INDUSTRIAL CABLES SLOVAKIA

PRODUCT CATALOGUE

2021

Schwechater Kabelwerke GmbH

The expert contact partners offering
a complete range of cables in Schwechat / Austria.
Top supplier. Expert partner.

PRAKAB PRAŽSKÁ KABELOVNA, s.r.o.

The high-quality manufacturers of power
and railway signalling cables in Prague / Czech Republic.
Experienced manufacturer. Extensive know-how.

TOV Interkabel Kiev

The top quality manufacturers of power
and safety cables in Kiev / Ukraine.
European standard. FRNC specialist.

ICS Industrial Cables Slovakia, spol. s r.o.

The flexible specialists for high-quality
industrial cables in Nitra / Slovakia.
Flexible solutions. Innovative partner.

SKG Netzwerktechnik GmbH
FCS Fiber-Components-Slovakia s.r.o.

The specialists for data network engineering
and fibre optic connectivity in Schwechat & Nitra.
Flexible solutions. Top quality.

A GROUP OF **PASSION AND SKILLS.**

INDUSTRIAL CABLES SLOVAKIA

We keep your device's pulse

Established in 2006 and located in Nitra / Slovakia, we produce a broad range of highly flexible cables. Since that time our team gained considerable experience in the design, development and production of special cables for various applications.

We are glad to provide you with a versatile range of our products in this brand-new catalogue design. Our objective is to provide you with the most updated information in a modern and new way.

Except our already traditional products for drag chain and motor power supply applications, which you can find in the automation and motor supply section, we would like to draw your attention to some new product groups. We are proud of our ADR approved cables for wiring of electrical installation in commercial vehicles and for connection between towing and towed vehicles. Our 400 Hz charging cables for aircrafts are described in the airport cables section. Do not miss the special cables section where you will find, for example, our new EVC charging cables as well as reeling cables. Our goal is to offer you a full range of AC and DC cables as per latest revision of international standards EN 50620 and IEC 62893.

The quality of our products is assured both by our quality management system according to ISO 9001 and our stringent in-house testing and industry certification. This is evidenced by increasing number of certified products according to ÖVE, UL/CSA, TÜV-ADR and VDE standards.

A state of the art production site, as well as young and well educated team can be taken as guarantee for high quality of supplied products.

Benefit from our experience!
Faithfully yours,
ICS team

Scan this QR code and browse/download
the most up-to-date version of our catalogue.
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of the sister companies of SKB-GROUP!

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FLEXICS® 11

PVC/PUR control cable, unscreened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polyvinyl chloride (PVC)
3 I Cores are stranded in layers with optimal lay-length
4 I Non-woven tape separation (optional)
5 I Special polyurethane (PUR) outer sheath, colour: grey (RAL 7001)

APPLICATION

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

TECHNICAL DATA

Standard:
based on VDE 0285

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -40 °C up to 80 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 4 x Ø of cable
flexible use: 12.5 x Ø of cable

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® 11			
3 G 0.5	5.1	14.4	55
4 G 0.5	5.7	19.2	62
5 G 0.5	6.2	24.0	75
7 G 0.5	7.2	33.6	90
10 G 0.5	8.8	48.0	120
12 G 0.5	9.1	58.0	135
18 G 0.5	10.7	86.4	205
25 G 0.5	13.2	120.0	270
34 G 0.5	14.7	163.0	380
42 G 0.5	15.8	202.0	415
2 x 0.75	5.4	14.4	44
3 G 0.75	5.7	21.6	53
4 G 0.75	6.2	29.0	64
5 G 0.75	6.8	36.0	76
7 G 0.75	8.1	50.0	96
10 G 0.75	9.6	72.0	140
12 G 0.75	9.9	86.0	170
18 G 0.75	11.9	130.0	260

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® 11

PVC/PUR control cable, unscreened

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® 11			
25 G 0.75	14.5	180.0	282
34 G 0.75	16.3	245.0	475
42 G 0.75	17.7	302.0	600
2 x 1	6.9	19.2	72
3 G 1	7.3	29.0	85
4 G 1	8.1	38.4	106
5 G 1	9.0	48.0	130
7 G 1	9.8	67.0	162
10 G 1	12.8	96.0	242
12 G 1	13.0	115.0	265
18 G 1	15.5	173.0	386
25 G 1	18.7	240.0	532
34 G 1	21.5	326.0	750
42 G 1	25.6	480.0	1100
50 G 1	27.5	586.0	1266
2 x 1.5	6.2	28.8	68
3 G 1.5	6.6	43.0	87
4 G 1.5	7.2	58.0	106
5 G 1.5	8.2	72.0	131
7 G 1.5	9.8	101.0	173
12 G 1.5	12.0	173.0	293
18 G 1.5	14.5	259.0	454
25 G 1.5	17.8	360.0	641
30 G 1.5	18.0	410.0	800
2 x 2.5	7.8	48.0	110
3 G 2.5	8.3	72.0	146
4 G 2.5	9.2	96.0	183
5 G 2.5	10.1	120.0	222
7 G 2.5	12.3	168.0	293
12 G 2.5	15.3	288.0	512
4 G 4	11.0	154.0	291
5 G 4	12.7	192.0	355
7 G 4	14.0	269.0	503
4 G 6	13.4	230.0	468
5 G 6	14.9	288.0	570
7 G 6	16.5	403.0	808
4 G 10	16.9	384.0	720
5 G 10	18.7	480.0	894
7 G 10	20.9	672.0	1295
4 G 16	19.8	614.0	1063

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® 11C

PVC/PUR control cable, screened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polyvinyl chloride (PVC)
3 I Cores are stranded in layers with optimal lay-length
4 I Non-woven tape separation
5 I Inner sheath of special compound based on polyvinyl chloride (PVC)
6 I Tinned copper wire braiding
7 I Non-woven tape separation over braiding (optional)
8 I Special polyurethane (PUR) outer sheath, colour: grey (RAL 7001)

TECHNICAL DATA

Standard:
based on VDE 0285

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -40 °C up to 80 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 6 x Ø of cable
flexible use: 20 x Ø of cable

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

APPLICATION

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® 11C			
2 x 0.75	7.4	45	85
3 G 0.75	7.9	52	99
4 G 0.75	8.4	77	114
5 G 0.75	8.9	84	130
7 G 0.75	9.7	92	161
12 G 0.75	12.3	138	245
18 G 0.75	14.5	219	354
25 G 0.75	16.6	277	463
34 G 0.75	18.9	420	598
41 G 0.75	20.6	500	725
2 x 1	7.9	50	97
3 G 1	8.2	77	111
4 G 1	8.7	87	129
5 G 1	9.5	90	152

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FLEXICS® 11C

PVC/PUR control cable, screened

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® 11C			
7 G 1	10.2	110	184
12 G 1	13.3	194	306
18 G 1	15.5	267	417
25 G 1	17.5	379	541
34 G 1	20.3	516	735
41 G 1	22.0	610	860
2 x 1.5	8.5	77	116
3 G 1.5	8.9	85	135
4 G 1.5	9.6	100	162
5 G 1.5	10.3	120	187
7 G 1.5	11.3	152	236
12 G 1.5	14.8	267	392
18 G 1.5	17.2	400	536
25 G 1.5	20.1	572	742
34 G 1.5	21.9	754	960
41 G 1.5	24.7	874	1118
3 G 2.5	10.3	121	191
4 G 2.5	11.3	163	232
5 G 2.5	12.6	199	282
7 G 2.5	13.9	261	370
12 G 2.5	17.2	470	580
4 G 4	13.4	238	345
5 G 4	14.7	279	412
4 G 6	15.8	318	483
5 G 6	17.3	370	576
4 G 10	19.0	558	733
4 G 16	22.2	804	1340

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® 1111

PUR/PUR control cable, unscreened

DESIGN

1 I Bare copper conductors, fine wires class 5 or super fine wires class 6 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound of polyurethane (PUR)
3 I Cores are stranded together with optimal lay-length
4 I Special polyurethane (PUR) outer sheath, colour: grey (RAL 7001), orange (RAL 2003) or black (RAL 9005)

APPLICATION

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

TECHNICAL DATA

Standard:
based on VDE 0285

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 3000 V / 50 Hz

Temperature range:
fixed installation: -50 °C up to 80 °C
flexible use: -40 °C up to 80 °C

Bending radius (min.):
fixed installation: 4 x Ø of cable
flexible use: 15 x Ø of cable

Core identification:
colours according to CENELEC HD 308 S2

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® 1111			
2 x 1	7.2	19.2	64
3 G 1	7.6	29.0	77
4 G 1	8.5	38.4	96
5 G 1	9.2	48.0	120
2 x 1.5	8.0	28.8	81
3 G 1.5	8.7	43.0	105
4 G 1.5	9.6	58.0	135
5 G 1.5	10.8	72.0	159
3 G 2.5	10.9	72.0	173
4 G 2.5	11.9	96.0	204
5 G 2.5	13.2	120.0	254

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® 1111C

PUR/PUR control cable, screened

DESIGN

1 I Bare copper conductors, fine wires class 5 or super fine wires class 6 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound of polyurethane (PUR)
3 I Cores are stranded together with optimal lay-length
4 I Wrapping with plastic tape
5 I Tinned copper wire braiding
6 I Non-woven tape separation over braiding (optional)
7 I Special polyurethane (PUR) outer sheath, colour: grey (RAL 7001), orange (RAL 2003) or black (RAL 9005)

APPLICATION

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

TECHNICAL DATA

Standard:
based on VDE 0285

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 3000 V / 50 Hz

Temperature range:
fixed installation: -50 °C up to 80 °C
flexible use: -40 °C up to 80 °C

Bending radius (min.):
fixed installation: 4 x Ø of cable
flexible use: 15 x Ø of cable

Core identification:
colours according to CENELEC HD 308 S2

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® 1111C			
2 x 1	7.5	32	80
3 G 1	7.8	56	95
4 G 1	8.8	66	106
5 G 1	9.5	95	149
2 x 1.5	8.8	43	101
3 G 1.5	9.0	71	125
4 G 1.5	10.0	86	150
5 G 1.5	10.8	102	159
3 G 2.5	11.0	146	169
4 G 2.5	12.2	150	225
5 G 2.5	13.5	200	275

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® CHAIN

PVC/PVC drag chain cable, unscreened

DESIGN

1 | Bare copper conductors, super fine wires class 6 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 | Core insulation of special compound based on polyvinyl chloride (PVC)
3 | Cores stranded in layers with short lay-lengths
4 | Non-woven wrapping over each stranding layer
5 | Outer sheath of special compound based on polyvinyl chloride (PVC), colour: grey (RAL 7001)

APPLICATION

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

TECHNICAL DATA

Standard:
based on VDE 0285

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -30 °C up to 80 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 7.5 x Ø of cable
flexible use: 10 x Ø of cable

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

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

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

Number of cores x nominal cross-section (mm²)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHAIN			
2 x 0.5	5.2	9.7	32
3 G 0.5	5.5	14.4	41
4 G 0.5	6.1	19.0	52
5 G 0.5	6.6	24.0	64
7 G 0.5	8.0	33.6	92
12 G 0.5	9.6	58.0	128
18 G 0.5	11.5	86.0	195
25 G 0.5	14.2	120.0	284
2 x 0.75	5.7	14.4	39
3 G 0.75	6.2	21.6	51
4 G 0.75	6.8	29.0	65
5 G 0.75	7.4	36.0	80
7 G 0.75	8.9	50.0	117
12 G 0.75	10.5	86.0	169
18 G 0.75	12.7	130.0	254
25 G 0.75	15.8	180.0	376
2 x 1	6.0	19.2	46

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® CHAIN

PVC/PVC drag chain cable, unscreened

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHAIN			
3 G 1	6.6	29.0	60
4 G 1	7.3	38.4	78
5 G 1	7.9	48.0	96
7 G 1	9.6	67.0	144
12 G 1	11.4	115.0	205
18 G 1	13.9	173.0	314
25 G 1	17.6	240.0	498
2 x 1.5	6.7	28.8	60
3 G 1.5	7.4	43.0	80
4 G 1.5	8.1	48.0	102
5 G 1.5	9.1	72.0	130
7 G 1.5	10.8	101.0	192
12 G 1.5	13.0	173.0	273
18 G 1.5	15.6	259.0	417
25 G 1.5	19.8	360.0	632
3 G 2.5	9.0	72.0	128
4 G 2.5	10.0	96.0	161
5 G 2.5	11.2	120.0	205
7 G 2.5	13.5	168.0	300
12 G 2.5	16.0	288.0	440
18 G 2.5	20.4	432.0	703
25 G 2.5	24.7	600.0	1054
3 G 4	10.6	115.0	176
4 G 4	11.8	154.0	227
5 G 4	13.5	192.0	298
7 G 4	18.6	269.0	446
3 G 6	13.0	173.0	280
4 G 6	14.2	230.0	358
7 G 6	19.8	403.0	614

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® CHAIN C

PVC/PVC drag chain cable, screened

DESIGN

1 I Bare copper conductors, super fine wires class 6 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polyvinyl chloride (PVC)
3 I Cores stranded in layers with short lay-lengths
4 I Non-woven wrapping over each stranding layer
5 I Inner sheath of special compound based on polyvinyl chloride (PVC)
6 I Tinned copper wire braiding
7 I Non-woven tape separation over braiding (optional)
8 I Outer sheath of special compound based on polyvinyl chloride (PVC), colour: grey (RAL 7001)

APPLICATION

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

TECHNICAL DATA

Standard:
based on VDE 0285

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -30 °C up to 80 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 7.5 x Ø of cable
flexible use: 10 x Ø of cable

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

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

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

Number of cores x nominal cross-section (mm²)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHAIN C			
2 x 0.5	6.9	33	73
3 G 0.5	7.3	39	84
4 G 0.5	7.9	46	98
5 G 0.5	8.6	54	110
7 G 0.5	9.8	70	141
12 G 0.5	11.5	100	201
18 G 0.5	13.4	153	285
25 G 0.5	15.9	202	394
2 x 0.75	7.3	39	85
3 G 0.75	7.8	48	98
4 G 0.75	8.4	59	116
5 G 0.75	9.0	69	128
7 G 0.75	10.7	90	178
12 G 0.75	12.5	129	253

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® CHAIN C

PVC/PVC drag chain cable, screened

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHAIN C			
18 G 0.75	14.9	205	367
25 G 0.75	17.4	271	496
2 x 1	7.7	46	97
3 G 1	8.2	57	116
4 G 1	8.9	70	134
5 G 1	9.8	81	154
7 G 1	11.4	110	207
12 G 1	13.4	182	314
18 G 1	16.1	254	443
25 G 1	18.8	365	612
2 x 1.5	8.4	58	117
3 G 1.5	9.0	75	139
4 G 1.5	9.9	91	169
5 G 1.5	10.9	112	201
7 G 1.5	12.7	145	262
12 G 1.5	15.2	247	404
18 G 1.5	17.8	348	560
25 G 1.5	21.2	498	788
3 G 2.5	11.0	119	206
4 G 2.5	11.9	161	244
5 G 2.5	13.2	194	306
7 G 2.5	15.8	262	418
12 G 2.5	20.4	410	690
18 G 2.5	24.0	562	994
25 G 2.5	28.2	778	1420
4 G 4	13.7	238	360
5 G 4	15.3	280	430
7 G 4	20.0	352	670
4 G 6	16.1	318	514
7 G 6	23.0	528	862

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® CHAIN 11

PVC/PUR drag chain cable, unscreened

DESIGN

1 I Bare copper conductors, super fine wires class 6 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polyvinyl chloride (PVC)
3 I Cores stranded in layers with short lay-lengths
4 I Non-woven wrapping over each stranding layer
5 I Special polyurethane (PUR) outer sheath, colour: grey (RAL 7001)

APPLICATION

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

TECHNICAL DATA

Standard:
based on VDE 0285

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -30 °C up to 80 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 7.5 x Ø of cable
flexible use: 10 x Ø of cable

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

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

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

Number of cores x nominal cross-section (mm²)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHAIN 11			
3 G 0.5	5.7	14.4	39
4 G 0.5	6.3	19.0	51
5 G 0.5	6.7	24.0	62
7 G 0.5	8.0	33.6	90
12 G 0.5	9.6	58.0	125
18 G 0.5	11.5	86.0	191
25 G 0.5	14.2	120.0	280
2 x 0.75	5.7	14.4	38
3 G 0.75	6.2	21.6	50
4 G 0.75	6.8	29.0	64
5 G 0.75	7.4	36.0	78
7 G 0.75	8.9	50.0	115
12 G 0.75	10.5	86.0	166
18 G 0.75	12.7	130.0	249
25 G 0.75	15.6	180.0	356
2 x 1	6.0	19.2	44
3 G 1	6.6	29.0	59

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® CHAIN 11

PVC/PUR drag chain cable, unscreened

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHAIN 11			
4 G 1	7.3	38.4	76
5 G 1	7.9	48.0	94
7 G 1	9.6	67.0	141
12 G 1	11.4	115.0	201
18 G 1	13.9	173.0	310
25 G 1	17.4	240.0	490
34 G 1	18.4	326.0	776
50 G 1	21.7	4802.0	1092
65 G 1	30.9	624.0	1400
2 x 1.5	6.7	28.8	59
3 G 1.5	7.4	43.0	78
4 G 1.5	8.1	58.0	100
5 G 1.5	9.1	72.0	128
7 G 1.5	10.8	101.0	189
12 G 1.5	13.0	173.0	269
18 G 1.5	15.6	259.0	415
25 G 1.5	19.4	360.0	628
34 G 1.5	20.6	490.0	1048
42 G 1.5	22.4	605.0	1290
50 G 1.5	24.2	720.0	1520
3 G 2.5	9.0	72.0	126
4 G 2.5	10.0	96.0	158
5 G 2.5	11.2	120.0	201
7 G 2.5	13.5	168.0	295
12 G 2.5	16.0	288.0	436
18 G 2.5	20.4	432.0	696
25 G 2.5	24.7	600.0	1042
3 G 4	10.6	115.0	175
4 G 4	12.0	154.0	224
5 G 4	13.5	192.0	292
7 G 4	18.6	269.0	440
3 G 6	13.0	173.0	276
4 G 6	14.2	230.0	352
7 G 6	19.8	403.0	608
3 G 10	16.2	288.0	660
4 G 10	18.1	384.0	750
5 G 10	20.3	480.0	990
7 G 10	24.3	672.0	1300
4 G 16	21.1	614.0	1200
5 G 16	23.5	768.0	1500

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® CHAIN 11C

PVC/PUR drag chain cable, screened

DESIGN

1 I Bare copper conductors, super fine wires class 6 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polyvinyl chloride (PVC)
3 I Cores stranded in layers with short lay-lengths
4 I Non-woven wrapping over each stranding layer
5 I Inner sheath of special compound based on polyvinyl chloride (PVC)
6 I Tinned copper wire braiding
7 I Non-woven wrapping over braiding
8 I Special polyurethane (PUR) outer sheath, colour: grey (RAL 7001)

APPLICATION

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

TECHNICAL DATA

Standard:
based on VDE 0285

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -30 °C up to 80 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 7.5 x Ø of cable
flexible use: 10 x Ø of cable

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

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

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

Number of cores x nominal cross-section (mm²)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHAIN 11C			
3 G 0.5	7.3	39	80
4 G 0.5	7.9	46	94
5 G 0.5	8.5	54	106
7 G 0.5	9.8	70	139
12 G 0.5	11.5	100	194
18 G 0.5	13.4	153	182
25 G 0.5	15.9	202	390
3 G 0.75	7.8	48	92
4 G 0.75	8.4	59	112
5 G 0.75	9.0	69	124
7 G 0.75	10.7	90	168
12 G 0.75	12.5	129	253
18 G 0.75	14.9	205	356
25 G 0.75	17.4	271	479

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® CHAIN 11C

PVC/PUR drag chain cable, screened

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHAIN 11C			
2 x 1	7.7	46	92
3 G 1	8.2	57	100
4 G 1	8.9	70	129
5 G 1	9.8	81	154
7 G 1	11.4	110	198
12 G 1	13.4	182	300
18 G 1	16.1	254	429
25 G 1	18.8	365	590
34 G 1	23.3	478	825
41 G 1	25.1	576	980
50 G 1	27.6	702	1160
2 x 1.5	8.4	58	112
3 G 1.5	9.0	75	133
4 G 1.5	9.9	91	162
5 G 1.5	10.9	112	188
7 G 1.5	12.7	145	251
12 G 1.5	15.2	247	378
18 G 1.5	17.8	348	536
25 G 1.5	21.2	498	766
34 G 1.5	26.1	702	1180
42 G 1.5	27.8	867	1458
50 G 1.5	30.3	1033	1857
3 G 2.5	11.0	119	198
4 G 2.5	11.9	161	233
5 G 2.5	13.2	194	294
7 G 2.5	15.8	262	399
12 G 2.5	20.4	410	582
18 G 2.5	24.0	562	989
25 G 2.5	28.2	778	1400
4 G 4	13.7	238	348
5 G 4	15.3	280	420
7 G 4	20.0	352	651
4 G 6	16.1	318	499
7 G 6	23.0	528	844
3 G 10	20.4	370	855
4 G 10	23.0	485	1140
5 G 10	25.3	610	1310
7 G 10	28.0	820	1630
4 G 16	26.2	840	1391
5 G 16	28.6	1050	1810

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® CHAIN 911

PP/PUR drag chain cable, unscreened

DESIGN

1 I Bare copper conductors, super fine wires class 6 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of polypropylene compound (PP)
3 I Cores stranded in layers with short lay-lengths
4 I Non-woven wrapping over each stranding layer
5 I Special polyurethane (PUR) outer sheath, colour: grey (RAL 7001)

APPLICATION

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

TECHNICAL DATA

Standard:
based on VDE 0285

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -50 °C up to 80 °C
flexible use: -30 °C up to 80 °C

Bending radius (min.):
fixed installation: 5 x Ø of cable
flexible use: 7.5 x Ø of cable

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

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

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

Number of cores x nominal cross-section (mm²)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHAIN 911			
2 x 0.5	5.0	9.7	33
3 G 0.5	5.2	14.4	40
4 G 0.5	6.5	19.0	54
5 G 0.5	7.0	24.0	62
7 G 0.5	7.7	33.6	76
12 G 0.5	9.1	58.0	114
18 G 0.5	11.0	86.0	165
25 G 0.5	13.2	120.0	218
2 x 0.75	5.6	14.4	42
3 G 0.75	5.9	21.6	50
4 G 0.75	6.7	29.0	61
5 G 0.75	7.2	36.0	72
7 G 0.75	8.8	50.0	100
12 G 0.75	10.2	86.0	158
18 G 0.75	12.2	130.0	219
25 G 0.75	15.4	180.0	314
2 x 1	6.0	19.2	48

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® CHAIN 911

PP/PUR drag chain cable, unscreened

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHAIN 911			
3 G 1	6.5	29.0	61
4 G 1	7.2	38.4	72
5 G 1	7.7	48.0	93
7 G 1	9.5	67.0	122
12 G 1	11.2	115.0	196
18 G 1	13.7	173.0	278
25 G 1	17.2	240.0	385
36 G 1	20.1	346.0	625
41 G 1	22.0	410.0	779
50 G 1	24.0	498.0	953
65 G 1	27.2	650.0	1205
2 x 1.5	6.7	28.8	68
3 G 1.5	7.3	43.0	83
4 G 1.5	7.9	48.0	102
5 G 1.5	9.0	72.0	128
7 G 1.5	10.6	101.0	177
12 G 1.5	12.5	173.0	275
18 G 1.5	15.2	259.0	405
25 G 1.5	19.0	360.0	562
36 G 1.5	22.2	518.0	880
42 G 1.5	24.0	628.0	1209
50 G 1.5	26.2	749.0	1449
3 G 2.5	8.8	72.0	122
4 G 2.5	9.8	96.0	163
5 G 2.5	11.0	120.0	196
7 G 2.5	13.3	168.0	268
12 G 2.5	15.8	288.0	446
18 G 2.5	18.8	432.0	665
25 G 2.5	24.0	600.0	932
4 G 4	12.8	154.0	240
5 G 4	14.1	192.0	298
7 G 4	16.9	269.0	418
4 G 6	14.9	230.0	354
7 G 6	19.0	403.0	610
4 G 10	18.4	384.0	685
5 G 10	20.7	480.0	817
7 G 10	24.7	672.0	1023
4 G 16	21.3	614.0	1042
5 G 16	23.8	768.0	1292

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® CHAIN 99111C

PP/PUR drag chain cable, screened

DESIGN

1 I Bare copper conductors, super fine wires class 6 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of polypropylene compound (PP)
3 I Cores stranded in layers with short lay-lengths
4 I Non-woven wrapping over each stranding layer
5 I Inner sheath of thermoplastic elastomer compound (TPE)
6 I Tinned copper wire braiding
7 I Non-woven wrapping over braiding
8 I Special polyurethane (PUR) outer sheath, colour: grey (RAL 7001)

APPLICATION

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

TECHNICAL DATA

Standard:
based on VDE 0285

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -50 °C up to 80 °C
flexible use: -30 °C up to 80 °C

Bending radius (min.):
fixed installation: 5 x Ø of cable
flexible use: 7.5 x Ø of cable

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

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

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

Number of cores x nominal cross-section (mm²)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHAIN 99111C			
3 G 0.5	7.3	39	79
4 G 0.5	7.9	46	94
5 G 0.5	8.5	54	105
7 G 0.5	9.8	70	138
12 G 0.5	11.5	100	192
18 G 0.5	13.4	153	282
25 G 0.5	15.9	202	386
2 x 0.75	7.3	39	80
3 G 0.75	7.8	48	91
4 G 0.75	8.4	59	112
5 G 0.75	9.0	69	124
7 G 0.75	10.7	90	166
12 G 0.75	12.5	129	251
18 G 0.75	14.9	205	352
25 G 0.75	17.4	271	470

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® CHAIN 99111C

PP/PUR drag chain cable, screened

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHAIN 99111C			
2 x 1	7.7	46	92
3 G 1	8.2	57	101
4 G 1	8.9	70	129
5 G 1	9.8	81	152
7 G 1	11.4	110	196
12 G 1	13.4	182	298
18 G 1	16.1	254	426
25 G 1	18.8	365	585
36 G 1	24.3	516	895
41 G 1	26.1	610	1032
50 G 1	28.4	690	1160
65 G 1	32.2	852	1660
2 x 1.5	8.4	58	112
3 G 1.5	9.0	75	133
4 G 1.5	9.9	91	160
5 G 1.5	10.9	112	188
7 G 1.5	12.7	145	251
12 G 1.5	15.2	247	377
18 G 1.5	17.8	348	534
25 G 1.5	21.2	498	768
36 G 1.5	26.4	702	1210
42 G 1.5	28.4	829	1441
50 G 1.5	31.2	1025	1709
3 G 2.5	11.0	119	196
4 G 2.5	11.9	161	233
5 G 2.5	13.2	194	293
7 G 2.5	15.8	262	399
12 G 2.5	20.4	410	582
18 G 2.5	24.0	562	989
25 G 2.5	28.2	778	1382
4 G 4	13.7	238	348
5 G 4	15.3	280	420
7 G 4	20.0	352	651
4 G 6	16.1	318	499
7 G 6	23.0	528	844
4 G 10	22.5	485	1052
5 G 10	24.7	610	1096
7 G 10	29.3	820	1530
4 G 16	25.7	840	1386
5 G 16	28.2	1050	1759

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® CHAIN UL/c(UL)

UL recognized PVC/PVC drag chain cable, unscreened

DESIGN

1 I Bare copper conductors, super fine wires class 6 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polyvinyl chloride (PVC)
3 I Cores stranded in layers with short lay-lengths
4 I Non-woven wrapping over each stranding layer
5 I Outer sheath of special compound based on polyvinyl chloride (PVC), colour: grey (RAL 7001)

APPLICATION

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

TECHNICAL DATA

Standard:
based on VDE 0285

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

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -30 °C up to 80 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 7.5 x Ø of cable
flexible use: 10 x Ø of cable

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

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

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

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHAIN UL/c(UL)			
2 x 0.5	5.5	9.7	42
3 G 0.5	5.9	14.4	52
4 G 0.5	6.6	19.0	60
5 G 0.5	7.2	24.0	72
7 G 0.5	8.7	33.6	106
12 G 0.5	10.5	58.0	150
18 G 0.5	12.5	86.0	231
25 G 0.5	15.0	120.0	316
2 x 0.75	6.1	14.4	51
3 G 0.75	6.6	21.6	63
4 G 0.75	7.3	29.0	75
5 G 0.75	8.0	36.0	90
7 G 0.75	9.6	50.0	132

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® CHAIN UL/c(UL)

UL recognized PVC/PVC drag chain cable, unscreened

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHAIN UL/c(UL)			
12 G 0.75	11.6	86.0	201
18 G 0.75	13.9	130.0	300
25 G 0.75	16.6	180.0	415
2 x 1	6.4	19.2	58
3 G 1	7.0	29.0	72
4 G 1	7.8	38.4	88
5 G 1	8.5	48.0	106
7 G 1	10.3	67.0	159
12 G 1	12.4	115.0	237
18 G 1	15.1	173.0	358
25 G 1	18.3	240.0	536
2 x 1.5	7.0	28.8	72
3 G 1.5	7.7	43.0	93
4 G 1.5	8.8	58.0	122
5 G 1.5	9.6	72.0	147
7 G 1.5	11.6	101.0	219
12 G 1.5	13.9	173.0	322
18 G 1.5	16.9	259.0	478
25 G 1.5	20.1	360.0	670
3 G 2.5	9.0	72.0	130
4 G 2.5	10.0	96.0	165
5 G 2.5	11.0	120.0	210
7 G 2.5	13.4	168.0	308
12 G 2.5	15.9	288.0	446
18 G 2.5	20.4	432.0	718
25 G 2.5	24.7	600.0	1070
3 G 4	10.6	115.0	192
4 G 4	11.8	154.0	243
5 G 4	13.3	192.0	325
7 G 4	18.5	269.0	469
3 G 6	12.8	173.0	290
4 G 6	14.0	230.0	368
7 G 6	19.8	403.0	620

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® CHAIN C UL/c(UL)

UL recognized PVC/PVC drag chain cable, screened

DESIGN

1 I Bare copper conductors, super fine wires class 6 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polyvinyl chloride (PVC)
3 I Cores stranded in layers with short lay-lengths
4 I Non-woven wrapping over each stranding layer
5 I Inner sheath of special compound based on polyvinyl chloride (PVC)
6 I Tinned copper wire braiding
7 I Non-woven tape separation over braiding (optional)
8 I Outer sheath of special compound based on polyvinyl chloride (PVC), colour: grey (RAL 7001)

APPLICATION

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

TECHNICAL DATA

Standard:
based on VDE 0285

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

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -30 °C up to 80 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 7.5 x Ø of cable
flexible use: 10 x Ø of cable

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

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

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

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

Number of cores x nominal cross-section (mm²)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHAIN C UL/c(UL)			
2 x 0.5	7.5	33	78
3 G 0.5	7.9	39	89
4 G 0.5	8.5	46	102
5 G 0.5	9.2	54	127
7 G 0.5	10.9	70	177
12 G 0.5	12.6	100	234
18 G 0.5	15.5	153	381
25 G 0.5	17.7	202	472
2 x 0.75	7.8	39	94
3 G 0.75	8.2	48	105
4 G 0.75	8.9	59	123
5 G 0.75	10.0	69	155
7 G 0.75	11.6	90	206

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® CHAIN C UL/c(UL)

UL recognized PVC/PVC drag chain cable, screened

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHAIN C UL/c(UL)			
12 G 0.75	13.8	129	304
18 G 0.75	16.3	205	425
25 G 0.75	18.6	271	548
2 x 1	8.2	46	106
3 G 1	8.6	57	123
4 G 1	9.4	70	141
5 G 1	10.6	81	178
7 G 1	12.3	110	233
12 G 1	14.6	182	362
18 G 1	17.6	254	501
25 G 1	20.2	265	667
2 x 1.5	9.0	58	127
3 G 1.5	9.7	75	152
4 G 1.5	10.6	91	187
5 G 1.5	11.4	112	218
7 G 1.5	13.8	145	320
12 G 1.5	16.3	247	460
18 G 1.5	19.5	348	677
25 G 1.5	23.6	498	926
3 G 2.5	11.0	119	208
4 G 2.5	11.8	161	244
5 G 2.5	13.0	194	306
7 G 2.5	15.8	262	428
12 G 2.5	20.0	410	682
18 G 2.5	24.0	562	994
25 G 2.5	28.3	778	1422
4 G 4	14.0	238	365
5 G 4	15.3	280	430
7 G 4	19.8	352	670
4 G 6	16.1	318	514
7 G 6	23.0	528	862

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® CHAIN 11 UL/c(UL)

UL recognized PVC/PUR drag chain cable, unscreened

DESIGN

1 I Bare copper conductors, super fine wires class 6 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polyvinyl chloride (PVC)
3 I Cores stranded in layers with short lay-lengths
4 I Non-woven wrapping over each stranding layer
5 I Special polyurethane (PUR) outer sheath, colour: grey (RAL 7001)

APPLICATION

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

TECHNICAL DATA

Standard:
based on VDE 0285

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

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -30 °C up to 80 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 7.5 x Ø of cable
flexible use: 10 x Ø of cable

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

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

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

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

Number of cores x nominal cross-section (mm²)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHAIN 11 UL/c(UL)			
2 x 0.5	6.5	9.7	46
3 G 0.5	6.8	14.4	55
4 G 0.5	7.5	19.0	69
5 G 0.5	8.0	24.0	85
7 G 0.5	9.8	33.6	117
12 G 0.5	10.8	58.0	155
18 G 0.5	12.7	86.0	224
25 G 0.5	15.2	120.0	328
2 x 0.75	6.8	14.4	54
3 G 0.75	7.3	21.6	66
4 G 0.75	8.0	29.0	82
5 G 0.75	8.7	36.0	101
7 G 0.75	10.7	50.0	142

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® CHAIN 11 UL/c(UL)

UL recognized PVC/PUR drag chain cable, unscreened

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHAIN 11 UL/c(UL)			
12 G 0.75	11.7	86.0	196
18 G 0.75	13.9	130.0	282
25 G 0.75	16.6	180.0	404
2 x 1	7.1	19.2	60
3 G 1	7.7	29.0	75
4 G 1	8.5	38.4	94
5 G 1	9.2	48.0	117
7 G 1	11.4	67.0	168
12 G 1	12.6	115.0	231
18 G 1	15.1	173.0	343
25 G 1	18.4	240.0	538
2 x 1.5	7.7	28.8	78
3 G 1.5	8.4	43.0	98
4 G 1.5	9.3	58.0	125
5 G 1.5	10.1	72.0	151
7 G 1.5	11.9	101.0	221
12 G 1.5	13.9	173.0	318
18 G 1.5	16.9	259.0	484
25 G 1.5	20.1	360.0	671
3 G 2.5	9.3	72.0	134
4 G 2.5	10.3	96.0	170
5 G 2.5	11.3	120.0	205
7 G 2.5	13.4	168.0	295
12 G 2.5	16.0	288.0	440
18 G 2.5	20.4	432.0	698
25 G 2.5	24.7	600.0	1045
3 G 4	10.9	115.0	190
4 G 4	12.1	154.0	247
5 G 4	13.5	192.0	312
7 G 4	18.6	269.0	452
3 G 6	13.0	173.0	288
4 G 6	14.2	230.0	363
7 G 6	19.8	403.0	622

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® CHAIN 11C UL/c(UL)

UL recognized PVC/PUR drag chain cable, screened

DESIGN

1 I Bare copper conductors, super fine wires class 6 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polyvinyl chloride (PVC)
3 I Cores stranded in layers with short lay-lengths
4 I Non-woven wrapping over each stranding layer
5 I Inner sheath of special compound based on polyvinyl chloride (PVC)
6 I Tinned copper wire braiding
7 I Non-woven wrapping over braiding
8 I Special polyurethane (PUR) outer sheath, colour: grey (RAL 7001)

APPLICATION

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

TECHNICAL DATA

Standard:
based on VDE 0285

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

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -30 °C up to 80 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 7.5 x Ø of cable
flexible use: 10 x Ø of cable

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

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

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

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHAIN 11C UL/c(UL)			
2 x 0.5	8.1	33	85
3 G 0.5	8.4	39	96
4 G 0.5	9.1	46	112
5 G 0.5	9.8	54	129
7 G 0.5	11.6	70	166
12 G 0.5	12.7	100	224
18 G 0.5	14.6	153	215
25 G 0.5	16.9	202	438
2 x 0.75	8.4	39	96
3 G 0.75	8.9	48	108
4 G 0.75	9.6	59	130
5 G 0.75	10.3	69	147
7 G 0.75	12.5	90	195

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® CHAIN 11C UL/c(UL)

UL recognized PVC/PUR drag chain cable, screened

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHAIN 11C UL/c(UL)			
12 G 0.75	13.7	129	283
18 G 0.75	16.1	205	389
25 G 0.75	18.4	271	527
2 x 1	8.8	46	108
3 G 1	9.3	57	116
4 G 1	10.1	70	147
5 G 1	11.1	81	177
7 G 1	13.2	110	225
12 G 1	14.6	182	330
18 G 1	17.3	254	462
25 G 1	19.8	365	638
2 x 1.5	9.4	58	131
3 G 1.5	10.0	75	153
4 G 1.5	11.1	91	187
5 G 1.5	11.9	112	215
7 G 1.5	13.8	145	283
12 G 1.5	16.1	247	427
18 G 1.5	19.1	348	605
25 G 1.5	21.9	498	809
3 G 2.5	11.2	119	206
4 G 2.5	12.2	161	245
5 G 2.5	13.3	194	298
7 G 2.5	15.7	262	399
12 G 2.5	20.4	410	586
18 G 2.5	24.0	562	991
25 G 2.5	28.2	778	1403
4 G 4	14.0	238	363
5 G 4	15.4	280	443
7 G 4	20.0	352	671
4 G 6	16.1	318	510
7 G 6	23.0	528	856

Technical changes reserved. All figures are therefore without guarantee.

Copper wire braidings, round

Bare copper wire braidings, round

DESIGN

1 I Bare copper wire or stranded bare copper wire braiding (round)

TECHNICAL DATA

NORM

Standard:
TS ICS 43-2020

APPLICATION

Our bare copper wire braidings / earthing straps are used for protective earthing within cabinets or for applying an additional shield around electrial connections in dry rooms without corrosive environment.

Single wire diameter (mm)	Conductor cross section (mm^2)	Max. conductor resistance (Ω/km)	Outer diameter rounded conductor (mm) appr.	Cu-value (kg/km)
Copper wire braidings, round				
0.07	6	2.87	5.0	58
0.07	10	1.72	7.0	96
0.07	16	1.08	8.5	154
0.07	20	0.86	10.0	192
0.07	25	0.69	11.0	240
0.07	35	0.49	13.5	336
0.1	10	1.72	7.0	96
0.1	16	1.08	8.5	154
0.1	25	0.69	11.0	240
0.1	35	0.49	13.5	336
0.1	50	0.34	17.0	480
0.2	25	0.69	11.0	240
0.2	35	0.49	13.5	336
0.2	50	0.34	17.0	480
0.2	70	0.25	20.0	672

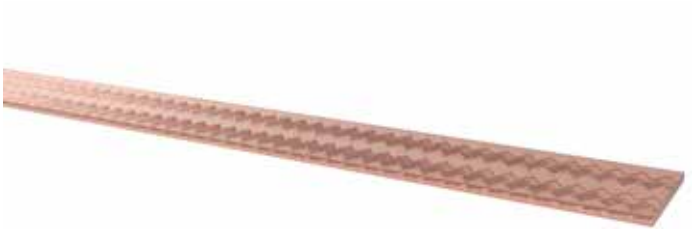
Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

Copper wire braidings, flat

Bare copper wire braidings, flat

DESIGN



1 I Bare copper wire or stranded bare copper wire braiding (flat)

TECHNICAL DATA

NORM

Standard:
TS ICS 43-2020

APPLICATION

Our bare copper wire braidings / earthing straps are used for protective earthing within cabinets or for applying an additional shield around electrial connections in dry rooms without corrosive environment.

Single wire diameter (mm)	Conductor cross section (mm^2)	Max. conductor resistance (Ω/km)	Width of flatted conductor (mm)	Height of flatted conductor (mm)	Cu-value (kg/km)
Copper wire braidings, flat					
0.07	6	2.87	8.5	0.9	58
0.07	10	1.72	11.5	1.2	96
0.07	16	1.08	15.2	1.4	154
0.07	20	0.86	16.8	1.7	192
0.07	25	0.69	19.0	1.9	240
0.07	35	0.49	21.5	2.4	336
0.1	10	1.72	11.2	1.3	96
0.1	16	1.08	15.5	1.5	154
0.1	25	0.69	20.0	2.0	240
0.1	35	0.49	24.0	2.2	336
0.1	50	0.34	28.5	2.8	480
0.2	25	0.69	22.0	1.6	240
0.2	35	0.49	24.5	2.4	336
0.2	50	0.34	31.0	2.7	480
0.2	70	0.25	35.0	3.8	672

Technical changes reserved. All figures are therefore without guarantee.

ESY

Copper earthing cable

DESIGN

1 I Bare copper conductors, super fine wire according to DIN VDE 0283 Part 3 / EN 61138, maximum single wire diameter 0.21 mm
2 I Outer sheath of special cold resistant compound based on polyvinyl chloride (PVC), colour: transparent

APPLICATION

Earthing ropes ESY are used as safety relevant connection in earthing and short circuiting equipment. The field of application ranges from railway systems, e.g. construction of overhead lines to earthing in high voltage power installations of electric supply companies. Special stranded conductor as well as insulation compound provide an extended temperature range for application.

TECHNICAL DATA

Standard:
EN 61138; EN 61230

Test voltage:
2000 V

Temperature range:
operating temperature: -25 °C up to 70 °C

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

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
ESY			
1 x 16	8.5	154	185
1 x 25	10.0	240	270
1 x 35	12.0	336	390
1 x 50	13.8	480	575
1 x 70	16.0	672	810
1 x 95	18.5	912	1080
1 x 120	20.5	1152	1680
1 x 150	22.2	1440	1512

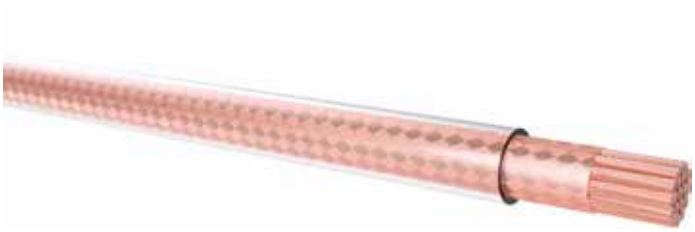
Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

ESUY

Copper earthing cable, screened

DESIGN



1 I Bare copper conductors, super fine wire according to DIN VDE 0283 Part 3 / EN 61138, maximum single wire diameter 0.10 mm
2 I Bare copper wire braiding
3 I Outer sheath of special compound based on polyvinyl chloride (PVC), colour: transparent

APPLICATION

Earthing ropes ESUY are used as safety relevant connection in earthing and short circuiting equipment. The field of application ranges from railway systems, e.g. construction of overhead lines to earthing in high voltage power installations of electric supply companies.

TECHNICAL DATA

Standard:
DIN 46438; DIN 46440

Test voltage:
2000 V

Temperature range:
operating temperature: -5 °C up to 70 °C

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

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

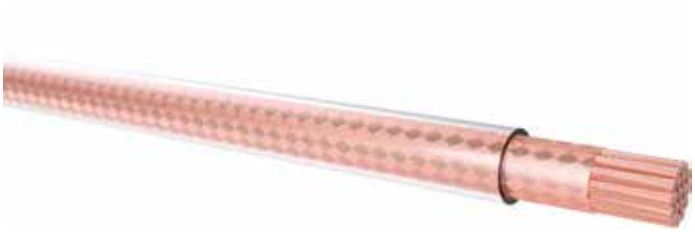
Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
ESUY			
1 x 16	8.9	177	230
1 x 25	10.3	275	335
1 x 35	12.5	387	475
1 x 50	14.9	560	670
1 x 70	17.4	791	905
1 x 95	19.8	1069	1220
1 x 120	21.5	1360	1505
1 x 150	24.2	1654	1940

Technical changes reserved. All figures are therefore without guarantee.

LV-XY

Copper earthing cable, screened

DESIGN



1 I Bare copper conductors, fine wire according to DIN VDE 0283 Part 3 / EN 61138, maximum single wire diameter 0.25 mm
2 I Bare copper wire braiding
3 I Outer sheath of special compound based on polyvinyl chloride (PVC), colour: transparent

APPLICATION

LV-XY cables are used as safety relevant connection in earthing and short circuiting equipment. The field of application ranges from railway systems, e.g. construction of overhead lines to earthing in high voltage power installations of electric supply companies.

TECHNICAL DATA

Standard:
TS ICS 06-2010

Test voltage:
2000 V

Temperature range:
operating temperature: -5 °C up to 70 °C

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

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
LV-XY			
1 x 50	14.8	560	670
1 x 70	17.8	791	905
1 x 95	21.0	1069	1220

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

X00V3-AD

Aluminum earthing cable

DESIGN

1 I Bare aluminum conductors, fine wires according to DIN VDE 0283 Part 3 / EN 61138
2 I Outer sheath of special cold resistant compound based on polyvinyl chloride (PVC), colour: transparent

APPLICATION

Aluminum earthing ropes X00V3-AD are used as safety relevant connection in earthing and short circuiting equipment. The field of application ranges from railway systems, e.g. construction of overhead lines to earthing in high voltage power installations of electric supply companies. Special stranded conductor as well as insulation compound provide an extended temperature range for application.

TECHNICAL DATA

Standard:
TS ICS 13-2021

Test voltage:
2000 V

Temperature range:
flexible use: -25 °C up to 70 °C

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

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
X00V3-AD			
1 x 25	9.8	73	120
1 x 35	11.7	102	168
1 x 50	14.0	145	240
1 x 70	15.0	203	306
1 x 95	17.7	275	398
1 x 120	19.6	348	495

Technical changes reserved. All figures are therefore without guarantee.

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

PE/PVC motor power supply cable, screened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of polyethylene (PE)
3 I Cores are stranded together with optimal lay-length
4 I Plastic tape separation (optional)
5 I Plastic bonded aluminium tape and tinned copper wire braiding
6 I Outer sheath of special compound of polyvinyl chloride (PVC), colour: black (RAL 9005) for 2YSL(St)CYK-J or transparent for 2YSL(St)CY-J

APPLICATION

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

TECHNICAL DATA

Standard:
DIN VDE 0276-603

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

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -30 °C up to 80 °C
flexible use: -5 °C up to 70 °C
conductor temperature: max. 70 °C

Bending radius (min.):
fixed installation: 5 x Ø of cable
flexible use: 15 x Ø of cable

Core identification:
colours according to CENELEC HD 308 S2

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
2YSL(St)CY-J 0.6/1 kV EMV			
4 G 1.5	10.6	95	244
4 G 2.5	12.3	150	318
4 G 4	14.0	235	513
4 G 6	16.1	320	670
4 G 10	19.7	533	914
4 G 16	23.0	789	1367
4 G 25	27.3	1236	1970
4 G 35	30.3	1662	2763
4 G 50	35.0	2345	3126
4 G 70	40.0	3196	4182
4 G 95	45.0	4316	5725

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

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

PE/PVC motor power supply cable, screened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of polyethylene (PE)
3 I Cores are stranded together with optimal lay-length
4 I Plastic bonded aluminium tape and tinned copper wire braiding
5 I Outer sheath of special compound of polyvinyl chloride (PVC), colour: black (RAL 9005) for 2YSL(St)CYK-J or transparent for 2YSL(St)CY-J

APPLICATION

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

TECHNICAL DATA

Standard:
DIN VDE 0276-603

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

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -30 °C up to 80 °C
flexible use: -5 °C up to 70 °C
conductor temperature: max. 70 °C

Bending radius (min.):
fixed installation: 5 x Ø of cable
flexible use: 15 x Ø of cable

Core identification:
colours according to CENELEC HD 308 S2

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
2YSL(St)CYK-J 0.6/1 kV EMV-3 PLUS			
3 x 1.5 + 3 G 0.25	10.2	91	212
3 x 2.5 + 3 G 0.5	11.8	152	276
3 x 4 + 3 G 0.75	13.4	224	446
3 x 6 + 3 G 1	15.3	298	582
3 x 10 + 3 G 1.5	18.6	491	794
3 x 16 + 3 G 2.5	21.5	723	1188
3 x 25 + 3 G 4	25.5	1138	1713
3 x 35 + 3 G 6	28.3	1535	2402
3 x 50 + 3 G 10	33.0	2208	2718
3 x 70 + 3 G 10	37.0	2871	3636
3 x 95 + 3 G 16	41.0	3953	4978
3 x 120 + 3 G 16	43.8	4836	5077

Technical changes reserved. All figures are therefore without guarantee.

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

XLPE/PVC motor power supply cable, screened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of cross-linked polyethylene (XLPE)
3 I Cores are stranded together with optimal lay-length
4 I Plastic tape separation (optional)
5 I Plastic bonded aluminium tape and tinned copper wire braiding
6 I Outer sheath of special compound of polyvinyl chloride (PVC), colour: black (RAL 9005) for 2XSL(St)CYK-J or transparent for 2XSL(St)CY-J

APPLICATION

2XSL(St)CY-J double screened motor supply and frequency converter cables were designed as supply and connecting cables for medium mechanical stress, fixed installation and non-guided movements in dry, damp and wet rooms. Black UV-resistant version is designed for outdoor applications. XLPE insulation improves transmission characteristics and allows transmission of higher power when using same cross sections.

TECHNICAL DATA

Standard:
DIN VDE 0276-603

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

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -30 °C up to 80 °C
flexible use: -5 °C up to 70 °C
conductor temperature: max. 90 °C

Bending radius (min.):
fixed installation: 5 x Ø of cable
flexible use: 15 x Ø of cable

Core identification:
colours according to CENELEC HD 308 S2

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
2XSL(St)CY-J 0.6/1 kV EMV			
4 G 1.5	10.6	95	244
4 G 2.5	12.3	150	318
4 G 4	14.0	235	513
4 G 6	16.1	320	670
4 G 10	19.7	533	914
4 G 16	23.0	789	1367
4 G 25	27.3	1236	1970
4 G 35	30.3	1662	2763
4 G 50	35.0	2345	3126
4 G 70	40.0	3196	4182
4 G 95	45.0	4316	5725

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

2XSL(St)CYK-J 0.6/1 kV EMV-3 PLUS

XLPE/PVC motor power supply cable, screened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of cross-linked polyethylene (XLPE)
3 I Cores are stranded together with optimal lay-length
4 I Plastic bonded aluminium tape and tinned copper wire braiding
5 I Outer sheath of special compound of polyvinyl chloride (PVC), colour: black (RAL 9005) for 2XSL(St)CYK-J or transparent for 2XSL(St)CY-J

APPLICATION

2XSL(St)CYK-J double screened motor supply and frequency converter cables were designed as supply and connecting cables for medium mechanical stress, fixed installation and non-guided movements in dry, damp and wet rooms. Black UV-resistant version is designed for outdoor applications. XLPE insulation improves transmission characteristics and allows transmission of higher power when using same cross sections.

TECHNICAL DATA

Standard:
DIN VDE 0276-603

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

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -30 °C up to 80 °C
flexible use: -5 °C up to 70 °C
conductor temperature: max. 90 °C

Bending radius (min.):
fixed installation: 5 x Ø of cable
flexible use: 15 x Ø of cable

Core identification:
colours according to CENELEC HD 308 S2

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
2XSL(St)CYK-J 0.6/1 kV EMV-3 PLUS			
3 x 1.5 + 3 G 0.25	10.2	91	212
3 x 2.5 + 3 G 0.5	11.8	152	276
3 x 4 + 3 G 0.75	13.4	224	446
3 x 6 + 3 G 1	15.3	298	582
3 x 10 + 3 G 1.5	18.6	491	794
3 x 16 + 3 G 2.5	21.5	723	1188
3 x 25 + 3 G 4	25.5	1138	1713
3 x 35 + 3 G 6	28.3	1535	2402
3 x 50 + 3 G 10	33.0	2208	2718
3 x 70 + 3 G 10	37.0	2871	3636
3 x 95 + 3 G 16	41.0	3953	4978
3 x 120 + 3 G 16	43.8	4836	5077

Technical changes reserved. All figures are therefore without guarantee.

2XSL(St)CH-J 0.6/1 kV EMV

XLPE/FRNC motor power supply cable, halogen-free, screened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of cross-linked polyethylene (XLPE)
3 I Cores are stranded together with optimal lay-length
4 I Plastic bonded aluminium tape and tinned copper wire braiding
5 I Outer sheath of special flame retardant non-corrosive compound (FRNC), clolour: black (RAL 9005)

APPLICATION

These double screened 2XSL(St)CH-J cables were designed as supply and connecting cables, for medium mechanical stress, for fixed installation and occasionally non-guided movements, in dry and damp rooms, especially where human life or valuable property are exposed to a high risk of fire hazards. Double screening considerably improves electromagnetic compatibility (EMC) in buildings and plants.

TECHNICAL DATA

Standard:
DIN VDE 0276-603

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

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -30 °C up to 80 °C
flexible use: -5 °C up to 70 °C
conductor temperature: max. 90 °C

Bending radius (min.):
fixed installation: 7.5 x Ø of cable
flexible use: 15 x Ø of cable

Core identification:
colours according to CENELEC HD 308 S2

Fire properties:
EN 60332-1-2: self-extinguishing and flame retardant
EN 60332-3-24 (Category C): reduced flame propagation
EN 61034: smoke density
EN 60754: halogen-free
CPR classification: D_{ca}

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
2XSL(St)CH-J 0.6/1 kV EMV			
4 G 1.5	10.6	95	244
4 G 2.5	12.3	150	318
4 G 4	14.0	235	513
4 G 6	16.1	320	670
4 G 10	19.7	533	914
4 G 16	23.0	789	1367
4 G 25	27.3	1236	1970
4 G 35	30.3	1662	2763
4 G 50	35.0	2345	3126
4 G 70	40.0	3196	4182
4 G 95	45.0	4316	5725

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

2XSL(St)CH-J 0.6/1 kV EMV-3 PLUS

XLPE/FRNC motor power supply cable, halogen-free, screened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of cross-linked polyethylene (XLPE)
3 I Cores are stranded together with optimal lay-length
4 I Plastic bonded aluminium tape and tinned copper wire braiding
5 I Outer sheath of special flame retardant non-corrosive compound (FRNC), clolour: black (RAL 9005)

APPLICATION

These double screened 2XSL(St)CH-J cables were designed as supply and connecting cables, for medium mechanical stress, for fixed installation and occasionally non-guided movements, in dry and damp rooms, especially where human life or valuable property are exposed to a high risk of fire hazards. Double screening considerably improves electromagnetic compatibility (EMC) in buildings and plants.

TECHNICAL DATA

Standard:
DIN VDE 0276-603

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

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -30 °C up to 80 °C
flexible use: -5 °C up to 70 °C
conductor temperature: max. 90 °C

Bending radius (min.):
fixed installation: 7.5 x Ø of cable
flexible use: 15 x Ø of cable

Core identification:
colours according to CENELEC HD 308 S2

Fire properties:
EN 60332-1-2: self-extinguishing and flame retardant
EN 60332-3-24 (Category C): reduced flame propagation
EN 61034: smoke density
EN 60754: halogen-free
CPR classification: D_{ca}

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
2XSL(St)CH-J 0.6/1 kV EMV-3 PLUS			
3 x 1.5 + 3 G 0.25	10.2	91	212
3 x 2.5 + 3 G 0.5	11.8	152	276
3 x 4 + 3 G 0.75	13.4	224	446
3 x 6 + 3 G 1	15.3	298	582
3 x 10 + 3 G 1.5	18.6	491	794
3 x 16 + 3 G 2.5	21.5	723	1188
3 x 25 + 3 G 4	25.5	1138	1713
3 x 35 + 3 G 6	28.3	1535	2402
3 x 50 + 3 G 10	33.0	2208	2718
3 x 70 + 3 G 10	37.0	2871	3636
3 x 95 + 3 G 16	41.0	3953	4978
3 x 120 + 3 G 16	43.8	4836	5077

Technical changes reserved. All figures are therefore without guarantee.

2XSL(St)CYK-FR-J 0.6/1 kV EMV

XLPE/PVC motor power supply cable, screened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of cross-linked polyethylene (XLPE)
3 I Cores are stranded together with optimal lay-length
4 I Plastic bonded aluminium tape and tinned copper wire braiding
5 I Outer sheath of special compound of flame resistant polyvinyl chloride (PVC), colour: black (RAL 9005)

APPLICATION

These 2XSL(St)CYK-FR-J cables were designed as supply and connecting cables, for medium mechanical stress, fixed installation and occasionally non-guided movements in dry, damp and wet rooms. Characterized by low flame propagation according to IEC 60332-3-24. XLPE insulation improves transmission characteristics and allows transmission of higher power using same cross sections. Double screening improves EMC in buildings and plants.

TECHNICAL DATA

Standard:
DIN VDE 0276-603

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

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -30 °C up to 80 °C
flexible use: -5 °C up to 70 °C
conductor temperature: max. 90 °C

Bending radius (min.):
fixed installation: 5 x Ø of cable
flexible use: 15 x Ø of cable

Core identification:
colours according to CENELEC HD 308 S2

Fire properties:
EN 60332-1-2: self-extinguishing and flame retardant
EN 60332-3-24 (Category C): reduced flame propagation

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
2XSL(St)CYK-FR-J 0.6/1 kV EMV			
4 G 1.5	10.6	95	244
4 G 2.5	12.3	150	318
4 G 4	14.0	235	513
4 G 6	16.1	320	670
4 G 10	19.7	533	914
4 G 16	23.0	789	1367
4 G 25	27.3	1236	1970
4 G 35	30.3	1662	2763
4 G 50	35.0	2345	3126
4 G 70	40.0	3196	4182
4 G 95	45.0	4316	5725

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

2XSL(St)CYK-FR-J 0.6/1 kV EMV-3 PLUS

XLPE/PVC motor power supply cable, screened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of cross-linked polyethylene (XLPE)
3 I Cores are stranded together with optimal lay-length
4 I Plastic bonded aluminium tape and tinned copper wire braiding
5 I Outer sheath of special compound of flame resistant polyvinyl chloride (PVC), colour: black (RAL 9005)

APPLICATION

These 2XSL(St)CYK-FR-J cables were designed as supply and connecting cables, for medium mechanical stress, fixed installation and occasionally non-guided movements in dry, damp and wet rooms. Characterized by low flame propagation according to IEC 60332-3-24. XLPE insulation improves transmission characteristics and allows transmission of higher power using same cross sections. Double screening improves EMC in buildings and plants.

TECHNICAL DATA

Standard:
DIN VDE 0276-603

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

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -30 °C up to 80 °C
flexible use: -5 °C up to 70 °C
conductor temperature: max. 90 °C

Bending radius (min.):
fixed installation: 5 x Ø of cable
flexible use: 15 x Ø of cable

Core identification:
colours according to CENELEC HD 308 S2

Fire properties:
EN 60332-1-2: self-extinguishing and flame retardant
EN 60332-3-24 (Category C): reduced flame propagation

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
2XSL(St)CYK-FR-J 0.6/1 kV EMV-3 PLUS			
3 x 1.5 + 3 G 0.25	10.2	91	212
3 x 2.5 + 3 G 0.5	11.8	152	276
3 x 4 + 3 G 0.75	13.4	224	446
3 x 6 + 3 G 1	15.3	298	582
3 x 10 + 3 G 1.5	18.6	491	794
3 x 16 + 3 G 2.5	21.5	723	1188
3 x 25 + 3 G 4	25.5	1138	1713
3 x 35 + 3 G 6	28.3	1535	2402
3 x 50 + 3 G 10	33.0	2208	2718
3 x 70 + 3 G 10	37.0	2871	3636
3 x 95 + 3 G 16	41.0	3953	4978
3 x 120 + 3 G 16	43.8	4836	5077

Technical changes reserved. All figures are therefore without guarantee.

9YSL(St)CY-J 0.6/1 kV EMV UL/c(UL)

UL recognized PP/PVC motor power supply cable, screened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of polypropylene compound (PP)
3 I Cores are stranded together with optimal lay-length
4 I Plastic tape separation (optional)
5 I Plastic bonded aluminium tape and tinned copper wire braiding
6 I Outer sheath of special compound of polyvinyl chloride (PVC), colour: black (RAL 9005) for 9YSL(St)CYK-J or transparent for 9YSL(St)CY-J

APPLICATION

Double screened flexible motor supply cables with special EMC-performance, with low capacitance design and PVC sheath. Contrary to usage of PVC insulated cables, PP insulated cables show significant reduction of useless reactive power always needed for charging and discharging the cable during operating of the frequency converter.

TECHNICAL DATA

Standard:
DIN VDE 0276-603

Rated voltage:
0.6/1 kV (Uo/U)
1000 V (UL/CSA)

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -40 °C up to 80 °C
flexible use: -5 °C up to 80 °C
conductor temperature: max. 80 °C

Bending radius (min.):
fixed installation: 4 x Ø of cable
flexible use: 15 x Ø of cable

Core identification:
colours according to CENELEC HD 308 S2

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

Certificate:
UL AWM Style 2570
CSA C22.2 No. 210-11, AWM

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
9YSL(St)CY-J 0.6/1 kV EMV UL/c(UL)			
4 G 1.5	10.5	87	151
4 G 2.5	11.8	133	207
4 G 4	13.3	213	272
4 G 6	14.9	298	371
4 G 10	17.7	460	557
4 G 16	21.5	707	1218
4 G 25	26.3	1100	1367
4 G 35	29.7	1542	1763
4 G 50	35.8	2206	2318
4 G 70	40.9	3002	3253
4 G 95	44.6	4004	4201

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

9YSL(St)CYK-J 0.6/1 kV EMV-3 PLUS UL/c(UL)

UL recognized PP/PVC motor power supply cable, screened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of polypropylene compound (PP)
3 I Cores are stranded together with optimal lay-length
4 I Plastic bonded aluminium tape and tinned copper wire braiding
5 I Outer sheath of special compound of polyvinyl chloride (PVC), colour: black (RAL 9005) for 9YSL(St)CYK-J or transparent for 9YSL(St)CY-J

APPLICATION

Double screened flexible motor supply cables with special EMC-performance, with low capacitance design and PVC sheath. Contrary to usage of PVC insulated cables, PP insulated cables show significant reduction of useless reactive power always needed for charging and discharging the cable during operating of the frequency converter.

TECHNICAL DATA

Standard:
DIN VDE 0276-603

Rated voltage:
0.6/1 kV (Uo/U)
1000 V (UL/CSA)

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -40 °C up to 80 °C
flexible use: -5 °C up to 80 °C
conductor temperature: max. 80 °C

Bending radius (min.):
fixed installation: 4 x Ø of cable
flexible use: 15 x Ø of cable

Core identification:
colours according to CENELEC HD 308 S2

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

Certificate:
UL AWM Style 2570
CSA C22.2 No. 210-11, AWM

Number of cores x nominal cross-section (mm²)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
9YSL(St)CYK-J 0.6/1 kV EMV-3 PLUS UL/c(UL)			
3 x 1.5 + 3 G 0.25	11.4	88	140
3 x 2.5 + 3 G 0.5	12.9	130	220
3 x 4 + 3 G 0.75	13.6	224	323
3 x 6 + 3 G 1	15.2	276	420
3 x 10 + 3 G 1.5	17.4	511	615
3 x 16 + 3 G 2.5	20.0	751	819
3 x 25 + 3 G 4	24.3	1204	1325
3 x 35 + 3 G 6	27.5	1535	1718
3 x 50 + 3 G 10	31.1	2156	2399
3 x 70 + 3 G 10	37.1	2980	3056
3 x 95 + 3 G 16	40.0	3953	4162
3 x 120 + 3 G 16	42.6	4836	5074

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® SERVO

PVC/PVC servo-motor supply cable, unscreened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polyvinyl chloride (PVC)
3 I Control pairs individually screened with plastic laminated aluminium tape and tinned copper wires. Aluminium tape is not applied for 1-pair versions
4 I Cores are stranded together with optimal lay-length
5 I Non-woven tape separation
6 I Outer sheath of special compound based on polyvinyl chloride (PVC), colour: grey (RAL 7001)

APPLICATION

PVC/PVC connection cable especially for frequency converters and servo motors. FLEXICS® SERVO cable are designed for fixed or flexible indoor installations without guidance and/or tensile stress.

TECHNICAL DATA

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

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -30 °C up to 80 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 7.5 x Ø of cable
flexible use: 20 x Ø of cable

Core identification:
supply cores: black (continuously numbered) with green/yellow ground conductor
control pairs 0.34 mm²: colour coded
control pairs from 0.75 mm²: black with white numbers

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

Number of cores x nominal cross-section (mm²)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® SERVO			
4 G 1.5 + (2 x 0.75)	11.6	98	184
5 G 1.5 + (2 x 0.75)	12.6	110	213
7 G 1.5 + (2 x 0.75)	12.8	144	251
4 G 2.5 + (2 x 0.75)	13.2	139	246
5 G 2.5 + (2 x 0.75)	14.5	159	297
7 G 2.5 + (2 x 0.75)	15.5	216	373
4 G 0.75 + 2 x (2 x 0.34)	9.6	92	133
4 G 1.5 + 2 x (2 x 0.75)	12.4	101	225
4 G 2.5 + (2 x 2 x 0.75)	13.7	142	275
4 G 4 + (2 x 0.75 + 2 x 1)	15.4	218	369
4 G 6 + (2 x 0.75 + 2 x 1)	16.6	295	458
4 G 10 + (2 x 0.75 + 2 x 1)	20.4	448	705
4 G 16 + (2 x 2 x 1)	23.2	669	976
4 G 25 + (2 x 2 x 1.5)	29.0	1060	1524

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® SERVO C

PVC/PVC servo-motor supply cable, screened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polyvinyl chloride (PVC)
3 I Control pairs individually screened with plastic laminated aluminium tape and tinned copper wires
4 I Cores are stranded together with optimal lay-length
5 I Plastic tape
6 I Tinned copper wire braiding
7 I Non-woven tape separation over braiding (optional)
8 I Outer sheath of special compound based on polyvinyl chloride (PVC), colour: grey (RAL 7001)

TECHNICAL DATA

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

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -30 °C up to 80 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 7.5 x Ø of cable
flexible use: 20 x Ø of cable

Core identification:
supply cores: black (continuously numbered) with green/yellow ground conductor
control pairs 0.34 mm²: colour coded
control pairs from 0.75 mm²: black with white numbers

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

APPLICATION

PVC/PVC connection cable especially for frequency converters and servo motors. FLEXICS® SERVO C cable are designed for fixed or flexible indoor installations without guidance and/or tensile stress, especially when excellent EMC behaviour is required.

Number of cores x nominal cross-section (mm²)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® SERVO C			
4 G 0.75 + 2 x (2 x 0.34)	10.2	111	157
4 G 1.5 + 2 x (2 x 0.75)	13.2	148	274
4 G 2.5 + (2 x 2 x 0.75)	14.7	226	333
4 G 4 + (2 x 0.75 + 2 x 1)	16.2	304	424
4 G 6 + (2 x 0.75 + 2 x 1)	17.8	379	553
4 G 10 + (2 x 0.75 + 2 x 1)	21.6	592	815
4 G 16 + (2 x 2 x 1)	24.1	861	1088
4 G 25 + (2 x 2 x 1.5)	29.7	1262	1665

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® CHAIN SERVO 911

PP/PUR servo-motor supply cable, halogen-free for drag chain application, unscreened

DESIGN

1 I Bare copper conductors, super fine wires class 6 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polypropylene (PP)
3 I Control pairs individually screened with plastic laminated aluminium tape and tinned copper wires
4 I Cores stranded together in short lay-lengths
5 I Non-woven tape separation
6 I Special polyurethane (PUR) outer sheath, colour: orange (RAL 2003) or grey (RAL 7001)

APPLICATION

Highly flexible PP/PUR connection cable for frequency converters and servo motors, especially for continuous moving machine parts, e.g. within C-tracks. FLEXICS® CHAIN SERVO 911 cables are designed for indoor applications when exposed to high mechanical stress and increased resistance against a wide range of oils, greases, coolants and lubricants.

TECHNICAL DATA

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

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -50 °C up to 80 °C
flexible use: -30 °C up to 80 °C

Bending radius (min.):
fixed installation: 5 x Ø of cable
flexible use: 7.5 x Ø of cable

Core identification:
supply cores: black (continuously numbered) with green/yellow ground conductor
control cores: black with number printing

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

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

Number of cores x nominal cross-section (mm²)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHAIN SERVO 911			
4 G 1.5 + 2 x (2 x 0.75)	14.0	96	235
4 G 2.5 + 2 x (2 x 0.75)	14.6	134	291
4 G 4 + (2 x 0.75) + (2 x 1)	16.1	206	370
4 G 6 + (2 x 0.75) + (2 x 1)	17.6	283	472
4 G 1.5 + (2 x 1)	12.0	87	186
4 G 2.5 + (2 x 1)	12.7	125	241
4 G 4 + (2 x 1)	14.8	182	326
4 G 6 + (2 x 1)	16.4	259	433

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® CHAIN SERVO 911C

PP/PUR servo-motor supply cable, halogen-free for drag chain application, screened

DESIGN

1 I Bare copper conductors, super fine wires class 6 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polypropylene (PP)
3 I Control pairs individually screened with plastic laminated aluminium tape and tinned copper wires
4 I Cores stranded together in short lay-lengths
5 I Wrapping with plastic tape
6 I Tinned copper wire braiding
7 I Non-woven wrapping over braiding
8 I Special polyurethane (PUR) outer sheath, colour: orange (RAL 2003) or grey (RAL 7001)

APPLICATION

Highly flexible PP/PUR connection cable for frequency converters and servo motors, especially for continuous moving machine parts, e.g. within C-tracks. FLEXICS® CHAIN SERVO 911C cables are designed for indoor applications when exposed to high mechanical stress and increased resistance against a wide range of oils, greases, coolants and lubricants. Excellent EMC behavior.

TECHNICAL DATA

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

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -30 °C up to 80 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 5 x Ø of cable
flexible use: 7.5 x Ø of cable

Core identification:
supply cores: black (continuously numbered) with green/yellow ground conductor
control cores: black with number printing

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

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

Number of cores x nominal cross-section (mm²)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHAIN SERVO 911C			
4 G 1.5 + 2 x (2 x 0.75)	15.6	150	304
4 G 2.5 + 2 x (2 x 0.75)	15.8	190	356
4 G 4 + (2 x 0.75) + (2 x 1)	17.3	267	434
4 G 6 + (2 x 0.75) + (2 x 1)	18.8	371	537
4 G 1.5 + (2 x 1)	13.3	131	242
4 G 2.5 + (2 x 1)	13.9	175	295
4 G 4 + (2 x 1)	15.9	238	373
4 G 6 + (2 x 1)	17.2	318	470

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® SERVO UL/c(UL)

UL recognized PVC/PVC servo-motor supply cable, unscreened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polyvinyl chloride (PVC)
3 I Control pairs individually screened with plastic laminated aluminium tape and tinned copper wires. Aluminium tape is not applied for 1-pair versions
4 I Cores are stranded together with optimal lay-length
5 I Non-woven tape separation
6 I Outer sheath of special compound based on polyvinyl chloride (PVC), colour: grey (RAL 7001)

APPLICATION

PVC/PVC connection cable especially for frequency converters and servo motors. FLEXICS® SERVO UL/c(UL) cable are designed for fixed or flexible indoor installations without guidance and/or tensile stress.

TECHNICAL DATA

Rated voltage:
0.6/1 kV (Uo/U)
1000 V (UL/CSA)

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -30 °C up to 80 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 7.5 x Ø of cable
flexible use: 20 x Ø of cable

Core identification:
supply cores: black (continuously numbered) with green/yellow ground conductor
control pairs 0.34 mm²: colour coded
control pairs from 0.75 mm²: black with white numbers

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

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

Number of cores x nominal cross-section (mm²)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® SERVO UL/c(UL)			
4 G 1.5 + (2 x 0.75)	13.0	98	230
5 G 1.5 + (2 x 0.75)	13.8	110	258
7 G 1.5 + (2 x 0.75)	13.9	144	299
4 G 2.5 + (2 x 0.75)	14.4	139	294
5 G 2.5 + (2 x 0.75)	15.5	159	349
7 G 2.5 + (2 x 0.75)	16.4	216	429
4 G 0.75 + 2 x (2 x 0.34)	11.6	92	201
4 G 1.5 + 2 x (2 x 0.75)	14.0	101	294
4 G 2.5 + (2 x 2 x 0.75)	15.1	142	349
4 G 4 + (2 x 0.75 + 2 x 1)	16.8	218	443
4 G 6 + (2 x 0.75 + 2 x 1)	18.0	295	532
4 G 10 + (2 x 0.75 + 2 x 1)	21.7	448	799
4 G 16 + (2 x 2 x 1)	24.4	669	1078
4 G 25 + (2 x 2 x 1.5)	30.1	1060	1713

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® SERVO C UL/c(UL)

UL recognized PVC/PVC servo-motor supply cable, screened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polyvinyl chloride (PVC)
3 I Control pairs individually screened with plastic laminated aluminium tape and tinned copper wires
4 I Cores are stranded together with optimal lay-length
5 I Plastic tape
6 I Tinned copper wire braiding
7 I Non-woven tape separation over braiding (optional)
8 I Outer sheath of special compound based on polyvinyl chloride (PVC), colour: grey (RAL 7001)

APPLICATION

PVC/PVC connection cable especially for frequency converters and servo motors. FLEXICS® SERVO C UL/c(UL) cable are designed for fixed or flexible indoor installations without guidance and/or tensile stress, especially when excellent EMC behaviour is required.

TECHNICAL DATA

Rated voltage:
0.6/1 kV (Uo/U)
1000 V (UL/CSA)

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -30 °C up to 80 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 7.5 x Ø of cable
flexible use: 20 x Ø of cable

Core identification:
supply cores: black (continuously numbered) with green/yellow ground conductor
control pairs 0.34 mm²: colour coded
control pairs from 0.75 mm²: black with white numbers

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

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

Number of cores x nominal cross-section (mm²)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® SERVO C UL/c(UL)			
4 G 0.75 + 2 x (2 x 0.34)	12.4	111	225
4 G 1.5 + 2 x (2 x 0.75)	14.8	148	343
4 G 2.5 + (2 x 2 x 0.75)	16.1	226	407
4 G 4 + (2 x 0.75 + 2 x 1)	17.6	304	498
4 G 6 + (2 x 0.75 + 2 x 1)	19.2	379	627
4 G 10 + (2 x 0.75 + 2 x 1)	23.0	592	909
4 G 16 + (2 x 2 x 1)	25.1	861	1190
4 G 25 + (2 x 2 x 1.5)	28.7	1262	1854
4 G 35 + (2 x 2 x 1.5)	30.6	1652	2023
4 G 50 + (2 x 2 x 2.5)	37.0	2264	2876

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® CHAIN SERVO 911 UL/c(UL)

UL recognized PP/PUR servo-motor supply cable, halogen-free for drag chain application, unscreened

DESIGN

1 I Bare copper conductors, super fine wires class 6 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polypropylene (PP)
3 I Control pairs individually screened with plastic laminated aluminium tape and tinned copper wires
4 I Cores stranded together in short lay-lengths
5 I Non-woven tape separation
6 I Special polyurethane (PUR) outer sheath, colour: orange (RAL 2003) or grey (RAL 7001)

APPLICATION

Highly flexible PP/PUR connection cable for frequency converters and servo motors, especially for continuous moving machine parts, e.g. within C-tracks. FLEXICS® CHAIN SERVO 911 UL/c(UL) cables are designed for indoor applications when exposed to high mechanical stress and increased resistance against a wide range of oils, greases, coolants and lubricants.

TECHNICAL DATA

Rated voltage:
0.6/1 kV (Uo/U)
1000 V (UL/CSA)

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -50 °C up to 80 °C
flexible use: -30 °C up to 80 °C

Bending radius (min.):
fixed installation: 5 x Ø of cable
flexible use: 7.5 x Ø of cable

Core identification:
supply cores: black (continuously numbered) with green/yellow ground conductor
control cores: black with number printing

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

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

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

Number of cores x nominal cross-section (mm²)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHAIN SERVO 911 UL/c(UL)			
4 G 1.5 + 2 x (2 x 0.75)	14.2	96	245
4 G 2.5 + 2 x (2 x 0.75)	15.3	134	312
4 G 4 + (2 x 0.75) + (2 x 1)	16.8	206	396
4 G 6 + (2 x 0.75) + (2 x 1)	18.0	283	483
4 G 1.5 + (2 x 1)	13.0	87	196
4 G 2.5 + (2 x 1)	13.4	125	258
4 G 4 + (2 x 1)	14.8	182	326
4 G 6 + (2 x 1)	16.4	259	433

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® CHAIN SERVO 911C UL/c(UL)

UL recognized PP/PUR servo-motor supply cable, halogen-free for drag chain application, screened

DESIGN

1 I Bare copper conductors, super fine wires class 6 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polypropylene (PP)
3 I Control pairs individually screened with plastic laminated aluminium tape and tinned copper wires
4 I Cores stranded together in short lay-lengths
5 I Wrapping with plastic tape
6 I Tinned copper wire braiding
7 I Non-woven wrapping over braiding
8 I Special polyurethane (PUR) outer sheath, colour: orange (RAL 2003) or grey (RAL 7001)

APPLICATION

Highly flexible PP/PUR connection cable for frequency converters and servo motors, especially for continuous moving machine parts, e.g. within C-tracks. FLEXICS® CHAIN SERVO 911C UL/c(UL) cables are designed for indoor applications when exposed to high mechanical stress and increased resistance against a wide range of oils, greases, coolants and lubricants. Excellent EMC behavior.

TECHNICAL DATA

Rated voltage:
0.6/1 kV (Uo/U)
1000 V (UL/CSA)

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -50 °C up to 80 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 5 x Ø of cable
flexible use: 7.5 x Ø of cable

Core identification:
supply cores: black (continuously numbered) with green/yellow ground conductor
control cores: black with number printing

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

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

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

Number of cores x nominal cross-section (mm²)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHAIN SERVO 911C UL/c(UL)			
4 G 1.5 + 2 x (2 x 0.75)	15.6	150	304
4 G 2.5 + 2 x (2 x 0.75)	15.8	190	356
4 G 4 + (2 x 0.75) + (2 x 1)	17.3	267	434
4 G 6 + (2 x 0.75) + (2 x 1)	18.8	371	537
4 G 10 + (2 x 1) + (2 x 1.5)	21.8	610	819
4 G 1.5 + (2 x 1)	13.3	131	242
4 G 2.5 + (2 x 1)	13.9	175	295
4 G 4 + (2 x 1)	15.9	238	373
4 G 6 + (2 x 1)	17.2	318	470
4 G 16 + 2 x (2 x 1.5)	25.5	801	1135
4 G 25 + 2 x (2 x 1.5)	28.8	1187	1559
4 G 35 + 2 x (2 x 1.5)	30.9	1588	2093
4 G 50 + 2 x (2 x 2.5)	36.3	2557	2920

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® SPIRAL 11

PVC/PUR multicore control cable, coilable

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polyvinyl chloride (PVC)
3 I Cores are stranded in layers with optimal lay-length
4 I Mineral powder separation
5 I Special polyurethane (PUR) outer sheath, shiny finished, colour: grey (RAL 7001), other colours upon request

TECHNICAL DATA

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
operating temperature: -5 °C up to 70 °C

Core identification:
colour coded or continuously numbered according to internal standards or customer requirements

APPLICATION

Our FLEXICS® SPIRAL 11 cables have been developed for indoor applications exposed to light or medium mechanical stress. They possess an increased resistance against a wide range of oils, greases, coolants and lubricants. They have a very good elasticity and offer more memory than its PVC alternative. Used mainly in households, lighting, mechanical and plant engineering. Further spiral processing possible.

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® SPIRAL 11			
2 x 0.75	5.7	14.4	42
3 G 0.75	6.1	21.6	52
4 G 0.75	6.7	28.8	65
5 G 0.75	7.3	36.0	78
7 G 0.75	8.0	50.0	98
12 G 0.75	10.1	86.4	166
18 G 0.75	12.2	129.6	237
2 x 1	6.1	19.2	49
3 G 1	6.6	28.8	64
4 G 1	7.1	38.4	78
5 G 1	7.6	48.0	94
7 G 1	8.5	67.0	117
12 G 1	11.0	115.2	204
18 G 1	13.1	172.8	286
2 x 1.5	6.5	29.0	62
3 G 1.5	7.1	43.0	79
4 G 1.5	7.5	57.6	105

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® SPIRAL 11

PVC/PUR multicore control cable, coilable

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® SPIRAL 11			
5 G 1.5	8.6	72.0	123
7 G 1.5	9.6	101.0	163
12 G 1.5	12.7	172.8	279
18 G 1.5	14.9	259.2	398
3 G 2.5	8.6	72.0	123
4 G 2.5	9.2	96.0	158
5 G 2.5	10.5	120.0	189

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® SPIRAL 911

PP/PUR multicore control cable, coilable

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of polypropylene compound (PP)
3 I Cores are stranded in layers with optimal lay-length
4 I Mineral powder separation
5 I Special polyurethane (PUR) outer sheath, shiny finished, colour: orange (RAL 2003), other colours upon request

TECHNICAL DATA

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
operating temperature: -30 °C up to 80 °C

Core identification:
colour coded or continuously numbered according to internal standards or customer requirements

APPLICATION

FLEXICS® SPIRAL 911 cables have been developed especially for continuous moving machine parts. They are designed for indoor applications exposed to high mechanical stress and possess an increased resistance against a wide range of oils, greases, coolants and lubricants. These cables have a very good memory and are very durable. Further spiral processing possible.

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® SPIRAL 911			
2 x 0.75	5.7	14.4	39
3 G 0.75	6.1	21.6	47
4 G 0.75	6.7	28.8	59
5 G 0.75	7.3	36.0	71
7 G 0.75	8.0	50.0	93
12 G 0.75	10.1	86.4	150
18 G 0.75	12.2	129.6	224
2 x 1	6.1	19.2	45
3 G 1	6.6	28.8	57
4 G 1	7.1	38.4	70
5 G 1	7.6	48.0	85
7 G 1	8.5	67.0	110
12 G 1	11.0	115.2	184
18 G 1	13.1	172.8	268
2 x 1.5	6.5	29.0	60
3 G 1.5	7.1	43.0	75
4 G 1.5	7.5	57.6	96
5 G 1.5	8.6	72.0	116

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® SPIRAL 911

PP/PUR multicore control cable, coilable

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® SPIRAL 911			
7 G 1.5	9.6	101.0	152
12 G 1.5	12.7	172.8	253
18 G 1.5	14.9	259.2	369
3 G 2.5	8.6	72.0	119
4 G 2.5	9.2	96.0	153
5 G 2.5	10.5	120.0	185

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® SPIRAL 1211

TPE/PUR multicore control cable, coilable

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of thermoplastic elastomer compound (TPE)
3 I Mineral powder separation
4 I Special polyurethane (PUR) outer sheath, shiny finished, colour: orange (RAL 2003), other colours upon request

TECHNICAL DATA

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
operating temperature: -30 °C up to 80 °C

Core identification:
colour coded or continuously numbered according to internal standards or customer requirements

APPLICATION

FLEXICS® SPIRAL 1211 cables are designed to withstand constant, repetitive and periodical movement during operation, even in the outdoors. They are suitable for use in dry, damp and wet locations; for heavy-duty applications in electrical tools, machinery, agriculture or construction sites. Resistant against high mechanical stress, scrubbing and grinding. Further spiral processing possible.

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® SPIRAL 1211			
2 x 0.75	5.7	14.4	40
3 G 0.75	6.1	21.6	49
4 G 0.75	6.7	28.8	63
5 G 0.75	7.3	36.0	76
7 G 0.75	8.0	50.0	97
12 G 0.75	10.1	86.4	160
18 G 0.75	12.2	129.6	233
2 x 1	6.1	19.2	46
3 G 1	6.6	28.8	60
4 G 1	7.1	38.4	74
5 G 1	7.6	48.0	90
7 G 1	8.5	67.0	116
12 G 1	11.0	115.2	195
18 G 1	13.1	172.8	278
2 x 1.5	6.5	29.0	61
3 G 1.5	7.1	43.0	77
4 G 1.5	7.5	57.6	99
5 G 1.5	8.6	72.0	120

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® SPIRAL 1211

TPE/PUR multicore control cable, coilable

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® SPIRAL 1211			
7 G 1.5	9.6	101.0	156
12 G 1.5	12.7	172.8	261
18 G 1.5	14.9	259.2	382
3 G 2.5	8.6	72.0	121
4 G 2.5	9.2	96.0	157
5 G 2.5	10.5	120.0	187

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® SPIRAL S05BQ-F/S07BQ-F

XLPE/PUR multicore control cable, coilable

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on cross-linked polymer (XLPE)
3 I Cores are stranded in layers with optimal lay-length
4 I Mineral powder separation
5 I Special polyurethane (PUR) outer sheath, shiny finished, colour: black (RAL 9005), other colours upon request

TECHNICAL DATA

Rated voltage:
300/500 V or 450/750 V (Uo/U)

Test voltage:
core / core 2500 V / 50 Hz

Temperature range:
operating temperature: -25 °C up to 90 °C

Core identification:
colour coded or continuously numbered according to internal standards or customer requirements

APPLICATION

FLEXICS® SPIRAL S05BQ-F/S07BQ-F cables withstand high mechanical demands like scrubbing and grinding. They are used where long lasting recovery capability and long term service life is a must. Its construction fits dry, damp or wet locations and offers good flexibility also at low temperatures, in industrial and agricultural appliances, electrical tools, on construction sites and in machinery. Further spiral processing possible.

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® SPIRAL S05BQ-F/S07BQ-F			
2 x 0.75	6.3	14.4	50
3 G 0.75	6.9	21.6	62
4 G 0.75	7.5	28.8	74
5 G 0.75	8.3	36.0	92
7 G 0.75	9.3	50.0	118
12 G 0.75	12.4	86.4	193
18 G 0.75	14.6	129.6	276
2 x 1	6.7	19.2	59
3 G 1	7.1	28.8	70
4 G 1	7.7	38.4	86
5 G 1	8.6	48.0	106
7 G 1	9.6	67.0	136
12 G 1	12.8	115.2	224
18 G 1	15.3	172.8	328
2 x 1.5	8.3	29.0	89
3 G 1.5	8.8	43.0	106
4 G 1.5	9.8	57.6	133

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® SPIRAL S05BQ-F/S07BQ-F

XLPE/PUR multicore control cable, coilable

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® SPIRAL S05BQ-F/S07BQ-F			
5 G 1.5	10.7	72.0	158
7 G 1.5	12.1	101.0	209
12 G 1.5	16.1	172.8	342
18 G 1.5	19.4	259.2	505
3 G 2.5	10.4	72.0	155
4 G 2.5	11.6	96.0	197
5 G 2.5	12.9	120.0	240

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® TRUCK FLRYY

PVC/PVC power and control cable for commercial vehicles

DESIGN

1 I Bare copper conductors, fine wires according to ISO 6722-1
2 I Core insulation of special compound based on polyvinyl chloride (PVC) or for data transmission core / control pairs based on modified polyolefins (MPO), thin wall insulation according to ISO 6722-1
3 I Power supply cores stranded together with control cores and construction-related fillers (optional)
4 I Mineral powder separation or non-woven wrapping over stranding (optional)
5 I Outer sheath of special compound based on polyvinyl chloride (PVC), colour: black (RAL 9005) or according to customer's requirements

APPLICATION

These PVC sheathed cables provide optimal solution for wiring of electrical installations in commercial vehicles. Moreover, ADR approval allows use in vehicles transporting hazardous goods.

TECHNICAL DATA

Standard:
acc. to ISO 6722-1 and ISO 14572 / temperature class A

Rated voltage:
60 V (Uo/U)

Test voltage:
core / core 5000 V / 50 Hz

Temperature range:
operating temperature: -40 °C up to 85 °C

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

Core identification:
acc. to ISO 4141-3, colour coded or continuously numbered, according to internal standards or client's requirements

Fire properties:
ISO 6722-1, ISO 14572, ISO 4141

Certificate:
ADR TÜ . EGG . 267 – 18

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® TRUCK FLRYY			
2 x 0.5	5.0	9.6	34
7 x 0.75	7.3	50.4	79
2 x 1	6.0	19.2	55
3 x 1	6.3	28.8	63
4 x 1	6.8	38.4	81
5 x 1	7.5	48.0	97
5 x 1 + 1 x 2.5	9.0	72.0	133
2 x 1.5	6.6	28.8	68
2 x 1.5 + 2 x 0.75	7.2	43.2	85
3 x 1.5 + 2 x 4	11.6	120.0	197
3 x 1.5 + 2 x 6	12.1	158.4	275
4 x 1.5	7.5	57.6	106
2 x 4 + 3 x 1.5 + (2 x 1.5)	12.7	148.8	251
2 x 6 + 3 x 1.5 + (2 x 1.5)	13.7	187.2	316
5 x 1.5 + 2 x 2.5	10.3	120.0	217
6 x 1.5 + 1 x 2.5	10.3	110.4	187
7 x 1.5	8.9	100.8	166

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® TRUCK FLRYY

PVC/PVC power and control cable for commercial vehicles

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® TRUCK FLRYY			
8 x 1.5 + 1 x 2.5	11.7	139.2	239
8 x 1.5 + 5 x 2.5	14.8	235.2	360
9 x 1.5 + 4 x 2.5	14.8	225.6	352
10 x 1.5 + 3 x 2.5 + (2 x 1.5)	14.4	244.8	391
10 x 1.5 + 3 x 2.5	14.4	216.0	367
50 x 1.5	23.4	720.0	998
4 x 6 + 1 x 1.5	13.7	244.8	352

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® TRUCK FLRY11Y

PVC/PUR power and control cable for commercial vehicles

DESIGN

1 I Bare copper conductors, fine wires according to ISO 6722-1
2 I Core insulation of special compound based on polyvinyl chloride (PVC) or for data transmission core / control pairs based on modified polyolefins (MPO), thin wall insulation according to ISO 6722-1
3 I Power supply cores stranded together with control cores and construction-related fillers (optional)
4 I Mineral powder separation or non-woven wrapping over stranding (optional)
5 I Outer sheath of special compound based on polyurethane (PUR), colour: black (RAL 9005) or according to customer's requirements

APPLICATION

These PUR sheathed cables provide optimal solution for connection between towing and towed vehicles. Due to PUR sheath cables offer high resistance to abrasion. Can be produced as SPIRAL for processing into coiled cable assemblies. ADR approval allows use in vehicles transporting hazardous goods.

TECHNICAL DATA

Standard:
acc. to ISO 6722-1 and ISO 14572 / temperature class A

Rated voltage:
60 V (Uo/U)

Test voltage:
core / core 5000 V / 50 Hz

Temperature range:
operating temperature: -40 °C up to 85 °C

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

Core identification:
acc. to ISO 4141-3, colour coded or continuously numbered, according to internal standards or client's requirements

Fire properties:
ISO 6722-1, ISO 14572, ISO 4141

Certificate:
ADR TÜ . EGG . 269 – 18

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® TRUCK FLRY11Y			
2 x 0.5	5.0	9.6	37
7 x 0.75	7.3	50.4	79
2 x 1	6.0	19.2	55
3 x 1	6.3	28.8	67
4 x 1	6.8	38.4	81
5 x 1	7.5	48.0	97
5 x 1 + 1 x 2.5	9.0	72.0	133
6 x 1 + 1 x 1.5	8.3	72.0	187
2 x 1.5	6.6	28.8	68
2 x 1.5 + 2 x 0.75	7.2	43.2	85
3 x 1.5 + 2 x 4	11.6	120.0	197
3 x 1.5 + 2 x 6	12.1	158.4	275
6 x 1.5 + 1 x 2.5	10.3	110.4	187
7 x 1.5	8.9	100.8	166
8 x 1.5 + 1 x 2.5	11.7	139.2	239

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® TRUCK FLRY11Y

PVC/PUR power and control cable for commercial vehicles

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® TRUCK FLRY11Y			
10 x 1.5 + 3 x 2.5 + (2 x 1.5)	14.4	244.8	395
10 x 1.5 + 3 x 2.5	14.4	216.0	367
18 x 1.5	13.7	259.2	407
25 x 1.5	16.1	360.0	560
50 x 1.5	23.4	720.0	998
2 x 4 + 3 x 1.5 + (2 x 1.5)	11.9	148.8	257
2 x 6 + 3 x 1.5 + (2 x 1.5)	12.1	187.2	321

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® TRUCK FLRYY11Y

PVC/PUR power and control cable for commercial vehicles

DESIGN

1 I Bare copper conductors, fine wires according to ISO 6722-1
2 I Core insulation of special compound based on polyvinyl chloride (PVC) or for data transmission core / control pairs based on modified polyolefins (MPO), thin wall insulation according to ISO 6722-1
3 I Power supply cores stranded together with control cores and construction-related fillers (optional)
4 I Mineral powder separation or non-woven wrapping over stranding (optional)
5 I Outer sheath of co-extruded special compound based on polyvinyl chloride (PVC) and special polyurethane (PUR), color: black (RAL 9005) or according to customers' requirements

APPLICATION

These PVC and PUR double sheathed cables provide optimal solution for wiring of electrical installations in commercial vehicles. Due to additional PUR sheath cables offer high resistance to abrasion. ADR approval allows use in vehicles transporting hazardous goods.

TECHNICAL DATA

Standard:
acc. to ISO 6722-1 and ISO 14572 / temperature class A

Rated voltage:
60 V (Uo/U)

Test voltage:
core / core 5000 V / 50 Hz

Temperature range:
operating temperature: -40 °C up to 85 °C

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

Core identification:
acc. to ISO 4141-3, colour coded or continuously numbered, according to internal standards or client's requirements

Fire properties:
ISO 6722-1, ISO 14572, ISO 4141

Certificate:
ADR TÜ . EGG . 268 – 18

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® TRUCK FLRYY11Y			
2 x 0.5	5.0	9.6	37
7 x 0.75	7.3	50.4	79
2 x 1	6.0	19.2	55
3 x 1	6.3	28.8	67
4 x 1	6.8	38.4	81
5 x 1	7.5	48.0	97
5 x 1 + 1 x 2.5	9.0	72.0	133
6 x 1 + 1 x 1.5	8.3	72.0	187
2 x 1.5	6.6	28.8	68
2 x 1.5 + 2 x 0.75	7.2	43.2	85
3 x 1.5 + 2 x 4	11.6	120.0	197
3 x 1.5 + 2 x 6	12.1	158.4	275
6 x 1.5 + 1 x 2.5	10.3	110.4	187
7 x 1.5	8.9	100.8	166
8 x 1.5 + 1 x 2.5	11.7	139.2	239

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® TRUCK FLRYY11Y

PVC/PUR power and control cable for commercial vehicles

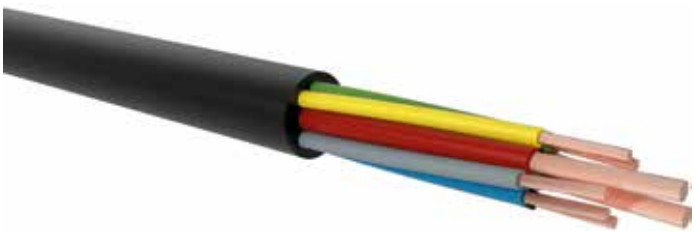
Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® TRUCK FLRYY11Y			
10 x 1.5 + 3 x 2.5 + (2 x 1.5)	14.4	244.8	395
10 x 1.5 + 3 x 2.5	14.4	216.0	367
18 x 1.5	13.7	259.2	407
25 x 1.5	16.1	360.0	560
50 x 1.5	23.4	720.0	998
2 x 4 + 3 x 1.5 + (2 x 1.5)	11.9	148.8	257
2 x 6 + 3 x 1.5 + (2 x 1.5)	12.1	187.2	321

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® TRUCK SPIRAL FLRY12Y

PVC/TPE-E connecting cable for commercial vehicles

DESIGN



1 I Bare copper conductors, fine wires according to ISO 6722-1
2 I Core insulation of special compound based on polyvinyl chloride (PVC) or for data transmission core / control pairs based on modified polyolefins (MPO), thin wall insulation according to ISO 6722-1
3 I Power supply cores stranded together with control cores and construction-related fillers (optional)
4 I Mineral powder separation and non-woven wrapping over stranding (optional)
5 I Outer sheath of special compound based on polyester (TPE-E), colour: black (RAL 9005)

APPLICATION

These TPE-E sheathed cables provide optimal solution for connection between towing and towed vehicles. Furthermore, these cables are designed for processing into coiled cable assemblies. For applications in electronic braking systems special designs with data elements are offered.

TECHNICAL DATA

Standard:
acc. to ISO 6722-1 and ISO 14572 / temperature class A

Rated voltage:
60 V (Uo/U)

Test voltage:
core / core 5000 V / 50 Hz

Temperature range:
operating temperature: -40 °C up to 85 °C

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

Core identification:
acc. to ISO 4141-3, colour coded or continuously numbered, according to internal standards or client's requirements

Fire properties:
ISO 6722-1, ISO 14572, ISO 4141

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® TRUCK SPIRAL FLRY12Y			
6 x 1 + 1 x 1.5	9.6	72.0	102
6 x 1.5 + 1 x 2.5	10.8	101.0	180
3 x 1.5 + 2 x 4	11.4	120.0	196
1 x 1.5 + (4 x 1.5) + 2 x 4	13.0	148.8	270
8 x 1.5 + (4 x 1.5) + 3 x 2.5	15.1	244.8	390

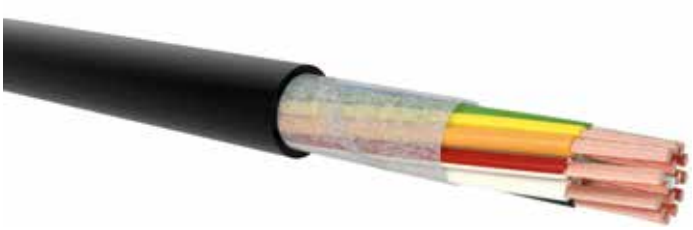
Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® TRUCK SPIRAL FLR9Y12Y

PP/TPE-E connecting cable for commercial vehicles, temperature class B

DESIGN



1 I Bare copper conductors, fine wires according to ISO 6722-1
2 I Core insulation of special compound based on polypropylene (PP), thin wall insulation according to ISO 6722-1
3 I Power supply cores stranded together with control cores and construction-related fillers (optional)
4 I Mineral powder separation and non-woven wrapping over stranding (optional)
5 I Outer sheath of special compound based on polyester (TPE-E), colour: black (RAL 9005)

APPLICATION

These TPE-E sheathed cables provide optimal solution for connection between towing and towed vehicles. Furthermore, these cables are designed for processing into coiled cable assemblies. For applications in electronic braking systems special designs with data elements are offered.

TECHNICAL DATA

Standard:
acc. to ISO 6722-1 and ISO 14572 / temperature class B

Rated voltage:
60 V (Uo/U)

Test voltage:
core / core 5000 V / 50 Hz

Temperature range:
operating temperature: -40 °C up to 105 °C

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

Core identification:
acc. to ISO 4141-3, colour coded or continuously numbered, according to internal standards or client's requirements

Fire properties:
ISO 6722-1, ISO 14572, ISO 4141

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® TRUCK SPIRAL FLR9Y12Y			
6 x 1 + 1 x 1.5	9.6	72.0	102
6 x 1.5 + 1 x 2.5	10.8	101.0	180
3 x 1.5 + 2 x 4	11.4	120.0	196
1 x 1.5 + (4 x 1.5) + 2 x 4	13.0	148.8	270
8 x 1.5 + (4 x 1.5) + 3 x 2.5	15.1	244.8	390

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® TRUCK TWIN FLYY

PVC/PVC twin battery cable for commercial vehicles

DESIGN

1 I Bare copper conductors, fine wires according to ISO 6722-1
2 I Core insulation of special compound based on polyvinyl chloride (PVC)
3 I Outer sheath of special compound based on polyvinyl chloride (PVC), colour: black (RAL 9005)

APPLICATION

Flat twin battery PVC sheathed cables for usage in vehicles. Connection and control cable between the voltage source and electrical appliances, e.g. for tail lifts, etc.

TECHNICAL DATA

Standard:
acc. to ISO 6722-1 and ISO 14572 / temperature class A

Rated voltage:
60 V (Uo/U)

Test voltage:
core / core 3000 V / 50 Hz

Temperature range:
operating temperature: -40 °C up to 85 °C

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

Core identification:
black and red

Fire properties:
ISO 6722-1, ISO 14572, ISO 4141

Number of cores x nominal cross-section (mm^2)	Outer dimensions width x height (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® TRUCK TWIN FLYY			
2 x 6	15.2 x 7.1	115.2	201
2 x 10	18.8 x 8.9	192.0	304
2 x 16	21.0 x 10.1	307.2	442
2 x 25	25.6 x 12.3	480.0	671
2 x 35	28.4 x 13.5	672.0	883
2 x 50	33.0 x 16.1	960.0	1261
2 x 70	39.8 x 18.4	1344.0	1799

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® CHARGE SPIRAL 9111

TPE/PUR coilable battery cable

DESIGN

1 I Bare copper conductors, fine wires according to ISO 6722-1
2 I Core insulation of thermoplastic elastomer compound (TPE)
3 I Non-woven tape separation (optional)
4 I Special polyurethane (PUR) outer sheath, colour: black (RAL 9005), red (RAL 3000) or orange (RAL 2003)

APPLICATION

Our FLEXICS® CHARGE SPIRAL 9111 cables have been developed especially as charging cables for batteries, e.g. for fork lifts and are destined for processing into coiled cable assemblies.

TECHNICAL DATA

Standard:
acc. to ISO 6722-1 and ISO 14572 / temperature class A

Rated voltage:
60 V (Uo/U)

Test voltage:
5000 V

Temperature range:
operating temperature: -40 °C up to 85 °C

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

Fire properties:
ISO 6722-1, ISO 14572, ISO 4141

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHARGE SPIRAL 9111			
1 x 16	9.6	154	222
1 x 25	11.7	240	290
1 x 35	13.6	336	392

Technical changes reserved. All figures are therefore without guarantee.

H05V-K

PVC insulated wire

DESIGN

1 | Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 | Core insulation of special compound based on polyvinyl chloride (PVC)

APPLICATION

PVC insulated wires for fixed and protected installations, for internal wiring of equipment and lightings, for signalling and control circuits.

TECHNICAL DATA

Standard:
EN 50525-2-31

Rated voltage:
300/500 V (Uo/U)

Test voltage:
2000 V

Temperature range:

fixed installation:	-30 °C up to 70 °C
flexible use:	-5 °C up to 70 °C
laying temperature:	min. 5 °C

Bending radius (min.):

fixed installation:	3 x Ø of cable
flexible use:	5 x Ø of cable

Core identification:
according to EN 50525-1 - black, white, blue, brown, red, orange, violet, pink, green/yellow, yellow, green, grey

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
H05V-K			
1 x 0.5	2.0	4.8	8
1 x 0.75	2.2	7.2	11
1 x 1	2.4	9.6	13

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

H07V-K

PVC insulated wire

DESIGN

1 | Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 | Core insulation of special compound based on polyvinyl chloride (PVC)

APPLICATION

PVC insulated wires for fixed and protected installations, for internal wiring of equipment and lightings, for signalling and control circuits.

TECHNICAL DATA

Standard:
EN 50525-2-31

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

Test voltage:
2500 V

Temperature range:

fixed installation:	-30 °C up to 70 °C
flexible use:	-5 °C up to 70 °C
laying temperature:	min. 5 °C

Bending radius (min.):

fixed installation:	3 x Ø up to 12 mm 4 x Ø over 12 mm
flexible use:	5 x Ø up to 12 mm 6 x Ø over 12 mm

Core identification:
according to EN 50525-1 - black, white, blue, brown, red, orange, violet, pink, green/yellow, yellow, green, grey

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
H07V-K			
1 x 1.5	2.8	14.4	19
1 x 2.5	3.5	24.0	30
1 x 4	4.0	38.0	44
1 x 6	5.0	58.0	66
1 x 10	6.7	96.0	107
1 x 16	7.6	154.0	161
1 x 25	8.1	240.0	290
1 x 35	9.2	336.0	380
1 x 50	11.6	480.0	550
1 x 70	13.4	672.0	716
1 x 95	15.5	912.0	976
1 x 120	17.1	1152.0	1214
1 x 150	22.0	1440.0	1530
1 x 185	25.0	1776.0	1900
1 x 240	28.0	2304.0	2450

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

H05Z-K

XLPE insulated wire, halogen-free

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special halogen-free, flame retardant compound based on cross-linked polymer (XLPE)

APPLICATION

These halogen-free and flame retardant single cores are intended for fixed and protected installations, for internal wiring of equipment and lightings, for signaling and control circuits, especially for the protection of human life and valuable equipment.

TECHNICAL DATA

Standard:
EN 50525-3-41

Rated voltage:
300/500 V (Uo/U)

Test voltage:
2000 V

Temperature range:
fixed installation: -40 °C up to 90 °C
flexible use: -20 °C up to 90 °C

Bending radius (min.):
fixed installation: 3 x Ø of cable
flexible use: 4 x Ø of cable

Core identification:
according to EN 50525-1 - black, white, blue, brown, red, orange, violet, pink, green/yellow, yellow, green, grey

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
H05Z-K			
1 x 0.5	2.2	4.8	9
1 x 0.75	2.4	7.2	12
1 x 1	2.6	9.6	14

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

H07Z-K

XLPE insulated wire, halogen-free

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special halogen-free, flame retardant compound based on cross-linked polymer (XLPE)

APPLICATION

These halogen-free and flame retardant single cores are intended for fixed and protected installations, for internal wiring of equipment and lightings, for signaling and control circuits, especially for the protection of human life and valuable equipment.

TECHNICAL DATA

Standard:
EN 50525-3-41

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

Test voltage:
2500 V

Temperature range:
fixed installation: -40 °C up to 90 °C
flexible use: -20 °C up to 90 °C

Bending radius (min.):
fixed installation: 3 x Ø up to 12 mm
4 x Ø over 12 mm
flexible use: 4 x Ø up to 12 mm
5 x Ø up to 20 mm
6 x Ø over 20 mm

Core identification:
according to EN 50525-1 - black, white, blue, brown, red, orange, violet, pink, green/yellow, yellow, green, grey

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
H07Z-K			
1 x 1.5	2.9	14.4	20
1 x 2.5	3.6	24.0	31
1 x 4	4.8	38.0	51
1 x 6	6.0	58.0	71
1 x 10	6.7	96.0	118
1 x 16	8.2	154.0	180
1 x 25	10.2	240.0	278
1 x 35	11.5	336.0	375
1 x 50	13.6	480.0	560
1 x 70	16.0	672.0	780
1 x 95	18.4	912.0	952
1 x 120	20.3	1152.0	1200
1 x 150	22.7	1440.0	1530
1 x 185	25.3	1776.0	1900
1 x 240	28.3	2304.0	2450

Technical changes reserved. All figures are therefore without guarantee.

H05Z1Z1-F

FRNC control cable, unscreened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special halogen-free, flame retardant compound (FRNC)
3 I Cores are stranded together with optimal lay-length
4 I Outer sheath of special halogen-free, flame retardant compound (FRNC), colour: grey (RAL 7001)

APPLICATION

Halogen-free and flame retardant flexible cable for appliances, devices and lamps as well as for internal wiring. Not suitable for outdoor application. Installed where fire, smoke emission and toxic fumes create a potential threat to life and equipment.

TECHNICAL DATA

Standard:
EN 50525-2-11

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 2000 V / 50 Hz

Temperature range:
fixed installation: -40 °C up to 70 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 3 x Ø of cable
flexible use: 4 x Ø of cable

Core identification:
colours according to CENELEC HD 308 S2

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
H05Z1Z1-F			
2 x 0.75	6.2	14.4	53
4 G 1	7.0	38.4	91
5 G 1	7.6	48.0	111
3 G 1.5	8.3	43.2	110
5 G 1.5	9.9	72.0	151
3 G 2.5	10.0	72.0	167
5 G 2.5	11.0	120.0	234

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

H03VV-F

PVC control cable, light-duty

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polyvinyl chloride (PVC)
3 I Cores are stranded together with optimal lay-length
4 I Outer sheath of special compound based on polyvinyl chloride (PVC), colour: according to customers' requirements

APPLICATION

Light duty PVC cable for use in domestic premises, kitchens and offices. For use with light portable appliances, e.g. table lamps, radios or office machines, but not for the connection of cooking plates or heating devices to public mains. These cables are generally unsuitable for outdoor use, industrial applications or the connection to industrial power tools.

TECHNICAL DATA

Standard:
EN 50525-2-11

Rated voltage:
300/300 V (Uo/U)

Test voltage:
core / core 2000 V / 50 Hz

Temperature range:
fixed installation: -30 °C up to 70 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 3 x Ø of cable
flexible use: 5 x Ø of cable

Core identification:
colours according to CENELEC HD 308 S2

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
H03VV-F			
2 x 0.5	4.7	9.6	30
3 G 0.5	5.0	14.4	37
4 G 0.5	5.6	19.2	48
2 x 0.75	5.2	14.4	40
3 G 0.75	5.5	21.6	48
4 G 0.75	6.1	29.0	60

Technical changes reserved. All figures are therefore without guarantee.

H05VV-F

PVC control cable, medium duty

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polyvinyl chloride (PVC)
3 I Cores are stranded together with optimal lay-length
4 I Outer sheath of special compound based on polyvinyl chloride (PVC), colour: according to customers' requirements

APPLICATION

Medium duty PVC cable for use in domestic premises and offices, e.g. washing machines, spin dryers, refrigerators, etc. These cables are generally unsuitable for outdoor use, industrial applications or the connection to industrial power tools.

TECHNICAL DATA

Standard:
EN 50525-2-11

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 2000 V / 50 Hz

Temperature range:
fixed installation: -30 °C up to 70 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 3 x Ø up to 12 mm
4 x Ø over 12 mm
flexible use: 5 x Ø up to 12 mm
6 x Ø over 12 mm

Core identification:
colours according to CENELEC HD 308 S2

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
H05VV-F			
3 G 0.75	6.2	21.6	57
4 G 0.75	6.7	29.0	69
5 G 0.75	7.7	36.0	95
2 x 1	6.2	19.0	55
3 G 1	6.6	29.0	68
4 G 1	7.4	38.0	86
5 G 1	8.1	48.0	102
2 x 1.5	7.0	29.0	73
3 G 1.5	7.6	43.0	92
4 G 1.5	8.5	58.0	116
5 G 1.5	9.5	72.0	142
2 x 2.5	8.8	48.0	116
3 G 2.5	9.5	72.0	146
4 G 2.5	10.4	96.0	179
5 G 2.5	11.5	120.0	218
3 G 4	11.3	115.0	226
4 G 4	12.0	154.0	257
5 G 4	13.3	192.0	311

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

H05VV5-F

PVC control cable, oil resistant, unscreened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polyvinyl chloride (PVC)
3 I Cores are stranded in layers with optimal lay-length
4 I Outer sheath of special oil resistant compound based on polyvinyl chloride (PVC), colour: grey (RAL 7001)

APPLICATION

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

TECHNICAL DATA

Standard:
EN 50525-2-51

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 2000 V / 50 Hz

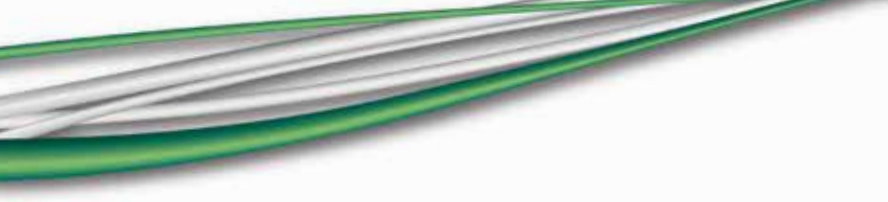
Temperature range:
fixed installation: -30 °C up to -70 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 3 x Ø up to 12 mm
4 x Ø over 12 mm
flexible use: 5 x Ø up to 12 mm
6 x Ø over 12 mm

Core identification:
colours according to CENELEC HD 308 S2

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
H05VV5-F			
2 x 0.5	5.9	9.7	46
3 G 0.5	6.2	14.4	54
4 G 0.5	6.7	19.2	65
5 G 0.5	7.4	24.0	80
7 G 0.5	9.1	33.6	119
10 G 0.5	10.8	48.0	166
12 G 0.5	11.2	58.0	186
14 G 0.5	11.7	67.0	215
18 G 0.5	13.0	86.4	251
25 G 0.5	16.0	120.0	349
34 G 0.5	17.7	163.0	480
2 x 0.75	6.3	14.4	52
3 G 0.75	6.7	21.6	68
4 G 0.75	7.3	29.0	82
5 G 0.75	8.3	36.0	107
6 G 0.75	9.0	43.0	132
7 G 0.75	9.7	50.0	145
12 G 0.75	12.1	86.0	231
18 G 0.75	14.0	130.0	313



INDUSTRIAL CABLES SLOVAKIA

H05VV5-F

PVC control cable, oil resistant, unscreened

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
H05VV5-F			
25 G 0.75	17.0	180.0	461
34 G 0.75	19.1	245.0	614
2 x 1	6.6	19.2	66
3 G 1	7.0	29.0	78
4 G 1	7.6	38.4	104
5 G 1	8.7	48.0	123
7 G 1	10.2	67.0	183
12 G 1	13.0	115.0	269
14 G 1	13.3	134.0	360
18 G 1	15.0	173.0	400
25 G 1	18.0	240.0	546
34 G 1	20.6	236.0	724
2 x 1.5	7.3	28.8	77
3 G 1.5	7.9	43.0	97
4 G 1.5	8.7	58.0	128
5 G 1.5	9.6	72.0	149
6 G 1.5	10.7	86.0	196
7 G 1.5	11.8	101.0	216
12 G 1.5	14.4	173.0	324
18 G 1.5	17.2	259.0	485
25 G 1.5	21.7	360.0	671
34 G 1.5	24.1	490.0	881
2 x 2.5	9.1	48.0	110
3 G 2.5	9.6	72.0	154
4 G 2.5	10.8	96.0	212
5 G 2.5	11.6	120.0	242
7 G 2.5	14.2	168.0	350
12 G 2.5	17.7	288.0	543
18 G 2.5	21.4	432.0	787
25 G 2.5	26.1	600.0	1175
34 G 2.5	29.5	816.0	1450

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

H05VVC4V5-K

PVC control cable, oil resistant, screened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polyvinyl chloride (PVC)
3 I Cores are stranded in layers with optimal lay-length
4 I Inner sheath of special compound based on polyvinyl chloride (PVC)
5 I Tinned copper wire braiding
6 I Outer sheath of special oil resistant compound based on polyvinyl chloride (PVC), colour: grey (RAL 7001)

APPLICATION

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

TECHNICAL DATA

Standard:
EN 50525-2-51

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 2000 V / 50 Hz

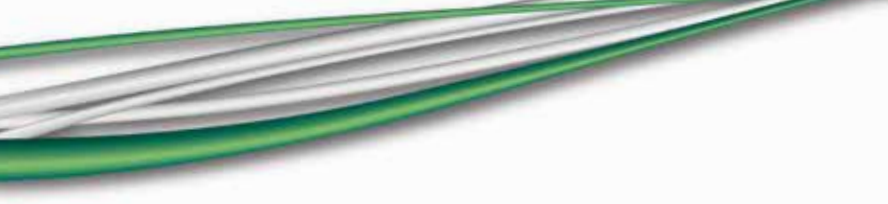
Temperature range:
fixed installation: -30 °C up to 70 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 3 x Ø up to 12 mm
4 x Ø over 12 mm
flexible use: 5 x Ø up to 12 mm
6 x Ø over 12 mm

Core identification:
colours according to CENELEC HD 308 S2

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
H05VVC4V5-K			
2 x 0.5	8.0	30	92
3 G 0.5	8.4	36	109
4 G 0.5	9.1	42	126
5 G 0.5	10.1	48	156
7 G 0.5	11.4	64	192
12 G 0.5	13.5	105	280
14 G 0.5	14.2	114	302
18 G 0.5	15.8	137	384
25 G 0.5	18.6	210	556
34 G 0.5	20.8	298	634
2 x 0.75	8.3	41	102
3 G 0.75	8.8	48	115
4 G 0.75	9.8	55	150
5 G 0.75	10.8	66	173
7 G 0.75	12.1	85	235
12 G 0.75	14.3	135	327



INDUSTRIAL CABLES SLOVAKIA

H05VVC4V5-K

PVC control cable, oil resistant, screened

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
H05VVC4V5-K			
18 G 0.75	16.9	190	488
25 G 0.75	20.0	275	654
34 G 0.75	22.1	340	821
2 x 1	8.6	48	114
3 G 1	9.3	59	142
4 G 1	10.2	70	175
5 G 1	11.0	84	205
7 G 1	12.9	106	264
12 G 1	15.6	174	420
14 G 1	15.7	198	433
18 G 1	17.4	240	561
25 G 1	21.1	332	766
34 G 1	24.1	420	996
2 x 1.5	9.1	69	146
3 G 1.5	10.2	75	176
4 G 1.5	10.9	90	207
5 G 1.5	11.6	108	235
7 G 1.5	13.5	157	314
12 G 1.5	16.8	240	500
18 G 1.5	20.0	355	707
25 G 1.5	24.2	448	950
34 G 1.5	26.3	754	1204
2 x 2.5	11.4	81	190
3 G 2.5	11.7	104	243
4 G 2.5	12.8	134	280
5 G 2.5	13.9	175	342
7 G 2.5	15.9	225	439
12 G 2.5	20.6	375	760
18 G 2.5	24.3	522	1052
25 G 2.5	29.0	897	1375
34 G 2.5	33.0	1179	1892

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

S07V3V3C4V3-F

PVC control cable, cold resistant, screened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special cold resistant compound based on polyvinyl chloride (PVC)
3 I Cores are stranded together with optimal lay-length
4 I Inner sheath of special cold resistant compound based on polyvinyl chloride (PVC)
5 I Tinned copper wire braiding
6 I Outer sheath of special cold resistant compound based on polyvinyl chloride (PVC), colour: black (RAL 9005)

TECHNICAL DATA

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

Test voltage:
core / core 2500 V / 50 Hz

Temperature range:
fixed installation: -40 °C up to 70 °C
flexible use: -25 °C up to 70 °C
conductor temperature: max. 70 °C

Bending radius (min.):
fixed installation: 5 x Ø of cable
flexible use: 10 x Ø of cable

Core identification:
colours according to CENELEC HD 308 S2

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

APPLICATION

For medium mechanical stress in dry, damp and wet rooms as well as outdoors. Also for fixed installation on plaster or on machine parts. The cable is used if there are requirements for the noise immunity of the signal transmission (EMC). The outer jacket is oil, UV and ozone resistant.

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
S07V3V3C4V3-F			
4 G 35	34.0	1575	2250
4 G 50	41.6	2160	3314

Technical changes reserved. All figures are therefore without guarantee.

YSLY-JZ or -OZ

PVC control cable, unscreened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polyvinyl chloride (PVC)
3 I Cores are stranded in layers with optimal lay-length
4 I Outer sheath of special compound based on polyvinyl chloride (PVC), colour: grey (RAL 7001) or black (RAL 9005)

APPLICATION

As flexible control and connecting cable for fixed laying and flexible applications without tensile stress and/or without guided movements. Applicable in dry, damp and wet rooms, for medium mechanical stress, but not for outdoor use.

TECHNICAL DATA

Standard:
based on VDE 0281

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -40 °C up to 80 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 4 x Ø of cable
flexible use: 15 x Ø of cable

Core identification:
black (continuously numbered), with green/yellow ground conductor from 3 cores (JZ) or without (OZ)

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

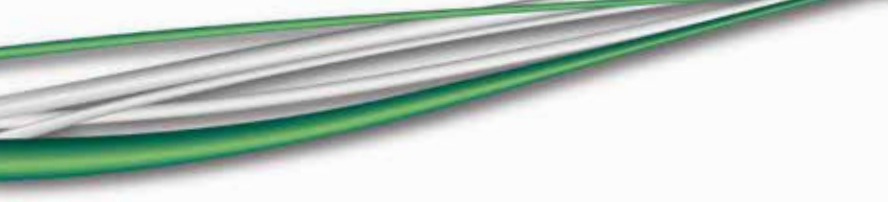
Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
YSLY-JZ or -OZ			
2 x 0.5	4.8	9.7	36
3 x 0.5	5.0	14.4	42
4 x 0.5	5.7	19.2	55
5 x 0.5	6.2	24.0	65
7 x 0.5	6.7	33.6	81
10 x 0.5	8.8	48.0	129
12 x 0.5	9.0	58.0	142
14 x 0.5	9.5	67.0	158
16 x 0.5	10.0	76.0	176
18 x 0.5	10.7	86.4	202
21 x 0.5	11.3	101.0	229
25 x 0.5	12.9	120.0	284
30 x 0.5	13.5	144.0	330
34 x 0.5	14.5	163.0	375
40 x 0.5	15.0	192.0	410
50 x 0.5	17.0	240.0	520
61 x 0.5	19.6	293.0	620
2 x 0.75	5.2	14.4	44
3 x 0.75	5.4	21.6	53

INDUSTRIAL CABLES SLOVAKIA

YSLY-JZ or -OZ

PVC control cable, unscreened

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
YSLY-JZ or -OZ			
4 x 0.75	6.2	29.0	68
5 x 0.75	6.8	36.0	83
6 x 0.75	7.0	43.0	99
7 x 0.75	7.3	50.0	104
10 x 0.75	9.6	72.0	165
12 x 0.75	9.9	86.0	183
16 x 0.75	11.4	115.0	240
18 x 0.75	11.9	130.0	267
21 x 0.75	12.8	151.0	303
25 x 0.75	14.3	180.0	376
34 x 0.75	16.3	245.0	496
41 x 0.75	18.3	296.0	620
50 x 0.75	19.2	360.0	698
61 x 0.75	20.5	439.0	790
2 x 1	5.5	19.2	51
3 x 1	5.9	29.0	64
4 x 1	6.5	38.4	80
5 x 1	7.2	48.0	99
7 x 1	8.0	67.0	127
10 x 1	9.4	96.0	200
12 x 1	10.0	115.0	223
14 x 1	11.4	134.0	249
16 x 1	12.0	154.0	286
18 x 1	12.7	173.0	316
21 x 1	13.6	205.0	369
25 x 1	14.5	240.0	456
30 x 1	16.4	308.0	530
34 x 1	17.4	326.0	591
50 x 1	20.9	480.0	855
61 x 1	24.0	586.0	1050
2 x 1.5	6.3	28.8	69
3 x 1.5	6.6	43.0	84
4 x 1.5	7.3	58.0	105
5 x 1.5	8.2	72.0	132
6 x 1.5	8.5	86.0	158
7 x 1.5	8.9	101.0	168
10 x 1.5	11.6	144.0	263
12 x 1.5	12.0	173.0	294
14 x 1.5	12.8	202.0	336
16 x 1.5	13.5	230.0	377
18 x 1.5	14.4	259.0	426



INDUSTRIAL CABLES SLOVAKIA

YSLY-JZ or -OZ

PVC control cable, unscreened

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
YSLY-JZ or -OZ			
21 x 1.5	15.2	302.0	488
25 x 1.5	17.5	360.0	612
32 x 1.5	18.5	461.0	700
34 x 1.5	19.7	490.0	795
42 x 1.5	22.2	605.0	999
50 x 1.5	23.6	720.0	1148
2 x 2.5	7.6	48.0	106
3 x 2.5	8.1	72.0	132
4 x 2.5	9.0	96.0	167
5 x 2.5	10.1	120.0	211
2 x 4	9.0	76.8	138
3 x 4	9.9	115.0	205
4 x 4	11.2	154.0	263
5 x 4	12.6	192.0	332
3 x 6	11.2	173.0	278
4 x 6	12.6	230.0	358
5 x 6	14.1	288.0	453
4 x 10	16.5	384.0	620
5 x 10	18.4	480.0	778
4 x 16	19.6	614.0	938
5 x 16	21.9	768.0	1178
4 x 25	27.0	960.0	1590
5 x 25	30.0	1200.0	1954
4 x 35	29.0	1344.0	2113
5 x 35	33.0	1680.0	2635
4 x 50	35.0	1920.0	2950

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

YSLCY-JZ or -OZ

PVC control cable, screened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polyvinyl chloride (PVC)
3 I Cores are stranded in layers with optimal lay-length
4 I Wrapping with plastic tape
5 I Tinned copper wire braiding
6 I Outer sheath of special compound based on polyvinyl chloride (PVC), colour: grey (RAL 7001) or black (RAL 9005)

APPLICATION

As flexible control and connecting cable for fixed laying and flexible applications without tensile stress and/or without guided movements. Applicable in dry, damp and wet rooms, especially when excellent EMC characteristics are requested. Applicable for medium mechanical stress but not for outdoor use.

TECHNICAL DATA

Standard:
based on VDE 0281

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 4000 V / 50 Hz

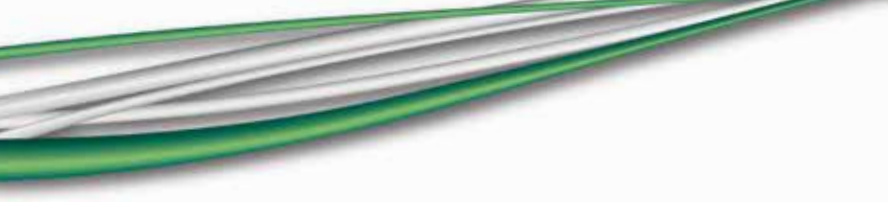
Temperature range:
fixed installation: -40 °C up to 80 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 4 x Ø of cable
flexible use: 15 x Ø of cable

Core identification:
black (continuously numbered), with green/yellow ground conductor from 3 cores (JZ) or without (OZ)

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
YSLCY-JZ or -OZ			
2 x 0.5	5.6	36	45
3 x 0.5	6.1	43	56
4 x 0.5	6.7	49	68
5 x 0.5	7.3	57	80
7 x 0.5	7.9	59	100
10 x 0.5	9.5	92	143
12 x 0.5	10.4	104	160
14 x 0.5	11.0	116	180
16 x 0.5	11.5	129	202
21 x 0.5	12.8	159	252
25 x 0.5	14.5	211	318
30 x 0.5	15.3	238	363
34 x 0.5	16.3	270	420
40 x 0.5	17.3	297	465
50 x 0.5	19.6	362	575
61 x 0.5	20.8	424	675
2 x 0.75	6.5	43	63



INDUSTRIAL CABLES SLOVAKIA

YSLCY-JZ or -OZ

PVC control cable, screened

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
YSLCY-JZ or -OZ			
3 x 0.75	7.0	52	65
4 x 0.75	9.5	61	79
5 x 0.75	7.6	72	95
7 x 0.75	8.2	89	120
8 x 0.75	9.0	100	134
10 x 0.75	10.5	121	168
12 x 0.75	10.9	138	190
16 x 0.75	12.1	174	241
18 x 0.75	12.7	211	268
21 x 0.75	13.7	237	319
25 x 0.75	15.2	280	377
34 x 0.75	17.0	357	497
44 x 0.75	19.2	448	600
50 x 0.75	20.6	496	695
61 x 0.75	23.0	619	720
2 x 1	6.5	51	63
3 x 1	6.9	62	76
4 x 1	7.5	74	94
5 x 1	8.2	88	110
7 x 1	8.9	112	141
10 x 1	11.4	152	202
12 x 1	11.8	174	232
14 x 1	12.4	217	259
16 x 1	13.0	241	305
18 x 1	14.2	268	342
21 x 1	15.0	302	386
25 x 1	17.0	354	464
30 x 1	17.6	407	530
34 x 1	19.1	548	604
50 x 1	22.6	671	549
2 x 1.5	7.7	65	97
3 x 1.5	8.1	82	106
4 x 1.5	8.9	100	131
5 x 1.5	9.5	110	156
7 x 1.5	10.7	154	203
8 x 1.5	11.7	172	227
10 x 1.5	14.0	236	310
12 x 1.5	13.5	268	341
14 x 1.5	15.3	302	389
16 x 1.5	16.1	338	438
18 x 1.5	17.1	373	490

YSLCY-JZ or -OZ

PVC control cable, screened

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
YSLCY-JZ or -OZ			
21 x 1.5	18.1	422	553
25 x 1.5	20.6	530	667
32 x 1.5	22.3	645	817
34 x 1.5	23.2	686	874
44 x 1.5	26.5	899	1139
50 x 1.5	27.8	1001	1269
61 x 1.5	29.4	1183	1490
2 x 2.5	8.5	91	101
3 x 2.5	9.0	119	148
4 x 2.5	10.7	149	190
5 x 2.5	11.0	179	222
7 x 2.5	12.8	254	298
3 x 4	10.9	172	207
4 x 4	12.0	239	251
5 x 4	13.5	288	340
4 x 6	14.3	334	384
5 x 6	15.7	403	472
4 x 10	20.0	518	683
5 x 10	22.1	662	824
4 x 16	22.0	809	930
5 x 16	26.2	990	1203

Technical changes reserved. All figures are therefore without guarantee.

YSLYCY-JZ or -OZ 0.6/1 kV

PVC control cable, screened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polyvinyl chloride (PVC)
3 I Cores are stranded in layers with optimal lay-length
4 I Inner sheath of special compound based on polyvinyl chloride (PVC)
5 I Tinned copper wire braiding
6 I Outer sheath of special compound based on polyvinyl chloride (PVC), colour: black (RAL 9005)

APPLICATION

As flexible control and connecting cable for fixed laying and flexible applications without tensile stress and/or without guided movements. Applicable in dry, damp and wet rooms, especially when excellent EMC characterics are requested. Due to UV resistant PVC sheath suitable for outdoor applications.

TECHNICAL DATA

Standard:
based on VDE 0281

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

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -40 °C up to 80 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 4 x Ø of cable
flexible use: 15 x Ø of cable

Core identification:
black (continuously numbered), with green/yellow ground conductor from 3 cores (JZ) or without (OZ)

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
YSLYCY-JZ or -OZ 0.6/1 kV			
2 x 0.5	8.3	30	107
3 x 0.5	8.6	39	118
4 x 0.5	9.2	52	135
5 x 0.5	9.8	61	153
7 x 0.5	10.9	75	190
12 x 0.5	13.7	130	289
18 x 0.5	15.6	170	372
25 x 0.5	18.0	230	476
2 x 0.75	8.7	39	119
3 x 0.75	9.1	57	134
4 x 0.75	9.7	68	154
5 x 0.75	10.5	79	180
7 x 0.75	11.7	96	224
12 x 0.75	14.8	169	340
18 x 0.75	17.4	224	472
25 x 0.75	20.7	292	646
2 x 1	8.9	52	128

INDUSTRIAL CABLES SLOVAKIA

YSLYCY-JZ or -OZ 0.6/1 kV

PVC control cable, screened

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
YSLYCY-JZ or -OZ 0.6/1 kV			
3 x 1	9.3	67	145
4 x 1	9.9	78	167
5 x 1	10.8	94	196
7 x 1	12.0	122	245
12 x 1	15.2	201	376
18 x 1	17.9	275	520
25 x 1	21.5	364	728
2 x 1.5	9.9	68	157
3 x 1.5	10.4	84	182
4 x 1.5	11.3	104	217
5 x 1.5	12.4	123	257
7 x 1.5	13.7	180	323
12 x 1.5	17.9	284	515
18 x 1.5	20.8	390	705
25 x 1.5	24.8	521	965
2 x 2.5	11.5	99	248
3 x 2.5	12.4	124	261
4 x 2.5	13.5	170	316
5 x 2.5	14.7	202	371
7 x 2.5	16.0	268	457
12 x 2.5	21.0	423	730
18 x 2.5	24.8	572	1050
25 x 2.5	29.8	740	1425
2 x 4	13.2	156	290
3 x 4	13.8	191	338
4 x 4	15.1	236	407
5 x 4	16.5	303	483
4 x 6	16.8	319	521
5 x 6	18.8	421	641
4 x 10	21.2	576	866
4 x 16	24.2	807	1200
4 x 25	30.5	1169	1820
4 x 35	33.9	1686	2399
4 x 50	39.1	2374	3273

Technical changes reserved. All figures are therefore without guarantee.

CMSM

PVC control cable, unscreened

DESIGN

1 | Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 | Core insulation of special compound based on polyvinyl chloride (PVC)
3 | Cores are stranded in layers with optimal lay-length
4 | Outer sheath of special compound based on polyvinyl chloride (PVC), colour: grey (RAL 7001)

APPLICATION

As flexible control and connecting cable within electrial devices, for control purposes or connection to public mains.

TECHNICAL DATA

Standard:
TS ICS 25-2015

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 2000 V / 50 Hz

Temperature range:
fixed installation: -60 °C up to 70 °C
flexible use: -25 °C up to 70 °C

Bending radius (min.):
fixed installation: 7.5 x Ø of cable
flexible use: 12 x Ø of cable

Core identification:
colours according to CENELEC HD 308 S2

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
CMSM			
2 x 0.5	4.3	9.6	49
3 G 0.5	4.8	14.4	60
4 G 0.5	5.2	19.0	72
5 G 0.5	5.7	24.0	85
7 G 0.5	6.4	33.6	107
12 G 0.5	8.8	58.0	168
19 G 0.5	10.4	91.0	255
24 G 0.5	12.3	115.0	316
37 G 0.5	14.3	178.0	478
2 x 0.75	4.9	14.1	56
3 G 0.75	5.2	21.6	69
4 G 0.75	5.7	29.0	84
5 G 0.75	6.4	36.0	100
7 G 0.75	6.9	50.0	126
12 G 0.75	9.6	86.0	209
19 G 0.75	11.6	137.0	314
24 G 0.75	13.8	173.0	405
37 G 0.75	15.9	267.0	557
2 x 1	5.1	19.0	63
3 G 1	5.4	29.0	79

INDUSTRIAL CABLES SLOVAKIA

CMSM

PVC control cable, unscreened

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
CMSM			
4 G 1	6.1	38.0	87
5 G 1	6.7	48.0	115
7 G 1	7.5	67.0	148
12 G 1	10.2	115.0	247
19 G 1	12.1	183.0	360
24 G 1	14.4	230.0	463
37 G 1	16.8	355.0	684
2 x 1.5	6.1	29.0	80
3 G 1.5	6.5	43.0	104
4 G 1.5	7.3	58.0	129
5 G 1.5	7.9	72.0	153
7 G 1.5	8.9	101.0	210
12 G 1.5	12.1	173.0	334
19 G 1.5	14.5	274.0	510
24 G 1.5	17.2	346.0	635
37 G 1.5	20.0	532.0	923
2 x 2.5	7.6	48.0	109
3 G 2.5	8.1	72.0	144
4 G 2.5	9.0	96.0	181
5 G 2.5	10.1	120.0	230
7 G 2.5	11.2	168.0	302
12 G 2.5	15.4	288.0	509

Technical changes reserved. All figures are therefore without guarantee.

CMFM

PVC control cable, screened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polyvinyl chloride (PVC)
3 I Cores are stranded in layers with optimal lay-length
4 I Wrapping with plastic tape
5 I Bare copper wire braiding
6 I Outer sheath of special compound based on polyvinyl chloride (PVC), colour: grey (RAL 7001) or black (RAL 9005)

APPLICATION

As flexible control and connecting cable within electrial devices, for control purposes or connection to public mains, especially when excellent electromagnetic compatibility (EMC) characteristics are requested.

TECHNICAL DATA

Standard:
TS ICS 26-2015

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 2000 V / 50 Hz

Temperature range:
fixed installation: -60 °C up to 70 °C
flexible use: -25 °C up to 70 °C

Bending radius (min.):
fixed installation: 7.5 x Ø of cable
flexible use: 12 x Ø of cable

Core identification:
colours according to CENELEC HD 308 S2

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
CMFM			
2 x 0.5	5.2	36	75
3 G 0.5	5.5	43	89
4 G 0.5	6.0	51	101
5 G 0.5	6.5	59	120
7 G 0.5	7.1	71	145
12 G 0.5	9.4	108	210
19 G 0.5	11.0	154	304
24 G 0.5	13.0	162	372
37 G 0.5	14.9	228	544
2 x 0.75	5.6	43	83
3 G 0.75	6.1	52	97
4 G 0.75	6.6	61	111
5 G 0.75	7.2	74	130
7 G 0.75	7.9	90	160
12 G 0.75	10.4	144	254
19 G 0.75	12.2	207	370
24 G 0.75	14.4	222	450
37 G 0.75	16.7	319	640

INDUSTRIAL CABLES SLOVAKIA

CMFM

PVC control cable, screened

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
CMFM			
2 x 1	5.9	50	93
3 G 1	6.3	61	112
4 G 1	6.9	75	127
5 G 1	7.6	89	150
7 G 1	8.2	112	183
12 G 1	10.8	176	293
19 G 1	12.9	257	410
24 G 1	15.2	276	624
37 G 1	17.4	403	755
2 x 1.5	6.8	64	116
3 G 1.5	7.3	82	136
4 G 1.5	8.0	101	171
5 G 1.5	8.9	121	194
7 G 1.5	9.6	155	261
12 G 1.5	12.9	245	404
19 G 1.5	15.3	363	573
24 G 1.5	18.2	391	709
37 G 1.5	21.0	576	1028
2 x 2.5	8.3	90	152
3 G 2.5	9.0	118	183
4 G 2.5	9.8	147	231
5 G 2.5	10.8	178	290
7 G 2.5	11.9	232	363
12 G 2.5	16.0	377	590

Technical changes reserved. All figures are therefore without guarantee.

JYDY

PVC/PVC flexible control cable

DESIGN

1 | Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 | Core insulation of special compound based on polyvinyl chloride (PVC)
3 | Cores are stranded in layers with optimal lay-length
4 | Wrapping with plastic tape
5 | Inner sheath of special compound based on polyvinyl chloride (PVC)
6 | Outer sheath of special compound based on polyvinyl chloride (PVC), colour: blue (RAL 5015)

APPLICATION

The cable is designed for fixed connection of voice, control and security equipment in mining industry.

TECHNICAL DATA

Standard:
TS ICS 14-2021

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 1000 V / 50 Hz

Temperature range:
laying temperature: min. -5 °C
operating temperature: -25 °C up to 60 °C

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

Core identification:
white, blue, brown, yellow, green, black, red

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
JYDY			
7 x 0.5	12.7	34	221

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

HSLH

FRNC control cable, halogen-free, unscreened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special halogen-free, flame retardant compound (FRNC)
3 I Cores are stranded in layers with optimal lay-length
4 I Outer sheath of special halogen-free, flame retardant compound (FRNC), colour: grey (RAL 7001)

APPLICATION

As flexible control and connecting cable for fixed laying and flexible applications without tensile stress and/or without guided movements. For the protection of human life and valuable equipment, especially when excellent EMC behavior is requested.

TECHNICAL DATA

Standard:
based on EN 50525-3-11

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 2000 V / 50 Hz

Temperature range:
fixed installation: -40 °C up to 70 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 4 x Ø of cable
flexible use: 15 x Ø of cable

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

Fire properties:
EN 60332-1-2, IEC 60332-1-2: self-extinguishing and flame retardant
EN 60332-3-24 (Category C): reduced flame propagation
EN 60754, IEC 60754-2: halogen-free; non-corrosive combustion gases
EN 61034-2, IEC 61034: smoke density

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
HSLH			
2 x 0.75	5.7	14.4	53
3 G 0.75	6.0	21.6	63
4 G 0.75	6.5	29.0	77
5 G 0.75	7.1	36.0	94
7 G 0.75	7.5	50.0	116
12 G 0.75	10.2	86.0	187
18 G 0.75	11.9	130.0	285
25 G 0.75	13.9	180.0	397
2 x 1	6.1	19.2	62
3 G 1	6.4	29.0	74
4 G 1	7.0	38.4	91
5 G 1	7.6	48.0	111
7 G 1	8.1	67.0	140
12 G 1	11.1	115.0	232
18 G 1	13.4	173.0	332
25 G 1	15.4	240.0	464
2 x 1.5	6.9	29.0	84

INDUSTRIAL CABLES SLOVAKIA

HSLH

FRNC control cable, halogen-free, unscreened

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
HSLH			
3 G 1.5	7.3	43.0	102
4 G 1.5	7.9	58.0	125
5 G 1.5	8.9	72.0	154
7 G 1.5	9.8	101.0	193
12 G 1.5	13.2	173.0	323
18 G 1.5	15.9	259.0	479
25 G 1.5	18.5	360.0	678
34 G 1.5	22.0	490.0	922
2 x 2.5	8.5	48.0	123
3 G 2.5	9.0	72.0	151
4 G 2.5	10.0	96.0	188
5 G 2.5	11.0	120.0	234
7 G 2.5	12.7	168.0	306
12 G 2.5	16.0	288.0	508
4 G 4	12.8	154.0	301
5 G 4	14.0	192.0	355
4 G 6	14.6	230.0	380
5 G 6	16.4	288.0	490
5 G 10	22.4	480.0	840

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

HSLCH

FRNC control cable, halogen-free, screened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special halogen-free, flame retardant compound (FRNC)
3 I Cores are stranded in layers with optimal lay-length
4 I Wrapping with plastic tape
5 I Tinned copper wire braiding
6 I Outer sheath of special halogen-free, flame retardant compound (FRNC), colour: grey (RAL 7001)

APPLICATION

As flexible control and connecting cable for fixed laying and flexible applications without tensile stress and/or without guided movements. For the protection of human life and valuable equipment, especially when excellent EMC behavior is requested.

TECHNICAL DATA

Standard:
based on EN 50525-3-11

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 2000 V / 50 Hz

Temperature range:
fixed installation: -40 °C up to 70 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 4 x Ø of cable
flexible use: 15 x Ø of cable

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

Fire properties:
EN 60332-1-2, IEC 60332-1-2: self-extinguishing and flame retardant
EN 60332-3-24 (Category C): reduced flame propagation
EN 60754, IEC 60754-2: halogen-free; non-corrosive combustion gases
EN 61034-2, IEC 61034: smoke density

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
HSLCH			
2 x 0.75	6.7	43	53
3 G 0.75	7.0	52	63
4 G 0.75	7.5	61	77
5 G 0.75	8.1	72	94
7 G 0.75	8.7	89	116
12 G 0.75	11.4	138	187
18 G 0.75	13.3	211	285
25 G 0.75	16.0	280	397
2 x 1	7.1	51	62
3 G 1	7.4	62	74
4 G 1	8.0	74	91
5 G 1	8.7	88	111
7 G 1	9.3	112	140
12 G 1	12.3	185	232
18 G 1	14.7	268	332
25 G 1	17.7	354	464
2 x 1.5	8.0	65	84

INDUSTRIAL CABLES SLOVAKIA

HSLCH

FRNC control cable, halogen-free, screened

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
HSLCH			
3 G 1.5	8.4	82	102
4 G 1.5	9.1	100	125
5 G 1.5	9.9	119	154
7 G 1.5	11.1	154	193
12 G 1.5	14.7	268	323
18 G 1.5	17.3	373	479
25 G 1.5	21.0	530	678
2 x 2.5	9.7	92	123
3 G 2.5	10.2	118	151
5 G 2.5	12.1	176	234
7 G 2.5	13.9	253	306

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

LiHCH

FRNC control cable, halogen-free, screened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special halogen-free, flame retardant compound (FRNC)
3 I Cores are stranded in layers with optimal lay-length
4 I Wrapping with plastic tape
5 I Tinned copper wire braiding
6 I Outer sheath of special halogen-free, flame retardant compound (FRNC), colour: grey (RAL 7001)

APPLICATION

LiHCH cables are multi-core halogen-free screened control cables suitable for indoor use in industrial applications with increased requirements for electromagnetic compatibility. Generally used in flexible or fixed applications with low mechanical and tensile stress as connecting cables for data processing, measurement and control engineering, safety related systems and as electronics cable where such cables are needed.

TECHNICAL DATA

Standard:
based on EN 50525-3-11

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -40 °C up to 70 °C
flexible use: -5 °C up to 70 °C

Bending radius (min.):
fixed installation: 4 x Ø of cable
flexible use: 15 x Ø of cable

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

Fire properties:
EN 60332-1-2: self-extinguishing and flame retardant
EN 60332-3-24 (Category C): reduced flame propagation
EN 60754-1 and 2: halogen-free; non-corrosive combustion gases
EN 61034-2, IEC 61034: smoke density
CPR classification: D_{ca}

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
LiHCH			
2 x 0.5	5.9	29.0	46
5 G 0.5	7.0	50.0	80
8 G 0.5	9.1	75.0	133
12 G 0.5	10.0	99.0	160
18 G 0.5	11.6	134.0	222
2 x 1	6.3	43.0	59
4 G 1	7.5	68.0	94
2 x 1.5	7.2	51.6	79
3 G 1.5	7.6	74.0	95
6 G 1.5	9.9	117.6	176
64 G 1.5	27.4	1051.3	1482
4 G 2.5	10.0	127.2	179
5 G 2.5	11.0	154.4	927
7 G 2.5	12.3	213.2	289
14 G 2.5	16.9	418.2	552
4 G 4	11.7	191.8	260

INDUSTRIAL CABLES SLOVAKIA

LiHCH

FRNC control cable, halogen-free, screened

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
LiHCH			
6 G 4	14.4	281.0	388
4 G 6	14.3	291.6	401
6 G 6	17.1	428.7	562
4 G 10	17.6	482.0	613
5 G 10	19.4	589.9	767

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

YMLCM

PVC low frequency cable, screened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polyvinyl chloride (PVC)
3 I Cores are stranded together with optimal lay-length
4 I Inner sheath of special compound based on polyvinyl chloride (PVC)
5 I Tinned copper wire braiding
6 I Outer sheath of special compound based on polyvinyl chloride (PVC), colour: black (RAL 9005)

TECHNICAL DATA

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 2000 V / 50 Hz

Temperature range:
fixed installation: -20 °C up to 70 °C
flexible use: -5 °C up to 70 °C
laying temperature: min. -5 °C

Bending radius (min.):
4 x Ø of cable

Core identification:
colours according to DIN 47100

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

APPLICATION

For the installation in dry and wet environments as interconnection cable for the low frequency and studio technique.

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
YMLCM			
2 x 0.75	7.2	30	70
4 x 0.75	8.4	60	118

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

LE-Y11Y K35

PVC/PUR building site cable, cold resistant

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special cold resistant compound based on polyvinyl chloride (PVC)
3 I Cores are stranded together with optimal lay-length
4 I Inner sheath special cold resistant compound based on polyvinyl chloride (PVC)
5 I Special polyurethane (PUR) outer sheath, colour: orange (RAL 2003)

APPLICATION

Our PUR building site cables LE-Y11Y K35 have been designed for medium mechanical stress in open air, in dry, damp and wet rooms, as well as for outdoor applications and for industrial premises, for fixed installation, for direct installation on lifting tools and machines etc.

TECHNICAL DATA

Standard:
based on EN 50525-2-21

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

Test voltage:
core / core 2500 V / 50 Hz

Temperature range:
fixed installation: -40 °C up to 70 °C
flexible use: -35 °C up to 70 °C

Bending radius (min.):
fixed installation: 3 x Ø of cable
flexible use: 5 x Ø of cable

Core identification:
colours according to CENELEC HD 308 S2

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
LE-Y11Y K35			
2 x 1.5	8.9	29	96
3 G 1.5	9.6	43	114
4 G 1.5	10.5	58	139
5 G 1.5	11.6	72	158
3 G 2.5	11.4	72	169
4 G 2.5	12.5	96	209
5 G 2.5	13.7	120	253
3 G 4	13.1	115	241
4 G 4	14.4	154	298
5 G 4	16.0	192	347
5 G 6	18.8	288	497
5 G 10	26.1	480	895
5 G 16	29.9	768	1288

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

AT-N07V3V3-F

PVC building site cable, cold resistant

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special cold resistant compound based on polyvinyl chloride (PVC)
3 I Cores are stranded together with optimal lay-length
4 I Outer sheath of special cold resistant compound based on polyvinyl chloride (PVC), colour: orange (RAL 2003) or yellow (RAL 1021)

APPLICATION

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

TECHNICAL DATA

Standard:
ÖVE/ÖNORM E 8241-55

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

Test voltage:
core / core 2500 V / 50 Hz

Temperature range:
fixed installation: -40 °C up to 70 °C
flexible use: -35 °C up to 70 °C

Bending radius (min.):
fixed installation: 3 x Ø of cable
flexible use: 6 x Ø of cable

Core identification:
colours according to CENELEC HD 308 S2

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
AT-N07V3V3-F			
2 x 1.5	9.5	29	115
3 G 1.5	10.0	43	120
4 G 1.5	11.0	58	150
5 G 1.5	12.0	72	172
3 G 2.5	12.0	72	174
4 G 2.5	13.0	96	219
5 G 2.5	14.0	120	285
4 G 4	14.5	154	320
5 G 4	16.5	192	359
4 G 6	14.7	230	400
5 G 6	16.7	288	496
4 G 10	22.0	384	770
5 G 10	24.0	480	891
4 G 16	25.0	614	1070
5 G 16	27.5	768	1256

Technical changes reserved. All figures are therefore without guarantee.

SOLARICS XL1

Solar cable, halogen-free, max. temperature on conductor: +90°C

DESIGN

1 I Tinned copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polyolefines
3 I Outer sheath of special halogen-free, flame retardant compound based on cross-linked polymer (XLPE)

APPLICATION

Our solar cable SOLARICS XL1 insulated with a special compound based on polyolefines and sheathed with special cross-linked polymer compound is used for interconnection of solar panels as well as for the connection of modules to AC/DC inverters. UV resistance and absence of halogens complete the requirements and allow to use the cable in indoor and outdoor applications.

TECHNICAL DATA

Standard:
TS ICS 05-2009

Rated voltage:
AC: 0.6/1 kV (Uo/U)
DC: 0.9/1.8 kV (Uo/U)

Test voltage:
6500 V

Temperature range:

operating temperature:	-40 °C up to 90 °C
conductor temperature:	max. 90 °C
short circuit temperature:	max. 200 °C/5 s

Bending radius (min.):

fixed installation:	4 x Ø of cable
flexible use:	15 x Ø of cable

Core identification:
black, blue, red and others in accordance with customer request

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
SOLARICS XL1			
1 x 1.5	4.6	14.4	38
1 x 2.5	5.0	24.0	50
1 x 4	5.6	38.4	65
1 x 6	6.4	57.6	88
1 x 10	7.6	96.0	138
1 x 16	8.6	153.6	194

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

SOLARICS XL2

Solar cable, halogen-free, max. temperature on conductor: +120°C

DESIGN

1 I Tinned copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special halogen-free, flame retardant compound based on cross-linked polymer (XLPE)
3 I Outer sheath of special halogen-free, flame retardant compound based on cross-linked polymer (XLPE)

APPLICATION

Our solar cable SOLARICS XL2 insulated and sheathed with special cross-linked polymer compounds is used for interconnection of solar panels as well as for the connection of modules to AC/DC inverters. UV resistance and absence of halogens complete the requirements and allow to use the cable in indoor and outdoor applications.

TECHNICAL DATA

Standard:
TS ICS 05-2009

Rated voltage:
AC: 0.6/1 kV (Uo/U)
DC: 0.9/1.8 kV (Uo/U)

Test voltage:
6500 V

Temperature range:

operating temperature:	-40 °C up to 90 °C
conductor temperature:	max. 120 °C
short circuit temperature:	max. 250 °C/5 s

Bending radius (min.):

fixed installation:	4 x Ø of cable
flexible use:	15 x Ø of cable

Core identification:
black, blue, red and others in accordance with customer request

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
SOLARICS XL2			
1 x 1.5	4.6	14.4	38
1 x 2.5	5.0	24.0	50
1 x 4	5.6	38.4	65
1 x 6	6.4	57.6	88
1 x 10	7.6	96.0	138
1 x 16	8.6	153.6	194

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® JET 11Y 400Hz

Ground power supply cable, single core

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Non-woven tape separation
3 I Special polyurethane (PUR) outer sheath, colour: yellow (RAL 1021)

APPLICATION

400 Hz cables are mainly used to supply power to aircrafts (on-board power). May be operated in mobile, stationary or under-ground mode. Simple, long-lasting and easy to install design with a fair market price and great quality.

TECHNICAL DATA

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

Test voltage:
4000 V

Temperature range:
operating temperature: -40 °C up to 90 °C

Bending radius (min.):
fixed installation: 5 x Ø of cable
flexible use: 12 x Ø of cable

Fire properties:
EN 60332-1-2, IEC 60332-1-2: self-extinguishing and flame retardant
IEC 60754-1: halogen-free

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® JET 11Y 400Hz			
1 x 50	12.3	480	532
1 x 70	14.0	672	730

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® JET 400Hz 1x120+4x1

Ground power supply cable, with control cores, tinned and halogen-free

DESIGN

1 I Tinned copper conductors, fine wires class 5 (control cores) and super fine wires class 6 (power cores) according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Control core with two layer (natural & grey color) insulation on polypropylene and polyester basis, continuously numbered
3 I Designed number of control cores stranded together within copper conductor strand
4 I Non-woven tape separation
5 I Primary outer sheath of special polyurethane (PUR), colour: orange (RAL 2003)
6 I Secondary outer sheath of special polyurethane (PUR), colour: yellow (RAL 1021)

TECHNICAL DATA

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

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
operating temperature: -40 °C up to 90 °C

Bending radius (min.):
6 x Ø of cable

Core identification:
grey (continuously numbered)

Fire properties:
EN 60332-1-2: self-extinguishing and flame retardant
IEC 60754-1: halogen-free

APPLICATION

400 Hz cables are mainly used to supply power to aircrafts (on-board power). May be operated in mobile, stationary or under-ground mode. Simple, long-lasting and easy to install design with a fair market price and great quality.

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® JET 400Hz 1x120+4x1			
1 x 120 + 4 x 1	24.5	1191	1445

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® JET 400Hz 4x(70+4x1)

Stranded ground power supply cable, with control cores, tinned and halogen-free

DESIGN

1 I Tinned copper conductors, fine wires class 5 (control cores) and super fine wires class 6 (power cores) according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Control core with two layer (natural & grey color) insulation on polypropylene and polyester basis, continuously numbered
3 I Designed number of control cores stranded together within copper conductor strand
4 I Non-woven tape separation
5 I Primary outer sheath of special polyurethane (PUR), colour: orange (RAL 2003)
6 I Secondary outer sheath of special polyurethane (PUR), colour: yellow (RAL 1021)
7 I Cores with integrated control cores stranded together with optimized lay length

TECHNICAL DATA

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

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
operating temperature: -40 °C up to 90 °C

Bending radius (min.):
6 x Ø of cable

Core identification:
grey (continuously numbered)

Fire properties:
EN 60332-1-2, IEC 60332-1-2: self-extinguishing and flame retardant
IEC 60754-1: halogen-free

APPLICATION

400 Hz cables are mainly used to supply power to aircrafts (on-board power). May be operated in mobile, stationary or underground mode. Simple, long-lasting and easy to install design with a fair market price and great quality.

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® JET 400Hz 4x(70+4x1)			
4 x (1 x 70 + 4 x 1)	48.9	2844	3673
4 x (1 x 70 + 6 x 1)	50.0	2920	3857

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® YSLYv-K35 400Hz 7x35+6x(4x1)

Ground power supply cable, with control cores for fixed installation

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Power supply control cores insulation of special cold resistant mixture of polyvinyl chloride (PVC); control cores of special compound based on polyvinyl chloride (PVC)
3 I Power supply cores (black with No. 1-6) stranded over central core (blue) with 6 star-quads in the interstices
4 I Non-woven tape separation
5 I Outer sheath of special cold resistant compound based on polyvinyl chloride (PVC), colour: black (RAL 9005)

TECHNICAL DATA

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

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -40 °C up to 70 °C
flexible use: -15 °C up to 70 °C

Bending radius (min.):
5 x Ø of cable

Core identification:
central blue core, other cores black (continuously numbered)

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

APPLICATION

400 Hz cables are mainly used to supply power to aircrafts (on-board power). May be operated in mobile, stationary or underground mode. Simple, long-lasting and easy to install design with a fair market price and great quality.

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® YSLYv-K35 400Hz 7x35+6x(4x1)			
7 x 35 + 6 x (4 x 1)	37	2625	3109

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® 2XSLHX 400Hz 7x35+6x(4x1)

Ground power supply cable, with control cores, halogen-free

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Power supply control cores insulation of cross-linked polyethylene (XLPE); control cores of special compound based on polypropylene (PP)
3 I Power supply cores (black with No. 1-6) stranded over central core (blue) with 6 star-quads in the interstices
4 I Non-woven tape separation
5 I Outer sheath of special cross-linked compound (XLPE), free of halogen and flame retardant, colour: black (RAL 9005)

APPLICATION

400 Hz cables are mainly used to supply power to aircrafts (on-board power). May be operated in mobile, stationary or underground mode. Simple, long-lasting and easy to install design with a fair market price and great quality.

TECHNICAL DATA

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

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -40 °C up to 90 °C
flexible use: -15 °C up to 80 °C
conductor temperature: max. 90 °C

Bending radius (min.):
6 x Ø of cable

Core identification:
central blue core, other cores black (continuously numbered)

Fire properties:
EN 60332-1-2: self-extinguishing and flame retardant
IEC 60754-1: halogen-free

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® 2XSLHX 400Hz 7x35+6x(4x1)			
7 x 35 + 6 x (4 x 1)	36	2625	2922

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® CHARGE EVC H07BZ5-F

VDE approved charging cable for electro vehicles

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228 (optional tinned copper wires)
2 I Power supply cores of special halogen-free compound based on cross-linked polymer (XLPE), compound type EVI-2
3 I Control core insulation of special thermoplastic elastomer, compound type EVI-1 or special cross-linked polymer (XLPE), compound type EVI-2
4 I Power supply cores stranded together with control cores and construction-related fillers (optional)
5 I Non-woven tape separation (optional)
6 I Outer sheath of special thermoplastic halogen-free flame retardant compound based on polyurethane (PUR), compound type EVM-1

APPLICATION

Our FLEXICS® CHARGE EVC cables have been developed especially as charging cables for electro vehicles.

TECHNICAL DATA

Standard:
EN 50620; IEC 62893

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

Test voltage:
core / core 2500 V / 50 Hz

Temperature range:
operating temperature: -40 °C up to 90 °C

Bending radius (min.):
fixed installation: 5 x Ø of cable
flexible use: 15 x Ø of cable

Core identification:
colour code acc. to HD 308 S2 with one or two control / pilot core(s) coloured and numbered

Fire properties:
EN 60332-1-2: self-extinguishing and flame retardant
halogen-free: EN 5052:2011 Annex B or IEC 62821-1:2015 Annex B

Certificate:
VDE Certificate No. 40052200

Number of cores x nominal cross-section (mm²)	CC / CP Cores (mm²)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHARGE EVC H07BZ5-F				
3 x 1.5	1...2 x 0,5...1,0	9.1	48.0	110
3 x 2.5	1...2 x 0,5...1,0	10.2	76.8	152
3 x 4	1...2 x 0,5...1,0	12.3	120.0	225
3 x 6	1...2 x 0,5...1,0	13.5	177.6	296
4 x 2.5	1...2 x 0,5...1,0	11.7	100.8	196
4 x 4	1...2 x 0,5...1,0	13.6	158.4	281
4 x 6	1...2 x 0,5...1,0	15.4	235.2	382
5 x 2.5	1...2 x 0,5...1,0	12.7	124.8	230
5 x 4	1...2 x 0,5...1,0	15.4	196.8	344
5 x 6	1...2 x 0,5...1,0	16.5	292.8	446

Technical changes reserved. All figures are therefore without guarantee.
Metal weight is theoretically calculated with one CC/CP core 0,5mm² and can vary depending on the desired construction.

FLEXICS® CHARGE EVC S07BZ5-F

Charging cable for electro vehicles

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228 (optional tinned copper wires)
2 I Power supply cores of special halogen-free compound based on cross-linked polymer (XLPE), compound type EVI-2
3 I Control core insulation of special thermoplastic elastomer, compound type EVI-1 or special cross-linked polymer (XLPE), compound type EVI-2
4 I Power supply cores stranded together with control cores and construction-related fillers (optional)
5 I Non-woven tape separation (optional)
6 I Outer sheath of special thermoplastic halogen-free flame retardant compound based on polyurethane (PUR), compound type EVM-1

APPLICATION

Our FLEXICS® CHARGE EVC cables have been developed especially as charging cables for electro vehicles.

TECHNICAL DATA

Standard:
EN 50620; IEC 62893

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

Test voltage:
core / core 2500 V / 50 Hz

Temperature range:
operating temperature: -40 °C up to 90 °C

Bending radius (min.):
fixed installation: 5 x Ø of cable
flexible use: 15 x Ø of cable

Core identification:
colour code acc. to HD 308 S2 with one or two control / pilot core(s) coloured and numbered

Fire properties:
EN 60332-1-2: self-extinguishing and flame retardant
halogen-free: EN 5052:2011 Annex B or IEC 62821-1:2015 Annex B

Number of cores x nominal cross-section (mm²)	CC / CP Cores (mm²)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® CHARGE EVC S07BZ5-F				
3 x 10	1...2 x 0,5...1,0	19.0	307.2	486
3 x 16	1...2 x 0,5...1,0	22.6	480.0	672
3 x 25	1...2 x 0,5...1,0	28.0	739.2	1055
3 x 35	1...2 x 0,5...1,0	32.9	1027.2	1425
4 x 10	1...2 x 0,5...1,0	20.9	403.2	601
4 x 16	1...2 x 0,5...1,0	25.2	633.6	863
4 x 25	1...2 x 0,5...1,0	31.5	979.2	1319
4 x 35	1...2 x 0,5...1,0	37.0	1363.2	1810
5 x 10	1...2 x 0,5...1,0	23.4	499.2	723
5 x 16	1...2 x 0,5...1,0	28.1	787.2	1042
5 x 25	1...2 x 0,5...1,0	35.2	1219.2	1622
5 x 35	1...2 x 0,5...1,0	41.5	1699.2	2195

Technical changes reserved. All figures are therefore without guarantee.
Metal weight is theoretically calculated with two CC/CP cores 1,0mm² and can vary depending on the desired construction.

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® DUO

PVC/PVC battery charging cable

DESIGN

1 I Bare copper conductors, super fine wires class 6 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on polyvinyl chloride (PVC)
3 I Outer sheath of special compound based on polyvinyl chloride (PVC), colour: transparent

APPLICATION

Connecting cable between charger and accumulators of battery, e.g. fork lifts, field conveyors etc. Suitable also for outdoor applications as well as in dry, damp and wet rooms.

TECHNICAL DATA

Standard:
based on DIN VDE 0250

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 3000 V / 50 Hz

Temperature range:
operating temperature: -25 °C up to 70 °C

Bending radius (min.):
fixed installation: 6 x Ø of cable
flexible use: 10 x Ø of cable

Core identification:
black and red

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

Number of cores x nominal cross-section (mm^2)	Outer dimensions width x height (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® DUO			
2 x 4	13 x 6	76.8	120
2 x 6	14 x 6.5	115.2	160
2 x 10	17 x 8	192.0	260
2 x 16	19 x 9	307.2	385
2 x 25	23 x 11	480.0	580
2 x 35	26 x 12.5	672.0	788
2 x 50	30 x 14.5	960.0	1092
2 x 70	33 x 16	1344.0	1515

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® DRUM 9111

PUR power and control cable, halogen-free, reelable

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Power supply core insulation of special thermoplastic vulcanizate compound (TPV); control cores of special compound based on polypropylene (PP)
3 I Cores are stranded together with optimal lay-length
4 I Non-woven tape separation
5 I Primary outer sheath of special polyurethane (PUR), colour: white (RAL 9010)
6 I Secondary outer sheath of special polyurethane (PUR), colour: yellow (RAL 1021)

TECHNICAL DATA

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

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -40 °C up to 90 °C
flexible use: -40 °C up to 90 °C

Bending radius (min.):
fixed installation: 5 x Ø of cable
flexible use: 7.5 x Ø of cable

Core identification:
colour code acc. to HD 308 S2 with two control cores, coloured and numbered

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

APPLICATION

Drum or reeling cables are specifically designed for moving applications in different application fields. They can work as power, control and signaling cables for cable reels, lifting appliances, transport systems, agricultural machines or cranes. These cables are built to resist medium or high mechanical stress.

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® DRUM 9111			
3 x 16 + 3 G 4 + 2 x 1.5	22.6	586	813
3 x 25 + 3 G 6 + 2 x 1.5	25.6	902	1157
3 x 35 + 3 G 6 + 2 x 1.5	28.0	1190	1469
3 x 50 + 3 G 10 + 2 x 1.5	32.4	1708	2094
3 x 70 + 3 G 16 + 2 x 1.5	36.2	2381	2883
3 x 95 + 3 G 16 + 2 x 2.5	40.8	3264	3686
3 x 120 + 3 G 25 + 2 x 2.5	46.2	4176	4673

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® S07BQ-F

PUR cable for submersible motor pumps, unscreened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on cross-linked polymer (XLPE)
3 I Cores are stranded together with optimal lay-length
4 I Special polyurethane (PUR) outer sheath, colour: yellow (RAL 1021)

TECHNICAL DATA

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

Test voltage:
core / core 3000 V / 50 Hz

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

Bending radius (min.):
fixed installation: 3 x Ø of cable
flexible use: 5 x Ø of cable

Core identification:
colours according to CENELEC HD 308 S2 or black (continuously numbered) with green/yellow ground conductor

APPLICATION

Extremely robust cable for extreme environmental conditions. The PUR outer sheath meets the highest requirements for tear and abrasion resistance. Excellent weather resistance, very good chemical resistance and microbial safe. Halogen-free and resistant to UV rays.

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® S07BQ-F			
4 G 1.5	10.1	57.6	126
5 G 1.5	11.1	72.0	152
7 G 1.5	13.3	100.8	212
10 G 1.5	15.7	144.0	291
4 G 2.5	11.5	96.0	180
7 G 2.5	16.8	168.0	340
4 G 4	14.1	153.6	270
4 G 6	16.6	230.4	385
4 G 10	21.5	384.0	662
4 G 16	25.1	614.4	958

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® S07BC4Q-F

PUR cable for submersible motor pumps, screened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on cross-linked polymer (XLPE)
3 I Cores are stranded together with optimal lay-length
4 I Plastic bonded aluminium tape and tinned copper wire braiding
5 I Special polyurethane (PUR) outer sheath, colour: yellow (RAL 1021)

TECHNICAL DATA

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

Test voltage:
core / core 3000 V / 50 Hz

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

Bending radius (min.):
fixed installation: 6 x Ø of cable
flexible use: 10 x Ø of cable

Core identification:
colours according to CENELEC HD 308 S2 or black (continuously numbered) with green/yellow ground conductor

APPLICATION

Extremely robust cable for extreme environmental conditions. The PUR outer sheath meets the highest requirements for tear and abrasion resistance. Excellent weather resistance, very good chemical resistance and microbial safe. Halogen-free and resistant to UV rays. Excellent EMC behavior.

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® S07BC4Q-F			
4 G 1.5	10.7	99.0	150
5 G 1.5	11.9	117.0	180
7 G 1.5	14.0	165.0	245
12 G 1.5	17.8	258.0	404
16 G 1.5	19.8	326.0	488
7 G 2.5	15.8	247.0	330
4 G 4	14.9	228.0	301
4 G 6	17.3	317.0	423
4 G 10	22.4	530.7	739
4 G 16	26.0	782.0	1127

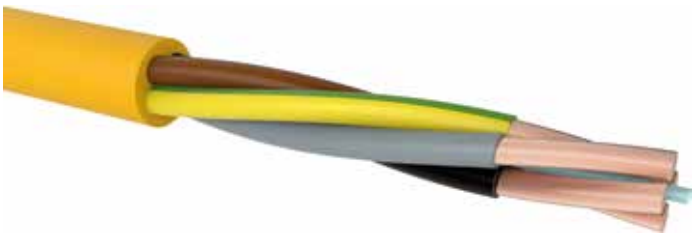
Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

FLEXICS® S1BQ-F

PUR cable for submersible motor pumps, unscreened

DESIGN



1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on cross-linked polymer (XLPE)
3 I Cores are stranded together with optimal lay-length
4 I Special polyurethane (PUR) outer sheath, colour: yellow (RAL 1021)

TECHNICAL DATA

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

Test voltage:
core / core 3500 V / 50 Hz

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

Bending radius (min.):
fixed installation: 3 x Ø of cable
flexible use: 5 x Ø of cable

Core identification:
colours according to CENELEC HD 308 S2

APPLICATION

Extremely robust cable for extreme environmental conditions. The PUR outer sheath meets the highest requirements for tear and abrasion resistance. Excellent weather resistance, very good chemical resistance and microbial safe. Halogen-free and resistant to UV rays. Single-core versions are particularly suitable for short and earth-proof installations.

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® S1BQ-F			
4 G 35	34.0	1344.0	1821
4 G 50	38.6	1920.0	2455
4 G 70	41.0	2688.0	3670
5 G 25	32.2	1200.0	1680
5 G 35	37.2	1680.0	2280
5 G 50	42.9	2400.0	3250
5 G 70	47.9	3360.0	4550
1 x 16	9.8	153.6	197
1 x 25	12.3	240.0	360
1 x 35	13.5	336.0	480
1 x 50	15.6	480.0	650
1 x 70	18.1	672.0	850
1 x 95	20.8	912.0	995
1 x 120	22.3	1152.0	1227
1 x 150	24.3	1440.0	1650
1 x 185	26.7	1776.0	2000
1 x 240	31.1	2304.0	2600

Technical changes reserved. All figures are therefore without guarantee.

FLEXICS® S1BC4Q-F

PUR cable for submersible motor pumps, screened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of special compound based on cross-linked polymer (XLPE)
3 I Cores are stranded together with optimal lay-length
4 I Plastic bonded aluminium tape and tinned copper wire braiding
5 I Special polyurethane (PUR) outer sheath, colour: yellow (RAL 1021)

TECHNICAL DATA

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

Test voltage:
core / core 3500 V / 50 Hz

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

Bending radius (min.):
fixed installation: 6 x Ø of cable
flexible use: 10 x Ø of cable

Core identification:
colours according to CENELEC HD 308 S2

APPLICATION

Extremely robust cable for extreme environmental conditions. The PUR outer sheath meets the highest requirements for tear and abrasion resistance. Excellent weather resistance, very good chemical resistance and microbial safe. Halogen-free and resistant to UV rays. Single-core versions are particularly suitable for short and earth-proof installations. Excellent EMC behavior.

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
FLEXICS® S1BC4Q-F			
4 G 16	25.8	782	1016
4 G 25	31.3	1114	1447
4 G 35	34.6	1610	1989
4 G 50	39.6	2215	2684
4 G 70	42.9	3180	3612
1 x 70	19.9	805	950
1 x 95	23.2	1058	1139
1 x 120	25.4	1266	1412
1 x 150	27.4	1625	1731
1 x 185	31.2	2016	2100
1 x 240	33.5	2518	2670

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

LE-XY2YA2Y

PE control cable for rope railways, unscreened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation special cold resistant compound based on polyvinyl chloride (PVC), pairs of special compound based on polyethylene (PE)
3 I PVC cores stranded with water-blocking fillers and with water-blocking tape wrapping. Two PE cores twisted into pairs with water-blocking fillers and 8 pairs twisted in the second layer over the first one, stranded with water-blocking fillers and with water-blocking tape wrapping
4 I Wrapping with plastic-laminated aluminum foil with two tinned drain wires stranded under the tape, drain wire 0.75mm class 5 according to IEC 60228
5 I Outer sheath of special thermoplastic elastomer compound based on polyethylene (PE), colour: black (RAL 9005)

TECHNICAL DATA

Standard:
TS ICS 14-2014

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 2500 V / 50 Hz

Temperature range:
laying temperature: min. -30 °C
operating temperature: -40 °C up to 70 °C
conductor temperature: max. 70 °C

Bending radius (min.):
5 x Ø of cable

Core identification:
colour coded

APPLICATION

Cables for electricity distribution in flexible installations, for controlling or supplying electric and electronic devices.

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
LE-XY2YA2Y			
3 x 2.5 + 8 x (2 x 0.75)	19.3	205	406

Technical changes reserved. All figures are therefore without guarantee.

LE-XY2YCV2Y

PE control cable for rope railways, screened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation special cold resistant compound based on polyvinyl chloride (PVC), pairs of special compound based on polyethylene (PE)
3 I PVC cores stranded with water-blocking fillers and with water-blocking tape wrapping. Two PE cores twisted into pairs with water-blocking fillers and 8 pairs twisted in the second layer over the first one, stranded with water-blocking fillers and with water-blocking tape wrapping
4 I Tinned copper wire braiding
5 I Water blocking tape separation
6 I Outer sheath of special thermoplastic elastomer compound based on polyethylene (PE), colour: black (RAL 9005)

TECHNICAL DATA

Standard:
TS ICS 13-2018

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 2500 V / 50 Hz

Temperature range:
laying temperature: max. -30 °C
operating temperature: -40 °C up to 70 °C

Bending radius (min.):
5 x Ø of cable

Core identification:
colour coded

APPLICATION

Cables for electricity distribution in flexible installations, for controlling or supplying electric and electronic devices.

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
LE-XY2YCV2Y			
3 x 2.5 + 8 x (2 x 0.75)	20.8	288	488

Technical changes reserved. All figures are therefore without guarantee.

INDUSTRIAL CABLES SLOVAKIA

2YC2Y

PE DC cable for antenna systems, screened

DESIGN

1 I Bare copper conductors, fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228
2 I Core insulation of polyethylene (PE)
3 I Wrapping with plastic tape
4 I Tinned copper wire braiding
5 I Non-woven wrapping over braiding
6 I Outer sheath of special thermoplastic halogen-free elastomer compound based on polyethylene (PE), UV resistant, colour: black (RAL 9005)

TECHNICAL DATA

Rated voltage:
300/500 V (Uo/U)

Test voltage:
core / core 4000 V / 50 Hz

Temperature range:
fixed installation: -40 °C up to 85 °C
flexible use: -40 °C up to 85 °C

Bending radius (min.):
fixed installation: 5 x Ø of cable
flexible use: 7.5 x Ø of cable

Core identification:
blue and red

APPLICATION

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

Number of cores x nominal cross-section (mm^2)	Outer diameter (mm) appr.	Cu-value (kg/km)	Total weight (kg/km) appr.
2YC2Y			
2 x 0.75	6.2	27.7	47
2 x 1	6.6	32.6	51
2 x 1.5	7.4	42.4	66
2 x 2.5	8.7	64.9	97
2 x 4	10.2	108.0	148
2 x 6	12.0	154.0	210
2 x 10	13.6	239.0	296
2 x 16	16.1	361.0	442
2 x 25	20.7	551.0	680
2 x 35	23.1	781.0	873

Technical changes reserved. All figures are therefore without guarantee.

Contents

INDUSTRIAL CABLES SLOVAKIA

Basic design elements for cables and insulated wires

Conductor
Consists of one or more metal wires and is used for transportation of electric current.

Round, solid (RE)
For small and medium diameter or cross-sections, made of copper (bare or tinned) up to 16 mm² and of aluminium up to 35 mm². Used in single- and multi-core cables and wires for fixed installation.

Round, stranded (RM)
For medium and large cross-sections of copper-conductors from 6 mm² and aluminium conductors from 25 mm². Used in single- and multi-core cables and wires for fixed installation.

Round, stranded, compressed (RM)
Particularly for compact conductors of medium and large cross-section made of copper from 6 mm² and aluminium from 16 mm². For use in single- and multi-core cables and wires for fixed installation.

Fine or superfine-wire (F)
For all cross-sections of copper-conductors (bare or tinned). Used for flexible cables.

Sector-shaped, solid (SE)
For medium and large cross-sections of aluminium conductors from 50 mm² up to 240 mm². Used for 3-, 3½-, 4- and 5-core cables.

Sector-shaped, stranded (SM)
For medium and large cross-sections of copper and aluminium conductors from 35 mm² up to 300 mm². Used for 3-, 3½-, 4- and 5-core cables.

Wires and stranded conductors in accordance with IEC 60228

Class	Construction		Abbreviation for	
			power cables DIN VDE 0271/0276	harmonized cables
1	Solid	Round, solid or sector-shaped, solid conductor	RE, SE	-U, -W
2	Stranded	Round stranded or sector-shaped, stranded conductor	RM, SM	-R, -S
5	Fine wire	Flexible	(F)	-K, -F, -D
6	Super fine wire	Highly flexible	(FF)	-H, -E

Core insulation
Covers the conductor and is used for electrical separation from its surroundings. Mainly made of extruded polymers but also of paper, glass or minerals, varnish etc., or a combination of several of these materials. Conductor and insulation together form the core.

Inner covering, taping
Covers the stranded core consisting of several or many cores and is used for filling the interstices between the stranding elements, forming a round shape of the cable. The inner covering has mostly no electrical function and consists usually either of extruded polymers, of one or more layers of tape or a combination of those elements.

Inner sheath
Similar to the sheath, it is used to cover the inner part of the cable (stranding bond), ensuring its compactness and protecting it from mechanical damage that may be caused by other layers of the cable, such as the armour. It is made of extruded polymers.

Screen
Protects the cable from electromagnetic or electrostatic radiation from the environment, or on the contrary, protects the environment from radiation from the cable. Consists of metallic tapes (e.g. copper or aluminium), laminated metallic tapes, wires, wire braids or a combination of these elements.

Armouring
Usually arranged over the jacket, the armouring provides mechanical reinforcement of the cable jacket. The armouring protects the interior of the cable from damage which may arise from radial forces (e.g. running over by vehicles or pressure of stones in the cable bed etc.) Under certain circumstances the armouring can take over or assist the electrical function of the screen. Tapes as well as round or flat wires made of galvanized steel or aluminium are usually used as armouring material. If protection against chewing damage by rodents is merely required, thin, bare steel tapes are usually used. Non-metallic designs as protection against chewing damage by rodents or termites are provided by reinforcing the jacket with HDPE and PP.

Sheath, outer covering
Functions as the outermost cover of cable or insulated wire and is used as mechanical protection, as protection against water penetration and as protection against chemical influences. Mostly made of extruded polymers, but also of metal (lead, aluminium), impregnated fabric tapes etc.

INDUSTRIAL CABLES SLOVAKIA

Conductor resistance data

Conductor resistance data for cables and insulated wires for stranded conductors from 0,5 mm². The resistance of each conductor at 20°C must not exceed the maximum value specified for the particular nominal cross-section.

Copper fine wires class 5 according to DIN EN 60228 / VDE 0295 / IEC 60228

Nominal cross-section [mm²]	Max. single wire diameter [mm]	Made of bare wires [Ω/km]	Made of tin-coated wires [Ω/km]
0,5	0,21	39,00	40,10
0,75	0,21	26,00	26,70
1	0,21	19,50	20,00
1,5	0,26	13,30	13,70
2,5	0,26	7,98	8,21
4	0,31	4,95	5,09
6	0,31	3,30	3,39
10	0,41	1,91	1,95
16	0,41	1,21	1,24
25	0,41	0,78	0,795
35	0,41	0,554	0,565
50	0,41	0,386	0,393
70	0,51	0,272	0,277
95	0,51	0,206	0,210
120	0,51	0,161	0,164
150	0,51	0,129	0,132
185	0,51	0,106	0,108
240	0,51	0,0801	0,0817
300	0,51	0,0641	0,0654

Copper super fine wires class 6 according to DIN EN 60228 / VDE 0295 / IEC 60228

Nominal cross-section [mm²]	Max. single wire diameter [mm]	Made of bare wires [Ω/km]	Made of tin-coated wires [Ω/km]
0,5	0,16	39,00	40,10
0,75	0,16	26,00	26,70
1	0,16	19,50	20,00
1,5	0,16	13,30	13,70
2,5	0,16	7,98	8,21
4	0,16	4,95	5,09
6	0,21	3,30	3,39
10	0,21	1,91	1,95
16	0,21	1,21	1,24
25	0,21	0,78	0,795
35	0,21	0,554	0,565
50	0,31	0,386	0,393
70	0,31	0,272	0,277
95	0,31	0,206	0,210
120	0,31	0,161	0,164
150	0,31	0,129	0,132
185	0,41	0,106	0,108
240	0,41	0,0801	0,0817
300	0,41	0,0641	0,0654

Copper fine wires according to ISO 6722-1

Nominal cross-section [mm²]	Made of bare wires [Ω/km]	Made of tin-coated wires [Ω/km]	Made of nickel-coated wires [Ω/km]
0,5	37,10	38,20	38,60
0,75	24,70	25,40	25,70
1	18,50	19,10	19,30
1,5	12,70	13,00	13,20
2	9,42	9,69	9,82
2,5	7,60	7,82	7,92
4	4,71	4,85	4,91
6	3,14	3,23	3,27
10	1,82	1,85	1,90
16	1,16	1,18	1,21
25	0,743	0,757	0,774
35	0,527	0,538	0,549
50	0,368	0,375	0,383
70	0,259	0,264	0,270
95	0,196	0,200	0,204
120	0,153	0,156	0,159

Copper fine wires and super fine wire according to DIN VDE 0283 Part 3 / EN 61138

Nominal cross-section [mm²]	Max. single wire diameter [mm]	Made of bare wires [Ω/km]	Made of tin-coated wires [Ω/km]
16	0,21	1,21	1,24
25	0,21	0,78	0,795
35	0,21	0,554	0,565
50	0,31	0,386	0,393
70	0,31	0,272	0,277
95	0,31	0,206	0,21
120	0,31	0,161	0,164
150	0,31	0,129	0,132

Aluminum fine wires according to DIN VDE 0283 Part 3 / EN 61138

Nominal cross-section [mm²]	Max. single wire diameter [mm]	Made of bare wires [Ω/km]
35	0,46	0,886
50	0,46	0,616
70	0,46	0,440
95	0,46	0,326
120	0,46	0,254
150	0,46	0,208

INDUSTRIAL CABLES SLOVAKIA

Common insulation and sheathing materials (overview)

Polymers	Basic characteristics	Application
Thermoplastics Non-cross-linked plastics that are reversibly plastically deformable at higher temperatures. It means that they do not harden after cooling and re-melting	Polyvinyl chloride **PVC** Cost-efficient, very good aging properties, service life > 30 years	Insulation and jacketing material for cables for fixed installation (e.g., for low voltage cables in utility networks) and for flexible cables
	Thermoplastic Polyethylene **PE** Low water absorption, good mechanical and electrical properties	Jacketing material for low-voltage cables in utility networks; especially for higher mechanical stress, insulated overhead lines
	Polypropylene **PP** Good resistance to fatigue, for example, by repeated motion in a drag chain application, high strength	Insulation material for industrial cables for heavy-duty application, with thin wall thickness and higher operating temperatures
Cross-linked thermoplastics Thermoplastics whose structure does not change even at higher temperatures, due to the crosslinking, so that they maintain their elastic properties	Cross-linked polyethylene **XLPE** Low water absorption, high chemical resistance. Can be used in areas with higher temperatures and high voltage applications	Insulation material for medium and high voltage cables, motor supply cables, insulation of solar cables
Thermoplastic elastomers Blends of polyolefins and rubber, with amorphous and crystalline fields, which undergo reversible plastic deformation at higher temperatures and show a rubber-elastic property without crosslinking	Thermoplastic polyurethane-elastomer **TPE-U** (TPU, PUR) High-performance material with a unique combination of resistance to abrasion, to mechanical and chemical stress, cold-resistant	Sheathing material for highly flexible control and drag chain cables for various industrial applications, spiral cables, EVC cables, etc. Sheathing material for cables that are exposed to adverse outdoor conditions
	Thermoplastic polyester-elastomer **TPE-E** High impact strength even at low temperatures and have got high heat resistance (<150 °C)	Insulation of drag chain cables and cables intended for use at high temperatures
	Thermoplastic polyolefin-elastomer **TPE-O** Higher mechanical resistance	Insulation of cables exposed to heavy-duty thermal and mechanical stress
Elastomers Cross-linked rubber-like polymers which exhibit rubber-elastic properties at operating temperature and maintain their structure even at higher temperatures	Silicone rubber **SI** Resistant to medium mechanical stress, high elasticity, cold and heat resistant	Heat-resistant insulated wires for temperatures up to 180 °C (up to 250°C for a short time)
	Ethylene-propylene-rubber **EPR** Good thermal and chemical resistance	Flexible insulated wires and cables for low and medium voltage, filling compound for inner sheathing
	Polychloroprene **CR** Elastic at low temperatures, self-extinguishing	Sheathing material for flexible cables
Special compounds	Flame-retardant, halogen-free polymer compounds, **non-cross-linked HFFR** No release of corrosive combustion gases, low fire propagation and smoke development	Insulation, filling and sheathing material for flame-retardant, halogen-free safety cables for the protection of areas with high concentrations of people and material goods
	Flame-retardant, halogen-free polymer compounds, **cross-linked HFFR** No release of corrosive combustion gases, low fire propagation and minimal smoke development	Insulation and sheathing material for flame-retardant, halogen-free safety cables for the protection of areas with high concentrations of people and material goods

Properties of insulation and sheathing materials for cables and insulated wires

Designation			Basic data		Properties (guide values)								
					electrical		mechanical			chemical			thermal
Material	Material Code	Material Code VDE	Operating temperature		Dielectric constant	Specific insulation resistance	Tensile strength	Elongation at break	Shore hardness	Water absorption	Weather resistance	Oil resistance	Burning behaviour
			permanent (°C)	short term (°C)	50 Hz / 20 C°	(Ω × cm) / 20C°	N/mm² MPa	%		% / 20C°			
Thermoplastics													
Polyvinyl chloride	PVC	Y	–30 +70	+100	3,6–6,0	10^{13}–10^{15}	10–25	130–350	70–95 (A)	0,4	moderate	good	self-extinguishing
Polyethylene (Low density)	LDPE	2Y	–50 +70	+100	2,3	10^{17}	10–20	400–600	43–50 (D)	0,1	good	moderate	combustible
Polyethylene (High density)	HPDE	2Y	–50 +90	+100	2,6	10^{18}	15–28	400–600	60–63(D)	0,1	good	moderate	combustible
Polypropylene	PP	9Y	–30 +90	+140	2,3–2,4	10^{16}	20–35	300–400	55–60 (D)	0,1	moderate	moderate	combustible
Cross-linked thermoplastics													
Cross-linked polyethylene	XLPE	2X	–35 +90	+100	4,0–6,0	10^{12}–10^{16}	12,5–20	300–400	40–45 (D)	0,1	good	moderate	combustible
Thermoplastic elastomers													
Thermoplastic polyurethane-elastomer	TPE–U	11Y	–50 +90	+100	2,7–3,6	5×10^{14}	≥ 6	≥ 400	60–75 (A)	1,5	very good	moderate	combustible
Thermoplastic polyester-elastomer	TPE–E	12Y	–50 +90	+110	3,7–5,1	$>10^{10}$	30–40	300–400	55–75 (D)	1,5	very good	very good	combustible
Thermoplastic polyolefin-elastomer	TPE–O	18Y	–40 +90	+110	2,7–3,6	$>10^{12}$	15–25	320–600	36–50 (D)	1,5	very good	moderate	combustible
Elastomers													
Silicone rubber	SI	2G	–60 +180	+250	2,8–3,2	10^{15}	5–10	200–350	60–70 (A)	1,0	very good	good	flame retardant
Ethylene-propylene-rubber	EPR	3G	–25 +70	+100	3,2	10^{14}	2–25	200–450	55–75(A)	0,02	good	low	combustible
Polychloroprene	CR	5G	–40 +100	+100	6,0–8,0	10^{13}	25	450	50–70(A)	0,0	very good	good	self-extinguishing
Special compounds													
Halogen-free polymer compound	FRNC	H	–30 +70	+100	3,4–5,0	10^{12}–10^{14}	8–13	150–250	65–95 (A)	0,20–1,50	moderate	moderate	self-extinguishing
Cross-linked halogen-free polymer compound		HX	–30 +90	+120	3,4–5,0	10^{13}–10^{14}	8–13	150–250	65–95 (A)	0,20–1,50	moderate	moderate	self-extinguishing

INDUSTRIAL CABLES SLOVAKIA

Type codes for harmonised cables and insulated wires

□□ □□□ □ □□□

Code for standard	
Harmonised standard	H
Recognised national type	A

Rated voltage U_0/U	
100/100 V	01
300/300 V	03
300/500 V	05
450/750 V	07
0,6/1 kV	1

Insulation material	
PVC	V
Natural and synthetic rubber	R
Silicone rubber	S
XLPE	X
Flame-retardant, halogen-free polymer compounds, crosslinked	Z
Flame-retardant halogen-free compounds, non-cross-linked	Z1

Jacketing material	
PVC	V
Natural and synthetic rubber	R
Chloroprene rubber	N
Chloroprene rubber (special compound)	N2
Glass fibre braid	J
Textile braid	T
Textile braid, mass impregnated, flame retardant	T2

Special design	
Flat, separable	H
Flat, non-separable	H2
Central element	D5

Conductor design	
–U	Solid wire
–R	Stranded wire
–K	Fine wire (for fixed installation)
–F	Fine wire (for flexible cables)
–H	Super-fine wire (for flexible cables)
–Y	Tinsel wire
–D	flexible (for welding cables)
–E	Super-flexible (for welding cables)

Number of cores

Protective conductor	
X	Without protective conductor
G	With protective conductor

Conductor cross-section

Example: H03VV-F 3G1.5
PVC control cable, light-duty,
fine-wire 3 × 1.5 mm²

Core identification

Cores in cables and insulated wires (except insulated overhead lines) are identified by the colour of the insulation and/or printed colours (numbers, rings) or longitudinal colour stripes. The following colour abbreviation are used:

Colour	Abbreviation	Colour	Abbreviation	Colour	Abbreviation
blue	bu	orange	or	turquoise	tq
brown	bn	pink	pk	green/yellow	gnye
yellow	ye	red	rd		
grey	gy	black	bk		
green	gn	violet	vt		
natural	nat	white	wh		

In case of insulated overhead lines, the cores are identified by longitudinal stripes on the insulation surface.

Colour codes for insulated wires and power cables according to HD 308 S2

Number of cores	Cables for fixed installation	Flexible cables	With green-yellow core	Cables for fixed installation	Flexible cables	Without green-yellow core
1	–J	1G		–O	1X	and other colours
2				–O	2X	
3	–J	3G		–O	3X	
4	–J	4G		–O	4X	
5	–J	5G		–O	5X	
6 or more	–J	nG	other cores with printed numbers	–O	nX	with printed numbers

These rules are not valid for cables, which are exclusively used for internal wiring of electrical devices and control cabinets.

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Parameters in drag chain application

Type	Minimum bending radius	Traverse length	Acceleration	Traverse speed	Bending cycles up to
FLEXICS® CHAIN	10 × D	5m	3m/s²	3m/s	3 million
FLEXICS® CHAIN C	10 × D	5m	3m/s²	3m/s	3 million
FLEXICS® CHAIN 11	10 × D	5m	3m/s²	3m/s	5 million
FLEXICS® CHAIN 11C	10 × D	5m	3m/s²	3m/s	5 million
FLEXICS® CHAIN 911	7,5 × D	5m	3m/s²	3m/s	5 million
FLEXICS® CHAIN 99111C	7,5 × D	5m	3m/s²	3m/s	5 million
FLEXICS® CHAIN UL / c(UL)	10 × D	5m	3m/s²	3m/s	3 million
FLEXICS® CHAIN C UL / c(UL)	10 × D	5m	3m/s²	3m/s	3 million
FLEXICS® CHAIN 11 UL / c(UL)	7,5 × D	5m	3m/s²	3m/s	5 million
FLEXICS® CHAIN 11C UL / c(UL)	10 × D	5m	3m/s²	3m/s	5 million
FLEXICS® CHAIN SERVO 911	7,5 × D	5m	3m/s²	3m/s	5 million
FLEXICS® CHAIN SERVO 911C	7,5 × D	5m	3m/s²	3m/s	5 million
FLEXICS® CHAIN SERVO 911 UL / c(UL)	7,5 × D	5m	3m/s²	3m/s	5 million
FLEXICS® CHAIN SERVO 911C UL / c(UL)	7,5 × D	5m	3m/s²	3m/s	5 million

The number of cycles was determined by testing under standardised conditions in programmable testing power chain systems with adjustable traverse length, traverse speed, acceleration and bending radius; under continuous motion and constant temperature.

Our in-house test facility enables us to test all parameters affecting the manufactured products and therefore guarantees operational service life under demanding industrial conditions.

Construction Products Regulation (CPR)

The Construction Products Regulation has been in effect for the entire European Union since July 1, 2017. According to this regulation, manufacturers or dealers are no longer allowed to bring cables intended for “fixed installation” in buildings into circulation within the European market without “CE marking” and “declaration of performance”.

The CE mark:

This is a legal requirement that confirms the conformity of a product with all relevant guidelines and regulations. According to the CPR, in addition to the CE marking, additional information about the product, its testing or certification and its performance is required. The CE marking must always be attached to the product, or where this is not possible, on the drum, spool or packaging, as well as on the accompanying documents.

What is a construction product?

A construction product is any product that is placed on the market and permanently installed in buildings or parts thereof. According to the CPR, cables fall under the basic requirement of „fire protection“ in a building and must therefore be classified according to EN 13501. Important: For cables and wires, the reference is made to EN 50575, whereby this standard only contains the requirements for fire behaviour, but not requirements for the structure or use of the products.

Which obligations affect the respective market participants?

- **Authorities**
  - Set rules on where to use the CPR classified cables
  - Examine the market for the correct application according to the regulation
- **Test centers**
  - Must prescribe the required fire behaviour based on the CPR classification
  - Assess any specific risks
- **Producers**
  - Must produce all products according to CPR
  - Have the products tested according to CPR
- **Wholesalers**
  - Ensure that only cables that meet the requirements are placed on the market
  - Ensure that the product bears the CE mark and that the documents required by the CPR are accessible
- **Installers**
  - Follow the national installer regulations
  - Only install cables that comply with the CPR

The CPR classification:

By testing in accordance with EN 50399 the following criteria are assessed:

- Heat of combustion
- Heat release
- Vertical flame spread
- Smoke development
- Burning droplets / falling off of plastic materials that can contribute to the spread of fire
- Acidity (acidity volume in a substance)

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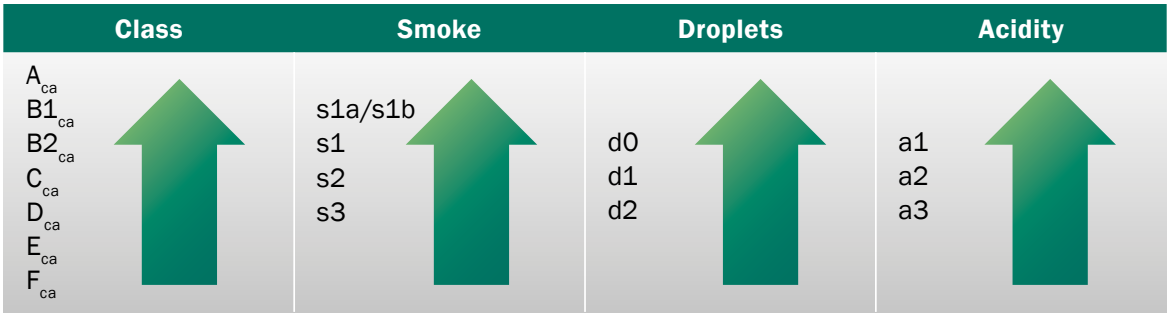
The CPR cable classes:

EN 50575 defines following fire classes:

- A_{ca} non-flammable, no contribution to fire
- $B1_{ca}$ flame retardant, very limited contribution to fire
- $B2_{ca}$, C_{ca} very limited contribution to fire, limited fire development and heat release
- D_{ca} low contribution to fire, constant flame spread, moderate heat release
- E_{ca} normally flammable
- F_{ca} highly flammable

For the classes $B1_{ca}$-D_{ca} there are additional classes to be determined:



Example: $B2_{ca}$ – s1a, d0, a1

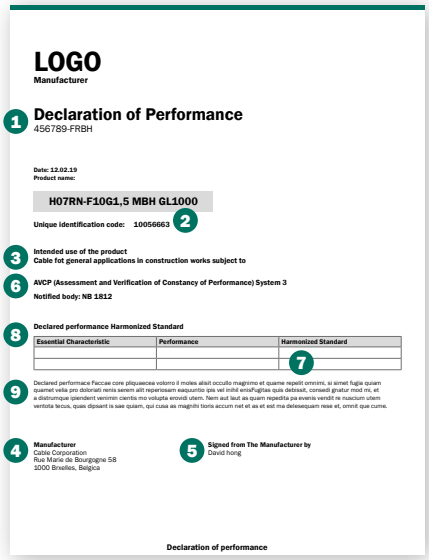
The class of reaction to fire must either be attached to the label or accompanying documents!

The declaration of performance (DoP):

This declaration is the confirmation of the product performance made and signed by the manufacturer. In addition, the manufacturer must provide the DoP in an easily understandable language or in the language required by the respective member state.

What is the content of a DoP and what does it look like?

1. Reference number of the declaration of performance
2. Unique identification code of the product type
3. Intended use/es
4. Manufacturer
5. Authorized representative
6. System(s) for evaluating and checking the constancy of performance (AVCP)
7. Harmonized standard and the state-monitored test center
8. Declared performance(s)
9. Statement of Liability



LOGO
Manufacturer

1 **Declaration of Performance**
456789-FRBH

Date: 12.02.19
Product name:

H07RN-F10G1,5 MBH GL1000

Unique identification code: 10056663 2

3 Intended use of the product
Cable fot general applications in construction works subject to

6 AVCP (Assessment and Verification of Constancy of Performance) System 3
Notified body: NB 1812

8 Declared performance Harmonized Standard

Essential Characteristic	Performance	Harmonized Standard
		7

9 Declared performace Faccae core pliquaecea volorro il moles aliait occullo magnimo et quame repelit omnimi, si simet fugia quiam quamet vella pro doloriati renis serem alit reperiosam eaquuntio ipis vel inihil enisFugitas quis debisait, consedi ginatur mod mi, et a diatrumque ipiendent verimin cientis mo volupta erovid utem. Nem aut laut as quam repeditia pa evenis vendit re nuacium utem ventota lecus, quas dipsant is sae quiam, qui cusa as magnihi tioris accum net et as et est ma delesequam rese et, omnit que cume.

4 Manufacturer
Cable Corporation
Rue Marie de Bourgogne 58
1000 Bruelles, Belgica

5 Signed from The Manufacturer by
David hong

Declaration of performance

What information can be found on the CPR label?

1. CE-marking
2. Year of the first attachment of the CE mark (min. 2-digit)
3. Manufacturer
4. Unique identification code of the product type
5. Reference number of the declaration of performance
6. Class of specified performance
7. Dated reference to the applicable standard
8. Identification number of the product certification body
9. Intended use according to the applied standard

Which cable is the right choice for a specific building structure?

Each EU member state independently regulated the level of performance required to ensure the required level of fire protection, depending on the type of structure in question and the local building technologies. It is therefore the duty of economic actors in the entire supply chain, as well as planners, to find out about the requirements applicable in their country.

In some EU countries it is legally regulated which fire classes are to be used in which buildings or building parts. In others, there are only recommendations from individual stakeholders.

Properties of electric cables in case of fire

Fire behaviour („Reaction to fire“)

This group of test standards is used to evaluate cables for their behaviour in the event of fire according to the following criteria: release of heat, smoke, corrosive gases, their flame spread, and the falling/dropping of burning parts.

Vertical flame propagation test

EN 60332-1-2: **self-extinguishing**

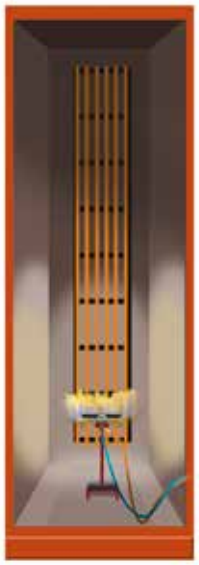
The purpose of the test is to determine whether flame propagation of individual conductors or cables occurs across their surface.

Vertical flame propagation test, self-extinguishing

Testing for vertical flame spread of cable bundles

EN 60332-3-22 and 24: **low fire propagation**

Similar to the vertical flame propagation test, this test is concerned with determining the extent of flame spread over the surface of the cables. In this case, however, we are dealing with cable bundles.



Testing flame spread in bundles

INDUSTRIAL CABLES SLOVAKIA

Corrosiveness of fire gases

EN 60754-1 and 2: **halogen-free, no corrosive fire gases**

One of the most important parameters of cables in case of fire is the corrosiveness, i.e. the ability of the gases to create conditions that are aggressive and cause corrosion. This is particularly important because the corrosive atmosphere can also damage equipment that is not directly affected by the fire.

Measurement of the corrosiveness of the fire gases

Smoke density

EN 61034-2: **minimum smoke density**

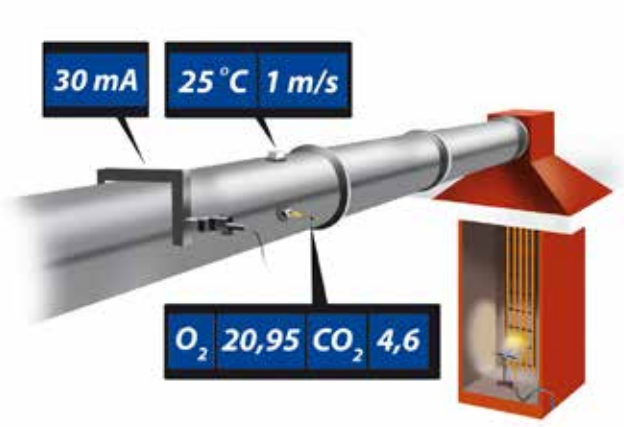
Another important parameter of cables in case of fire is the density of smoke and the associated restriction of light propagation. Dense smoke leads to poor orientation of persons and thus makes their evacuation more difficult.

Measurement of smoke density

Measurement of heat release and smoke production during flame spread test

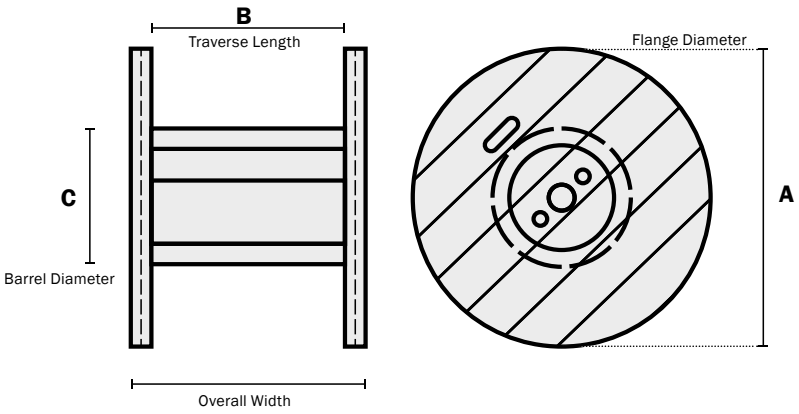
EN 50399

It is equally important to determine how much heat cables release in the event of a fire and what their contribution to fire development is. This property is tested in a complex test in order to be able to classify the cables in so-called reaction to fire classes within the framework of the Construction Products Regulation (CPR). These classes are listed in the European Commission Regulation No. 2006/751/EC.



Testing the fire behaviour of electrical cables

Standard delivery drums



A = Flange Diameter
B = Traverse Length
C = Barrel Diameter

Reel Size = A × B × C
Example = 1200 × 600 × 800

Wooden drum designation	Flange diam. A [mm]	Max. windng diam.	Barrel diam. C [mm]	Traverse length. B [mm]	Weight kg
10HS	1000	940	550	600	65
12HS	1200	1120	700	650	105
14HS	1400	1320	850	750	170
16HS	1600	1500	900	850	230
18HS	1800	1700	1000	950	320

Steel drum designation	Flange diam. A [mm]	Max. windng diam.	Barrel diam. C [mm]	Traverse length. B [mm]	Weight kg
10MS	1000	940	600	575	56
12MS	1200	1120	600	660	82
15MS	1500	1400	750	940	150
18MS	1800	1700	1150	895	280

Plywood drum designation	Flange diam. A [mm]	Max. windng diam.	Barrel diam. C [mm]	Traverse length. B [mm]	Weight kg
PC400	400	370	150	405	2
PC500	500	470	150	405	3,5
PC600	600	560	150	405	4
PC800	800	760	310	396	11
PC1000	1000	980	310	390/500	20

INDUSTRIAL CABLES SLOVAKIA

1. GENERAL PROVISIONS

1.1. These basic terms and conditions of deliveries (hereinafter referred to as "the Terms and Conditions") set out the terms and conditions of concluding Purchase Contracts for the deliveries of cable products and their accessories, the content of Purchase Contracts and the Buyer's and Seller's rights and duties ensuing from these Contracts. In addition, they set out, but not exclusively, entitlements after breaching obligations as per the Contract. When concluding any Purchase Contract for cable products and their accessories, only these Terms and Conditions apply being an integral part of the Purchase Contract. The contracting parties may deviate from these Terms and Conditions only on the basis of a mutual written agreement.

1.2. The Seller is the company ICS INDUSTRIAL CABLES SLOVAKIA, spol. s r.o., with its registered office at Dolné Hony 25, 949 01 Nitra, Slovak Republic, company registration number: 35 970 910, registered in the Commercial Register kept by the District Court in Nitra, section Sro, rider No. 20829/N.

1.3. Price details and other declarations and promises are binding on the Seller only when these are provided in writing.

1.4. The Purchase Contract respectively Order Confirmation may be concluded on the basis of the order which is submitted by the Buyer and which must include the following basic appurtenances:

- company name, company registration number, tax registration number, address and bank connection
- contact person, telephone, delivery place address
- name of product (dimensions, colour indication, etc.)
- price
- quantity
- expedition materials (cable drums, boxes, pallets)
- method of payment
- method of transport
- delivery date

1.5. These Terms and Conditions shall become an inseparable part of the Purchase Contract. Variations form the Terms and Conditions are only possible if agreed in writing.

1.6. The subject-matter of the Purchase Contract is the Seller's obligation to deliver to the Buyer goods specified in the order and confirmed in the order confirmation, transfer the ownership right to these goods to the Buyer and the Buyer's obligation to pay the purchase price to the Seller in a due and timely manner.

1.7. Unless special technical terms and conditions are agreed together with Purchase Contracts, goods shall be delivered in a common version whose technical parameters are known to the Buyer before the conclusion of the Purchase Contract (technical specifications, norms, catalogue pages, technical arrangements).

1.8. An order may be cancelled only prior to the start of production. If the Buyer requires the cancellation of an order after the production starts and the Seller agrees to such cancellation, the Buyer is obliged to pay a penalty as a compensation at minimum amounting to 50% of the value up to 100% of the cancelled order.

1.9. The Seller reserves the right to deliver goods with a variance of ± 10 % of the ordered quantity of individual goods items. Invoicing shall correspond with the delivered quantity with a tolerance of measuring devices of ± 1.0%. The differences detected in length falling within this tolerance shall not be subject to quantity claims.

1.10. Partial deliveries during the performance of the Purchase Contract are admissible.

2. PURCHASE PRICE

2.1. Products are delivered for purchase prices which are set on the basis of the valid offered base price and metal surcharge. In order to set the purchase price, the price of non-ferrous metal (Cu, Al) is added to the sum. The metal price is determined by the seller as the price derived from current prices on the London Stock Exchange. Unless otherwise agreed, is Cu-adjustment executed with the average DEL-fixing from month prior delivery (+1 % purchasing charges).

2.2. The purchase price set in this way is without VAT. Transport costs are included in the price according to required/offered delivery terms and conditions – INCOTERMS – EXW, FCA, CPT, CIF etc.

2.3. Cables and insulated wires are delivered in rings, one-way drums or returnable drums.

2.4. In the case of goods delivery on returnable packaging, the buyer is obliged to return such packaging as soon as possible, but no later than 6 months after delivery of the goods. If the Buyer is unable to return the returnable packaging and does not extend this period with Seller, the Seller shall issue an invoice to the Buyer for the non-returned packaging.

3. PAYMENT TERMS

3.1. Payments may be made by bank transfer:

- in advance on the basis of an advance payment invoice (proforma invoice),
- in due date on the base of invoice

3.2. The Seller issues to the Buyer who concludes the Purchase Contract with the Seller for the first time or has an unsettled obligation towards the Seller coming from previously concluded Purchase Contracts or due to other reasons an advance payment invoice at an amount of 100% of the purchase price. The Buyer is obliged to pay the amount by the due date and submit the certificate of payment to the Seller. Unless the payment is made, the Seller shall not be obliged to deliver goods to the Buyer.

3.3. Unless otherwise stated or agreed, the Seller is entitled to issue an invoice for the total purchase price on the delivery day. On this day a supplementary payment of the price for non-ferrous metal is also added to the purchase price. Unless otherwise agreed, the whole purchase price is due in 30 (thirty) days as of the date of invoice issue. In exceptional cases the due date and the applied amount of discount shall be individually agreed with the customer. Within the said period the Buyer is obliged to pay the whole purchase price to the Seller.

3.4. The obligation to pay the purchase price and, possibly, other payments according to the Purchase Contract and these Terms and Conditions is fulfilled by crediting the whole amount to the account of the Seller in its bank.

3.5. Payment periods are considered to be met if the financial obligation is credited to the Seller's account in its bank by the given date. At the Seller's discretion the payments received may be set against other receivables that have not been settled until that day.

3.6. The Seller is entitled to refuse to deliver goods to the Buyer who is in arrears with the payment of any obligation towards the Seller and also when the Buyer has entered into liquidation, the Buyer's assets are subject to a bankruptcy order or settlement permission, a petition for a bankruptcy order or settlement permission has been filed with regard to the Buyer's assets, or if there is a reasonable doubt that the fulfilment of obligations (including those not yet payable) by the Buyer is endangered.

3.7. If the Buyer has been in arrears with the payment of any obligation towards the Seller for more than 7 (seven) days, the Seller is entitled to withdraw from all Purchase Contracts. The Seller is also entitled to withdraw from all Purchase Contracts if the Buyer enters into liquidation or a petition for a bankruptcy order or settlement permission has been filed with regard to the Buyer's assets, the Buyer's assets are subject to a bankruptcy order or settlement permission or a petition for a bankruptcy order with regard to the Buyer's assets has been dismissed because

of the Buyer's lack of assets. The Seller has the same right if the Buyer is in arrears with the payment of any obligation that the Buyer has towards entities with which the Seller is capital connected. Withdrawal from the Contract does not prejudice the right of the Seller to damages including compensation for the profit lost as a result of contract termination and the entitlement to a contractual penalty.

3.8. If the Buyer finds himself in arrears with payment of any financial obligation as per the Purchase Contract and these Terms and Conditions, it is obliged to pay the Seller a contractual penalty amounting to 0.05% per day of the invoiced purchase price for each started day of default. This does not prejudice the Seller's right to claim damages as well as payment of late payment interest as per Article 369 of the Commercial Code.

4. GOODS DELIVERY AND TRANSFER OF THE OWNERSHIP RIGHT

4.1. Goods are delivered upon their delivery to the place of destination specified by the Buyer and confirmed by the Seller. If the Buyer provides its own transport, goods are considered to be delivered upon their acceptance by the Buyer (or its carrier) at Seller's premises.

4.2. The ownership right to goods is transferred to the Buyer upon complete payment of the purchase price thereof.

5. RESPONSIBILITY FOR GOODS

5.1. The Seller is responsible for goods quality and the fact that goods shall have the agreed quality throughout the set period following the delivery and that the said properties shall be maintained for the said period. The guarantee period for goods lasts 24 months as of the expedition date. The guarantee does not apply to the damage caused by unprofessional handling or incorrect storage.

5.2. When accepting goods together with cable drums, the Buyer is obliged to inspect and detect whether there are any defects visible at first sight and whether the delivery is complete and claim the defects without delay.

5.3. When qualitative defects are detected in goods, the Buyer is obliged, within 12 months as of the day of goods acceptance, not later than within 24 months as of the expedition date, to inform the Seller of this fact with a proposed procedure as per Article 436 of the Commercial Code. A quantitative defect of goods must be claimed within 30 (thirty) days as of the acceptance day. The claim must be submitted in writing and must contain the following appurtenances:

a) specification of the defect claimed
b) claimed quantity
c) number of the invoice or delivery note
d) number of the drum
e) details of the contact person authorised to deal with claims

5.4. The Seller is obliged to make a statement with regard to the claim within 30 days as of the day of receipt of the written notice of defect.
In the event that the Buyer is asked to return goods, the Buyer is obliged to return the said goods. If the Buyer fails to return the claim goods in specified period, it is understood that it does not insist on the claim and thereby it expires.
The costs of return or possible liquidation of the goods claimed shall be borne by the Seller only in the event that the claim proves to be legitimate.

5.5. The risk of damage, loss or breaking of goods and packaging is transferred to the Buyer upon the delivery of goods (4.1).
5.6. Unless it is specifically required by the Buyer, the goods delivery is not insured against theft, transport and fire damage. If the Buyer requires an insurance policy to be taken out, such insurance shall be taken out at the Buyer's expense.

6. FINAL PROVISIONS

6.1. These Terms and Conditions, Purchase Contracts as well as any legal relations ensuing therefrom are governed by the law and order of the Slovak Republic, mainly the Commercial Code No. 513/1991 Coll. as amended.

6.2. Concluding this Purchase Contract, of which these Terms and Conditions are an integral part, the contracting parties expressly declare that:

a) the conclusion and performance of the Purchase Contract come under their statutory power, are not in conflict with their Articles of Incorporation and have been duly approved in compliance with the internal rules of the given entity (company),
b) the obligations set out in the Purchase Contract and these Terms and Conditions are valid and binding obligations enforceable as per the Contract and Terms and Conditions (excluding limitations stipulated by the Bankruptcy and Settlement Act or any other legal regulations limiting creditors' rights in general),
c) the business defined in the Purchase Contract and these Terms and Conditions and the action to be taken in compliance with the Purchase Contract and these Terms and Conditions are not in conflict with any law or any other applicable legal regulations nor with any relevant order issued by a court or another public authority,
d) the business defined in the Purchase Contract and these Terms and Conditions and the action to be taken in compliance with the Purchase Contract and these Terms and Conditions are not in conflict with any contract arrangement which is binding on either of the contracting parties,
e) their assets are not subject to a bankruptcy order or settlement permission, or that no petition for a bankruptcy order has been dismissed because of lack of assets, or that no petition for a bankruptcy order has been filed against them in a court,
f) they are not parties to any legal or arbitration proceedings whose subject-matter relates or might relate to the subject-matter of this Contract.

6.3. On request, each contracting party ("indemnifying party") shall fully indemnify the other contracting party ("indemnified party") for any damage, loss, expenses, debts or any other obligations (including reasonable expenses for legal counsel) that the indemnified party has incurred because any of the declarations or guarantees given by the indemnifying party in the Purchase Contract and these Terms and Conditions is untrue or misleading or because of the breach of any obligation as per the Purchase Contract by the indemnifying party. The entitlement to the payment of the agreed contractual penalty is not thereby prejudiced.

6.4. In the cases when any obligation as per the Purchase Contract or these Terms and Conditions which is to be fulfilled by one contracting party may only be reasonably fulfilled by means of cooperation with the other contracting party, the other contracting party shall provide the respective contracting party with any such reasonable cooperation on request.

6.5. Should any of the provisions of the Purchase Contract and these Terms and Conditions become or prove to be invalid, illegal or unenforceable, the validity and enforceability of the other provisions shall not be thereby prejudiced. The contracting parties undertake to replace, by mutual agreement, such invalid, illegal or unenforceable provisions with a valid, legal and enforceable provisions having the same or at least similar business and legal meaning.

6.6. The Purchase Contract may only be amended in writing.

Effective as of 1 January 2021

INDUSTRIAL CABLES SLOVAKIA

CERTIFICATE OF COMPLIANCE

Certificate Number 20140306-E347667
Report Reference E347667-20121207
Issue Date 2014-MARCH-06

Issued to: ICS INDUSTRIAL CABLES SLOVAKIA SPOL S R O
DOLNE HONY 25
94901 NITRA SLOVAK REPUBLIC

This is to certify that representative samples of COMPONENT - APPLIANCE WIRING MATERIAL
SINGLE-CONDUCTOR THERMOPLASTIC-INSULATED WIRE: 10012, 10107, 11009

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

liance Wiring Material
Online Certifications Directory at
database for additional information

onent Mark should be considered as being

sists of the manufacturer's identification and
gnation as specified under "Marking" for the
UL Directory. As a supplementary means of
UL's Component Recognition Program, UL's
unction with the required Recognized Marks.
specified in the UL Directory preceding the
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in the field. The final acceptance of the
omplete equipment submitted to UL LLC.

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BUREAU VERITAS Certification

ICS Industrial Cables Slovakia, spol. s r.o.
Dolné Hony 25, 949 01 Nitra
Slovak Republic

Bureau Veritas Certification Holding SAS – UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 9001: 2015

Scope of certification

DESIGN AND PRODUCTION OF THE CABLES AND INSULATED CONDUCTORS

Original cycle start date: 30 AUGUST 2007
Recertification cycle start date: 18 AUGUST 2019

Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on: 17 AUGUST 2022

Certificate No. SK-U19 061Q Version: 1 Revision date: 18 AUGUST 2019

Certification body address: 5th Floor, 66 Prescot Street, London E1 8HG, United Kingdom
Local office: Plynárenská 7/B, BRATISLAVA 821 09, Slovak Republic

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation.
To check this certificate validity please call: + 421 2 5341 4165

Page 1 of 1

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A s.r.o., Dolne Hony 25
UBLIK / SLOVAKIA

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- 18

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on the accessories concerning identity to the type once a year.
The accessories have to be taken from the current production.

Berlin, 2018-05-30
Sco/Hel

Verband der TÜV e.V.
Geschäftsbereich Anlagentechnik,
Arbeitswelt, Systemsicherheit, Regelwerke
– Gefahrguttransporte –

Dr. Schröer

Verband der TÜV e.V. · Friedrichstraße 136 · 10117 Berlin · Deutschland
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INDUSTRIAL CABLES SLOVAKIA

Presence throughout Europe

ICS Industrial Cables Slovakia is a member of SKB–GROUP located in Schwechat, Austria

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