± 192x0,2
10	7x1,35	49x0,51	± 80x0,4	± 320x0,2
16	7x1,70	49x0,65	± 128x0,4	± 512x0,2
25	7x2,13	84x0,62	± 200x0,4	± 800x0,2
35	7x2,52	133x0,58	± 280x0,4	± 1120x0,2
50	19x1,83	133x0,69	± 400x0,4	± 705x0,3
70	19x2,17	189x0,69	± 356x0,5	± 990x0,3
95	19x2,52	259x0,69	± 485x0,5	± 1340x0,3
120	37x2,03	336x0,67	± 614x0,5	± 1690x0,3
150	37x2,27	392x0,69	± 765x0,5	± 2123x0,3
185	37x2,52	494x0,69	± 944x0,5	1470x0,4
240	61x2,24	627x0,70	± 1225x0,5	± 1905x0,4
300	61x2,50	790x0,70	± 1530x0,5	± 2385x0,4
400	61x2,89		± 2035x0,5	
500	61x3,23		± 1768x0,6	
630	91x2,97		± 2228x0,6	

allowable maximal diameter of single wire	
nominal value mm	maximum value mm
0,2	0,21
0,25	0,26
0,3	0,31
0,4	0,41
0,5	0,51
0,6	0,51

STRANDING COMPOSITION

COPPER CONDUCTOR AND STRANDING COMPOSITION DATA

Approx outer Ø	Pounds per 1000 ft.	Circular Mils	Size AWG/CM	CONCENTRIC STRAND					ROPE LAY Concentric Strand		ROPE LAY Bunch Strand	
				Class AA	Class A	Class B	Class C	Class D	Class G	Class H	Class K 30AWG (.010")	Class M 34AWG (.0063")
.0050	.0757	25.00	36									
.0056	.0954	31.52	35									
.0063	.1203	39.75	34									
.0071	.1517	50.13	33									
.0080	.1913	63.21	32									
.0089	.2413	79.70	30									
.0100	.3042	100.5	30									
.0113	.3836	126.7	29									
.0126	.4837	159.8	28									
.0142	.6100	201.5	27									
.0159	.7692	254.1	26									
.0179	.9699	320.4	25									
.0201	1.223	404.0	24									
.0226	1.542	509.5	23									
.0254	1.945	642.4	22									
.0285	2.452	810.1	21									
.0363	3.154	1,020	20			7	19				10	26
.0456	5.015	1,620	18			7	19				16	41
.0576	7.974	2,580	16			7	19				26	65
.0726	12.68	4,110	14			7	19	37	49		41	104
.0915	20.16	6,530	12			7	19	37	49		65	186
.1160	32.06	10,380	10			7	19	37	49		104	259
.1600	40.42	13,090	9			7	19	37	49	133		
.1460	51.0	16,510	8			7	19	37	49	133	168	420
.1840	80.9	26,240	6			7	19	37	49	133	266	665
.2320	129	41,740	4	3	7	7	19	37	49	133	420	1064
.2600	162	52,620	3	3	7	7	19	37	49	133	532	1323
.2990	205	66,630	2	3	7	7	19	37	49	133	665	1666
.3320	259	83,690	1	3	7	19	37	61	133	259	836	2107
.3730	326	105,600	1/0	7	7	19	37	61	133	259	1064	2646
.4190	411	133,100	2/0	7	7	19	37	61	133	259	1323	3325
.4700	518	167,800	3/0	7	7	19	37	61	133	259	1666	4256
.5280	653	211,600	4/0	7	7	19	37	61	133	259	2107	5320
.5750	772	250,000	250,000	12	19	37	61	91	259	427	2499	6384
.6300	925	300,000	300,000	12	19	37	61	91	259	427	2989	7581
.6810	1080	350,000	350,000	12	19	37	61	91	259	427	3458	8806
.7280	1236	400,000	400,000	19	19	37	61	91	259	427	3990	10,101
.8130	1542	500,000	500,000	19	37	37	61	91	259	427	5054	12,691
.8930	1850	600,000	600,000	37	37	61	91	127	427	703	5985	14,945
.9980	2316	750,000	750,000	37	61	61	91	127	427	703	7581	18,788
1.152	3086	1,000,000	1,000,000	37	61	61	91	127	427	703	10,101	25,193

STRANDING COMPOSITION

DIMENSION AND WEIGHTS OF SOLID COPPER WIRE

Size AWG	Approximate Diameter	Circular Mils	Square Inches	Approximate Lbs/Mft
34	0,00063	39,7	0,0000312	0,120
32	0.0080	64.0	0.0000503	0.194
30	0.0100	100	0.0000785	0.303
29	0.0113	128	0.000100	0.387
28	0.0126	159	0.000125	0.481
27	0.0142	202	0.000158	0.610
26	0.0159	253	0.000199	0.765
25	0.0179	320	0.000252	0.970
24	0.0201	404	0.000317	1.22
23	0.0226	511	0.000401	1.55
22	0.0253	640	0.000503	1.94
21	0.0285	812	0.000638	2.46
20	0.0320	1020	0.000804	3.10
18	0.0403	1620	0.00128	4.92
16	0.0508	2580	0.00203	7.81
14	0.0641	4110	0.00323	12.4
12	0.0808	6530	0.00513	19.8
10	0.1019	10,380	0.00815	31.43
9	0.1144	13,090	0.01028	39.62
8	0.1285	16,510	0.01297	49.98
7	0.1443	20,820	0.01635	63.03
6	0.1620	26,240	0.02061	79.44
5	0.1819	33,090	0.02599	100.2
4	0.2043	41,740	0.03278	130.3
3	0.2294	52,620	0.04133	159.3
2	0.2576	66,360	0.05212	200.9

STRANDING-CLASS CONSTRUCTION AND USES

Concentric-lay Conductors	
Class B	Power cables
Class C	Power cables where more flexible stranding than Class B is desired
Class D	Power cables where extra flexible stranding is desired
Rope-lay and Bunch-stranded Conductors	
Class G	All cables for portable use
Class H	All cables where extreme flexibility is required, e.g. take-up reels
Class I	Apparatus cable and motor leads
Class K	Cords and cables 30 AWG copper wires - Stationary service
Class M	Cords and cables 34 AWG copper wires - Constant service

Note: Class G and H shall have concentric-lay stranded members and Class I, K and M shall have bunched stranded members.

COLOR CODE

ELETTROTEK KABEL SINGLE WIRE COLOR IDENTIFICATION

Core.no	Basic color	RAL
01	BLACK / NERO	9005
02	DARK BLUE / BLU SCURO (RAL 5010)	5010
03	BROWN / MARRONE	8003
04	GREY / GRIGIO	7000
05	YELLOW / GIALLO	1021
06	GREEN / VERDE	6018
07	VIOLET/ VIOLA	4005
08	WHITE / BIANCO	9003
09	ORANGE / ARANCIONE	2003
10	RED / ROSSO	3000
11	LIGHT BLUE / BLU CHIARO (RAL 5015)	5015
12	LIGHT BLUE / BLU CHIARO (RAL 5012)	5012
13	PINK / ROSA	3015
14	SKY BLUE/BLU SKY	5024
15	YELLOW-GREEN / GIALLO-VERDE	1021/6018
16	WHITE-DARK BLUE / BIANCO-BLU SCURO	9003/5010
17	DARK BLUE-WHITE / BLU-BIANCO	5010/9003
18	WHITE-GREY / BIANCO-GRIGIO	9003/7000
19	BLACK-GREEN / NERO-VERDE	9005/6018
20	BLACK-DARK BLUE / NERO-BLU SCURO	9005/5010
21	BLACK-WHITE / NERO-BIANCO	9005/9003
22	BLACK-VIOLET / NERO-VIOLA	9005/4005
23	BLACK-RED / NERO-ROSSO	9005/3000
24	WHITE-RED / BIANCO-ROSSO	9003/3000
25	WHITE-BROWN / BIANCO- MARRONE	9003/8003
26	DARK BLUE-RED / BLU SCURO-ROSSO	5010/3000
27	WHITE-VIOLET / BIANCO-VIOLA	9003/4005
28	WHITE-YELLOW / BIANCO-GIALLO	9003/1021
29	WHITE-GREEN / BIANCO-VERDE	9003/6018
30	WHITE-ORANGE / BIANCO-ARANCIONE	9003/2003
31	OFF WHITE GREY	9002
32	REDDISH BROWN	3016
33	BEIGE	1001
34		
35		
36		
37		
38		
39		

HD 308 S2

no. of cores	Cores with green-yellow insulated conductor (-J)	Cores without green-yellow insulated conductor (-O)
2	-	BLUE-BROWN
3	GREEN/YELLOW-BLUE-BROWN	BROWN-BLACK-GREY
4	GREEN/YELLOW-BROWN-BLACK-GREY	BLUE-BROWN-BLACK-GREY
5	GREEN/YELLOW-BLUE-BROWN-BLACK-GREY	BLUE-BROWN-BLACK-GREY-BLACK
6	GREEN-YELLOW/BLACK + WHITE PRINTED NUMBERS	BLACK + WHITE PRINTED NUMBERS

Core identification with numbers acc. to EN 50334

Number Printing used as the marking inscription for identifying the number of cores of electrical cables.
Other core colors are possible, with the exception of green and yellow.

COLOR CODE

ALARM Cables Color Identification (0,22 mm²)

Number	Color	Number	Color
1	WHITE	21	WHITE / LIGHT BLUE
2	RED	22	WHITE / PINK
3	YELLOW	23	WHITE / ORANGE
4	GREEN	24	RED / GREY
5	GREY	25	RED / BROWN
6	ORANGE	26	RED / YELLOW
7	LIGHT BLUE	27	RED / LIGHT BLUE
8	BROWN	28	RED / GREEN
9	BLACK	29	RED / ORANGE
10	VIOLET	30	RED / BLUE
11	BLUE	31	RED / BLACK
12	PINK	32	RED / PINK
13	WHITE / BROWN	33	YELLOW / BROWN
14	WHITE / VIOLET	34	YELLOW / GREEN
15	WHITE / GREEN	35	YELLOW / GREY
16	WHITE / BLUE	36	YELLOW / ORANGE
17	WHITE / GREY	37	YELLOW / LIGHT BLUE
18	WHITE / YELLOW	38	YELLOW / VIOLET
19	WHITE / BLACK	39	YELLOW / BLACK
20	WHITE / RED	40	YELLOW / BLUE

ALARM cables Supply Core Colors

Section	Color
0,50 mm ²	RED / BLACK
0,75 mm ²	RED / BLACK

Pair colors for data cables CAT. 5E & 6

Num. of pair	Color
1	BROWN / WHITE - BROWN
2	BLUE / WHITE - BLUE
3	GREEN / WHITE - GREEN
4	ORANGE / WHITE - ORANGE

DIN 47100

Number	Color	Number	Color
1	WHITE	32	YELLOW - blue
2	BROWN	33	GREEN - red
3	GREEN	34	YELLOW - red
4	YELLOW	35	GREEN - black
5	GREY	36	YELLOW - black
6	PINK	37	GREY - blue
7	BLUE	38	PINK - blue
8	RED	39	GREY - red
9	BLACK	40	PINK - red
10	VIOLET	41	GREY - black
11	GREY - pink	42	PINK - black
12	RED - blue	43	BLUE - black
13	WHITE - green	44	RED - black
14	BROWN - green	45	WHITE - brown - black
15	WHITE - yellow	46	YELLOW - green - black
16	YELLOW - brown	47	GREY - pink - black
17	WHITE - grey	48	RED - blue - black
18	GREY - brown	49	WHITE - green - black
19	WHITE - pink	50	BROWN - green - black
20	PINK - brown	51	WHITE - yellow - black
21	WHITE - blue	52	YELLOW - brown - black
22	BROWN - blue	53	WHITE - grey - black
23	WHITE - red	54	GRAY - brown - black
24	BROWN - red	55	WHITE - pink - black
25	WHITE - black	56	PINK - brown - black
26	BROWN - black	57	WHITE - blue - black
27	GREY - green	58	BROWN - blue - black
28	YELLOW - grey	59	WHITE - red - black
29	PINK - green	60	BROWN - red - black
30	YELLOW - pink	61	BLACK - white
31	GREEN - blue		

COLOR CODE

COLOUR CODE FOR CABLES JB/OB

The combination of color identification up to 101 cores consists of 11 basic colors. For core 12 cores or more, one or two additional color rings or longitudinal stripes are printed on the basic color. This ring width is approximately 2mm. The insulation of the conductor gives the first basic color.

JB COLOUR CODE

Number	Color	Number
0 GREEN/YELLOW	34 PINK/BLUE	68 ORANGE/WHITE/BLACK
1 WHITE	35 ORANGE/BLUE	69 TRANS/WHITE/BLACK
2 BLACK	36 TRANS/BLUE	70 BEIGE/WHITE/BLACK
3 BLUE	37 BEIGE/BLUE	71 BROWN/WHITE/BLUE
4 BROWN	38 GREY/BROWN	72 GREY/WHITE/BLUE
5 GREY	39 RED/BROWN	73 RED/WHITE/BLUE
6 RED	40 VIOLET/BROWN	74 VIOLET/WHITE/BLUE
7 VIOLET	41 PINK/BROWN	75 PINK/WHITE/BLUE
8 PINK	42 ORANGE/BROWN	76 ORANGE/WHITE/BLUE
9 ORANGE	43 TRANS/BROWN	77 TRANS/WHITE/BLUE
10 TRANSPARENT	44 BEIGE/BROWN	78 BEIGE/WHITE/BLUE
11 BEIGE	45 RED/GREY	79 GREY/WHITE/BROWN
12 BLACK/WHITE	46 VIOLET/GREY	80 RED/WHITE/BROWN
13 BLUE/WHITE	47 PINK/GREY	81 VIOLET/WHITE/BROWN
14 BROWN/WHITE	48 ORANGE/GREY	82 PINK/WHITE/BROWN
15 GREY/WHITE	49 TRANS/GREY	83 ORANGE/WHITE/BROWN
16 RED/WHITE	50 BEIGE/GREY	84 TRANS/WHITE/BROWN
17 VIOLET/GREY	51 ORANGE/RED	85 BEIGE/WHITE/BROWN
18 PINK/WHITE	52 TRANS/RED	86 RED/WHITE/GREY
19 ORANGE/WHITE	53 BEIGE/RED	87 VIOLET/WHITE/GREY
20 TRANS/WHITE	54 PINK/VIOLET	88 PINK/WHITE/GREY
21 BEIGE/WHITE	55 ORANGE/VIOLET	89 ORANGE/WHITE/GREY
22 BLUE/BLACK	56 TRANS/VIOLET	90 TRANS/WHITE/GREY
23 BROWN/BLACK	57 BEIGE/VIOLET	91 BEIGE/WHITE/GREY
24 GREY/BLACK	58 TRANS/PINK	92 BLUE/WHITE/RED
25 RED/BLACK	59 BEIGE/PINK	93 BROWN/WHITE/RED
26 VIOLET/BLACK	60 TRANS/ORANGE	94 VIOLET/WHITE/RED
27 PINK/BLACK	61 BEIGE/ORANGE	95 PINK/WHITE/RED
28 ORANGE/BLACK	62 BLUE/WHITE/BLACK	62 BLUE/WHITE/BLACK
29 TRANS/BLACK	63 BROWN/WHITE/BLACK	97 BROWN/WHITE/VIOLET
30 BEIGE/BLACK	64 GREY/WHITE/BLACK	98 ORANGE/WHITE/VIOLET
31 BROWN/BLUE	65 RED/WHITE/BLACK	99 BROWN/BLACK/BLUE
32 GREY/BLUE	66 VIOLET/WHITE/BLACK	100 GREY/BLACK/BLUE
33 RED/BLUE	67 PINK/WHITE/BLACK	101 RED/BLACK/BLUE

COLOR CODE

The cores are to be counted continuously through all layers at the same direction, beginning with the inner layer and working towards the outside layer

OB COLOUR CODE

Number	Color	Number
1 WHITE	35 ORANGE/BLUE	69 TRANS/WHITE/BLACK
2 BLACK	36 TRANS/BLUE	70 BEIGE/WHITE/BLACK
3 BLUE	37 BEIGE/BLUE	71 BROWN/WHITE/BLACK
4 BROWN	38 GREY/BROWN	72 GREY/WHITE/BLUE
5 GREY	39 RED/BROWN	73 RED/WHITE/BLUE
6 RED	40 VIOLET/BROWN	74 VIOLET/WHITE/BLUE
7 VIOLET	41 PINK/BROWN	75 PINK/WHITE/BLUE
8 PINK	42 ORANGE/BROWN	76 ORANGE/WHITE/BLUE
9 ORANGE	43 TRANS/BROWN	77 TRANS/WHITE/BLUE
10 TRANSPARENT	44 BEIGE/BROWN	78 BEIGE/WHITE/BLUE
11 BEIGE	45 RED/GREY	79 GREY/WHITE/BROWN
12 BLCK/WHITE	46 RED/GREY	80 RED/WHITE/BROWN
13 BLUE/WHITE	47 PINK/GREY	81 VIOLET/WHITE/BROWN
14 BROWN/WHITE	48 ORANGE/GREY	82 PINK/WHITE/BROWN
15 GREY/WHITE	49 TRANS/GREY	83 ORANGE/WHITE/BROWN
16 RED/WHITE	50 BEIGE/GREY	84 TRANS/WHITE/BROWN
17 VIOLET/GREY	51 ORANGE/RED	85 BEIGE/WHITE/BROWN
18 PINK/WHITE	52 TRANS/RED	86 RED/WHITE/GREY
19 ORANGE/WHITE	53 BEIGE/RED	87 VIOLET/WHITE/GREY
20 TRANS/WHITE	54 PINK/VIOLET	88 PINK/WHITE/GREY
21 BEIGE/WHITE	55 ORANGE/VIOLET	89 ORANGE/WHITE/GREY
22 BLUE/BLACK	56 TRANS/VIOLET	90 TRANS/WHITE/GREY
23 BROWN/BLACK	57 BEIGE/VIOLET	91 BEIGE/WHITE/GREY
24 GREY/BLACK	58 TRANS/PINK	92 BLUE/WHITE/RED
25 RED/BLACK	59 BEIGE/PINK	93 BROWN/WHITE/RED
26 VIOLET/BLACK	60 TRANS/ORANGE	94 VIOLET/WHITE/RED
27 PINK/BLACK	61 BEIGE/ORANGE	95 PINK/WHITE/RED
28 ORANGE/BLACK	62 BLUE/WHITE/BLACK	96 ORANGE/WHITE/RED
29 TRANS/BLACK	63 BROWN/WHITE/BLACK	97 BROWN/WHITE/VIOLET
30 BEIGE/BLACK	64 GREY/WHITE/BLACK	98 ORANGE/WHITE/VIOLET
31 BROWN/BLUE	65 RED/WHITE/BLACK	99 BROWN/BLACK/BLUE
32 GREY/BLUE	66 VIOLET/WHITE/BLACK	100 GREY/BLACK/BLUE
33 RED/BLUE	67 PINK/WHITE/BLACK	101 RED/BLACK/BLUE
34 PINK/BLUE	68 ORANGE/WHITE/BLACK	

COLOR CODE

DIN 0815

1. Color coding for installation cables

J-Y(St)Y ... Lg

Cables with two-pairs		
pair 1	A-RED	B-BLACK
pair 2	A-WHITE	B-YELLOW

For cables with more than 2 pairs

The color of the a-core in the first pair of each layer is red ("counting" pair), in all other pairs it is white.

The color of the b-core is blue, yellow, green, brown, black in repeating order as follows:

color of b-core	Nr. of pair									
blue	1	6	11	16	21	26	31	36	41	46
yellow	2	7	12	17	22	27	32	37	42	47
green	3	8	13	18	23	28	33	38	43	48
brown	4	9	14	19	24	29	34	39	44	49
black	5	10	15	20	25	30	35	40	45	50

blue	51	56	61	66	71	76	81	86	91	96
yellow	52	57	62	67	72	77	82	87	92	97
green	53	58	63	68	73	78	83	88	93	98
brown	54	59	64	69	74	79	84	89	94	99
black	55	60	65	70	75	80	85	90	95	100

2. Color coding for installation cables

JE-Y(St)Y... Bd JE-LiYCY mBd JE-H(St)H Bd JE-LIHCH Bd RD-Y(St)Y AJ-Y(St)YDY Bd Si

For two-pair cable		
pair 1	A-BLUE	B-RED
pair 2	A-GREY	B-YELLOW

For cables with more than 2 pairs.
Color of basic insulation of pairs in one bunch:

Pair	1		2		3		4	
	a	b	a	b	a	b	a	b
colour	BLUE	RED	GREY	YELLOW	GREEN	BROWN	WHITE	BLACK

For identification of bunches, cores are marked with black rings and bunches are wrapped by a colored tape.



FLAMABILITY TEST

Examination of the vertical flame length, test method I kV - flame with gas/air mixture

Description	VDE 0482 part. 265-2-1, EN 50265-2-1 and IEC 60332-1	VDE 0482 part. 265-2-2, EN 50265-2-2 and IEC 60332-2
Length of sample	600 mm	600 mm
Burner	Acc. to EN 60695-2-4-1	Acc. to VDE 0482 part. 265-1 and EN 50265-1
Test temperature	1 kW flame	Defined by the stipulated setting of the Flame length
Position of sample	Vertical	Vertical
Position of flame	45° to vertical sample	45° to vertical sample
Duration of flame	See table 1	20 seconds
Conditions	Cable must be self-extinguishing. The damage or carbonization may only reach max. 50 mm under the upper fixing clamp.	Cable must be self-extinguishing. The damage or carbonization may only reach max. 10 mm under the upper fixing clamp.

Table 1

outer diameter * of sample in mm	
Nominal value	Duration of flame test in seconds
$D \leq 25$	60
$25 < D \leq 50$	120
$50 < D \leq$	240
$D > 75$	480

* If the insulated cables are not round (i.e. flat cables), dimensions must be measured to determine an equivalent diameter.



FLAMABILITY TEST

Description	UL 1581 section 1080 (VW-I Flame test)
Length of sample	455 mm
Burner	Bunsen burner with added air supply Ø 9,5 mm
Test temperature	500 W flame
Position of sample	Vertical
Position of flame	20° to vertical sample
Duration of flame	Five 15 second trials with 15 seconds between each flame test
Conditions	Paper (25% carbonized) The sample may keep on burning for a maximum of 1 minute after any application. Material droppings must not ignite the cotton lying under the sample.

Description	UL 1581 section 1061 (Cable Flame Test)
Length of sample	455 mm
Burner	Bunsen burner with added air supply Ø 9,5 mm
Test temperature	500 W flame
Position of sample	Vertical
Position of flame	20° to vertical sample
Duration of flame	Three 60 seconds trials with 30 seconds between each flame test
Conditions	Paper (25% carbonized) The sample may keep on burning for a maximum of 1 minute after any application. Material droppings must not ignite the cotton lying under the sample.

Description	UL 1581 section 1060 (Vertical Flame and FT I Test)
Length of sample	455 mm
Burner	Bunsen burner with added air supply Ø 9,5 mm
Test temperature	500 W flame
Position of sample	Vertical
Position of flame	20° to vertical sample
Duration of flame	Five 15 seconds trials with 15 seconds between each flame test
Conditions	Paper (25% carbonized) The sample may keep on burning for a maximum of 1 minute after any application.

FLAMABILITY TEST

Assessment of the vertical flame length for vertical extended bundle of insulated cables

Description	IEC 60332-3, EN 50266, DIN VDE 0482 part. 266
Length of sample	3500 mm
Burner	Flat burner (Ribbon gas burner)
Test temperature	500 W flame
Position of sample	Vertical
Position of flame	Horizontal
Duration of flame	Category A, B: 40 minutes Category C, D: 20 minutes
Conditions	The burned portion of the sample must be shorter than 2,5 m measured from the bottom edge of the burner, unless specified otherwise.

	EN 60332-	IEC 60332-
Category A-7 l/m	3/22	3/22
Category B-3,5 l/m	3/23	3/23
Category C-1,5 l/m > 12 mm cable-ø	3/24	3/24
Category D-0,5 l/m ≤ 12 mm cable-ø	3/25	3/25
Volume % of non metallic material x meter		



FLAMABILITY TEST

Tests for electric cables under fire conditions - Circuits integrity

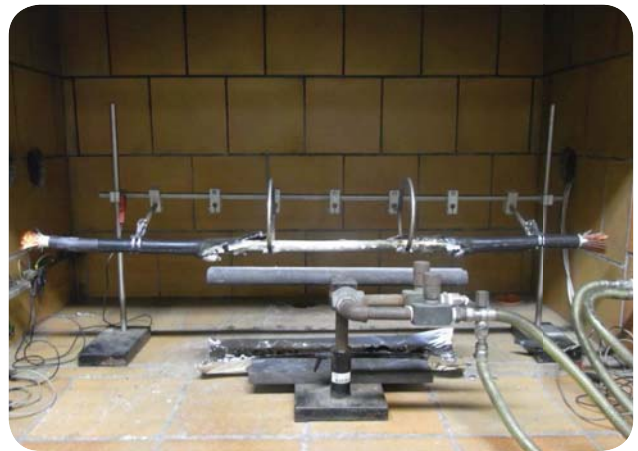
Description:	IEC 60331, CEI 20-36
	This test serves to verify the circuit can remain integral even during a fire. A sample of cable is held on an open flame at 750°C for a minimum period of 90 min, under the rated voltage. No break or short circuit should occur during the test in order to receive the rating. The test can also be performed with temperatures up to 1100 °C. Likewise, fibre optic cables can be tested in the same conditions while monitoring the attenuation of the signal of one or more fibres.
Classification:	IEC 60331-21 - CEI 20-36/2-1 - Electrical cables up to 0,6/1 kV IEC 60331-23 - CEI 20-36/2-3 - Data cables IEC 60331-25 - CEI 20-36/2-5 - Fibre optic cables

Tests for electric cables under fire conditions - Circuits integrity - part.2

Description:	IEC 60331-2
	Test method for fire with shock at a temperature of at least 830 °C for cables of rated voltage up to 0,6/1 kV and with an overall diameter not exceeding 20 mm
Test temperature:	830°C (+40/-0°C)
Duration:	30*, 60, 90, 120 min (*with water spray BS EN 50200 annex E)
Mechanical shocks:	every 5 min.
Water spray:	0,8 lt/min. (last 15 min.) (with water spray BS EN 50200 annex E)

Tests for electric cables under fire conditions - Circuits integrity - part. I

Description:	IEC 60331-1
	Test method for fire with shock at a temperature of at least 830 °C for cables of rated voltage up to 0,6/1 kV and with an overall diameter exceeding 20 mm
Test temperature:	830°C (+40/-0°C)
Duration:	60, 90, 120 min
Mechanical shocks:	every 5 min.



Fire Resistance

Description:	BS EN 50200
	This test serves to verify the circuit integrity of cables while exposed to fire at 830°C as well as mechanical shocks.
Classification:	PH 15 - flame exposure for 15 min. PH 30 - flame exposure for 30 min. PH 60 - flame exposure for 60 min. PH 90 - flame exposure for 90 min. PH 120 - flame exposure for 120 min.

Description	NF C 32-070 "CI"
Length of sample	1600 mm
Test temperature	+ 830°C +/- 50°C
Position of sample	Vertical in the chimney
Duration of test	30 minutes
Conditions	The outstanding cable above the chimney may not be damaged

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