Caledonian
www.caledonian-cables.co.uk

Caledonian Windmill Cables

- >> *Power Cables*
- >> *Control Cables*
- >> *Data Cables*
- >> *Communication Cables*
- >> *Fiber Optic Cables*

ADDISON
www.addison-cables.com

COMPANY PROFILE

Caledonian, established in 1978, offers one of the most complete lines of fiber and copper cabling system solutions with over hundreds of different cabling system products. Our superior products provide leading edge within every cable series and for every application.

ISO 9001
REGISTERED FIRM

Registration Certificate

This document certifies that the administration systems of

Caledonian Cables Limited / Addison Technology Limited
Marchants Industrial Centre, Mill Lane, Laughton, Lewes, Sussex, BN8 6AJ, United Kingdom

have been assessed and approved by QAS International to the following management systems, standards and guidelines:

ISO 9001 : 2008
With the permitted exclusion of clauses 7.3 Design and Development

The approved administration systems apply to the following:

The manufacture and supply of electrical cables and ancillary power equipment to customers internationally.

Original Approval 6th September 1997
Current Certificate 7th February 2013
Certificate Expiry 7th February 2014
Certificate Number A6211

On behalf of QAS International
www.qas-international.com

This certificate remains valid while the holder maintains their quality administration systems in accordance with the standards and guidelines stated above, which will be audited annually by QAS International. The holder is entitled to display the above registration mark for the duration of this certificate. This certificate must be returned to QAS International on reasonable request.
Issuing Office: QAS International, 2nd Oxford Street, Malmesbury, Wiltshire, SN16 9AX

Among the national and international standards with which our cables could comply are: BS - British Standard; LPCB Fire Performance Standard, ISO Standard etc. Caledonian Cables offers a comprehensive stock of cables and cabling products through its nationwide network of resellers and distributors. Caledonian Cables has continually expanded its global presence in Europe and Asia.

Caledonian & Addison, produces a wide range of cables for communication, power and electronics in its primary plants in UK, Italy and Spain. To stay in front, we continually keep expanding our manufacturing capabilities in more low cost region such as Romania, Taiwan, Malaysia etc. This low-cost manufacturing facilities enable us provide a flexible, scalable global system that delivers superior operational performance and optimal results for our customers.

Our extensive global network of manufacturing facilities gives us significant scale and the flexibility to fulfill our customer requirements. This global presence provides design and consultancy solutions that are combined with core cable manufacturing, logistic services, and vertically integrated with our E commerce technologies, to optimize customer operations by lowering costs and reducing time to market.

Caledonian & Addison has been respected for its high standards of quality, excellent service level, competitive pricing and a unique and innovative spirit. With our latest technologies, we are both inspired and well-positioned to meet the changing needs of our customers. We have the resources to diversify and to enhance our product lines and services. We understand the need for change and with our accurate planning, we are ready for the future and the promise of new marketing opportunities. Our tradition of growth through excellence is assured.

Our Design Centers work closely with customers to constantly improve its standard range of products and technologies and to develop customized, country and industry-specific solutions. Caledonian & Addison has established an extensive network of design, manufacturing, and logistics facilities in the world's major markets to serve the growing outsourcing needs of both multinational and regional customers.

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LSOH Torsion Resistant Power Cable 0.6/1kV

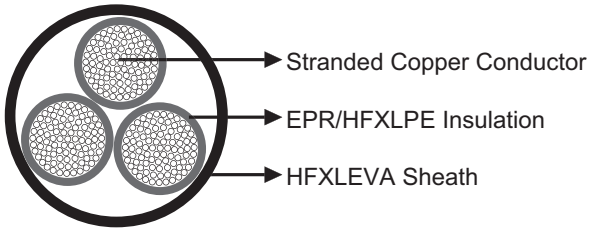
» Application

These cables with increased tolerance to torsion application, UV and ozone resistant, good bending and halogen free are specifically designed for the torsion applications in wind turbines, suitable for transmit energy from the generator to the transformer.

» Standards

IEC 60502

» Construction



Conductor: Stranded tinned copper, class 5/class 6 according to IEC 60228.
Insulation: EPR/HFXLPE.
Sheath: HFXLEVA.

» Technical Data

Rated Voltage U0/U (Um)	0.6/1kV
Operating Temperatures	-40℃~+90℃
Minimum Bending Radius	6×OD
Torsion Application	+/-144°/m
Flame Retardant	IEC 60332-3
Halogen Free	IEC 60754
Corrosive Gases	IEC 60754
Smoke Density	IEC 61034
Oil Resistant	Yes
Ozone Resistant	Yes

Power Cable

UV Resistant	Yes
Cold Resistant	CSA C 22.2

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
3×25	27.5	1500
3×35	31.0	1960
3×50	36.0	2640
3×70	40.5	3150
3×95	46.5	4575
3×120	50.5	5490
4×25	30.5	1870
4×35	34.5	2320
4×50	39.0	3100
4×70	43.5	4240
4×95	51.5	5716
4×120	56.0	6950

LSOH Screened Torsion Resistant Loop Cable 0.6/1kV

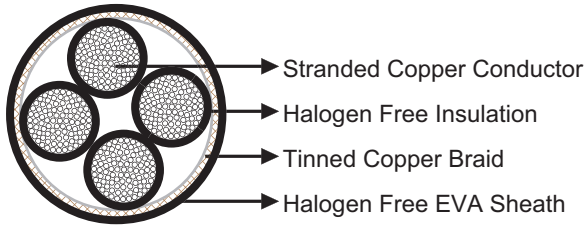
» Application

These cables are designed for special application condition in wind turbines, special for medium mechanical stress and for operation under permanent influence of seawater and usage outdoor.

» Standards

IEC 60502
EN 50363
HD 22.13

» Construction



Conductor: Stranded bare copper conductor.
Insulation: Extruded halogen free rubber compound EI8.
Screen: Tinned wire copper braid.
Sheath: Extruded halogen free EVA compound EM8.

» Technical Data

Rated Voltage Uo/U (Um)	0.6/1 kV
Operating Temperatures	flexing: -35℃~+90℃; fixed: -40℃~+90℃
Minimum Bending Radii	flexing: 6×OD; fixed: 4×OD
Torsion Application	± 100 °/m
Maximum Permissible Tensile Load	15 N/mm² (in operation)
Short-circuit Temperature	250℃
Flame Retardant	EN 50265-2-1
Halogen Free	IEC 60754
Smoke Density	IEC 61034

Oil Resistant	Yes
Ozone Resistant	Yes
Silicone Free	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
25×0.75	18.0	500
25×1	20.0	550
4×1.5	10.0	150
12×1.5	16.0	400
32×1.5	26.0	950
42×1.5	35.0	1700
12×2.5	23.0	620
5×2.5	15.0	300
4×4	13.5	300

AL Conductor EPR/XLEVA 0.6/1kV LSOH Power Cable 90°C

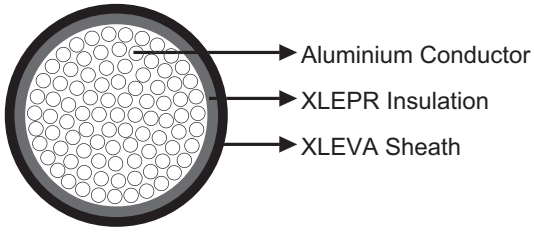
» Application

These durable, high temperature resistant LSOH cables are designed for wind turbines and dedicated for fixed installation inside the tower.

» Standards

IEC 60502-1

» Construction



Conductor: Aluminium conductor, class 2 according to IEC 60228/EN 60228.

Insulation: Special cross-linked halogen free rubber EPR for high temperatures.

Sheath: Special cross-linked synthetic halogen free rubber EM8 (XLEVA). CPE can be offered upon request.

» Technical Data

Rated Voltage Uo/U (Um)	0.6/1kV
Operating Temperatures	-40℃~+ 90℃
Minimum Bending Radii	6×OD
Maximum Permissible Tensile Load	15N/mm²
Short-circuit Temperature	250℃
Flame Retardant	IEC 60332-1/ IEC 60332-3
Halogen Free	IEC 60754
Corrosive Gases	IEC 60754
Smoke Density	IEC 61034
Oil Resistant	Yes
Ozone Resistant	Yes

Power Cable

UV Resistant	Yes
Water Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×150	22.5	640
1×185	25.0	770
1×240	27.8	980
1×300	30.5	1210
1×400	35.5	1550

AL Conductor HEPR/PO 0.6/1kV LSOH Power Cable 90°C

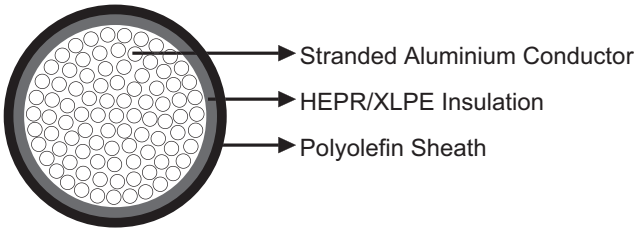
» Application

These cables are designed for main power lines of permanent routing in wind tower installation.

» Standards

IEC 60502

» Construction



Conductor: Aluminium conductor, class 2 to IEC 60228.
Insulation: HEPR. XLPE can be offered upon request.
Inner Covering: rubber compound type GM1b.
Sheath: Compound based on polyolefin, type HXM1.

» Technical Data

Rated Voltage Uo/U (Um)	0.6/1kV
Operating Temperatures	-40℃~+ 90℃
Minimum Bending Radius	4×OD
Short-circuit Temperature	250℃
Flame Retardant	IEC 60332-1
Halogen Free	IEC 60754
Gases Corrosively	DIN EN 50267-2/ IEC 60754
Smoke Density	IEC 61034
Oil Resistant	Yes
Ozone Resistant	Yes
UV Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×50	13.0	266
1×70	15.0	352
1×95	16.5	450
1×120	18.0	556
1×150	20.0	686
1×185	22.5	842
1×240	26.0	1076
1×300	29.0	1299
1×400	32.5	1680
3×150	44.0	2756
4×150	49.0	3367

H07BN4-F 450/750V Torsion Resistant Cable

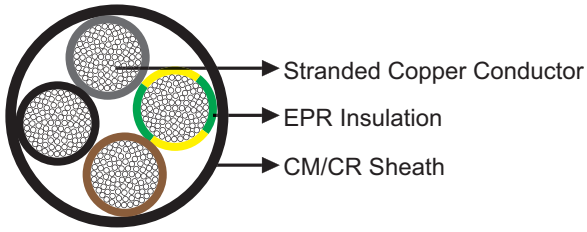
» Application

These cables with increased tolerance to torsion application, improved behaviour against abrasion and extended temperature, UV and ozone resistant are specially designed for wind turbines and to be used for the loop.

» Standards

DIN VDE 0282.12
HD 22.12

» Construction



Conductor: Stranded bare copper, class 5 according to DIN VDE 0295/HD 383/ IEC 60228.

Insulation: Cold and heat resistant EPR. Special cross-linked EI7 rubber for high temperatures can be offered upon request.

Sheath: Ozone, UV-resistant, oil and cold-resistant special compound based on CM (chlorinated polyethylene)/CR (chloroprene rubber). Special cross-linked EM7 rubber can be offered upon request.

» Technical Data

Rated Voltage U0/U (Um)	450/750V
Operating Temperatures	-40℃~+90℃
Minimum Bending Radius	6×OD
Maximum Permissible Tensile Load	15 N/mm²
Torsion Application	+/-150°/m
Short-circuit Temperature	250℃
Flame Retardant	EN 50265-1/EN 50265-2-1/IEC 60332-1
Oil Resistant	Yes

Ozone Resistant	Yes
UV Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×25	13.5	371
1×35	15.0	482
1×50	17.3	667
1×70	19.3	888
1×95	22.7	1160
1×(G)10	28.6	175
1×(G)16	28.6	245
1×(G)25	28.6	365
1×(G)35	28.6	470
1×(G)50	17.9	662
1×(G)70	28.6	880
1×(G)120	24.7	1430
1×(G)150	27.1	1740
1×(G)185	29.5	2160
1×(G)240	32.8	2730
1×300	36.0	3480
1×400	40.2	4510
10G1.5	19.0	470
12G1.5	19.3	500
12G2.5	22.6	670
18G1.5	22.6	725
18G2.5	26.5	980
2×1.5	28.6	110
2×2.5	28.6	160
2×4	12.9	235
2×6	14.1	275
2×10	19.4	530
2×16	21.9	730
2×25	26.2	1060
24G1.5	26.4	980
24G2.5	31.4	1390
3×25	28.6	1345
3×35	32.2	1760
3×50	37.3	2390
3×70	43.0	3110

Power Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
3×95	47.2	4170
3×(G)1.5	10.1	130
3×(G)2.5	12.0	195
3×(G)4	13.9	285
3×(G)6	15.6	340
3×(G)10	21.1	650
3×(G)16	23.9	910
3×120	51.7	5060
3×150	57.0	6190
4G1.5	11.2	160
4G2.5	13.6	240
4G4	15.5	350
4G6	17.1	440
4G10	23.5	810
4G16	25.9	1150
4G25	31.0	1700
4G35	35.3	2170
4G50	40.5	3030
4G70	46.4	3990
4G95	52.2	5360
4G120	56.5	6480
5G1.5	12.2	230
5G2.5	14.7	295
5G4	17.1	430
5G6	19.0	540
5G10	25.0	1020
5G16	28.7	1350
5G25	35.0	2080
5G35	38.4	2650
5G50	43.9	3750
5G70	50.5	4950
5G95	57.8	6700
6G1.5	14.7	295
6G2.5	16.9	390
7G1.5	16.5	350
7G2.5	18.5	460
8×1.5	17.0	400

H07BN4-F & UL/CSA 600V 90°C Torsion Resistant Cable

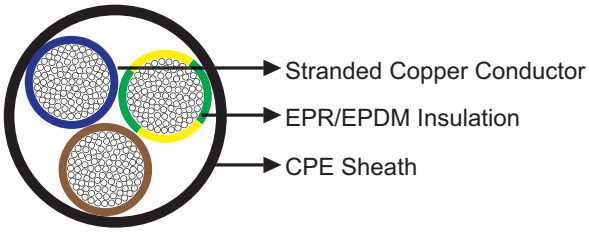
» Application

These cables with increased tolerance to torsion application, improved behaviour against abrasion and extended temperature, UV and ozone resistant are specially designed for wind turbines.

» Standards

HD 22.12
UL/CSA 22.2
UL 758

» Construction



Conductor: Flexible annealed bare copper, class 5 according to IEC/EN 60228.

Insulation: Special cross-linked EI7 rubber for high temperatures (EPDM class 28). Special thermoset EPR for high temperature can be offered upon request.

Sheath: High mechanical performance special cross-linked EM7 rubber (CPE class 42). Special thermoset CPE improved for low temperature behaviour (-40°C) can be offered upon request.

» Technical Data

Rated Voltage Uo/U (Um)	600V
Operating Temperatures	-40℃~+90℃
Minimum Bending Radius	flexing: 6×OD; fixed: 4×OD
Torsion Application	+/-150°/m
Maximum Permissible Tensile Load	15 N/mm²
Short-circuit Temperature	250℃
Flame Retardant	EN 50265-1/EN 50265-2-1/IEC 60332-1
Oil Resistant	Yes

Ozone Resistant	Yes
UV Resistant	Yes
Water Resistant	Yes
Impact Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×120(4/0AWG)	25.5	1540
1×150(250MCM)	28.8	1810
1×185(350MCM)	31.4	2210
1×240(450MCM)	33.8	2750
1×300(550MCM)	37.7	3520
1×400(750MCM)	41.4	4510
1×50(1 AWG)	18.7	730
1×95(3/0 AWG)	23.0	1220
3×120(4/0 AWG)	56.0	5200
3×150(250MCM)	61.5	6400
3×240(450MCM)	72.0	9780
3×25(4 AWG)	30.0	1420
3×35(2 AWG)	35.3	1850
3×50(1 AWG)	39.8	2480
3×70(2/0 AWG)	43.8	3180
3×95(3/0 AWG)	49.0	4260
4G50(1 AWG)	42.5	3150
4G70(2/0 AWG)	48.2	4240
4G95(3/0 AWG)	53.5	5480

G: with green-yellow earth core

×: without green-yellow earth core

H07BN4-F & UL/CSA 1000V 90°C Torsion Resistant Cable

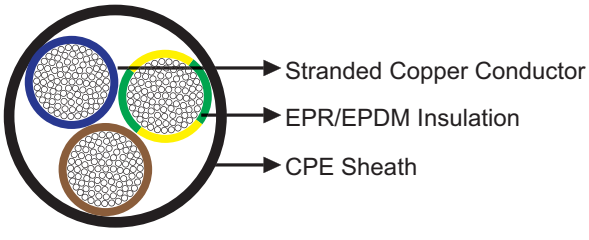
» Application

These cables with increased tolerance to torsion application, improved behaviour against abrasion and extended temperature, UV and ozone resistant are specially designed for wind turbines.

» Standards

HD 22.12
UL/CSA 22.2
UL 758

» Construction



Conductor: Flexible annealed bare copper, class 5 according to IEC/EN 60228.

Insulation: Special cross-linked EI7 rubber for high temperatures (EPDM class 28). Special thermoset EPR for high temperature can be offered upon request.

Sheath: High mechanical performance special cross-linked EM7 rubber (CPE class 42). Special thermoset CPE improved for low temperature behaviour (-40°C) can be offered upon request.

» Technical Data

Rated Voltage Uo/U (Um)	1000V
Operating Temperatures	-40℃~+90℃
Minimum Bending Radius	flexing: 6×OD; fixed: 4×OD
Torsion Application	+/-150°/m
Maximum Permissible Tensile Load	15 N/mm²
Short-circuit Temperature	250℃
Flame Retardant	EN 50265-1/EN 50265-2-1/IEC 60332-1
Oil Resistant	Yes

Ozone Resistant	Yes
UV Resistant	Yes
Water Resistant	Yes
Impact Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×120(4/0 AWG)	25.5	1540
1×150(250MCM)	28.8	1810
1×185(350MCM)	31.4	2210
1×240(450MCM)	33.8	2750
1×300(550MCM)	37.7	3520
1×400(750MCM)	41.4	4510
1×50(1 AWG)	18.7	730
1×95(3/0 AWG)	23.0	1220
3×120(4/0 AWG)	56.0	5200
3×150(250MCM)	61.5	6400
3×240(450MCM)	72.0	9780
3×25(4 AWG)	30.0	1420
3×35(2 AWG)	35.3	1850
3×50(1 AWG)	39.8	2480
3×70(2/0 AWG)	43.8	3180
3×95(3/0 AWG)	49.0	4260
4G50(1 AWG)	42.5	3150
4G70(2/0 AWG)	48.2	4240
4G95(3/0 AWG)	53.5	5480

G: with green-yellow earth core

×: without green-yellow earth core

H07ZZ-F 450/750V Torsion Resistant Cable

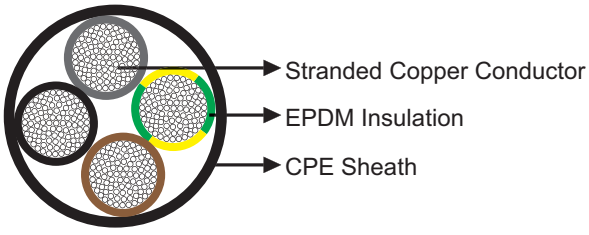
» Application

These cables with increased tolerance to torsion application, improved behaviour against abrasion and extended temperature, UV and ozone resistant are specially designed for wind turbines and to be used for the loop.

» Standards

HD 22-13

» Construction



Conductor: Stranded bare copper, fine wire class 5 according to DIN VDE 0295/HD 383/ IEC 60228.

Insulation: Special cross-linked EPDM rubber (type EI7) for high temperatures.

Sheath: Special cross-linked CPE (type EM7).

» Technical Data

Rated Voltage U0/U (Um)	450/750V
Operating Temperatures	-40℃~+90℃
Maximum Permissible Tensile Load	15 N/mm²
Minimum Bending Radius	flexing: 6×OD; fixed: 4×OD
Torsion Application	+/-150°/m
Short-circuit Temperature	250℃
Flame Retardant	EN 50265-1/EN 50265-2-1/IEC 60332-1/IEC 60332-3
Smoke Density	LSF EN 61034
Oil Resistant	Yes
Ozone Resistant	Yes

UV Resistant	Yes
Water Resistant	Yes
Impact Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×(G)10	10.3	175
1×(G)16	11.7	245
1×(G)25	13.9	365
1×(G)35	15.7	470
1×(G)70	20.3	880
1×(G)120	24.7	1430
1×(G)150	27.1	1740
1×(G)185	29.5	2160
1×(G)240	32.8	2730
1×50	17.9	662
1×95	22.7	1160
1×300	36.0	3480
1×400	40.2	4510
2×1.5	9.4	110
2×10	19.4	530
2×16	21.9	730
2×2.5	11.2	160
2×4	12.9	235
2×6	14.1	275
2×25	26.2	1060
3×25	28.6	1345
3×35	32.2	1760
3×50	37.3	2390
3×70	43.0	3110
3×95	47.2	4170
3×(G)1.5	10.1	130
3×(G)2.5	12.0	195
3×(G)4	13.9	285
3×(G)6	15.6	340
3×(G)10	21.1	650
3×(G)16	23.9	910
3×120	51.7	5060
3×150	57.0	6190
4G1.5	11.2	160

Power Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
4G2.5	13.6	240
4G4	15.5	350
4G6	17.1	440
4G10	23.5	810
4G16	25.9	1150
4G25	31.0	1700
4G35	35.3	2170
4G50	40.5	3030
4G70	46.4	3990
4G95	52.2	5360
4G120	56.5	6480
5G1.5	12.2	230
5G2.5	14.7	295
5G4	17.1	430
5G6	19.0	540
5G10	25.0	1020
5G16	28.7	1350
5G25	35.0	2080
5G35	38.4	2650
5G50	43.9	3750
5G70	50.5	4950
5G95	57.8	6700
6G1.5	14.7	295
6G2.5	16.9	390
7G1.5	16.5	350
7G2.5	18.5	460
8×1.5	17.0	400
10G1.5	19.0	470
12G1.5	19.3	500
12G2.5	22.6	670
18G1.5	22.6	725
18G2.5	26.5	980
24G1.5	26.4	980
24G2.5	31.4	1390

G: with green-yellow earth core

×: without green-yellow earth core

H07ZZ-F & UL/CSA 600V EPR/XLEVA Torsion Resistant Cable

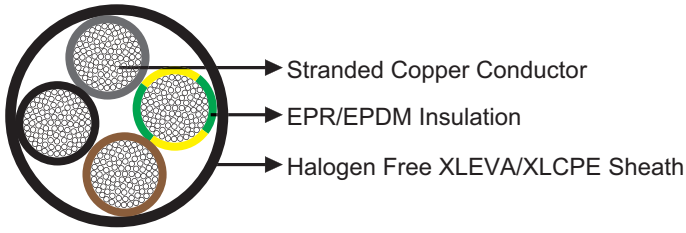
» Application

These halogen free cables with increased tolerance to torsion application, improved behaviour against abrasion and extended temperature, UV and ozone resistant are specially designed for wind turbines.

» Standards

UL/CSA 22.2
UL 758
HD 22.13

» Construction



Conductor: Stranded annealed bare copper, class 5 according to DIN VDE 0295/HD 383/IEC 60228.

Insulation: Special thermoset EPR for high temperature. Special cross-linked improved for EI8 and EI7 base on EPDM can be offered upon request.

Sheath: Special halogen free thermoset XLEVA. High mechanical performance special cross-linked EM8 synthetic halogen free rubber based on CPE can be offered upon request.

» Technical Data

Rated Voltage Uo/U (Um)	CENELEC 450/750V; UL/CSA 600V
Operating Temperatures	-40℃~+90℃
Maximum Permissible Tensile Load	15 N/mm²
Minimum Bending Radius	flexing: 6×OD; fixed: 4×OD
Torsion Application	+/-150°/m
Short-circuit Temperature	250℃

Flame Retardant	IEC 60332-1/IEC 60332-3
Halogen Free	IEC 60754
Smoke Density	LSF EN 61034/IEC 61034
Oil Resistant	Yes
Ozone Resistant	Yes
UV Resistant	Yes
Water Resistant	Yes
Impact Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×25	13.5	371
1×35	15.0	482
1×50	18.7	730
1×70	19.3	888
1×95	23.0	1220
1×120	25.5	1540
1×150	28.8	1810
1×185	31.4	2210
1×240	33.8	2750
1×300	37.7	3520
1×400	41.4	4510
3×120	56.0	5200
3×150	61.5	6400
3×240	72.0	9780
3×25	30.0	1420
3×35	35.3	1850
3×50	39.8	2480
3×70	43.8	3180
3×95	49.0	4260
3×120	52.8	5490
4G25	32.8	1870
4G35	36.3	2320
4G50	42.5	3150
4G70	48.2	4240
4G95	53.5	5480
4G120	58.3	6950

G: with green-yellow earth core

×: without green-yellow earth core

H07ZZ-F & UL/CSA 1000V EPR/XLEVA Torsion Resistant Cable

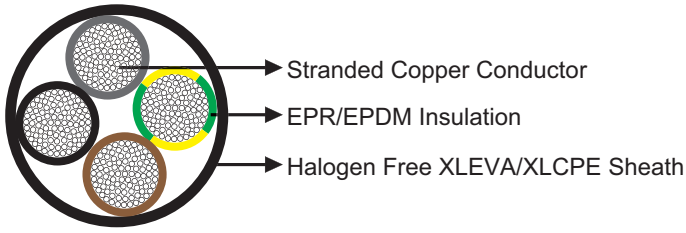
» Application

These halogen free cables with increased tolerance to torsion application, improved behaviour against abrasion and extended temperature, UV and ozone resistant are specially designed for wind turbines.

» Standards

UL/CSA 22.2
UL 758
HD 22.13

» Construction



Conductor: Stranded annealed bare copper, class 5 according to DIN VDE 0295/HD 383/IEC 60228.

Insulation: Special thermoset EPR for high temperature. Special cross-linked improved for EI8 and EI7 EPDM can be offered upon request.

Sheath: Special halogen free thermoset XLEVA. High mechanical performance special cross-linked EM8 synthetic halogen free rubber based on CPE can be offered upon request.

» Technical Data

Rated Voltage Uo/U (Um)	CENELEC 450/750V; UL/CSA 1000V
Operating Temperatures	-40℃~+90℃
Maximum Permissible Tensile Load	15 N/mm²
Minimum Bending Radius	flexing: 6×OD; fixed: 4×OD
Torsion Application	+/-150°/m
Short-circuit Temperature	250℃

Power Cable

Flame Retardant	IEC 60332-1/IEC 60332-3
Halogen Free	IEC 60754
Smoke Density	LSF EN 61034/IEC 61034
Oil Resistant	Yes
Ozone Resistant	Yes
UV Resistant	Yes
Water Resistant	Yes
Impact Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×25	13.5	371
1×35	15.0	482
1×50	18.7	730
1×70	19.3	888
1×95	23.0	1220
1×120	25.5	1540
1×150	28.8	1810
1×185	31.4	2210
1×240	33.8	2750
1×300	37.7	3520
1×400	41.4	4510
3×120	56.0	5200
3×150	61.5	6400
3×240	72.0	9780
3×25	30.0	1420
3×35	35.3	1850
3×50	39.8	2480
3×70	43.8	3180
3×95	49.0	4260
3×120	52.8	5490
4G25	32.8	1870
4G35	36.3	2320
4G50	42.5	3150
4G70	48.2	4240
4G95	53.5	5480
4G120	58.3	6950

G: with green-yellow earth core

×: without green-yellow earth core

PVC/PVC to UL/CSA 600V Torsion Resistant Cable

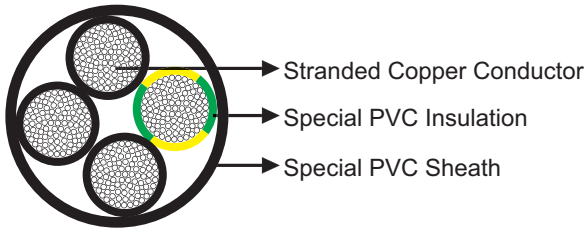
» Application

These cables with increased tolerance to Torsion Application, UV and oil resistant are specifically designed for the torsion applications in wind turbines.

» Standards

UL 758

» Construction



Conductor: Stranded bare copper according to DIN VDE 0295.
Insulation: Special PVC flexible at low temperatures.
Sheath: Special PVC flexible at low temperatures.

» Technical Data

Rated Voltage U0/U (Um)	600V
Operating Temperatures	flexing: -40℃~+80℃; fixed: -40℃~+80℃
Minimum Bending Radius	flexing:10×OD; fixed: 4×OD
Torsion Application	+/-140°/m
Flame Retardant	CSA C 22.2
Oil Resistant	IEC 60811-2-1
UV Resistant	Yes

» Dimensions and Weight

Construction	AWG /MCM	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	-	mm	kg/km
4×0.34	22	7.1	86
4×0.5	20	7.4	99
6×0.5	20	8.6	121
10×0.5	20	10.8	165
12×0.5	20	11.1	208
3×0.75	19	7.3	77
4×0.75	19	7.9	100
5×0.75	19	8.6	120
7×0.75	19	10.0	170
10×0.75	19	11.0	200
12×0.75	19	11.8	220
14×0.75	19	12.5	238
16×0.75	19	13.2	271
18×0.75	19	13.9	310
21×0.75	19	15.2	380
25×0.75	19	16.9	490
32×0.75	19	18.2	560
36×0.75	19	19.1	620
40×0.75	19	20.5	729
41×0.75	19	20.8	729
50×0.75	19	23.5	990
4×1	18	8.3	100
5×1	18	9.0	110
7×1	18	10.5	140
10×1	18	13.0	220
12×1	18	13.2	240
14×1	18	13.4	280
16×1	18	14.1	310
18×1	18	15.1	360
21×1	18	16.7	410
25×1	18	18.4	500
32×1	18	19.8	590
36×1	18	20.6	700
40×1	18	22.4	800
41×1	18	22.4	810
50×1	18	24.6	980
2×1.5	16	7.9	75
3×1.5	16	8.0	110
4×1.5	16	8.9	131
5×1.5	16	9.7	165
7×1.5	16	12.0	210
10×1.5	16	13.1	270

Power Cable

Construction	AWG /MCM	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	-	mm	kg/km
12×1.5	16	14.3	360
14×1.5	16	14.9	420
16×1.5	16	15.7	450
18×1.5	16	16.8	510
21×1.5	16	17.8	590
25×1.5	16	20.6	700
32×1.5	16	22.2	900
36×1.5	16	23.1	980
40×1.5	16	25.0	1030
41×1.5	16	25.0	1050
50×1.5	16	27.7	1200
3×2.5	14	8.9	151
4×2.5	14	9.7	230
5×2.5	14	10.9	250
7×2.5	14	14.4	360
10×2.5	14	15.8	480
12×2.5	14	16.3	580
19×2.5	14	20.4	690
3×4	12	10.8	250
4×4	12	12.0	270
5×4	12	13.6	370
7×4	12	15.9	530
12×4	12	19.6	740
3×6	10	13.1	340
4×6	10	14.6	460
5×6	10	16.3	550
7×6	10	19.6	780
4×10	8	17.4	670
5×10	8	20.1	870
7×10	8	23.5	1150
4×16	6	22.6	1000
5×16	6	25.4	1250
4×25	4	26.5	1580
5×25	4	28.2	1900
4×35	2	31.4	2100
5×35	2	35.4	2600
4×50	1	36.7	2800
1×35	2	12.9	460
1×70	2/0	17.9	880
1×95	3/0	21.9	1230
1×120	4/0	23.1	1540
1×150	300	27.2	1870
1×185	350	28.0	2300
1×240	500	31.2	2970
1×300	600	35.0	3730
1×400	750	39.3	4500

UL/CSA 600V PVC/PVC Screened Torsion Resistant Cable

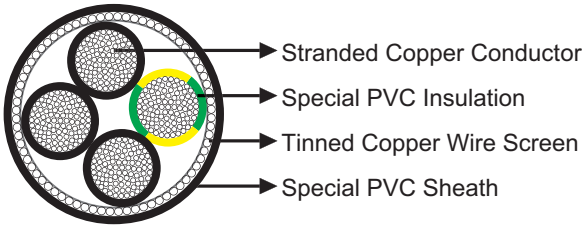
» Application

These cables with increased tolerance to torsion application, UV and oil resistant are specifically designed for wind power applications.

» Standards

UL 758

» Construction



Conductor: Stranded bare copper according to DIN VDE 0295.
Insulation: Special PVC flexible at low temperatures.
Screen: Tinned copper wire wrapped.
Sheath: Special PVC flexible at low temperatures.

» Technical Data

Rated Voltage U0/U (Um)	1000V
Operating Temperatures	-40℃~+80℃
Minimum Bending Radius	10×OD
Torsion Application	+/-90°/m
Flame Retardant	FT1
Oil Resistant	Yes
UV Resistant	Yes

» Dimensions and Weight

Construction	AWG /MCM	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	-	mm	kg/km
2×2×0.25	24	8.9	90
4×2×0.25	24	9.9	115
5×2×0.25	24	11.1	130
4×0.34	22	7.7	91
2×2×0.34	22	9.6	110
4×2×0.34	22	11.0	130
4×0.5	20	8.0	105
6×0.5	20	9.2	130
10×0.5	20	11.4	170
12×0.5	20	11.7	220
2×2×0.5	20	9.8	115
4×2×0.5	20	11.3	150
3×0.75	19	7.7	97
4×0.75	19	8.3	122
5×0.75	19	9.0	145
7×0.75	19	9.7	200
8×0.75	19	10.7	220
12×0.75	19	12.2	258
18×0.75	19	14.4	400
25×0.75	19	17.8	552
32×0.75	19	18.8	610
41×0.75	19	21.2	795
50×0.75	19	23.5	900
2×2×0.75	19	10.4	130
4×2×0.75	19	12.7	211
8×2×0.75	19	17.1	410
12×2×0.75	19	17.6	520
4×1.0	18	8.7	110
6×1.0	18	10.2	150
8×1.0	18	11.7	210
12×1.0	18	13.3	280
2×1.5	16	6.8	86
3×1.5	16	8.8	133
4×1.5	16	9.4	159
5×1.5	16	10.3	195
7×1.5	16	11.9	247
12×1.5	16	14.7	410
2×2×1.5	16	12.1	180

Power Cable

Construction	AWG /MCM	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	-	mm	kg/km
3×2×1.5	16	14.0	235
4×2×1.5	16	14.6	210
3×2.5	14	10.4	210
4×2.5	14	10.6	264
5×2.5	14	12.3	288
7×2.5	14	14.8	411
12×2.5	14	18.2	638
5×4	12	13.6	382
7×4	12	16.3	582
12×4	12	20.0	806
5×6	10	17.4	640
4×10	8	17.8	727
5×10	8	19.8	935
4×16	6	21.1	1072
5×16	6	26.2	1330
4×25	4	26.0	1664
5×25	4	28.6	2014
4×50	1	37.0	3200
1×70	2/0	19.8	950
1×95	3/0	22.5	1200
1×120	4/0	25.0	1400
1×150	300	24.9	2000
1×185	350	27.8	2340
1×240	500	32.5	3150
1×300	600	39.0	3920

UL/CSA 1000V PVC/PVC Torsion Resistant Cable 90°C

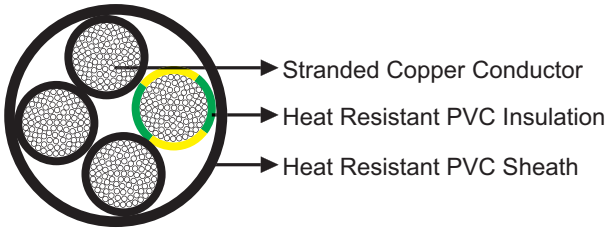
» Application

These cables with increased tolerance to torsion application, UV and oil resistant are specifically designed for wind power applications.

» Standards

UL 758

» Construction



Conductor: Stranded bare copper according to DIN VDE 0295.
Insulation: Special heat resistant PVC.
Sheath: Special heat resistant PVC.

» Technical Data

Rated Voltage U0/U (Um)	1000V
Operating Temperatures	flexing: -35℃~+90℃; fixed: -40℃~+90℃
Minimum Bending Radius	10×OD
Torsion Application	+/-140°/m
Flame Retardant	FT1
Oil Resistant	Yes
UV Resistant	Yes

» Dimensions and Weight

Construction	AWG /MCM	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	-	mm	kg/km
4×0.34	22	7.1	86
4×0.5	20	7.4	99
6×0.5	20	8.6	121
10×0.5	20	10.8	165
12×0.5	20	11.1	208
3×0.75	19	7.3	77
4×0.75	19	7.9	100
5×0.75	19	8.6	120
7×0.75	19	10.0	170
10×0.75	19	11.0	200
12×0.75	19	11.8	220
14×0.75	19	12.5	238
16×0.75	19	13.2	271
18×0.75	19	13.9	310
21×0.75	19	15.2	380
25×0.75	19	16.9	490
32×0.75	19	18.2	560
36×0.75	19	19.1	620
40×0.75	19	20.5	729
41×0.75	19	20.8	750
50×0.75	19	23.5	990
4×1	18	8.3	100
5×1	18	9.0	110
7×1	18	10.5	140
10×1	18	13.0	220
12×1	18	13.2	240
14×1	18	13.4	280
16×1	18	14.1	310
18×1	18	15.1	360
21×1	18	16.7	410
25×1	18	18.4	500
32×1	18	19.8	590
36×1	18	20.6	700
40×1	18	22.4	800
41×1	18	22.4	810
50×1	18	24.6	980
2×1.5	16	7.9	75
3×1.5	16	8.0	110

Power Cable

Construction	AWG /MCM	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	-	mm	kg/km
4×1.5	16	8.9	131
5×1.5	16	9.7	165
7×1.5	16	12.0	210
10×1.5	16	13.1	270
12×1.5	16	14.3	360
14×1.5	16	14.9	420
16×1.5	16	15.7	450
18×1.5	16	16.8	510
21×1.5	16	17.8	590
25×1.5	16	20.6	700
32×1.5	16	22.2	900
36×1.5	16	23.1	980
40×1.5	16	25.0	1030
41×1.5	16	25.0	1050
50×1.5	16	27.7	1200
3×2.5	14	8.9	151
4×2.5	14	9.7	230
5×2.5	14	10.9	250
7×2.5	14	14.4	360
10×2.5	14	15.8	480
12×2.5	14	16.3	580
19×2.5	14	20.4	690
3×4	12	10.8	250
4×4	12	12.0	270
5×4	12	13.6	370
7×4	12	15.9	530
12×4	12	19.6	740
3×6	10	13.1	340
4×6	10	14.6	460
5×6	10	16.3	550
7×6	10	19.6	780
4×10	8	17.4	670
5×10	8	20.1	870
7×10	8	23.5	1150
4×16	6	22.6	1000
5×16	6	25.4	1250
4×25	4	26.5	1580
5×25	4	28.2	1900
4×35	2	31.4	2100
5×35	2	35.4	2600
4×50	1	36.7	2800

Power Cable

Construction	AWG /MCM	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	-	mm	kg/km
1×35	2	12.9	460
1×50	1	15.6	630
1×70	2/0	17.9	880
1×95	3/0	21.9	1230
1×120	4/0	23.1	1540
1×150	300	27.2	1870
1×185	350	27.5	2300
1×240	500	31.2	2970
1×300	600	34.2	3730
1×400	750	39.3	4500

UL/CSA 1000V PVC/PVC Screened Torsion Resistant Cable 90°C

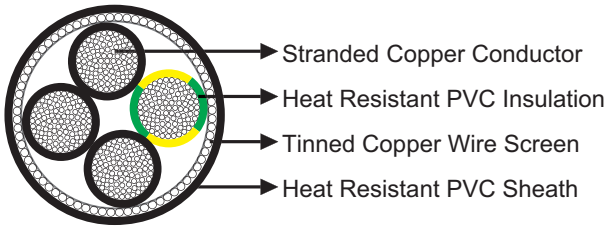
» Application

These cables with increased tolerance to torsion application, UV and oil resistant are specifically designed for wind power applications.

» Standards

UL 758

» Construction



Conductor: Stranded bare copper according to DIN VDE 0295.
Insulation: Special heat resistant PVC.
Screen: Tinned copper wire wrapped.
Sheath: Special heat resistant PVC.

» Technical Data

Rated Voltage U0/U (Um)	1000V
Operating Temperatures	flexing: -35℃~+90℃; fixed: -40℃~+90℃
Minimum Bending Radius	10×OD
Torsion Application	+/-90°/m
Flame Retardant	FT1
Oil Resistant	Yes
UV Resistant	Yes

» Dimensions and Weight

Construction	AWG /MCM	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	-	mm	kg/km
2×2×0.25	24	8.9	90
4×2×0.25	24	9.9	115
5×2×0.25	24	11.1	130
4×0.34	22	7.7	91
2×2×0.34	22	9.6	110
4×2×0.34	22	11.0	130
4×0.5	20	8.0	105
6×0.5	20	9.2	130
10×0.5	20	11.4	170
12×0.5	20	11.7	220
2×2×0.5	20	9.8	115
4×2×0.5	20	11.3	150
3×0.75	19	7.7	97
4×0.75	19	8.3	122
5×0.75	19	9.0	145
7×0.75	19	9.7	200
8×0.75	19	10.7	220
12×0.75	19	12.2	258
18×0.75	19	14.4	400
25×0.75	19	17.8	552
32×0.75	19	18.8	610
40×0.75	19	21.2	805
41×0.75	19	21.2	795
50×0.75	19	23.5	900
2×2×0.75	19	10.4	130
3×2×0.75	19	11.5	172
4×2×0.75	19	12.7	211
8×2×0.75	19	17.1	410
12×2×0.75	19	17.6	520
4×1.0	18	8.7	110
6×1.0	18	10.2	150
8×1.0	18	11.7	210
12×1.0	18	13.3	280
2×1.5	16	6.8	86
3×1.5	16	8.8	133
4×1.5	16	9.4	159
5×1.5	16	10.3	195
7×1.5	16	11.9	247

Power Cable

Construction	AWG /MCM	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	-	mm	kg/km
12×1.5	16	14.7	410
2×2×1.5	16	12.1	180
3×2×1.5	16	14.0	210
4×2×1.5	16	14.6	235
3×2.5	14	10.4	210
4×2.5	14	10.6	264
5×2.5	14	12.3	288
7×2.5	14	14.8	411
12×2.5	14	18.2	638
5×4	12	13.6	382
7×4	12	16.3	582
12×4	12	20.0	806
5×6	10	17.4	640
4×10	8	17.8	727
5×10	8	19.8	935
4×16	6	21.1	1072
5×16	6	26.2	1330
4×25	4	26.0	1664
5×25	4	28.6	2014
4×50	1	37.0	3200
1×70	2/0	19.8	950
1×95	3/0	22.5	1280
1×120	4/0	25.0	1570
1×150	300	24.9	2000
1×185	350	27.8	2340
1×240	500	33.0	3150
1×300	600	39.0	3920
1×400	750	43.0	5100
1×500	1000	46.5	6200

DLO 2kV Torsion Resistant Cable to UL 44

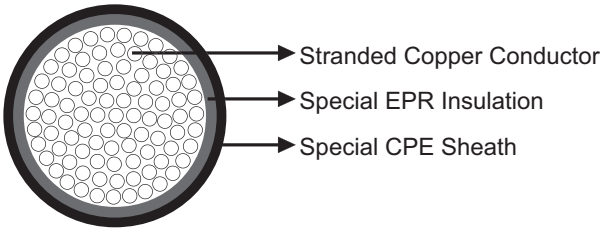
» Application

These cables are used for main power layout from the nacelle to the base of the wind tower.

» Standards

UL 44
ICEA S-68-516/NEMA WC-8

» Construction



Conductor: Stranded tinned copper according to ASTM B-172/ ASTM B-33.
Insulation: Special EPR. XLPO can be offered upon request.
Sheath: Special CPE. XLPO can be offered upon request.

» Technical Data

Rated Voltage U0/U (Um)	2000V
Operating Temperatures	-40℃~+90℃
Minimum Bending Radius	flexing: 6×OD; fixed: 4×OD
Torsion Application	+/-180°/m
Flame Retardant	IEEE 1202/CSA FT4 FT1
Oil Resistant	Yes
UV Resistant	Yes
Cold Resistant	CSA C 22.2

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×AWG/MCM	mm	kg/km
1×14	5.9	37
1×12	6.3	69
1×10	7.2	100
1×8	8.2	142
1×6	10.1	200
1×4	11.5	286
1×2	12.6	370
1×1	16.1	637
1×1/0	17.5	715
1×2/0	18.5	830
1×3/0	20.2	1104
1×4/0	21.7	1298
1×262	24.8	1590
1×313	26.4	1872
1×373	28.2	2176
1×444	30.0	2570
1×535	32.2	3046
1×646	34.8	3600
1×777	37.0	4290
1×929	39.5	5144
1×1111	44.4	6070

NYY 0.6/1kV Power Cable

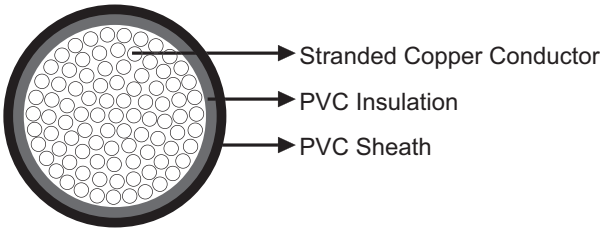
» Application

These cables are designed for power lines of fixed routing in wind tower installation, also used as energy supply cables installed in underground, water, cable ducts, power stations, outdoors, indoors, for industry and distribution boards as well as in subscriber networks, where mechanical damages are not expected.

» Standards

IEC 60502
DIN VDE 0276 part 603

» Construction



Conductor: Stranded copper conductor according to IEC60228/VDE 0295.
Insulation: PVC.
Filling: Filling compound over the core assembly.
Sheath: PVC.

» Technical Data

Rated Voltage Uo/U (Um)	0.6/1kV
Operating Temperatures	flexing: -5℃~+50℃; fixed: -40℃~+70℃
Minimum Bending Radius	Single Core: 15×OD; Multicore:12×OD
Maximum Permissible Tensile Load	50N/mm²
Short-circuit Temperature	160℃
Flame Retardant	IEC 60332-1/VDE 0482-332-1-2
Silicone Free	Yes

» Dimensions and Weight

NYY-J

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×25 rm	13	380
1×35 rm	14	447
1×50 rm	15	650
1×70 rm	17	864
3×1.5 re	12	223
4×1.5 re	13	256
5×1.5 re	14	293
7×1.5 re	15	360
10×1.5 re	18	520
12×1.5 re	19	560
14×1.5 re	20	620
16×1.5 re	21	680
19×1.5 re	22	760
24×1.5 re	24	900
30×1.5 re	26	1100
3×2.5 re	13	272
4×2.5 re	14	316
5×2.5 re	15	323
7×2.5 re	16	450
10×2.5 re	20	630
12×2.5 re	20	680
14×2.5 re	21	790
19×2.5 re	23	990
24×2.5 re	26	1300
30×2.5 re	28	1400
3×4 re	15	373
4×4 re	16	439
5×4 re	17	510
3×6 re	16	466
4×6 re	17	547
5×6 re	19	640
3×10 re	18	629
4×10 re	19	743
5×10 re	21	899
3×16 re	20	850
4×16 re	22	1039
5×16 re	23	1240

Power Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
3×25 rm/16 re	25	1595
4×25 rm	27	1620
3×35 sm/16 re	27	1718
4×35 sm	27	1916
3×50 sm/25 sm	31	2383
4×50 sm	31	2639
3×70 sm/35 sm	33	3196
4×70 sm	35	3576
3×95 sm/50 sm	38	4271
4×95 sm	40	4746
3×120 sm/70 sm	41	5281
4×120 sm	43	5813
3×150 sm/70 sm	46	6408
4×150 sm	48	7263
3×185 sm/95 sm	50	7909
4×185 sm	53	8905
3×240 sm/120 sm	57	10162
4×240 sm	60	11430

NYY-O

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×10 re	10	176
1×16 re	11	239
1×25 re	13	380
1×35 re	14	447
1×50 rm	15	650
1×70 rm	17	864
1×95 rm	19	1132
1×120 rm	21	1405
1×150 rm	22	1710
1×185 rm	24	2086
1×240 rm	27	2669
1×300 rm	30	3305
1×500 rm	39	5400
2×1.5 re	11	210
2×2.5 re	12	250
4×2.5 re	14	316
2×4 re	14	360
4×4 re	16	439
2×6 re	15	400
4×6 re	17	547

Power Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
2×10 re	17	500
4×10 re	19	743
4×16 re	22	1039
4×25 rm	27	1620
4×35 sm	27	1916
4×50 sm	31	2639
4×70 sm	35	3576
4×95 sm	40	4746

re: round conducter, single wire

rm: round conducter, multi wire

sm: sectional conductor

NAYY 0.6/1kV Power/Control Cable

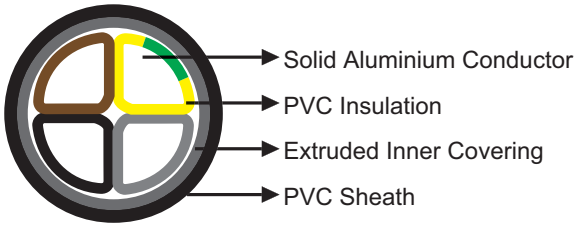
» Application

These cables are designed for power lines of fixed routing in wind tower installation, also used as energy supply cables installed in underground, water, cable ducts, power stations, outdoors, indoors, for industry and distribution boards as well as in subscriber networks, where mechanical damages are not expected.

» Standards

IEC 60502-1
DIN VDE 0276 part 603

» Construction



Conductor: Solid aluminium wires, round or sector shape according to VDE 0295/IEC 60228.
Insulation: PVC.
Inner Covering: Extruded inner covering.
Sheath: PVC.

» Technical Data

Rated Voltage Uo/U (Um)	0.6/1kV
Operating Temperatures	flexing: -5℃~+50℃; fixed: -40℃~+70℃
Minimum Bending Radius	12×OD
Maximum Permissible Tensile Load	30N/mm²
Short-circuit Temperature	160℃
Flame Retardant	VDE 0482-332-1-2/DIN EN 60332-1-2/IEC 60332-1
Silicone Free	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×25 re	13.0	200
1×50 rm	16.5	310
1×70 rm	18.5	400
1×95 rm	21.0	520
1×120 rm	22.5	600
1×150 rm	23.5	700
1×185 rm	25.5	870
1×240 rm	28.5	1090
1×300 rm	31.5	1335
1×400 rm	35.5	1685
1×500 rm	39.0	2075
1×630 rm	43.0	2540
4×25 re	27.0	1000
4×35 re	29.0	1200
4×50 se	30.5	1350
4×70 se	34.5	1750
4×120 se	42.5	2630
4×150 se	45.5	3000
4×185 se	50.5	3780
4×240 se	54.0	4740
4G25 re	27.0	1000
4G35 re	29.0	1200
4G50 se	30.5	1350
4G70 se	34.5	1750
4G95 se	38.5	2250
4G120 se	42.5	2750
4G150 se	45.5	3200
4G185 se	50.5	3950
4G240 se	54.0	4700
4G240 sm	55.5	4960
4G150 se+1×1.5 re	45.5	3010
4G150 se+2×1.5 re	45.5	3020

G: with green-yellow earth core

×: without green-yellow earth core

N2XY 0.6/1kV Power Cable

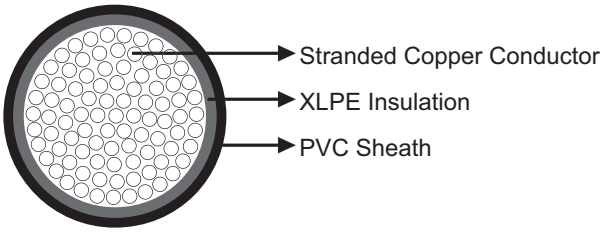
» Application

These cables are designed for energy supply, suitable for installed in underground, water, cable ducts, power stations, outdoors, indoors, for industry and distribution boards as well as in subscriber networks, where mechanical damages are not expected.

» Standards

IEC 60502
DIN VDE 0276 part 603

» Construction



Conductor: Stranded bare copper conductor according to VDE 0295/IEC 60228.
Insulation: Cross-linked polyethylene (XLPE).
Inner Covering: Extruded inner covering.
Sheath: PVC.

» Technical Data

Rated Voltage Uo/U (Um)	0.6/1kV
Operating Temperatures	-40℃~+ 70℃
Minimum Bending Radius	15×OD
Maximum Permissible Tensile Load	50N/mm²
Short-circuit Temperature	250℃
Flame Retardant	VDE 0482-332-1-2/DIN EN 60332-1-2/IEC 60332-1
Silicone Free	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×95	21.0	1200
1×150	25.0	1800
1×185	27.0	2200
1×240	30.0	2800
1×300	32.0	3300
1×400	36.0	4200
1×500	40.0	5400
4G35	31.0	2200
4G50	33.0	2400
4G75	38.0	3100
4G95	42.0	4200
4G120	46.0	5100
4G150	50.0	6300
4G185	55.0	8000
4G240	70.0	10000

G: with green-yellow earth core

×: without green-yellow earth core

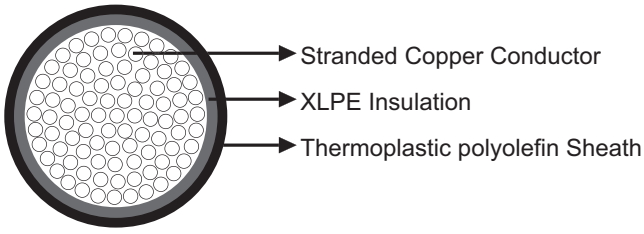
N2XH 0.6/1kV LSOH Power Cable

» Application

These cables are designed for energy supply, suitable for fixed installation in dry, damp or wet environments; in, above, on and beneath plaster as well as in masonary walls and in concrete, also suitable for outdoor applications and in underground by using in conduits or tubes.

» Standards

DIN VDE 0276 part 604



» Construction

Conductor: Bare copper conductor wire according to VDE 0295/IEC 60228.
Insulation: Halogen free cross-linked polyethylene (XLPE), Type 2XI1.
Inner Covering: Overall filled inner sheath covered by filling compound or wrapped tape.
Sheath: Thermoplastic polyolefin, Type HM4.

» Technical Data

Rated Voltage Uo/U (Um)	0.6/1kV
Operating Temperatures	-30℃~+ 90℃
Minimum Bending Radius	15×OD
Flame Retardant	DIN VDE 0482 part 266-2/BS 4066 part 3/EN 50266-2/IEC 60332-3
Halogen Free	DIN VDE 0482 part 267/EN 50267-2-1/IEC 60754
Corrosive Gases	DIN VDE 0482 part 267/EN 50267-2-2/IEC 60754
Smoke Density	DIN VDE 0482 part 268/HD 606/EN 50268-1+2/ IEC 61034/BS 7622 part 1+2

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×185 rm	25.0	1910
1×240 rm	28.0	2370
1×300 rm	30.0	2970

rm: round conducter, multi wire

NA2XH 0.6/1kV LSOH Power Cable

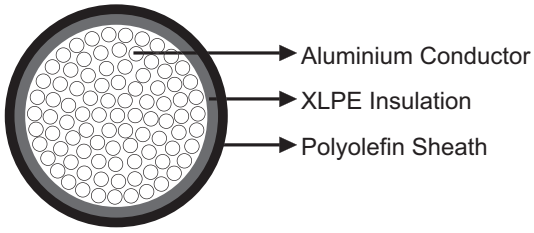
» Application

These cables are designed for energy supply in tower, suitable for outdoors, in concrete, indoors and in cable ducts where no mechanical damage is to be expected.

» Standards

DIN VDE 0276 part 604

» Construction



Conductor: Sector-shaped solid or round solid/stranded aluminium wire.
Insulation: Cross-linked polyethylene (XLPE).
Filling: Extruded halogen-free filling compound.
Sheath: Polyolefin, Type HM4. PVC sheath can be offered upon request (NA2XY).

» Technical Data

Rated Voltage Uo/U (Um)	0.6/1kV
Operating Temperatures	-40℃~+ 90℃
Minimum Bending Radius	15×OD
Short-circuit Temperature	250℃
Flame Retardant	DIN VDE 0482 Part 266-2/BS 4066 Part 3/EN 50266-2/IEC 60332-1
Halogen Free	DIN VDE 0482 Part 267/EN 50267-2-1/IEC 60754
Corrosive Gases	VDE 0482 Part 267/DIN EN 50267-2-2/IEC 60754
Smoke Density	DIN VDE 0482 Part 268/HD 606/EN 50268-12/IEC 61034

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×95	18.0	405
1×120	19.5	490
1×150	20.5	580
1×185	22.5	700
1×240	25.0	880
1×300	27.5	1080
1×400	30.5	1370
1×500	34.5	1760
1×630	38.5	2200
3×95	31.0	1300
3×120	34.5	1620
3×150	37.5	1930
3×185	41.0	2380
3×240	45.0	2970
4G35	26.0	890
4G50	27.5	1030
4G70	31.5	1350
4G95	34.5	1710
4G120	38.5	2120
4G150	43.5	2600
4G185	46.5	3160
4G240	50.5	3950

G: with green-yellow earth core

×: without green-yellow earth core

H05BQ-F/H07BQ-F

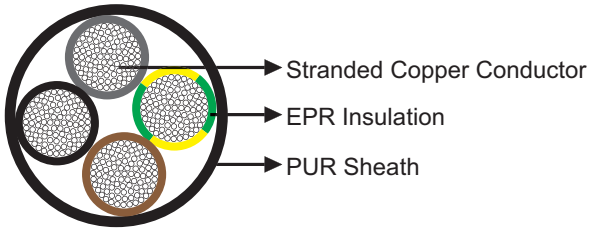
» Application

These cables are used as power cables for high mechanical stresses, in particular for abrasion and grinding stresses, suitable for use in dry, damp and wet rooms and outdoors, for connecting electric tools and lamps also on construction sites.

» Standards

HD 22.10 S1

» Construction



Conductor: Stranded bare copper, class 5 according to HD 383.
Insulation: EPR compound type EI6.
Sheath: Polyurethane.

» Technical Data

Rated Voltage U0/U (Um)	300/500V (H05BQ-F);450/750V (H07BQ-F)
Operating Temperatures	-40℃~+90℃
Minimum Bending Radius	fixed: 4×OD; flexing: 6×OD

» Dimensions and Weight

H05BQ-F

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
2×0.75	6.6	50
3G0.75	7.2	60
4G0.75	7.8	80
5G0.75	8.8	100
2×1	7.1	60
3G1	7.5	70
4G1	8.2	90
5G1	9.2	110

H07BQ-F

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
2×1.5	8.7	90
3G1.5	9.2	110
4G1.5	10.3	130
5G1.5	11.3	170
2×2.5	10.3	120
3G2.5	11.0	160
4G2.5	12.3	200
5G2.5	13.6	250
2×4	12.2	170
3G4	12.9	230
4G4	14.5	280
5G4	16.0	360
2×6	13.5	220
3G6	14.6	300
4G6	16.2	380
5G6	17.9	470
2×10	17.8	380
3G10	19.1	520
4G10	21.1	650
5G10	23.2	800
2×16	20.4	540
3G16	22.1	750
4G16	24.2	950
5G16	26.9	1160

G: with green-yellow earth core

×: without green-yellow earth core

H05V-K/H07V-K Internal Wiring Cable

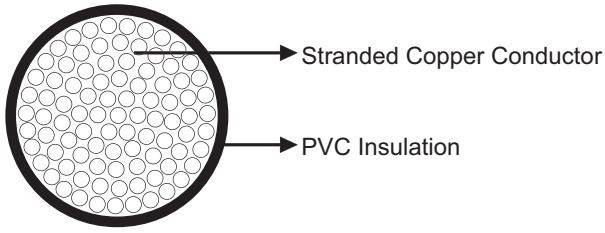
» Application

These cables are designed for the intenal wiring of devices, distributor and switchboards and also for protective laying to the lightings, suitable for laying in tubes, under and surface mounting of plasters and also in closed installation conduits.

» Standards

DIN VDE 0281 part 3
HD 21.3 S3
IEC 60227-3

» Construction



Conductor: Stranded bare copper, class 5 according to DIN VDE 0295/HD 383/ IEC 60228.
Insulation: PVC.

» Technical Data

Rated Voltage U0/U (Um)	300/500V(H05V-K); 450/750V(H07V-K)
Operating Temperatures	flexing: -5℃~+70℃; fixed: -30℃~+80℃
Minimum Bending Radius	15×OD
Flame Retardant	VDE 0482-332-1-2/IEC 60332-1
Silicone Free	Yes

» Dimensions and Weight

H05V-K

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×0.5	2.1	9
1×0.75	2.4	12
1×1	2.6	15

H07V-K

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×1.5	3.0	24
1×2.5	3.7	35
1×4	4.3	51
1×6	4.9	71
1×10	6.5	118
1×16	8.0	180
1×25	9.8	278
1×35	11.0	375
1×50	13.0	560
1×70	15.5	780
1×95	17.0	952
1×120	19.7	1200
1×150	21.3	1505
1×185	23.5	1845
1×240	27.4	2400

S-3GSHXOEU HFFR 0.6/1 kV & UL 1000V 90°C

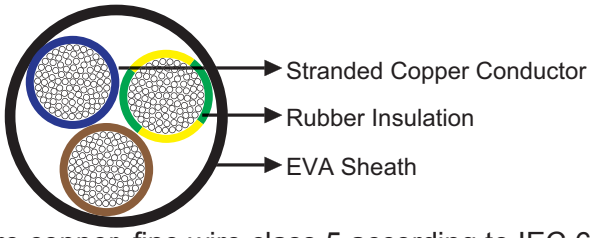
» Application

These cables are designed for use at medium mechanical stresses in wind turbines.

» Standards

UL 758
DIN VDE 0250
DIN VED 0282

» Construction



Conductor: Stranded bare copper, fine wire class 5 according to IEC 60228 / DIN EN 60228.
Insulation: Rubber compound.
Sheath: EVA.

» Technical Data

Rated Voltage Uo/U (Um)	600/1000V (DIN VDE 0250)/ 1000V (AWM 758)
Operating Temperatures	-40℃~+90℃
Minimum Bending Radius	flexing: 6×OD; fixed: 4×OD
Short-circuit Temperature	250℃
Flame Retardant	IEC 60332-1
Halogen Free	EN 50267-2-1/IEC 60754
Corrosive Gases	DIN EN 50267-2
Smoke Density	IEC 61034
Oil Resistant	Yes
Cooling Fluid Resistance	Yes
Ozone Resistant	Yes
UV Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
3×1.5	10.3	142
4×1.5	11.3	182
5×1.5	12.5	224
3×2.5	12.5	217
4×2.5	13.0	265
5×2.5	14.5	326
3×4	14.5	313
4×4	15.5	383
3×6	15.5	407
4×6	17.5	514
2×10	18.5	560
3×10	20.0	688
4×10	22.0	642
5×10	25.5	1095
3×16	23.0	946
4×16	26.0	1242
5×16	28.5	1501
1×25	13.0	364
3×25	28.0	1416
4×25	30.5	1746
5×25	34.0	2173
1×35	15.0	491
3×35	31.5	1894
4×35	34.5	2338
5×35	38.0	2849
1×50	17.0	682
3×50	36.0	2564
4×50	40.0	3236
5×50	44.0	3941
1×70	19.5	936
3×70	41.5	3466
4×70	46.5	4504
5×70	51.0	5515
1×95	21.5	1209
3×95	47.5	4580
1×120	24.0	1487
3×120	51.0	5517

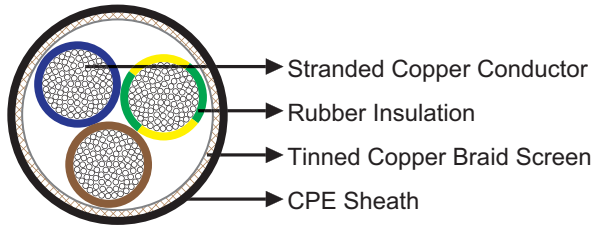
S-3GSHCOEU 0.6/1 kV & UL 1000V 90°C

» Application

These cables are designed for use at medium mechanical stresses in wind turbines.

» Standards

UL 758
DIN VDE 0250



» Construction

Conductor: Stranded bare copper, class 5 according to IEC 60228/DIN EN 60228.
Insulation: Rubber compound.
Screen: Tinned copper wires. Mixed braid of tinned copper wires and polyester yarn can be offered upon request.
Sheath: CPE.

» Technical Data

Rated Voltage Uo/U (Um)	600/1000V (DIN VDE 0250)/ 1000V (AWM 758)
Operating Temperatures	-40℃~+90℃
Maximum Permissible Tensile Load	15 N/mm²
Minimum Bending Radius	flexing: 10×OD; fixed: 6×OD
Short-circuit Temperature	250℃
Flame Retardant	IEC 60332-1
Oil Resistant	Yes
Ozone Resistant	Yes
UV Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×95	23.0	1120
1×120	26.0	1607
1×185	30.5	2341
1×240	34.0	2953

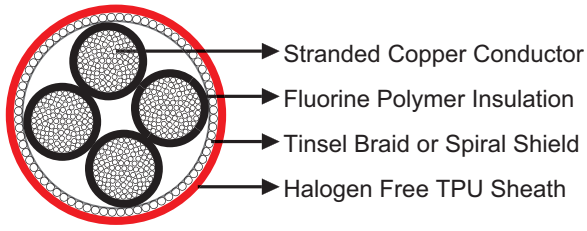
Halogen Free Torsion Resistant Fire Alarm Cable 24V

» Application

These fire alarm cables are designed for the torsion applications in the loop section of wind turbines.

» Standards

IEC 60502
DIN VDE 0250



» Construction

Conductor: Stranded copper wires, class 6 according to DIN VDE 0295/ IEC 60228.
Insulation: Fluorine polymer.
Screen: Tinsel braid or spiral shield.
Sheath: Flame retardant halogen-free TPU.

» Technical Data

Rated Voltage U0/U (Um)	24V
Operating Temperatures	-50℃~+90℃
Minimum Bending Radius	7.5×OD
Torsion Application	+/-1080°/5m
Flame Retardant	IEC 60332-3
Halogen Free	IEC 60754
Oil Resistant	Yes
Abrasion Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
4×0.75	6.6	82

High Temperature Resistant Cables +145°C 0.6/1kV

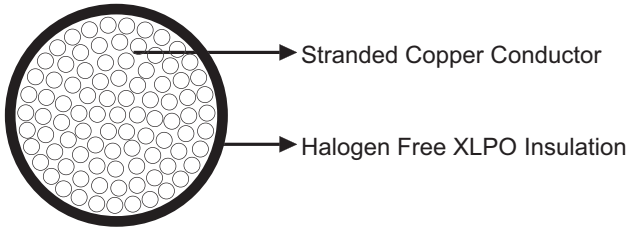
» Application

These cables are specifically designed for connecting generator output of thermal class (B), motors, transformers and relays requiring for high temperature resistant.

» Standards

IEC 60502

» Construction



Conductor: Stranded tinned copper wires, class 5/class 6 according to DIN VDE 0295/ IEC 60228.
Insulation: Halogen-free XLPO.

» Technical Data

Rated Voltage U0/U (Um)	0.6/1kV
Operating Temperatures	-55℃~+145℃
Minimum Bending Radius	6×OD
Flame Retardant	IEC 60332-3
Halogen Free	IEC 60754
Corrosive Gases	IEC 60754
Smoke Density	IEC 61034
Oil Resistant	Yes
Ozone Resistant	Yes
UV Resistant	Yes
Cold Resistant	CSA C 22.2

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×6	5.4	70
1×10	6.8	119
1×16	8.5	180
1×25	10.3	270
1×35	11.8	373
1×50	13.9	528
1×70	16.0	728
1×95	18.5	966
1×120	20.5	1230
1×150	22.1	1530
1×185	24.8	1880
1×240	27.7	2500
1×300	37.8	3910
1×400	38.7	4870

EPR/HFXLEVA Medium Voltage Torsion Resistant Cable

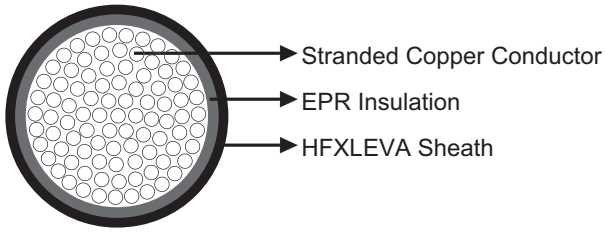
» Application

These cables having torsion resistant, good bending and halogen free are specifically designed for the torsion applications in wind turbines, suitable for transmit energy from the generator to the transformer, which is usually located at the base of the tower.

» Standards

IEC 60502

» Construction



Conductor: Stranded tinned copper, class 5/class 6 according to IEC 60228.
Insulation: EPR.
Sheath: HFXLEVA.

» Technical Data

Rated Voltage U0/U (Um)	1.8/3kV
Operating Temperatures	-40℃~+125℃
Minimum Bending Radius	6×OD
Torsion Application	+/-180°/m
Flame Retardant	IEC 60332-3
Halogen Free	IEC 60754
Corrosive Gases	IEC 60754
Smoke Density	IEC 61034
Oil Resistant	Yes
Ozone Resistant	Yes
UV Resistant	Yes
Cold Resistant	CSA C 22.2

» Dimensions and Weight

1.8/3kV

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×25	12.9	516
1×35	14.3	670
1×50	16.5	840
1×70	18.6	1112
1×95	21.6	1520
1×120	23.7	1880
1×150	26.2	2513
1×185	29.9	3272
1×240	32.1	3534
1×300	34.5	4020
1×400	39.3	5640

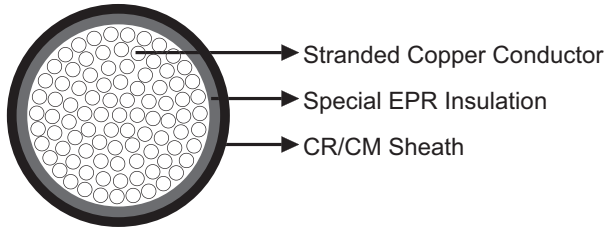
NTSCGEWOEU Medium Voltage Torsion Resistant Cable 3.6/6kV

» Application

These medium-voltage cables are designed for energy transmission, also for loop applications.

» Standards

DIN VDE 0250-813



» Construction

Conductor: Stranded tinned copper wires according to DIN VDE 0295.
Insulation: Special EPR with inner and outer conducting layer.
Sheath: CM/CR.

» Technical Data

Rated Voltage U0/U (Um)	3.6/6kV
Operating Temperatures	-40℃~+90℃
Minimum Bending Radius	10×OD
Torsion Application	+/-100°/m
Oil Resistant	Yes
Ozone Resistant	Yes
UV Resistant	Yes

» Dimensions and Weight

3.6/6kV

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
3×35/35	61.0	5723
3×50/50	69.0	6596
3×70/70	73.0	7881
3×95/95	80.0	10612
1×240	42.8	3100
1×300	44.9	3800

N2XS2Y Medium Voltage Power Cable

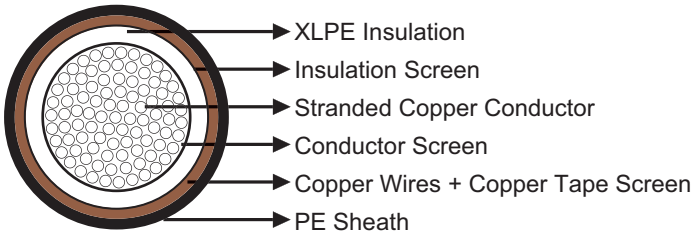
» Application

These cables are commonly used in wind parks, suitable for indoor installation and in cable ducts, outdoors, underground and in water as well as for installation on cable trays for industries, switch-boards and power stations.

» Standards

IEC 60502
DIN VDE 0276 part 620
HD 620 S1

» Construction



Conductor: Stranded bare copper conductor according to HD 383.
Conductor Screen: Semiconducting compound.
Insulation: XLPE, PE-compound DIX8 to HD 620.1.
Insulation Screen: Semiconducting compound.
Tape: Conductive material.
Screen: Braiding of copper wires with one or two tapes applied helically.
Tape: Separation tape.
Sheath: PE, compound DMP2 to HD 620.1.

» Technical Data

Rated Voltage U0/U (Um)	6/10 kV, 12/20 kV, 18/30 kV
Operating Temperatures	-20℃~+90℃

Minimum Bending Radius	15×OD
Short-circuit Temperature	250℃

» Dimensions and Weight

6/10 kV

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×35 rm/16	25.5	910
1×50 rm/16	26.5	990
1×70 rm/16	28.5	1205
1×95 rm/16	29.5	1520
1×120 rm/16	31.5	1760
1×150 rm/16	32.5	2020
1×150 rm/25	32.5	2130
1×185 rm/16	34.5	2360
1×185 rm/25	34.5	2470
1×240 rm/16	36.5	2960
1×240 rm/25	36.5	3020
1×300 rm/25	38.5	3630
1×400 rm/35	42.5	4560
1×500 rm/35	45.5	5580

12/20 kV

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×35 rm/16	27.5	960
1×50 rm/16	28.5	1160
1×70 rm/16	30.5	1410
1×95 rm/16	31.5	1670
1×120 rm/16	33.5	1960
1×150 rm/16	34.5	2220
1×150 rm/25	34.5	2310
1×185 rm/16	36.5	2620
1×185 rm/25	36.5	2670
1×240 rm/16	39.0	3160
1×240 rm/25	39.0	3270
1×300 rm/25	41.0	3880
1×400 rm/35	44.5	4820
1×500 rm/35	47.5	5860

Power Cable

18/30 kV

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×50 rm/16	35.5	1410
1×70 rm/16	37.5	1660
1×95 rm/16	38.5	1970
1×120 rm/16	40.5	2220
1×150 rm/25	41.5	2650
1×185 rm/25	43.5	2980
1×240 rm/25	45.5	3570
1×300 rm/25	48.5	4220
1×400 rm/25	51.5	5170
1×500 rm/25	54.5	6260

NA2XS(F)2Y RE/RM Medium Voltage Power Cable

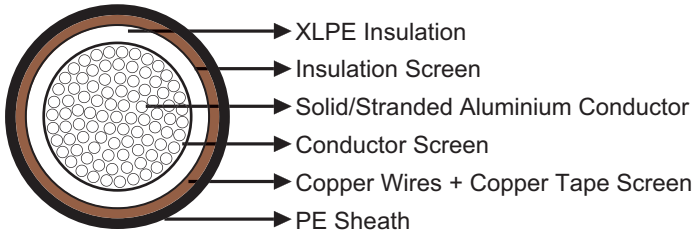
» Application

These cables are commonly used in wind turbines, suitable for indoor installation and in cable ducts, outdoors, underground and in water.

» Standards

IEC 60502-2
DIN VDE 0276 part 620

» Construction



Conductor: Circular solid (RE) or stranded (RM) aluminium conductor.
Conductor Screen: Semiconducting compound.
Insulation: XLPE.
Insulation Screen: Semiconducting compound.
Tape: Semiconducting swellable tape.
Screen: Braiding of copper wires with copper tape.
Tape: Separation tape.
Sheath: PE.

» Technical Data

Rated Voltage Uo/U (Um)	6/10 kV, 12/20 kV, 18/30 kV
Operating Temperatures	-40℃~+90℃
Minimum Bending Radius	15×OD
Short-circuit Temperature	250℃
Longitudinally Water-Tight	Yes
Halogen Free	Yes

Lead Free	Yes

» Dimensions and Weight

6/10 kV

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×70 re	26.5	760
1×95 re	26.5	860
1×120 re	28.5	930
1×150 re	29.5	1130
1×185 re	31.5	1230
1×240 re	33.5	1470
1×300 re	36.5	1670
1×400 re	40.5	2060
1×500 re	43.5	2400
1×630 re	45.5	2790
1×800 re	49.5	3340
1×1000 re	53.5	4000
1×35 rm	25.5	600
1×50 rm	26.5	670
1×70 rm	28.5	770
1×95 rm	29.0	880
1×120 rm	31.0	950
1×150 rm	32.0	1150
1×185 rm	34.0	1250
1×240 rm	36.0	1500
1×300 rm	38.5	1700
1×400 rm	42.5	2100
1×500 rm	45.5	2450
1×630 rm	47.5	2850
1×800 rm	52.5	3490
1×1000 rm	56.5	4080

12/20 kV

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×70 re	30.5	910
1×95 re	31.5	1030
1×120 re	32.5	1130
1×150 re	33.5	1320
1×185 re	35.5	1470
1×240 re	38.5	1720
1×300 re	40.5	1960
1×400 re	43.5	2300
1×500 re	46.5	2740

Power Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×630 re	49.5	3070
1×800 re	53.5	3680
1×1000 re	57.5	4360
1×50 rm	30.5	820
1×70 rm	32.5	930
1×95 rm	33.5	1050
1×120 rm	35.0	1150
1×150 rm	36.0	1350
1×185 rm	38.0	1500
1×240 rm	41.0	1750
1×300 rm	43.0	2000
1×400 rm	46.0	2350
1×500 rm	49.0	2800
1×630 rm	51.5	3140
1×800 rm	57.5	3840
1×1000 rm	60.5	4460

18/30 kV

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×70 re	34.5	1180
1×95 re	35.5	1320
1×120 re	37.5	1420
1×150 re	38.5	1670
1×185 re	40.5	1810
1×240 re	42.5	2010
1×300 re	45.5	2300
1×400 re	48.5	2740
1×500 re	51.5	3140
1×630 re	55.5	3480
1×800 re	59.5	4100
1×1000 re	63.5	4800
1×50 rm	35.0	1100
1×70 rm	37.0	1200
1×95 rm	38.0	1350
1×120 rm	40.0	1450
1×150 rm	41.0	1700
1×185 rm	43.0	1850
1×240 rm	45.0	2050
1×300 rm	48.0	2350
1×400 rm	51.0	2800
1×500 rm	54.0	3200
1×630 rm	57.5	3570
1×800 rm	62.5	4280
1×1000 rm	66.5	4970

NTSCGEWOEU Medium Voltage Torsion Resistant Cable 12~35kV

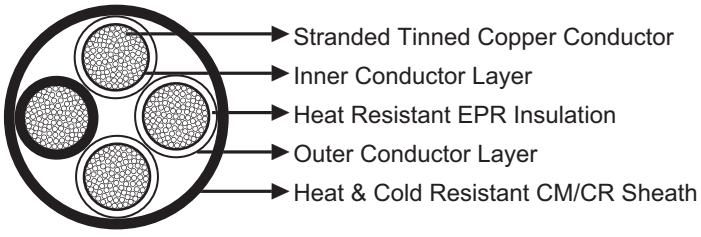
» Application

These cables are specifically designed for carrying medium voltage energy from the transformer in the nacelle to the bottom of the tower.

» Standards

DIN VDE 0250 Part 813

» Construction



Conductor: Stranded tinned copper, class 5 according to DIN VDE 0295/IEC 60228.
Inner Conductor Layer: Semiconductive rubber compound.
Insulation: Heat resistant EPR.
Outer Conductor Layer: Semiconductive rubber compound.
Sheath: Heat and cold resistant special rubber compound based on CM (Chlorinated synthetic rubber) or CR (Chloroprene rubber).

» Technical Data

Rated Voltage U0/U (Um)	12/20kV, 18/30kV, 20/35kV
Operating Temperatures	-40℃~+90℃
Minimum Bending Radius	10×OD
Torsion Application	+/100°/m
Maximum Permissible Tensile Load	20N/mm²
Short-circuit Temperature	200℃
Flame Retardant	DIN EN 502652-1/IEC 60332-1
Oil Resistant	Yes
Ozone Resistant	Yes
UV Resistant	Yes

» Dimensions and Weight

12/20kV

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
3×25/25	61.2	4780
3×35/35	65.9	5700
3×50/50	69.5	6630
3×70/70	73.5	7840

18/30kV

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
3×25/25	79.1	7520
3×35/35	80.5	8050
3×50/50	83.1	8920
3×70/70	89.0	10600

20/35kV

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
3×25/25	86.2	8820
3×35/35	90.8	10000
3×50/50	93.0	10830
3×70/70	96.1	12050

(N)TSCGEHXOEU Medium Voltage LSOH Torsion Resistant Cable

» Application

These LSOH cables are specifically designed for special application condition in wind turbines, used for economical transmission of large energy rates with medium voltage.

» Standards

DIN VDE 0250 Part 813

» Construction

Conductor: Stranded tinned/bare copper, class 5 according to DIN VDE 0295 IEC 60228.
Inner Conductor Layer: Semiconductive halogen free rubber compound.
Insulation: Halogen free, heat resistant insulation based on EPR.
Outer Conductor Layer: Semiconductive rubber compound.
Optional Inner Sheath: Extruded special rubber compound.
Sheath: Halogen free special rubber compound based on EVA.

» Technical Data

Rated Voltage Uo/U (Um)	8.7/15 kV, 12/20 kV,18/30 kV,20/35 kV
Operating Temperatures	-40℃~+90℃
Minimum Bending Radius	10×OD
Torsion Application	+/100°/m
Maximum Permissible Tensile Load	15N/mm²
Short-circuit Temperature	250℃
Flame Retardant	DIN EN 60332-1
Halogen Free	IEC 60754
Corrosive Gases	DIN EN 50267-2-3

Smoke Density	DIN EN 50268-2
Oil Resistant	Yes
Ozone Resistant	Yes
UV Resistant	Yes
Silicone Free	Yes

» Dimensions and Weight

8.7/15kV

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
3×50/50	51.5	4050
3×70/70	57.5	5250
3×95+3×16.7	57.5	5600

12/20kV

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
3×25/25	51.5	3400
3×35/35	54.5	4000
3×50/50	56.5	4700
3×70/70	59.0	5700
3×95/95	65.5	6900

18/30kV

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
3×25/25	67.5	5300
3×35/35	67.5	5600
3×50/50	69.5	6300
3×70/70	71.5	7100
3×95/95	76.5	8500

20/35 kV

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
3×25/25	73.0	6100
3×35/35	73.0	6500
3×50/50	73.0	6800
3×70/70	76.0	7900
3×95/95	78.0	9100

Medium Voltage High Temperature Resistant Cables +180°C

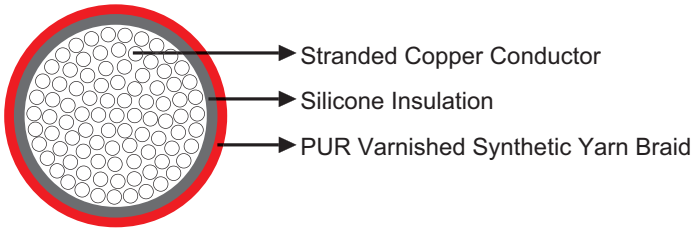
» Application

These cables are specifically designed for applications requiring for high temperature and oil resistant, suitable used for linking generators to transformers positioned up in the nacelle.

» Standards

IEC 60092

» Construction



Conductor: Stranded tinned copper wires, class 5 according to IEC 60228.
Tape: Polyester tape (up 16 mm²), Semi-conductive layer (only for 6.6 and 13.8 kV).
Insulation: Silicone rubber insulation.
Braid: PUR varnished synthetic yarn braid.

» Technical Data

Rated Voltage U0/U (Um)	1.1kV-15kV
Operating Temperatures	-55℃~+180℃
Minimum Bending Radius	6×OD (1.1kV); 12×OD (>=1.1kV)
Flame Retardant	IEC 60332-1/IEC 60332-3
Halogen Free	IEC 60754
Corrosive Gases	IEC 60754
Smoke Density	IEC 61034
Oil Resistant	Yes
Ozone Resistant	Yes
UV Resistant	Yes
Cold Resistant	CSA C 22.2

» Dimensions and Weight

1.1kV

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×2.5	4.5	36
1×4	5.0	52
1×6	5.4	69
1×10	6.4	111
1×16	8.6	177
1×25	10.3	267
1×35	11.6	365
1×50	13.6	510
1×70	15.7	701
1×95	17.9	926
1×120	19.8	1154
1×150	21.9	1432
1×185	24.3	1761
1×240	26.9	2284

3.3-4.2kV

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×2.5	6.3	54
1×6	7.3	90
1×10	8.2	135
1×16	10.4	208
1×25	12.0	302
1×35	13.2	401
1×50	15.4	559
1×70	17.5	775
1×95	19.5	981
1×120	21.4	1215
1×150	23.1	1481
1×185	25.1	1798
1×240	27.5	2314

6.6-7.2kV

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×4	7.6	81
1×6	8.0	99

Power Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×10	9.0	145
1×16	11.3	225
1×25	12.9	322
1×35	14.1	423
1×50	16.3	584
1×70	18.3	785
1×95	20.2	1006
1×120	22.0	1238
1×150	24.1	1525
1×185	26.1	1844
1×240	28.3	2355

13.8-15.0kV

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×10	12.1	205
1×16	14.0	288
1×25	15.5	390
1×35	16.7	497
1×50	18.5	655
1×70	20.6	864
1×95	22.4	1093
1×120	24.2	1332
1×150	26.5	1637
1×185	28.5	1966
1×240	30.7	2486

H07RN-F 450/750V

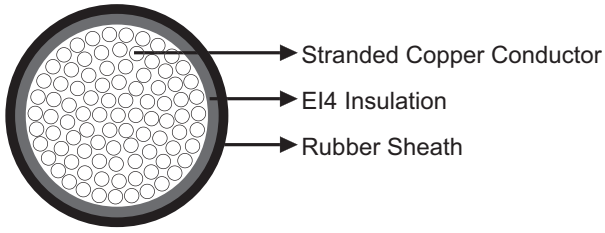
» Application

These cables are designed for use at medium mechanical stresses in wind turbines. They can be used in case of protected and fixed installation in tubes or in equipment as well as rotor connecting cable of motors with a working voltage up to 1000 V alternating voltage or a direct voltage up to 750 V against ground.

» Standards

DIN VDE 0282 part 4
HD 22.4 S4
HD 22.1
BS 7919
IEC 60245-4

» Construction



Conductor: Stranded bare copper conductor, class 5 acc. to IEC 60228/DIN VDE 0295.
Insulation: Rubber type EI4 according to HD 22.1/DIN VDE 0282 part 1.
Sheath: Rubber compound according to HD 22.1/DIN VDE 0282 part 1.

» Technical Data

Rated Voltage Uo/U (Um)	450/750V
Operating Temperatures	-30℃~+60℃
Minimum Bending Radius	flexing:7.5×OD; fixed: 4×OD
Maximum Permissible Tensile Load	15 N/mm²
Short-circuit Temperature	250℃
Flame Retardant	IEC 60332-1/DIN VDE 0472 part 804

Control Cable

Oil Resistant	Yes
Ozone Resistant	Yes
Weather Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×1.5	6.4	58
1×2.5	7.1	71
1×4	8.1	100
1×6	8.9	130
1×10	10.7	230
1×16	12.1	290
1×25	14.3	420
1×35	16.1	530
1×50	18.6	750
1×70	21.0	960
1×95	23.4	1250
1×120	25.7	1560
1×150	28.3	1900
1×185	31.0	2300
1×240	34.5	2950
1×300	37.7	3600
1×400	42.1	4600
1×500	46.7	6000
2×1	8.9	98
2×1.5	9.8	135
2×2.5	11.7	193
2×4	13.5	280
2×6	15.0	330
2×10	20.2	586
2×16	23.0	810
2×25	27.5	1160
3G1	9.5	130
3G1.5	10.6	165
3G2.5	12.5	235
3G4	14.5	320
3G6	16.1	420
3G10	21.7	810
3G16	24.7	1050
3G25	29.6	1250
3G35	33.2	1900
3G50	38.5	2600
3G70	43.4	3400
3G95	48.7	4450

Control Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
3G120	53.7	5180
3G150	59.0	6500
3G185	64.5	7860
3G240	73.5	10224
3G300	81.0	12620
4G1	10.6	150
4G1.5	11.7	200
4G2.5	13.8	290
4G4	16.0	395
4G6	17.9	540
4G10	23.7	950
4G16	27.0	1260
4G25	32.8	1860
4G35	36.8	2380
4G50	42.6	3190
4G70	48.4	4260
4G95	54.7	5600
4G120	59.5	6830
4G150	65.5	8320
4G185	72.0	9800
4G240	81.5	12100
4G300	90.5	15200
5G1.5	12.8	240
5G2.5	15.2	345
5G4	17.8	485
5G6	19.9	650
5G10	26.0	1200
5G16	29.9	1550
5G25	36.2	2250
5G35	41.3	2750
5G50	45.4	3950
5G70	48.9	4740
7G1.5	16.0	375
7G2.5	18.3	520
7G4	21.4	681
12G1.5	20.0	460
12G2.5	23.4	760
18G2.5	27.7	850
19G1.5	23.5	810
19G2.5	28.3	1075
24G1.5	27.5	1015
24G2.5	32.6	1390

G: with green-yellow earth core

×: without green-yellow earth core

H07RN-F & UL/CSA 600V 90°C

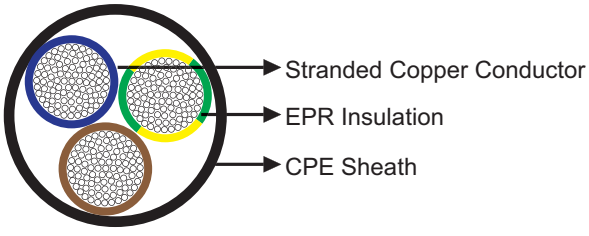
» Application

These cables are designed for use at medium mechanical stresses in wind turbines. They can be used in case of protected and fixed installation in tubes or in equipment as well as rotor connecting cable of motors with a working voltage up to 1000 V alternating voltage or a direct voltage up to 750 V against ground.

» Standards

HD 22.4 S4
UL 758

» Construction



Conductor: Stranded bare copper, fine wire class 5 according to IEC 60228/DIN VDE 0295/HD 383.

Insulation: EPR class 28.

Sheath: CPE class 42.

» Technical Data

Rated Voltage Uo/U (Um)	600V(UL/CSA)
Operating Temperatures	-40℃~+90℃
Minimum Bending Radius	flexing: 6×OD; fixed: 4×OD
Short-circuit Temperature	250℃
Flame Retardant	DIN EN 60332-1-2/IEC 60332-1-2
Oil Resistant	Yes
Ozone Resistant	Yes
UV Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1G25	13.9	385
1×50	17.8	680
1G95	22.4	1142
1×150	27.1	1845
1×240	32.1	2820
1×300	35.0	3390
1×400	40.0	4370
3G1	9.6	130
3G1.5	9.8	160
3G2.5	11.5	220
3G4	16.0	320
3G6	17.1	420
3G10	22.9	810
3×35	31.5	1850
3×50	35.5	2590
3×70	41.0	3560
3×95	46.0	4500
3×240	70.5	10260
4G1.5	10.5	200
4G2.5	12.5	280
4G4	14.5	380
4G6	18.4	540
4G10	25.0	950
5G1.5	11.5	250
5G2.5	13.5	350
5G4	18.7	485
5G6	20.1	650
7G1.5	13.5	400
7G2.5	15.5	540

G: with yellow/green earth core

×: without yellow/green earth core

(H)07RN-F HFFR & UL/CSA 600V 90°C

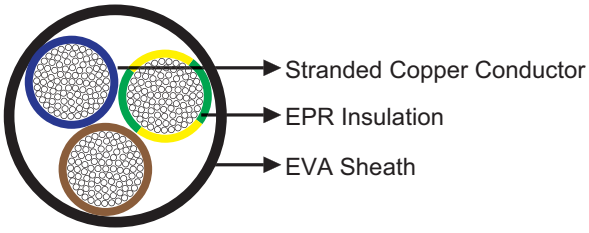
» Application

These cables are designed for use at medium mechanical stresses in wind turbines. They can be used in case of protected and fixed installation in tubes or in equipment as well as rotor connecting cable of motors with a working voltage up to 1000 V alternating voltage or a direct voltage up to 750 V against ground.

» Standards

HD 22.4
UL 758

» Construction



Conductor: Stranded bare copper, fine wire class 5 according to DIN VDE 0295.
Insulation: EPR class 28.
Sheath: EVA.

» Technical Data

Rated Voltage Uo/U (Um)	600V(UL/CSA)
Operating Temperatures	-40℃~+90℃
Minimum Bending Radius	flexing: 6×OD; fixed: 4×OD
Short-circuit Temperature	250℃
Flame Retardant	EN 50265-2-1/IEC 60332-1
Corrosive Gases	EN 50267-2
Smoke Density	EN 50268-2
Oil Resistant	Yes
UV Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1G25	13.9	420
1×50	17.8	790
1G95	22.4	1145
1×150	27.1	1845
1×240	32.1	2820
1×300	35.0	3390
3G1.5	9.8	165
3G2.5	11.5	227
3×25	27.5	1435
3×50	35.5	2598
3×70	41.0	3570
3×95	46.0	4510
3×240	70.5	10280
4G1.5	10.5	208
4G2.5	12.5	289
4G4	14.5	394
5G1.5	11.5	258
5G2.5	13.5	362
7G1.5	13.5	412
7G2.5	15.5	554

G: with yellow/green earth core

×: without yellow/green earth core

H05VV5-F 300/500V

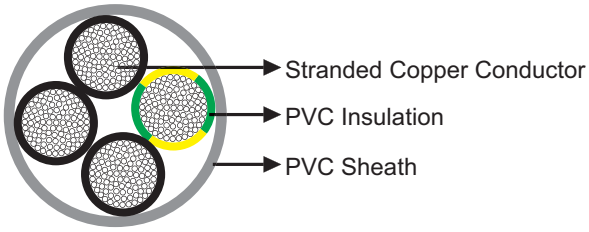
» Application

These cables are used as supply or interconnecting cables for measuring, controlling and regulating for light and medium mechanical stresses.

» Standards

HD 21.13 S1
DIN VDE 0281 Part. 13/5/96

» Construction



Conductor: Stranded bare copper, class 5/class 6 according to IEC 60228.
Insulation: PVC Type YI 4.
Sheath: PVC oil resistant Type YM 5.

» Technical Data

Rated Voltage Uo/U (Um)	300/500 V
Operating Temperatures	flexing: -15℃~+80℃; fixed: -40℃~+80℃
Minimum Bending Radius	flexing: 10×OD; fixed: 6×OD
Flame Retardant	IEC 60332-1
Oil Resistant	Yes
Ozone Resistant	Yes
Silicone Free	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
3G0.75	6.5	57
4G0.75	7.0	70
5G0.75	7.8	89
7G0.75	9.4	130
12G0.75	11.5	174
18G0.75	13.8	259
25G0.75	16.8	362
41G0.75	21.5	602
50G0.75	23.6	723
2×1	6.2	54
3G1	6.7	66
4G1	7.5	82
5G1	8.0	105
7G1	9.6	149
12G1	12.3	210
14G1	13.9	267
18G1	14.4	302
25G1	17.5	418
34G1	21.4	622
2×1.5	7.7	75
3G1.5	7.9	93
4G1.5	8.9	117
5G1.5	10.3	143
7G1.5	11.9	220
12G1.5	14.3	292
18G1.5	17.2	435
25G1.5	21.2	620
34G1.5	24.5	842
50G1.5	30.3	1305
3G2.5	9.4	144
4G2.5	10.8	180
5G2.5	11.8	229
7G2.5	14.0	300
12G2.5	17.3	453
18G2.5	20.5	684
25G2.5	25.5	943

G: with yellow/green earth core

×: without yellow/green earth core

H05VVC4V5-K 300/500V

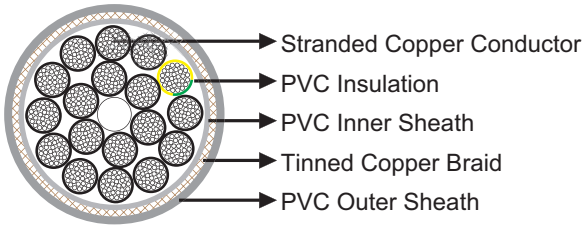
» Application

These screened cables are used as supply or interconnecting cable for measuring, controlling and regulating for light and medium mechanical stresses.

» Standards

HD 21.13 S1
DIN VDE 0281 Part. 13/5/96

» Construction



Conductor: Stranded bare copper, class 5/class 6 according to IEC 60228.
Insulation: PVC Type YI 4.
Inner Sheath: PVC.
Screen: Tinned copper braid.
Outer Sheath: PVC oil resistant Type YM 5.

» Technical Data

Rated Voltage Uo/U (Um)	300/500 V
Operating Temperatures	flexing: -15℃~+80℃; fixed: -40℃~+80℃
Minimum Bending Radius	flexing: 20×OD; fixed: 10×OD
Flame Retardant	IEC 60332-1
Oil Resistant	Yes
Ozone Resistant	Yes
Silicone Free	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
3G0.75	8.6	108
4G0.75	9.5	123
5G0.75	10.0	147
7G0.75	11.9	189
12G0.75	14.7	296
25G0.75	19.5	529
3G1	9.3	130
4G1	9.9	150
5G1	11.0	191
7G1	12.6	223
12G1	15.1	322
18G1	17.9	455
25G1	21.7	668
3G1.5	10.1	146
4G1.5	11.1	179
5G1.5	12.5	221
7G1.5	14.5	303
12G1.5	17.6	448
18G1.5	21.2	637
25G1.5	24.7	845
47G1.5	32.0	1480
3G2.5	11.6	207
4G2.5	12.9	247
5G2.5	14.4	309

G: with yellow/green earth core

×: without yellow/green earth core

Halogen Free Grounding Cable 0.6/1 kV

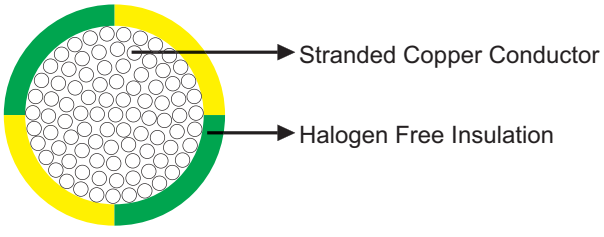
» Application

These cables with reduced fire hazard and higher safety performance are designed for control and power systems, used as connecting cable for earthing or grounding of trays, cubicle and other conductive parts.

» Standards

DIN VDE 0295

» Construction



Conductor: Stranded bare copper, class 5/class 2 according to IEC 60228.
Insulation: Halogen free compound HM4 according to IEC 60092-353.

» Technical Data

Rated Voltage Uo/U (Um)	0.6/1kV
Operating Temperatures	flexing: -5℃~+85℃; fixed: -35℃~+85℃
Minimum Bending Radius	flexing: 16×OD; fixed: 8×OD
Flame Retardant	IEC 60332-3 Cat. A
Halogen Free	IEC 60754
Gases Corrosively	IEC 60754
Smoke Density	IEC 61034
Ozone Resistant	Yes
Silicone Free	Yes

Control Cable

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
Class 2 Stranded		
1G1.5	2.9	20
1G2.5	3.3	31
1G4	3.8	46
1G6	4.4	68
1G16	6.2	169
1G25	7.9	264
1G35	8.9	364
1G50	10.3	516
1G70	12.2	720
1G95	14.0	967
1G120	15.8	1220
Class 5 Stranded		
1G6	4.4	68
1G10	5.4	109
1G16	6.6	170
1G25	8.4	266
1G70	12.7	728

Y 300/500V

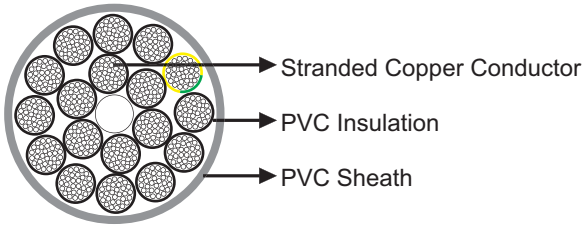
» Application

These cables are designed for flexible use for mechanical stresses as measuring, control and regulating cables in tool machines, conveyor belts, and production lines in machinery production, in air-conditioning and in steel production, suitable for dry, moist and wet rooms.

» Standards

DIN VDE 0245

» Construction



Conductor: Stranded bare copper, class 5 according to DIN VDE 0295/IEC60228.
Insulation: PVC Type YI 2.
Sheath: PVC Type YM 2/TM 2.

» Technical Data

Rated Voltage Uo/U (Um)	300/500V
Operating Temperatures	flexing: -15℃~+70℃; fixed: -40℃~+70℃
Minimum Bending Radius	flexing: 20×OD; fixed: 10×OD
Flame Retardant	VDE 0482-332-1-2/DIN EN 60332-1-2/IEC 60332-1
Oil Resistant	Yes
Ozone Resistant	Yes
Silicone Free	Yes
Lead Free	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
2×0.5	4.7	32
3G0.5	5.1	39
4G0.5	5.4	46
5G0.5	6.2	57
6G0.5	7.2	64
7G0.5	6.6	70
8G0.5	7.0	77
10G0.5	8.4	97
12G0.5	8.6	110
16G0.5	10.1	148
18G0.5	10.1	160
21G0.5	11.4	188
25G0.5	12.5	219
30G0.5	13.2	264
34G0.5	13.8	283
40G0.5	14.8	333
42G0.5	15.4	353
50G0.5	17.4	441
65G0.5	19.4	556
80G0.5	21.2	680
100G0.5	23.4	844
2×0.75	5.1	39
3×0.75	5.4	50
3G0.75	5.4	50
4G0.75	5.9	60
5G0.75	6.7	72
6G0.75	6.9	81
7G0.75	7.1	90
8G0.75	7.4	100
9G0.75	8.1	128
10G0.75	9.1	124
12G0.75	9.4	146
14G0.75	9.9	166
15G0.75	10.6	182
16G0.75	10.8	215
18G0.75	11.1	211
21G0.75	12.4	254
25G0.75	13.4	289

Control Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
32G0.75	14.9	380
34G0.75	15.1	378
41G0.75	16.0	452
42G0.75	16.0	461
50G0.75	18.1	559
61G0.75	19.8	673
65G0.75	20.7	774
80G0.75	22.1	879
100G0.75	24.6	1084
2×1	5.3	49
3×1	5.8	57
3G1	5.6	60
4×1	6.1	69
4G1	6.5	69
5G1	6.7	83
6G1	7.0	101
7G1	7.5	104
8G1	8.0	120
9G1	9.9	161
10G1	9.9	161
12G1	9.9	174
14G1	10.6	202
15G1	11.1	215
16G1	11.1	226
18G1	11.7	252
21G1	13.1	305
25G1	14.3	346
34G1	16.3	477
41G1	17.7	566
42G1	17.9	578
50G1	19.1	682
61G1	20.5	883
65G1	21.5	949
80G1	24.3	1092
100G1	27.5	1398
2×1.5	6.2	61
3×1.5	6.7	78
3G1.5	6.5	79
4×1.5	7.2	97
4G1.5	7.4	92
5G1.5	7.9	109

Control Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
6G1.5	8.6	133
7G1.5	9.0	147
8G1.5	9.5	169
9G1.5	10.5	185
10G1.5	11.3	210
12G1.5	11.6	237
14G1.5	12.0	271
16G1.5	12.9	310
18G1.5	13.7	347
21G1.5	14.9	403
25G1.5	16.9	490
32G1.5	18.1	606
34G1.5	18.8	642
42G1.5	20.5	798
50G1.5	22.2	926
61G1.5	23.7	1119
65G1.5	24.7	1020
80G1.5	28.3	1545
100G1.5	30.1	1808
2×2.5	7.3	92
3G2.5	7.7	119
4G2.5	8.5	148
5G2.5	9.7	180
7G2.5	10.1	232
8G2.5	11.3	274
12G2.5	13.9	377
18G2.5	17.1	575
25G2.5	20.7	786
34G2.5	21.7	1080
50G2.5	28.7	1566
3G4	9.3	176
4G4	10.2	219
5G4	11.6	269
7G4	12.8	356
3G6	11.0	255
4G6	12.3	323
5G6	13.5	391
7G6	14.9	519
3G10	14.0	411
4G10	15.0	513
5G10	17.1	650

Control Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
7G10	18.8	844
3G16	18.2	653
4G16	19.2	844
5G16	21.3	1012
7G16	23.8	1367
4G25	23.0	1252
5G25	25.8	1548
7G25	28.5	2078
4G35	26.7	1658
5G35	29.5	2029
7G35	38.0	3156
4G50	31.5	2360
5G50	34.7	2920
4G70	35.7	3201
5G70	40.0	4011
4G95	41.1	4259
5G95	45.6	5292
4G120	45.1	5263
4G150	62.3	8340
4G185	67.0	9904

G: with green-yellow earth core

×: without green-yellow earth core

CY 300/500V

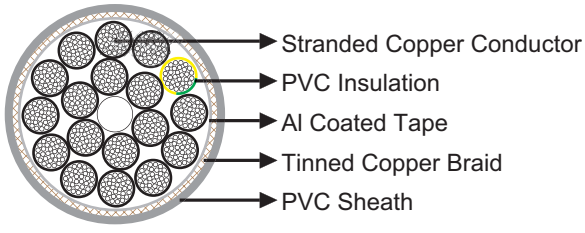
» Application

These screened cables are designed for use as a data cable in control circuits, in tool-making and machine industries as well as a signal cable in computer systems and electronics. PVC inner sheath has been replaced in these cables by a stabilising foil separator, thus reducing the total diameter of the cables considerably and thereby reducing the bending radius, total weight etc..

» Standards

DIN VDE 0245

» Construction



Conductor: Stranded bare copper, class 5 according to DIN VDE 0295/IEC60228.
Insulation: PVC Type YI 2.
Separator: Al coated tape.
Screen: Tinned copper braid.
Sheath: PVC Type YM 2/TM 2.

» Technical Data

Rated Voltage Uo/U (Um)	300/500V
Operating Temperatures	flexing: -15℃~+70℃; fixed: -40℃~+70℃
Minimum Bending Radius	flexing: 20×OD; fixed: 10×OD
Flame Retardant	IEC 60332-1
Ozone Resistant	Yes
Silicone Free	Yes
Lead Free	Yes

Control Cable

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of coresGmm²	mm	kg/km
2×0.5	5.4	45
3G0.5	5.8	53
4G0.5	6.3	63
5G0.5	6.7	76
6G0.5	7.2	87
7G0.5	7.3	107
8G0.5	7.7	109
12G0.5	9.2	140
18G0.5	10.2	179
25G0.5	13.3	256
2G0.75	6.0	54
3G0.75	6.3	65
4G0.75	6.8	77
5G0.75	7.3	91
6G0.75	7.8	102
7G0.75	7.8	115
8G0.75	8.3	137
12G0.75	10.1	177
18G0.75	11.6	250
25G0.75	13.9	326
34G0.75	15.6	406
50G0.75	19.0	576
2×1	6.2	60
3G1	6.5	73
4G1	7.0	89
5G1	7.6	105
6G1	8.2	110
7G1	8.4	139
8G1	9.0	157
12G1	10.4	207
18G1	12.4	295
25G1	14.9	384
34G1	16.6	530
50G1	19.6	1020
2×1.5	6.8	70
3G1.5	7.2	90
4G1.5	7.8	108
5G1.5	8.4	125

Control Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of coresGmm²	mm	kg/km
7G1.5	9.3	160
8G1.5	10.0	204
12G1.5	11.8	279
18G1.5	14.0	350
25G1.5	16.9	530
34G1.5	18.9	720
42G1.5	20.1	820
2×2.5	8.0	104
3G2.5	8.6	140
4G2.5	9.4	173
5G2.5	10.0	206
7G2.5	10.8	267
12G2.5	14.6	432
2×4	9.8	185
4G4	11.1	236
5G4	12.1	288
7G4	14.0	500
2×6	11.7	268
3G6	12.5	330
4G6	12.8	339
5G6	14.2	416
7G6	16.9	672
2×10	14.7	425
3G10	15.7	500
4G10	17.3	783
5G10	19.2	856
7G10	21.4	1305
4G16	20.8	880
5G16	22.6	1295
4G25	24.9	1570
5G25	27.8	1965
4G35	28.4	2070
5G35	31.6	2690
4G50	34.6	3015

G: with green-yellow earth core

×: without green-yellow earth core

YCY 300/500V

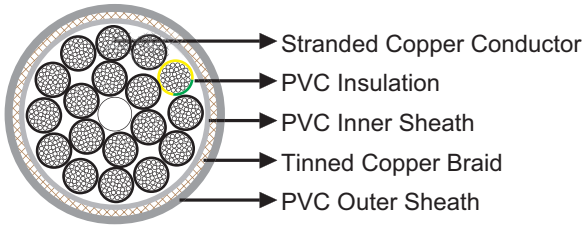
» Application

These screened cables are designed for use as a data and control cable in machinery, computer systems etc. as well as a signal cable for electronics.

» Standards

DIN VDE 0245

» Construction



Conductor: Stranded bare copper, class 5 according to DIN VDE 0295/IEC60228.
Insulation: PVC Type YI 2.
Inner Sheath: PVC.
Screen: Tinned copper braid.
Outer Sheath: PVC Type YM 2.

» Technical Data

Rated Voltage Uo/U (Um)	300/500V
Operating Temperatures	flexing: -15℃~+70℃; fixed: -40℃~+70℃
Minimum Bending Radius	flexing: 20×OD; fixed: 10×OD
Flame Retardant	IEC 60332-1
Ozone Resistant	Yes
Silicone Free	Yes
Lead Free	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of coresGmm²	mm	kg/km
2×0.5	5.6	65
3G0.5	6.6	72
4G0.5	7.6	77
5G0.5	8.3	90
7G0.5	9.3	114
12G0.5	11.0	160
18G0.5	12.0	216
2×0.75	7.1	71
3G0.75	7.4	82
4G0.75	7.9	94
5G0.75	8.4	109
7G0.75	9.0	122
12G0.75	11.2	192
18G0.75	12.7	261
25G0.75	16.0	388
2×1	7.3	78
3G1	7.6	90
4G1	8.1	106
5G1	8.7	121
7G1	9.3	144
12G1	11.7	225
18G1	13.5	315
25G1	16.6	455
34G1	19.5	657
41G1	20.4	698
50G1	22.9	918
2×1.5	7.9	94
3G1.5	8.3	112
4G1.5	9.1	133
5G1.5	9.7	148
7G1.5	10.2	183
12G1.5	13.3	295
18G1.5	16.4	451
25G1.5	18.6	599
3G2.5	9.5	158
4G2.5	10.3	191
5G2.5	11.5	213
7G2.5	12.3	274

Control Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of coresGmm²	mm	kg/km
12G2.5	13.3	530
3G4	10.7	218
4G4	12.2	274
5G4	12.7	317
4G6	14.0	378
5G6	16.4	493
4G10	17.9	636
5G10	19.4	760
4G16	21.5	953
5G16	23.2	1130
4G25	25.2	1401
5G25	28.2	1935
4G35	29.9	1886
5G35	32.0	2268
4G50	34.4	2674
5G50	43.0	4150
4G70	46.8	4600
5G70	51.8	5750
4G95	51.0	6060
5G95	56.0	7580
4G120	56.0	7315
5G120	63.0	9150
4G150	63.5	9680
5G150	69.5	10170

G: with green-yellow earth core

×: without green-yellow earth core

Halogen Free Control Cable 300/500 V

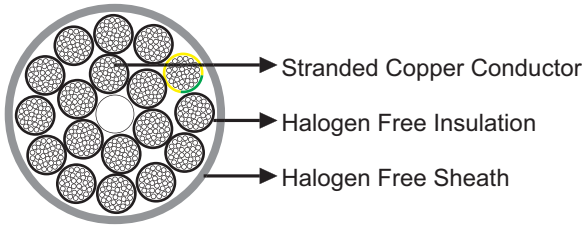
» Application

These halogen-free, flame retardant cables are designed for use as measuring and control cable in machinery and plant construction, in building and air-conditioning systems, in warehousing and conveying systems, in ship-building and for renewable energy such as in the construction of wind turbines.

» Standards

DIN VDE 0281 part 14

» Construction



Conductor: Stranded bare copper, class 5 according to DIN VDE 0295/BS 6360/IEC 60228.
Insulation: Halogen-free compound special polymer.
Sheath: Halogen-free compound special polymer.

» Technical Data

Rated Voltage Uo/U (Um)	300/500V
Operating Temperatures	flexing: -30℃~+90℃; fixed: -40℃~+90℃
Minimum Bending Radius	flexing: 10×OD; fixed: 4×OD
Flame Retardant	VDE 0482-332-1-2/DIN EN 60332-1-2/IEC 60332-1
Halogen Free	VDE 0482 part 267/DIN EN 50267-2-1/IEC 60754
Gases Corrosively	NF X 10-702
Smoke Density	VDE 0482 part 1034-1+2/IEC 61034-1+2/DIN EN 61034-1+2/BS 7622 part 1+2
Oil Resistant	Yes
Ozone Resistant	Yes

Control Cable

Silicone Free	Yes
UV Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
2×0.5	4.8	43
3G0.5	5.1	50
3×0.5	5.1	50
4G0.5	5.7	60
4×0.5	5.7	60
5G0.5	6.2	71
5×0.5	6.2	71
7G0.5	7.4	84
8G0.5	8.0	101
10G0.5	8.8	121
12G0.5	9.1	142
16G0.5	10.0	183
18G0.5	10.7	204
20G0.5	11.2	227
25G0.5	12.7	283
30G0.5	13.5	324
34G0.5	14.5	367
37G0.5	15.0	381
41G0.5	15.8	417
42G0.5	15.8	454
50G0.5	17.3	519
61G0.5	19.4	635
65G0.5	19.4	694
2×0.75	5.2	47
3G0.75	5.5	56
3×0.75	5.5	56
4G0.75	6.2	69
4×0.75	6.2	69
5G0.75	6.8	83
5×0.75	6.8	83
7G0.75	8.1	114
7×0.75	8.1	114
8G0.75	8.9	136
10G0.75	9.6	172
12G0.75	9.9	183

Control Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
16G0.75	11.5	241
18G0.75	11.9	266
20G0.75	12.6	291
25G0.75	14.1	374
30G0.75	15.4	450
34G0.75	16.4	517
37G0.75	17.2	541
41G0.75	17.6	611
42G0.75	17.6	621
50G0.75	19.8	742
61G0.75	20.9	853
65G0.75	21.5	909
2×1	5.5	63
3G1	6.0	74
3×1	6.0	74
4G1	6.6	90
4×1	6.6	90
5G1	7.2	109
7G1	8.6	151
8G1	9.4	184
10G1	10.4	224
12G1	10.7	243
16G1	12.0	314
18G1	12.7	361
20G1	13.5	387
25G1	15.2	496
34G1	17.4	670
37G1	18.4	713
41G1	18.9	784
42G1	18.9	824
50G1	21.0	952
61G1	22.2	1140
65G1	22.8	1201
2×1.5	6.3	70
3G1.5	6.7	94
3×1.5	6.7	94
4G1.5	7.3	112
5G1.5	8.2	141
7G1.5	9.8	191
8G1.5	10.6	224
10G1.5	11.7	282

Control Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
12G1.5	12.1	311
16G1.5	13.6	392
18G1.5	14.5	450
20G1.5	15.2	497
25G1.5	17.8	630
34G1.5	19.8	842
37G1.5	20.2	897
50G1.5	23.7	1277
61G1.5	25.3	1460
65G1.5	26.0	1612
2×2.5	7.6	118
3G2.5	8.3	151
4G2.5	9.1	181
5G2.5	10.2	224
7G2.5	12.1	316
8G2.5	13.2	370
10G2.5	14.7	451
12G2.5	15.2	499
16G2.5	17.5	720
18G2.5	18.1	769
20G2.5	18.7	911
25G2.5	22.2	1047
30G2.5	23.7	1280
2×4	9.2	199
3G4	9.9	247
4G4	11.0	299
5G4	12.1	369
7G4	13.3	463
8G4	15.9	601
10G4	17.3	698
12G4	18.3	790
16G4	20.2	1130
18G4	21.8	1280
2×6	10.8	266
3G6	11.7	360
4G6	13.0	429
5G6	14.5	529
7G6	16.0	631
2×10	14.0	440
3G10	15.0	550
4G10	16.8	708

Control Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
5G10	18.7	862
7G10	20.6	1124
2×16	16.5	642
3G16	17.6	830
4G16	19.7	1060
5G16	21.9	1270
7G16	24.4	1794
3G25	22.5	1190
4G25	25.2	1594
5G25	27.9	2014
3G35	25.2	1590
4G35	28.0	2200
5G35	31.0	2693
3G50	29.5	2571
4G50	33.4	3087
5G50	37.2	3980
3G70	37.0	3207
4G70	41.2	4077
5G70	46.0	5501
3G95	41.0	4708
4G95	46.0	5590
5G95	50.5	6972
3G120	45.7	5515
4G120	50.3	7100
3G150	52.2	6279
4G150	57.0	7781

G: with green-yellow earth core

×: without green-yellow earth core

Halogen Free, Screened Control Cable 300/500 V

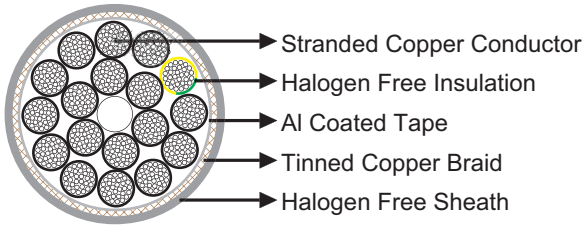
» Application

These screened, halogen-free, flame retardant cables are designed for use as measuring and control cable in machinery and plant construction, in building and air-conditioning systems, in warehousing and conveying systems, in ship-building and for renewable energy such as in the construction of wind turbines.

» Standards

DIN VDE 0281 part 14

» Construction



Conductor: Stranded bare copper, class 5 according to DIN VDE 0295/BS 6360/IEC 60228.
Insulation: Halogen-free compound special polymer.
Separator: Al coated tape.
Screen: Tinned copper braid.
Sheath: Halogen-free compound special polymer.

» Technical Data

Rated Voltage Uo/U (Um)	300/500V
Operating Temperatures	flexing: -30℃~+80℃; fixed: -40℃~+80℃
Minimum Bending Radius	flexing: 10×OD; fixed: 4×OD
Flame Retardant	VDE 0482-332-1-2/DIN EN 60332-1-2/IEC 60332-1
Halogen Free	VDE 0482 part 267/DIN EN 50267-2-1/IEC 60754
Gases Corrosively	NF X 10-702
Smoke Density	VDE 0482 part 1034-1+2/IEC 61034-1+2/DIN EN 61034-1+2/BS 7622 part 1+2

Oil Resistant	Yes
Ozone Resistant	Yes
Silicone Free	Yes
UV Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
2×0.5	5.7	46
3G0.5	6.0	56
3×0.5	6.0	56
4G0.5	6.5	62
4×0.5	6.5	62
5G0.5	7.0	75
5×0.5	7.0	75
7G0.5	7.9	98
8G0.5	8.5	116
10G0.5	9.3	135
12G0.5	9.6	158
16G0.5	10.7	210
18G0.5	11.2	216
20G0.5	11.9	240
25G0.5	13.4	315
2×0.75	6.1	60
3G0.75	6.4	68
3×0.75	6.4	68
4G0.75	6.9	78
4×0.75	6.9	78
5G0.75	7.4	95
5×0.75	7.4	95
7G0.75	8.6	130
7×0.75	8.6	130
8G0.75	9.4	145
10G0.75	10.0	180
12G0.75	10.4	203
16G0.75	11.6	275
18G0.75	12.4	290
20G0.75	12.9	320
25G0.75	14.8	413
2×1	6.4	66
3G1	6.7	80

Control Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
3×1	6.7	80
4G1	7.3	100
4×1	7.3	100
5G1	7.8	130
7G1	9.1	160
8G1	9.9	197
10G1	10.8	232
12G1	11.2	260
16G1	12.3	346
18G1	13.2	382
20G1	13.8	440
25G1	15.8	540
2×1.5	6.6	88
3G1.5	6.9	100
3×1.5	6.9	100
4G1.5	7.5	125
5G1.5	8.4	158
7G1.5	10.0	210
8G1.5	11.1	244
10G1.5	12.0	315
12G1.5	12.1	340
16G1.5	14.3	424
18G1.5	14.6	480
25G1.5	17.6	702
2×2.5	8.3	132
3G2.5	9.0	168
4G2.5	9.8	195
5×2.5	10.9	256
7G2.5	12.9	345
8G2.5	13.1	390
10G2.5	15.2	482
12G2.5	15.9	572
2×4	9.8	220
3G4	10.6	251
4G4	11.5	305
5G4	12.7	388
7G4	14.0	504
2×6	11.5	270
3G6	12.4	351
4G6	13.8	464
5G6	15.7	546

Control Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
7G6	16.6	670
2×10	14.9	461
3G10	15.9	574
4G10	17.8	785
5G10	19.6	914
7G10	21.6	1308
2×16	17.2	670
3G16	19.0	911
4G16	20.8	1105
5G16	22.9	1293
7G16	25.0	2149
3G25	23.5	1432
4G25	26.2	1911
5G25	29.7	2414
3G35	26.0	1914
4×35	30.4	2542
5G35	34.1	3180
3G50	30.3	3080
4G50	34.6	3550
5G50	39.1	4753
3G70	37.9	3840
4G70	41.3	4939
5G70	46.4	6572
3G95	41.5	5651
4G95	46.2	6690
5G95	51.5	8370
3G120	46.8	6342
4G120	51.0	8453
4G150	59.2	9104

G: with green-yellow earth core

×: without green-yellow earth core

Y 0.6/1kV

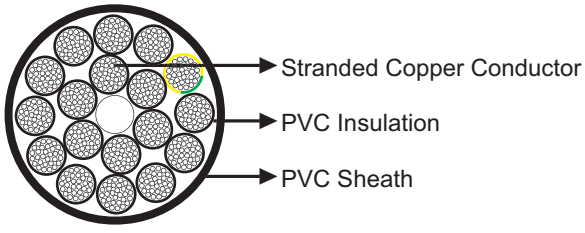
» Application

These cables are designed for flexible use for medium mechanical stresses as measuring and control cables in tool machines, conveyor belts, production lines; for plant installations, air conditioning, in steel production plants and rolling mills, suitable for dry, moist and wet rooms as well as outside (fixed installation).

» Standards

DIN VDE 0262/12.95
DIN VDE 0281 part 13

» Construction



Conductor: Stranded bare copper, class 5 according to DIN VDE 0295/IEC60228.
Insulation: PVC Type TI 2/YI 2.
Sheath: PVC Type TM 2/YM 2.

» Technical Data

Rated Voltage Uo/U (Um)	600/1000V
Operating Temperatures	flexing: -5℃~+80℃; fixed: -40℃~+80℃
Minimum Bending Radius	flexing: 7.5×OD; fixed: 4×OD
Flame Retardant	VDE 0482-332-1-2/DIN EN 60332-1-2/IEC 60332-1
Oil Resistant	Yes
Silicone Free	Yes
UV Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
2×0.5	6.3	56
3G0.5	6.7	68
3×0.5	6.7	68
4G0.5	7.2	100
4×0.5	7.2	100
5G0.5	8.0	117
5×0.5	8.0	117
6G0.5	8.9	126
7G0.5	8.9	138
7×0.5	8.9	138
8G0.5	10.2	150
8×0.5	10.2	150
10G0.5	11.2	176
12G0.5	11.4	200
12×0.5	11.4	200
14G0.5	12.3	230
16G0.5	12.9	250
18G0.5	13.8	276
20G0.5	14.4	293
21G0.5	14.4	305
25G0.5	16.4	335
30G0.5	17.2	348
32G0.5	18.0	355
34G0.5	18.7	520
40G0.5	20.2	590
42G0.5	20.2	595
50G0.5	22.1	715
52G0.5	22.1	740
61G0.5	23.6	840
65G0.5	25.0	880
80G0.5	27.2	960
100G0.5	30.2	1050
2×0.75	6.6	66
3G0.75	7.0	74
3×0.75	7.0	74
4G0.75	7.6	126
4×0.75	7.6	126
5G0.75	8.4	140

Control Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
5×0.75	8.4	140
6G0.75	9.3	170
6×0.75	9.3	170
7G0.75	9.3	190
7×0.75	9.3	190
8G0.75	10.9	212
8×0.75	10.9	212
9G0.75	11.8	227
10G0.75	11.8	238
12G0.75	12.3	257
12×0.75	12.3	257
14G0.75	12.9	286
15G0.75	13.8	319
18G0.75	14.5	362
20G0.75	15.4	394
21G0.75	16.1	422
25G0.75	17.4	486
32G0.75	19.1	595
34G0.75	19.9	638
37G0.75	19.9	696
40G0.75	21.5	726
41G0.75	21.5	750
42G0.75	21.5	770
50G0.75	23.5	895
61G0.75	25.3	1070
65G0.75	26.9	1110
80G0.75	28.9	1500
100G0.75	32.1	1889
2×1	7.0	80
3G1	7.3	96
3×1	7.3	96
4G1	8.2	100
4×1	8.2	100
5G1	9.2	130
5×1	9.2	130
6G1	9.9	150
7G1	9.9	170
7×1	9.9	170
8G1	11.6	230
9G1	12.8	250
10G1	12.8	270

Control Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
10×1	12.8	270
12G1	13.0	290
12×1	13.0	290
14G1	14.0	320
16G1	14.8	360
18G1	15.7	405
18×1	15.7	405
20G1	16.7	450
21G1	17.4	510
24G1	18.4	550
25G1	18.8	570
25×1	18.8	570
26G1	18.8	590
30×1	19.9	650
34G1	21.5	750
36G1	21.5	790
40G1	23.2	850
40×1	23.2	850
41G1	23.2	890
42G1	23.2	900
50G1	25.6	1100
56G1	26.4	1190
61G1	27.3	1266
65G1	29.0	1560
80G1	31.4	1810
100G1	34.8	1950
3G16	20.5	700
2×1.5	8.2	95
3G1.5	8.6	112
3×1.5	8.6	112
4G1.5	9.6	139
4×1.5	9.6	139
5G1.5	10.7	170
5×1.5	10.7	170
6G1.5	11.6	190
7G1.5	11.6	225
7×1.5	11.6	225
8G1.5	13.8	250
9G1.5	15.2	280
10G1.5	15.2	300
11G1.5	15.5	330

Control Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
12G1.5	15.5	370
12×1.5	15.5	370
14G1.5	16.6	400
16G1.5	17.5	450
18G1.5	18.6	520
19G1.5	18.6	550
20G1.5	19.7	600
21G1.5	20.6	600
25G1.5	22.5	730
32G1.5	24.5	880
34G1.5	25.6	950
40G1.5	27.6	990
42G1.5	27.6	1120
50G1.5	30.4	1400
56G1.5	31.5	1530
61G1.5	32.6	1700
65G1.5	34.8	1900
80G1.5	37.4	2300
100G1.5	41.6	2700
2×2.5	9.4	160
3G2.5	10.1	175
3×2.5	10.1	175
4G2.5	11.2	203
4×2.5	11.2	203
5G2.5	12.5	251
5×2.5	12.5	251
7G2.5	13.8	330
7×2.5	13.8	330
8G2.5	16.1	400
12G2.5	18.3	553
14G2.5	19.4	630
18G2.5	22.0	795
21G2.5	25.0	930
25G2.5	26.7	1110
34G2.5	30.4	1450
42G2.5	33.0	1750
50G2.5	36.2	2100
61G2.5	38.8	2540
100G2.5	49.5	3850
2×4	11.4	180
3G4	12.3	230

Control Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
4G4	13.7	310
5G4	15.2	410
7G4	16.7	540
8G4	19.9	710
12G4	22.6	860
3G6	14.0	370
4G6	15.5	430
5G6	17.3	650
7G6	19.2	860
3G10	16.4	660
4G10	18.2	790
5G10	20.4	960
7G10	22.4	1300
3G16	20.5	700
4G16	22.6	1100
5G16	25.4	1600
7G16	27.8	1890
3G25	24.8	1450
4G25	27.6	1600
5G25	30.3	2050
7G25	33.6	2900
3G35	27.5	1900
4G35	30.5	2400
5G35	34.1	2900
3G50	33.5	2700
4G50	37.2	3400
5G50	41.8	4361
3G70	38.7	3300
4G70	42.7	4400
5G70	47.6	5807
3G95	43.3	5050
4G95	48.0	6010
5G95	52.8	7752
4G120	52.6	7500
4G150	61.3	8640
4G185	67.1	10380

G: with green-yellow earth core

×: without green-yellow earth core

YCY 0.6/1kV

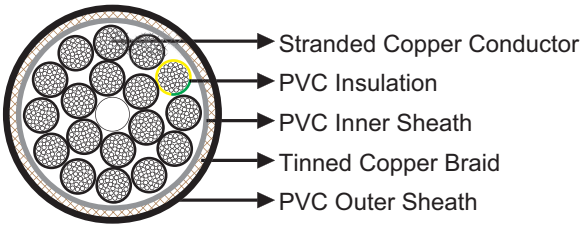
» Application

These screened cables are designed for flexible use for medium mechanical stresses as measuring and control cables in tool machines, conveyor belts, production lines; for plant installations, air conditioning, in steel production plants and rolling mills, suitable for dry, moist and wet rooms as well as outside (fixed installation).

» Standards

DIN VDE 0262/12.95
DIN VDE 0281 part 13

» Construction



Conductor: Stranded bare copper, class 5 according to DIN VDE 0295/IEC60228.
Insulation: PVC Type TI 2
Inner Sheath: PVC.
Screen: Tinned copper braid.
Outer Sheath: PVC Type TM 2.

» Technical Data

Rated Voltage Uo/U (Um)	600/1000V
Operating Temperatures	flexing: -5℃~+80℃; fixed: -40℃~+90℃
Minimum Bending Radius	flexing: 10×OD; fixed: 5×OD
Flame Retardant	VDE 0482-332-1-2/DIN EN 60332-1-2/IEC 60332-1
Oil Resistant	Yes
Silicone Free	Yes
UV Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of coresGmm²	mm	kg/km
2×0.5	8.5	129
3G0.5	8.8	150
4G0.5	9.6	170
5G0.5	10.2	199
7G0.5	11.1	235
12G0.5	14.0	320
18G0.5	16.2	428
25G0.5	19.2	503
2×0.75	8.8	143
3G0.75	9.3	155
4G0.75	9.9	190
5G0.75	10.8	228
7G0.75	11.5	323
12G0.75	14.6	410
18G0.75	17.1	560
25G0.75	20.3	730
2×1	9.4	150
3G1	9.8	163
4G1	10.4	200
5G1	11.4	239
7G1	12.5	289
12G1	15.7	464
18G1	18.4	628
25G1	21.8	855
2×1.5	10.4	162
3G1.5	11.1	187
4G1.5	11.8	240
5G1.5	13.1	289
7G1.5	14.2	383
12G1.5	18.4	592
18G1.5	21.5	806
25G1.5	25.6	1241
2×2.5	11.8	272
3G2.5	12.7	298
4G2.5	13.8	345
5G2.5	15.1	427
7G2.5	16.3	561
12G2.5	21.3	857
18G2.5	25.4	1355
25G2.5	30.0	1995

Control Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of coresGmm²	mm	kg/km
2×4	14.2	306
3G4	15.1	391
4G4	16.2	527
5G4	18.0	700
7G4	19.8	920
12G4	25.8	1510
2×6	15.9	420
3G6	16.9	629
4G6	18.7	731
5G6	20.4	1105
7G6	22.2	1465
2×10	18.3	845
3G10	19.2	1125
4G10	21.2	1345
5G10	23.2	1635
7G10	26.8	2210
2×16	22.8	1150
3G16	24.7	1395
4G16	27.0	1870
5G16	30.0	2720
7G16	32.2	3213
3G25	29.2	2465
4G25	32.0	2750
5G25	35.7	3490
7G25	39.0	4980
3G35	32.3	3230
4G35	35.8	4100
5G35	39.5	4950
3G50	39.7	4590
4G50	43.4	5780
5G50	47.8	7210
3G70	44.9	5610
4G70	49.1	7480
5G70	53.8	9390
3G95	49.6	8585
4G95	54.1	10220
5G95	57.7	13800
3G120	51.5	11105
4G120	59.4	13750
4G150	67.9	15990
4G185	74.0	18470

G: with green-yellow earth core

×: without green-yellow earth core

Halogen Free Control Cable 0.6/1 kV

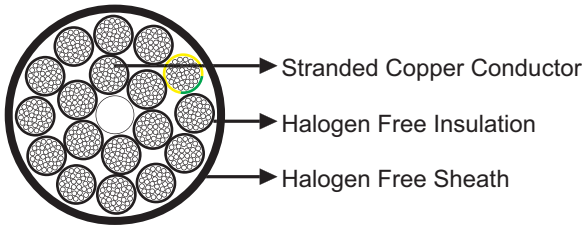
» Application

These halogen-free, flame retardant cables are designed for use as measuring and control cable in machine tools, conveyor belts, production lines as well as in plant installations, in air-conditioning and steel production works, suitable for the application in dry, damp and wet environments and also for laying on, in and under plaster as well as in concrete and masonry excluding in direct laying in vibration, compacted or compressed concrete.

» Standards

DIN VDE 0281 part 14
DIN VDE 0281 part 13
IEC 60092-351

» Construction



Conductor: Stranded bare copper, class 5 according to DIN VDE 0295/BS 6360/IEC 60228.
Insulation: Halogen-free compound TI6/XLPE compound Type HF
Sheath: Halogen-free sheath compound TM7/HM4.

» Technical Data

Rated Voltage Uo/U (Um)	600/1000V
Operating Temperatures	flexing: -15℃~+70℃; fixed: -40℃~+70℃
Minimum Bending Radius	15×OD
Flame Retardant	VDE 0482-332-1-2/DIN EN 60332-1-2/IEC 60332-1
Halogen Free	VDE 0482 part 267/DIN EN 50267-2-1/IEC 60754
Gases Corrosively	VDE 0482 part 267/DIN EN 50267-2-2/IEC 60754
Smoke Density	VDE 0482 part 1034-1+2/IEC 61034-1+2/DIN EN 61034-1+2/BS 7622 part 1+2

Control Cable

Oil Resistant	Yes
Silicone Free	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
2×0.5	6.4	57
3G0.5	6.8	69
3×0.5	6.8	69
4G0.5	7.6	104
4×0.5	7.6	104
5G0.5	8.2	121
5×0.5	8.2	121
7G0.5	9.8	145
10G0.5	11.6	186
12G0.5	12.2	224
18G0.5	14.4	292
25G0.5	17.2	357
2×0.75	6.8	68
3G0.75	7.2	77
3×0.75	7.2	77
4G0.75	8.0	136
4×0.75	8.0	136
5G0.75	8.8	152
5×0.75	8.8	152
7G0.75	10.7	208
10G0.75	12.7	250
12G0.75	13.1	271
18G0.75	15.6	387
25G0.75	18.9	498
2×1	7.4	82
3G1	8.0	99
3×1	8.0	99
4G1	8.8	140
4×1	8.8	140
5G1	9.8	160
5×1	9.8	160
7G1	11.7	217
10G1	14.1	271
12G1	14.5	301
18G1	17.3	417
25G1	21.1	576
2×1.5	8.4	97
3G1.5	9.1	119
3×1.5	9.1	119

Control Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
4G1.5	9.9	148
4×1.5	9.9	148
5G1.5	11.0	172
5×1.5	11.0	172
7G1.5	13.3	243
10G1.5	15.9	311
12G1.5	16.6	392
18G1.5	19.7	529
25G1.5	23.9	741
2×2.5	9.4	160
3G2.5	9.9	177
3×2.5	9.9	177
4G2.5	11.1	209
4×2.5	11.1	209
5G2.5	12.4	272
5×2.5	12.4	272
7G2.5	15.0	340
10G2.5	18.4	561
12G2.5	22.0	799
18G2.5	24.6	940
25G2.5	26.9	1121
3G4	12.3	255
4G4	13.8	319
5G4	15.3	423
3G6	14.1	380
4G6	15.6	441
5G6	17.3	657
3G10	16.5	668
4G10	18.4	796
5G10	20.5	972
3G16	19.1	832
4G16	21.2	1122
5G16	23.6	1604
3G25	24.0	1457
4G25	26.9	1611
5G25	29.3	2070
3G35	26.2	1914
4G35	29.4	2424
5G35	32.8	2970
4G50	34.2	3467
4G70	41.0	4491
4G95	46.2	6170
4G120	50.3	7618

G: with green-yellow earth core

×: without green-yellow earth core

Halogen Free, Screened Control Cable 0.6/1 kV

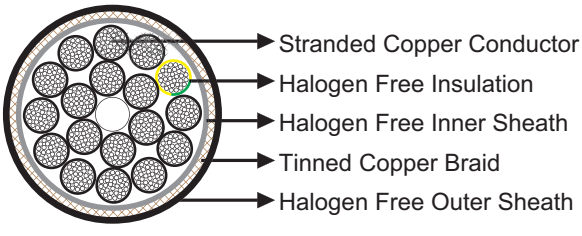
» Application

These screened, halogen-free, flame retardant cables are designed for instrumentation and control cables in tooling machinery, conveyor and transportation belts, production lines, in plant construction, air-conditioning systems as well as in iron and steel works, suitable for use in dry, damp and wet environments for installation above, on, in and beneath plaster as well as in masonry and concrete walls except for direct embedding in vibrated, compacted or tamped concrete.

» Standards

DIN VDE 0281 part 14
DIN VDE 0281 part 13

» Construction



Conductor: Stranded bare copper, class 5 according to DIN VDE 0295/BS 6360/IEC 60228.
Insulation: Halogen-free compound TI6.
Inner Sheath: Halogen-free compound.
Screen: Tinned copper braid.
Outer Sheath: Halogen-free compound TM7.

» Technical Data

Rated Voltage Uo/U (Um)	600/1000V
Operating Temperatures	flexing: -5℃~+70℃; fixed: -40℃~+70℃
Minimum Bending Radius	15×OD
Flame Retardant	DIN VDE 0482 Part 265-2-1/ EN 50265-2-1/IEC 60332-1

Control Cable

Halogen Free	VDE 0482 part 267/DIN EN 50267-2-1/IEC 60754
Gases Corrosively	VDE 0482 part 267/DIN EN 50267-2-2/IEC 60754
Smoke Density	VDE 0482 part 1034-1+2/IEC 61034-1+2/DIN EN 61034-1+2/BS 7622 part 1+2
Oil Resistant	Yes
Silicone Free	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
3G0.5	8.6	150
4G0.5	9.4	170
5G0.5	10.1	199
7G0.5	12.1	235
12G0.5	14.7	320
18G0.5	17.3	428
25G0.5	20.6	503
3G0.75	9.0	155
4G0.75	9.9	190
5G0.75	10.8	228
7G0.75	13.0	323
12G0.75	15.8	410
18G0.75	17.9	560
25G0.75	22.8	730
3G1	9.8	163
4G1	10.8	200
5G1	12.1	239
7G1	14.5	289
12G1	17.4	464
18G1	20.7	628
25G1	24.8	855
3G1.5	10.9	187
4G1.5	12.2	240
5G1.5	13.3	289
7G1.5	16.0	383
12G1.5	19.6	592
18G1.5	23.4	806
25G1.5	28.2	1241
3G2.5	12.2	298
4G2.5	13.4	345
5G2.5	14.9	427

Control Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
7G2.5	17.9	561
12G2.5	21.9	857
18G2.5	26.1	1355
25G2.5	31.9	1995
3G4	15.1	391
4G4	16.7	527
5G4	18.6	700
3G6	17.0	629
4G6	18.7	731
5G6	20.7	1105
3G10	19.6	1125
4G10	21.9	1345
5G10	24.1	1635
4G16	23.5	1395
5G16	26.4	1870
7G16	28.8	2720
3G25	28.0	2465
4G25	32.5	2750
5G25	35.7	3490
3G35	32.7	3230
4G35	35.7	4100
5G35	40.0	4950
4G50	41.1	5780
4G70	48.0	7480
4G95	51.2	10220
4G120	56.0	13750
4G150	64.5	15900

G: with green-yellow earth core

×: without green-yellow earth core

Halogen Free, Screened Control Cable 0.6/1 kV 90°C

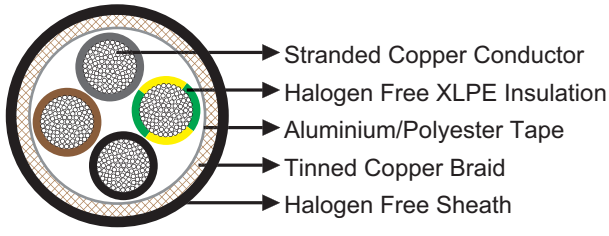
» Application

These halogen-free, flame retardant cables are designed for frequency converter controlled AC drives, suitable for fixed installation and occasional free flexing indoors in dry, damp and wet conditions, as well as outdoors for low mechanical stress.

» Standards

DIN VDE 0250
IEC 60092-353

» Construction



Conductor: Stranded bare copper, class 5 according to DIN VDE 0295/IEC 60228.

Protective Conductor: Stranded bare copper, class 5 according to DIN VDE 0295/IEC 60228. For cross sections > 16mm² the protective conductor is divided into 3 cores.

Insulation: Halogen free special XLPE according to IEC 60502-4.

Screen: Al coated tape + tinned copper wires braid.

Sheath: Halogen free compound HM4. Halogen free PUR can be offered upon request.

» Technical Data

Rated Voltage Uo/U (Um)	600/1000V
Operating Temperatures	-5℃~+90℃
Minimum Bending Radius	flexing: 20×OD; fixed: 10×OD
Flame Retardant	IEC 60332-3
Halogen Free	IEC 60754
Gases Corrosively	IEC 60754
Ozone Resistant	Yes
UV Resistant	Yes

Control Cable

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
4×1.5	11.0	230
4×2.5	12.5	300
4×4	15.5	390
4×6	17.5	420
4×10	19.5	780
3×16+3×2.5	22.5	820
3×25+3×4	26.0	1150
3×35+3×6	29.5	1550
3×50+3×10	35.0	2400
3×70+3×10	38.5	3100
3×95+3×16	44.0	4200
3×120+3×16	48.0	4630
3×150+3×25	53.0	5880
3×185+3×35	58.0	7200
3×240+3×50	66.0	9600
3×300+3×50	73.0	11530

Y 0.6/1kV UL/CSA

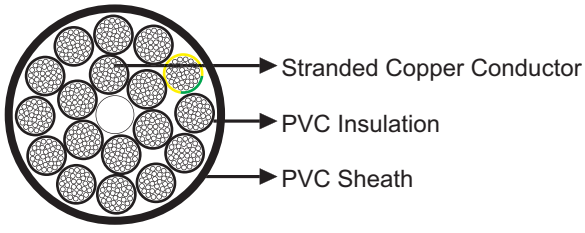
» Application

These cables are designed for flexible use for medium mechanical stresses as measuring and control cables in tool machines, conveyor belts, production lines; for plant installations, air conditioning, in steel production plants and rolling mills, suitable for dry, moist and wet rooms as well as outside (fixed installation).

» Standards

VDE 0276 part 627
DIN VDE 0281 part 13
UL 758
IEC 60502

» Construction



Conductor: Stranded bare copper, class 5 according to DIN VDE 0295/IEC60228.
Insulation: Special PVC type TI2 according to DIN VDE 0281 part 1, class 43 UL-Std. 1581.
Sheath: Special PVC.

» Technical Data

Rated Voltage Uo/U (Um)	600/1000V
Operating Temperatures	flexing: -5℃~+80℃; fixed: -40℃~+80℃
Minimum Bending Radius	flexing: 7.5×OD; fixed: 4×OD
Flame Retardant	VDE 0482-332-1-2/DIN EN 60332-1-2/IEC 60332-1/VW1/FT1
Oil Resistant	Yes
Silicone Free	Yes
UV Resistant	Yes

Control Cable

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
2×0.5	6.4	56
3G0.5	6.8	68
4G0.5	7.6	100
5G0.5	8.2	117
7G0.5	9.8	138
12G0.5	12.2	200
18G0.5	14.4	276
25G0.5	17.2	335
2×0.75	6.8	66
3G0.75	7.2	74
4G0.75	8.0	126
5G0.75	8.8	140
7G0.75	10.7	190
12G0.75	13.1	257
18G0.75	15.6	362
25G0.75	18.9	486
2×1	7.4	80
3G1	8.0	96
4G1	8.8	100
5G1	9.8	130
7G1	11.7	170
12G1	14.5	290
18G1	17.3	405
25G1	21.1	570
2×1.5	8.4	95
3G1.5	9.1	112
4G1.5	9.9	139
5G1.5	11.0	170
7G1.5	13.3	225
12G1.5	16.6	370
18G1.5	19.7	520
25G1.5	23.9	730
2×2.5	9.4	160
3G2.5	9.9	175
4G2.5	11.1	203
5G2.5	12.4	251
7G2.5	15.0	330
12G2.5	18.4	553

Control Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
18G2.5	22.0	795
25G2.5	26.9	1110
2×4	11.4	180
3G4	12.3	230
4G4	13.8	310
5G4	15.3	410
7G4	16.8	540
12G4	22.9	860
3G6	14.1	370
4G6	15.6	430
5G6	17.3	650
7G6	19.3	860
3G10	16.5	660
4G10	18.4	790
5G10	20.5	960
7G10	22.5	1300
3G16	19.6	760
4G16	21.7	1100
5G16	24.2	1600
7G16	25.7	1890
3G25	24.0	1450
4G25	26.9	1600
5G25	29.3	2050
7G25	32.6	2900

G: with green-yellow earth core

×: without green-yellow earth core

YCY 0.6/1kV UL/CSA

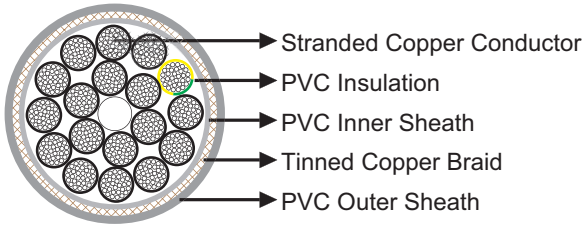
» Application

These screened cables are designed for flexible use for medium mechanical stresses as measuring and control cables in tool machines, conveyor belts, production lines; for plant installations, air conditioning, in steel production plants and rolling mills, suitable for dry, moist and wet rooms as well as outside (fixed installation) .

» Standards

VDE 0276 part 627
DIN VDE 0281 part 13
UL 758
IEC 60502

» Construction



Conductor: Stranded bare copper, class 5 according to DIN VDE 0295/IEC60228.
Insulation: PVC type TI2 according to DIN VDE 0281 part 1, class 43 UL-Std. 1581.
Inner Sheath: PVC type TM 2 according to DIN VDE 0281 part 1, class 43 UL-Std. 1581.
Screen: Tinned copper braid.
Outer Sheath: PVC type TM 2 according to DIN VDE 0281 part 1, class 43 UL-Std. 1581.

» Technical Data

Rated Voltage Uo/U (Um)	600/1000V
Operating Temperatures	flexing: -5℃~+80℃; fixed: -40℃~+90℃
Minimum Bending Radius	flexing: 10×OD; fixed: 5×OD
Flame Retardant	VDE 0482-332-1-2/DIN EN 60332-1-2/IEC 60332-1/VW 1/FT1

Oil Resistant	Yes
Silicone Free	Yes
UV Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
2×0.5	8.3	129
3G0.5	8.6	150
4G0.5	9.4	170
5G0.5	10.1	199
7G0.5	12.1	235
12G0.5	14.7	320
18G0.5	17.3	428
25G0.5	20.6	503
2×0.75	8.7	143
3G0.75	9.0	155
4G0.75	9.9	190
5G0.75	10.8	228
7G0.75	13.0	323
12G0.75	15.8	410
18G0.75	17.9	560
25G0.75	22.8	730
2×1	9.4	150
3G1	9.8	163
4G1	10.8	200
5G1	12.1	239
7G1	14.5	289
12G1	17.4	464
18G1	20.7	628
25G1	24.8	855
2×1.5	10.2	162
3G1.5	10.9	187
4G1.5	12.2	240
5G1.5	13.3	289
7G1.5	16.0	383
12G1.5	19.6	592
18G1.5	23.4	806
25G1.5	28.2	1241
2×2.5	11.5	272
3G2.5	12.2	298
4G2.5	13.4	345
5G2.5	14.9	427
7G2.5	17.9	561
12G2.5	21.9	857

Control Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
18G2.5	26.1	1355
25G2.5	31.9	1995
2×4	14.3	306
3G4	15.1	391
4G4	16.7	527
5G4	18.6	700
7G4	20.0	920
3G6	17.0	629
4G6	18.7	731
5G6	20.7	1105
7G6	23.0	1465
3G10	19.6	1125
4G10	21.9	1345
5G10	24.1	1635
7G10	26.8	2210
3G16	23.5	1395
4G16	26.4	1870
5G16	28.8	2720
7G16	31.9	3213
3G25	28.0	2465
4G25	32.5	2750
5G25	35.7	3490
7G25	39.0	4980

G: with green-yellow earth core

×: without green-yellow earth core

Y UL/CSA 600V 90°C

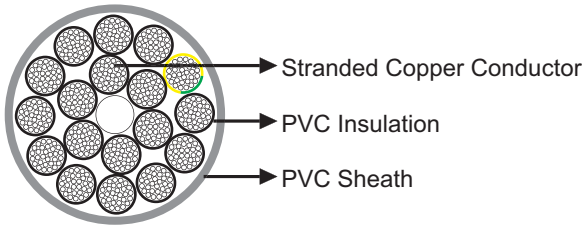
» Application

These flexible control cable rated at 600V are used in machine tools, control systems, connection between control panels and machines, assembly lines and other industrial equipment, suitable for installation in dry, moist or wet environment and moderate flexing applications.

» Standards

UL AWM I/II A/B Style 2587
CSA

» Construction



Conductor: Stranded bare copper, class 5 according to DIN VDE 0295/BS 6360/IEC60228.

Insulation: PVC Type TI3 according to DIN VDE 0281 part 1, class 43 UL-Std. 1581. PVC TI1 can be offered upon request.

Sheath: PVC Type YM5 according to DIN VDE 0207 part 5, class 43 UL-Std. 1581. PVC TM5 can be offered upon request.

» Technical Data

Rated Voltage Uo/U (Um)	600V
Operating Temperatures	flexing: -5℃~+90℃; fixed: -40℃~+90℃
Minimum Bending Radius	flexing: 7.5×OD; fixed: 4×OD
Flame Retardant	VDE 0482-332-1-2/DIN EN 60332-1-2/IEC 60332-1
Oil Resistant	Yes
Silicone Free	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
2×0.5	5.9	49
3G0.5	6.3	58
4G0.5	6.7	69
5G0.5	7.3	84
7G0.5	8.5	123
8G0.5	9.6	140
9G0.5	10.4	177
12G0.5	10.9	192
18G0.5	12.9	256
25G0.5	15.5	358
34G0.5	17.7	487
41G0.5	19.9	580
2×1	6.3	53
3×(G)1	6.7	61
4G1	7.3	74
5G1	7.9	90
7G1	9.2	130
8G1	10.0	144
9G1	11.1	180
12G1	11.8	198
18G1	14.1	274
25G1	17.1	384
34G1	19.3	494
41G1	21.2	508
2×1.5	6.9	73
3G1.5	7.5	94
4G1.5	8.1	117
5G1.5	8.7	140
7G1.5	10.6	186
9G1.5	12.8	244
12G1.5	13.4	319
18G1.5	15.8	451
25G1.5	18.9	625
34G1.5	21.7	840
41G1.5	23.7	1032
2×2.5	8.2	115
3G2.5	8.7	143
4G2.5	10.1	185
5G2.5	10.9	221
7G2.5	13.1	293

Control Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
9G2.5	15.6	429
12G2.5	16.7	563
18G2.5	19.6	854
19G2.5	19.7	914
25G2.5	24.0	1188
3G4	11.2	232
4G4	12.5	298
5G4	13.8	358
7G4	16.3	460
3G6	12.9	360
4G6	14.2	402
5G6	15.9	484
7G6	19.4	630
3G10	16.9	535
4G10	18.5	653
5G10	20.3	786
7G10	22.3	1100
2×16	19.4	640
3G16	20.7	810
4G16	23.2	1045
5G16	25.7	1260
7G16	28.4	1760
3G25	25.0	1180
4G25	28.1	1507
5G25	30.9	1858
7G25	35.5	2830
3G35	28.6	1590
4G35	31.7	2123
5G35	35.2	2612
3G50	31.2	2652
4G50	35.8	3058
5G50	38.7	4093
3G70	39.2	3307
4G70	41.6	4254
5G70	48.4	5661
3G95	42.1	4867
4G95	46.0	5762
5G95	51.2	7208
3G120	47.8	5580
4G120	52.8	7280
5G120	59.0	8692

G: with green-yellow earth core

×: without green-yellow earth core.

YCY UL/CSA 600V 90°C

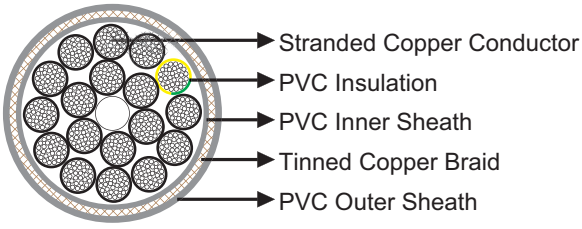
» Application

These flexible control cable rated at 600V are used in machine tools, control systems, connection between control panels and machines, assembly lines and other industrial equipment, suitable for installation in dry, moist or wet environment and moderate flexing applications.

» Standards

UL Style 10012 Style 2587
CSA

» Construction



Conductor: Stranded bare copper, class 5 according to DIN VDE 0295/BS 6360/IEC60228.

Insulation: PVC Type TI3 according to DIN VDE 0281 part 1, class 43 UL-Std. 1581. PVC TI1 can be offered upon request.

Inner Sheath: PVC Type YM5 according to DIN VDE 0207 part 5. PVC TM5 can be offered upon request.

Screen: Tinned copper braid.

Outer Sheath: PVC Type YM5 according to DIN VDE 0207 part 5, class 43 UL-Std. 1581. PVC TM5 can be offered upon request.

» Technical Data

Rated Voltage Uo/U (Um)	600V
Operating Temperatures	flexing: -5℃~+90℃; fixed: -40℃~+90℃
Minimum Bending Radius	flexing: 10×OD; fixed: 5×OD
Flame Retardant	VDE 0482-332-1-2/DIN EN 60332-1-2/IEC 60332-1
Oil Resistant	Yes
Silicone Free	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
2×0.5	7.8	93
3G0.5	8.1	124
4G0.5	8.7	133
5G0.5	9.3	153
7G0.5	10.6	191
9G0.5	12.4	243
12G0.5	13.1	322
18G0.5	15.7	374
25G0.5	18.3	436
34G0.5	20.2	560
41G0.5	22.4	663
2×1	8.2	107
3G1	8.5	130
4G1	9.2	155
5G1	10.1	181
7G1	11.4	209
9G1	13.4	321
12G1	13.9	341
18G1	16.3	473
25G1	19.6	650
34G1	22.6	781
41G1	24.4	892
2×1.5	8.8	136
3G1.5	9.3	165
4G1.5	10.1	192
5G1.5	10.9	224
7G1.5	13.0	273
9G1.5	14.9	340
12G1.5	15.7	461
18G1.5	18.4	674
25G1.5	22.4	950
34G1.5	25.3	1203
41G1.5	27.5	1588
2×2.5	10.4	173
3G2.5	10.9	220
4G2.5	11.9	270
5G2.5	13.3	329
7G2.5	15.7	428
9G2.5	18.2	580

Control Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
12G2.5	19.3	761
18G2.5	23.2	1140
25G2.5	28.5	1551
2×4	12.6	209
3G4	13.2	310
4G4	14.6	456
5G4	15.9	532
7×4	19.1	737
2G6	14.3	318
3G6	15.3	411
4G6	16.7	572
5G6	18.5	732
7G6	22.2	961
3G10	19.2	741
4G10	21.3	988
5G10	23.9	1202
7G10	26.7	1743
3G70	41.4	3647
3G16	24.4	1088
4G16	27.4	1662
5G16	30.8	2021
7G16	33.8	2720
3G25	30.4	1947
4G25	33.5	2591
5G25	40.0	3197
7G25	40.8	4530
3G35	34.0	2701
4G35	37.9	3277
5G35	41.7	4530
3G50	35.0	2870
4G50	40.5	3960
5G50	44.4	4371
3G70	41.4	3647
4G70	46.1	4882
5G70	50.6	5876
3G95	46.2	4751
4G95	50.7	6368
5G95	56.1	7843
3G120	52.0	5899
4G120	57.0	8010
5G120	62.7	9205

G: with green-yellow earth core

×: without green-yellow earth core.

Wind Turbine Tray cable (WTTC)

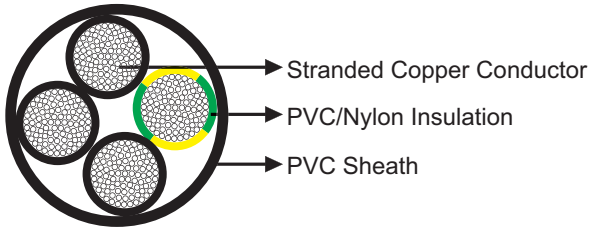
» Application

These cables are intended to be installed in cable trays or raceways within wind turbine generators.

» Standards

UL Type WTTC
UL: TC-ER, PLTC-ER (AWG 18 - AWG 12), ITC-ER (AWG 18 - AWG 12)
UL Type MTW,
UL 1277

» Construction



Conductor: Stranded copper conductor.

Insulation: Special PVC core insulation with transparent nylon skin. XLPE/EPR can be offered upon request.

Screen (optional): Tinned copper braid can be offered upon request.

Sheath: Special PVC. Special XL compound can be offered upon request.

» Technical Data

Rated Voltage Uo/U (Um)	600V (TC), 1000V (AWM), 1000 V (WTTC)
Operating Temperatures	-40℃~+90℃
Minimum Bending Radius	5×OD
Flame Retardant	FT4, IEEE 1202/383
Oil Resistant	Yes
Silicone Free	Yes
UV Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. Of Cores	mm	kg/km
	18AWG	
2	7.0	68
3	7.1	88
4	8.0	98
5	8.6	116
7	9.3	149
9	10.7	186
10	11.6	199
12	11.9	245
15	13.2	292
16	13.3	306
18	14.6	366
19	14.7	384
25	17.0	451
27	17.4	521
34	19.3	625
37	19.8	684
41	20.7	744
50	23.5	933
61	24.9	1095
	16AWG	
2	7.5	80
3	7.8	86
4	8.5	115
5	9.3	126
6	10.0	164
7	10.1	171
8	10.9	201
9	11.7	237
10	12.4	259
12	12.9	301
14	14.5	365
15	15.0	379
16	15.2	405
18	15.9	443
19	16.0	458
20	16.5	491
25	18.6	564

Control Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. Of Cores	mm	kg/km
27	19.0	629
30	19.6	701
34	20.5	775
40	22.9	946
41	23.4	967
50	25.1	1137
61	27.2	1345
14AWG		
2	8.6	100
3	8.9	112
4	9.8	141
5	10.6	152
6	11.6	205
9	13.5	312
10	15.5	378
12	15.9	434
16	17.6	550
18	18.3	616
19	18.5	634
25	21.6	817
12AWG		
2	9.5	132
3	10.0	177
4	10.9	201
5	11.9	274
6	13.0	315
7	13.1	353
9	15.9	476
12	17.8	613
16	19.8	783
19	20.8	918
20	21.9	961
25	25.3	1236
10AWG		
2	11.9	213
3	12.6	283
4	14.7	387
5	16.0	473
7	17.4	607
9	20.4	771
12	23.9	1061

Control Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. Of Cores	mm	kg/km
19	27.9	1528
	8AWG	
4	19.7	662
5	21.7	784
	6AWG	
3	19.5	701
4	21.9	908
5	24.0	1149
	4AWG	
3	24.3	1060
4	27.1	1366
5	29.3	1631
	2AWG	
3	27.9	1480
4	31.4	1922
5	34.0	2363
	1AWG	
4	34.8	2397
	1/0MCM	
4	37.9	2938
	2/0MCM	
4	41.3	3559
	3/0MCM	
4	48.6	4181
	4/0MCM	
4	51.2	5747
	250MCM	
4	55.0	7591
	350MCM	
4	63.5	8299
	500MCM	
4	73.7	10549

LiYCY Data Cable

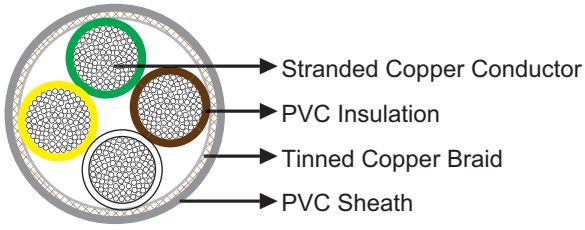
» Application

These screened cables are designed for special purpose of data transmission in wind turbines, suitable for in dry, moist and wet rooms.

» Standards

DIN VDE 0245, 0812

» Construction



Conductor: Stranded bare copper, class 5 according to DIN VDE 0295/IEC60228.
Insulation: PVC type TI2.
Drain Wire: Tinned copper conductor.
Screen: Tinned copper wire braid.
Sheath: PVC type TM2.

» Technical Data

Rated Voltage Uo/U (Um)	350V (<0.25 mm²); 500V (≥0.25 mm²)
Operating Temperatures	flexing: -5℃~+80℃; fixed: -40℃~+80℃
Minimum Bending Radius	flexing: 10×OD; fixed: 5×OD
Flame Retardant	VDE 0482-332-1-2/DIN EN 60332-1-2/IEC 60332-1
Oil Resistant	Yes
Silicone Free	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×0.14	2.5	16
2×0.14	3.7	20
3×0.14	3.9	27
4×0.14	4.1	32
5×0.14	4.4	37
6×0.14	4.9	42
7×0.14	4.9	48
8×0.14	5.2	55
10×0.14	6.2	65
12×0.14	6.2	77
14×0.14	6.6	79
16×0.14	6.9	89
18×0.14	7.2	103
20×0.14	7.7	116
21×0.14	7.9	120
24×0.14	8.3	131
25×0.14	8.5	136
27×0.14	8.5	142
30×0.14	9.3	157
32×0.14	9.6	163
36×0.14	9.9	182
40×0.14	10.2	209
42×0.14	10.5	217
44×0.14	11.2	226
48×0.14	11.3	240
52×0.14	11.8	270
56×0.14	12.1	320
61×0.14	12.4	370
80×0.14	14.1	510
100×0.14	15.5	580
1×0.25	2.9	27
2×0.25	4.2	31
3×0.25	4.3	36
4×0.25	4.7	40
5×0.25	5.3	51
6×0.25	5.7	58
7×0.25	5.7	64
8×0.25	6.6	82
10×0.25	7.2	85
12×0.25	7.3	90
14×0.25	7.9	110
16×0.25	8.3	142

Data Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
18×0.25	8.9	144
19×0.25	9.1	146
20×0.25	9.4	150
21×0.25	9.4	152
24×0.25	10.0	163
25×0.25	10.1	169
27×0.25	10.1	176
30×0.25	11.1	189
32×0.25	11.1	204
36×0.25	11.9	219
37×0.25	11.9	230
40×0.25	12.4	247
42×0.25	12.8	269
44×0.25	12.8	292
48×0.25	13.5	317
52×0.25	14.1	330
56×0.25	14.5	343
61×0.25	14.9	365
80×0.25	17.1	480
100×0.25	19.6	605
1×0.34	3.2	24
2×0.34	4.8	30
3×0.34	5.2	37
4×0.34	5.5	48
5×0.34	6.0	54
6×0.34	6.7	61
7×0.34	6.7	67
8×0.34	7.8	81
10×0.34	8.4	103
12×0.34	8.5	110
14×0.34	9.0	153
16×0.34	9.4	159
18×0.34	9.8	172
19×0.34	9.9	181
20×0.34	10.1	191
21×0.34	10.7	199
24×0.34	10.7	229
25×0.34	12.0	241
27×0.34	12.1	258
30×0.34	12.1	290
32×0.34	12.6	305
36×0.34	12.6	330
37×0.34	13.7	348
40×0.34	13.7	364
42×0.34	14.6	389
44×0.34	14.6	414

Data Cable

Construction No. of cores×mm²	Nominal Overall Diameter mm	Nominal Weight kg/km
48×0.34	14.6	420
52×0.34	14.6	450
56×0.34	16.2	480
61×0.34	16.6	520
80×0.34	17.1	580
100×0.34	19.4	694
1×0.5	3.4	40
2×0.5	5.3	45
3×0.5	5.6	55
4×0.5	6.0	61
5×0.5	6.7	76
6×0.5	7.3	89
7×0.5	7.3	98
8×0.5	8.5	117
10×0.5	9.2	135
12×0.5	9.5	157
14×0.5	10.0	190
16×0.5	10.6	210
18×0.5	10.7	217
19×0.5	11.2	246
20×0.5	11.9	275
24×0.5	12.6	337
25×0.5	12.7	351
27×0.5	12.7	373
30×0.5	14.0	396
32×0.5	14.5	431
34×0.5	15.3	440
36×0.5	15.3	445
37×0.5	16.3	458
40×0.5	16.3	470
50×0.5	18.0	570
61×0.5	19.1	650
80×0.5	21.8	780
100×0.5	24.3	990
1×0.75	3.8	41
2×0.75	6.0	59
3×0.75	6.2	66
4×0.75	6.7	77
5×0.75	7.3	93
6×0.75	8.1	113
7×0.75	8.2	130
8×0.75	9.0	145
10×0.75	10.3	180
12×0.75	10.4	202
14×0.75	11.2	225
16×0.75	11.8	275

Data Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
18×0.75	12.6	292
19×0.75	12.6	322
20×0.75	13.1	362
24×0.75	14.1	415
25×0.75	14.3	435
27×0.75	14.3	467
30×0.75	15.7	486
32×0.75	16.3	530
34×0.75	17.1	570
36×0.75	17.1	600
37×0.75	17.6	640
40×0.75	17.8	680
42×0.75	18.4	714
61×0.75	21.5	900
80×0.75	24.5	1200
100×0.75	27.2	1440
2×1	6.4	65
3×1	6.7	80
4×1	7.2	98
5×1	8.0	127
6×1	8.6	144
7×1	8.6	158
8×1	10.0	197
10×1	11.2	232
12×1	11.4	260
14×1	12.0	302
16×1	12.8	346
19×1	13.4	412
24×1	15.2	493
27×1	15.4	562
37×1	18.9	790
2×1.5	7.3	88
3×1.5	7.6	100
4×1.5	8.2	126
5×1.5	9.1	160
6×1.5	9.9	192
7×1.5	9.9	208
8×1.5	10.8	244
10×1.5	13.2	315
12×1.5	13.2	338
14×1.5	13.9	383
16×1.5	14.8	424
19×1.5	15.6	506
24×1.5	17.6	690
27×1.5	17.9	781
37×1.5	21.9	941

LiYCY Twisted Pair Data Cable

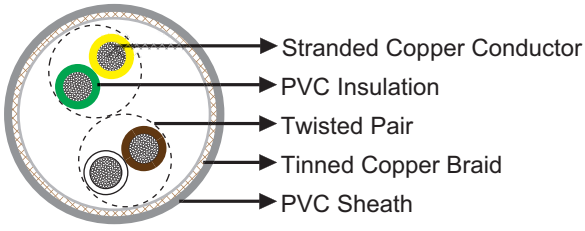
» Application

These screened cables are designed for special purpose of data transmission in wind turbines, suitable for in dry, moist and wet rooms.

» Standards

DIN VDE 0812, 0814

» Construction



Conductor: Stranded bare copper, class 5 according to DIN VDE 0295/IEC60228..
Insulation: PVC Type YI2.
Cable Element: Twisted pairs.
Screen: Tinned copper wire braid.
Sheath: PVC Type YM2.

» Technical Data

Rated Voltage Uo/U (Um)	350V
Operating Temperatures	flexing: -5℃~+80℃; fixed: -30℃~+80℃
Minimum Bending Radius	flexing: 10×OD; fixed: 5×OD
Flame Retardant	VDE 0482-332-1-2/DIN EN 60332-1-2/IEC 60332-1
Oil Resistant	Yes
Silicone Free	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
1×2×0.14	3.5	34
2×2×0.14	5.6	40
3×2×0.14	5.6	49
4×2×0.14	6.0	55
5×2×0.14	6.7	66
6×2×0.14	7.2	86
7×2×0.14	7.2	91
8×2×0.14	8.4	97
10×2×0.14	9.1	109
12×2×0.14	9.2	141
14×2×0.14	9.9	148
15×2×0.14	10.4	152
16×2×0.14	10.4	155
18×2×0.14	11.0	171
20×2×0.14	11.5	183
22×2×0.14	12.3	205
24×2×0.14	12.3	228
25×2×0.14	12.5	239
26×2×0.14	12.5	245
27×2×0.14	12.5	251
28×2×0.14	13.7	258
30×2×0.14	13.7	270
32×2×0.14	14.2	284
34×2×0.14	14.7	300
36×2×0.14	14.9	316
38×2×0.14	15.6	350
40×2×0.14	16.1	370
44×2×0.14	16.8	390
46×2×0.14	17.0	430
50×2×0.14	17.7	440
52×2×0.14	17.7	460
55×2×0.14	18.2	480
1×2×0.25	4.1	45
2×2×0.25	6.3	53
3×2×0.25	6.6	65
4×2×0.25	7.0	80
5×2×0.25	7.8	98
6×2×0.25	8.6	114
7×2×0.25	8.6	121

Data Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
8×2×0.25	9.8	129
10×2×0.25	11.0	157
12×2×0.25	11.2	189
14×2×0.25	12.2	213
15×2×0.25	12.8	225
16×2×0.25	12.8	237
18×2×0.25	13.5	248
20×2×0.25	14.1	275
22×2×0.25	14.9	303
24×2×0.25	15.3	330
25×2×0.25	15.5	343
26×2×0.25	15.5	345
27×2×0.25	15.5	350
28×2×0.25	17.0	360
30×2×0.25	17.0	375
32×2×0.25	17.6	400
34×2×0.25	18.2	410
36×2×0.25	18.2	420
38×2×0.25	19.0	450
40×2×0.25	19.7	485
44×2×0.25	20.5	500
46×2×0.25	20.7	540
50×2×0.25	21.5	550
52×2×0.25	21.5	580
55×2×0.25	22.1	630
1×2×0.34	5.4	58
2×2×0.34	7.0	65
3×2×0.34	7.3	78
4×2×0.34	8.1	90
5×2×0.34	8.8	110
6×2×0.34	9.8	130
7×2×0.34	9.8	145
8×2×0.34	11.2	150
9×2×0.34	12.6	170
10×2×0.34	12.6	190
12×2×0.34	12.8	220
14×2×0.34	13.3	245
16×2×0.34	14.3	250
18×2×0.34	15.2	275
21×2×0.34	15.9	300
25×2×0.34	17.5	400
27×2×0.34	17.5	410
30×2×0.34	19.1	440

Data Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
34×2×0.34	20.8	510
37×2×0.34	21.5	550
40×2×0.34	22.4	590
44×2×0.34	23.6	600
50×2×0.34	24.8	650
52×2×0.34	24.8	680
56×2×0.34	25.4	750
61×2×0.34	26.2	840
1×2×0.5	4.9	60
2×2×0.5	7.8	89
3×2×0.5	8.2	104
4×2×0.5	9.1	126
5×2×0.5	9.9	148
6×2×0.5	10.7	171
8×2×0.5	12.8	290
10×2×0.5	14.0	320
12×2×0.5	14.3	361
16×2×0.5	16.1	421
20×2×0.5	17.2	580
25×2×0.5	17.9	740
1×2×0.75	5.2	71
2×2×0.75	8.4	105
3×2×0.75	8.9	128
4×2×0.75	9.8	156
5×2×0.75	10.8	189
6×2×0.75	12.1	216
8×2×0.75	13.4	309
10×2×0.75	15.5	355
12×2×0.75	15.8	405
16×2×0.75	18.0	565
20×2×0.75	19.2	700
25×2×0.75	21.8	950
1×2×1	5.3	75
2×2×1	8.9	116
3×2×1	9.4	140
4×2×1	10.4	191
1×2×1.5	5.8	84
2×2×1.5	10.2	122
3×2×1.5	10.8	194
4×2×1.5	12.0	240

LiHH Multicore Halogen-free Data Cable

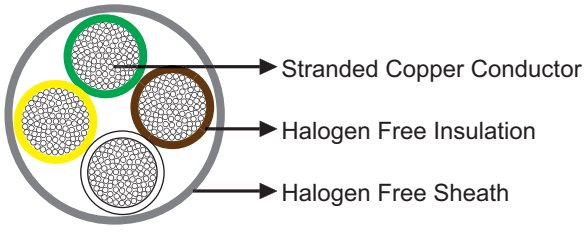
» Application

These halogen-free cables are designed for special purpose of data transmission in wind turbines, suitable for indoor and outdoor installation.

» Standards

VDE 0812

» Construction



Conductor: Stranded bare copper.
Insulation: Halogen free compound.
Sheath: Halogen free compound.

» Technical Data

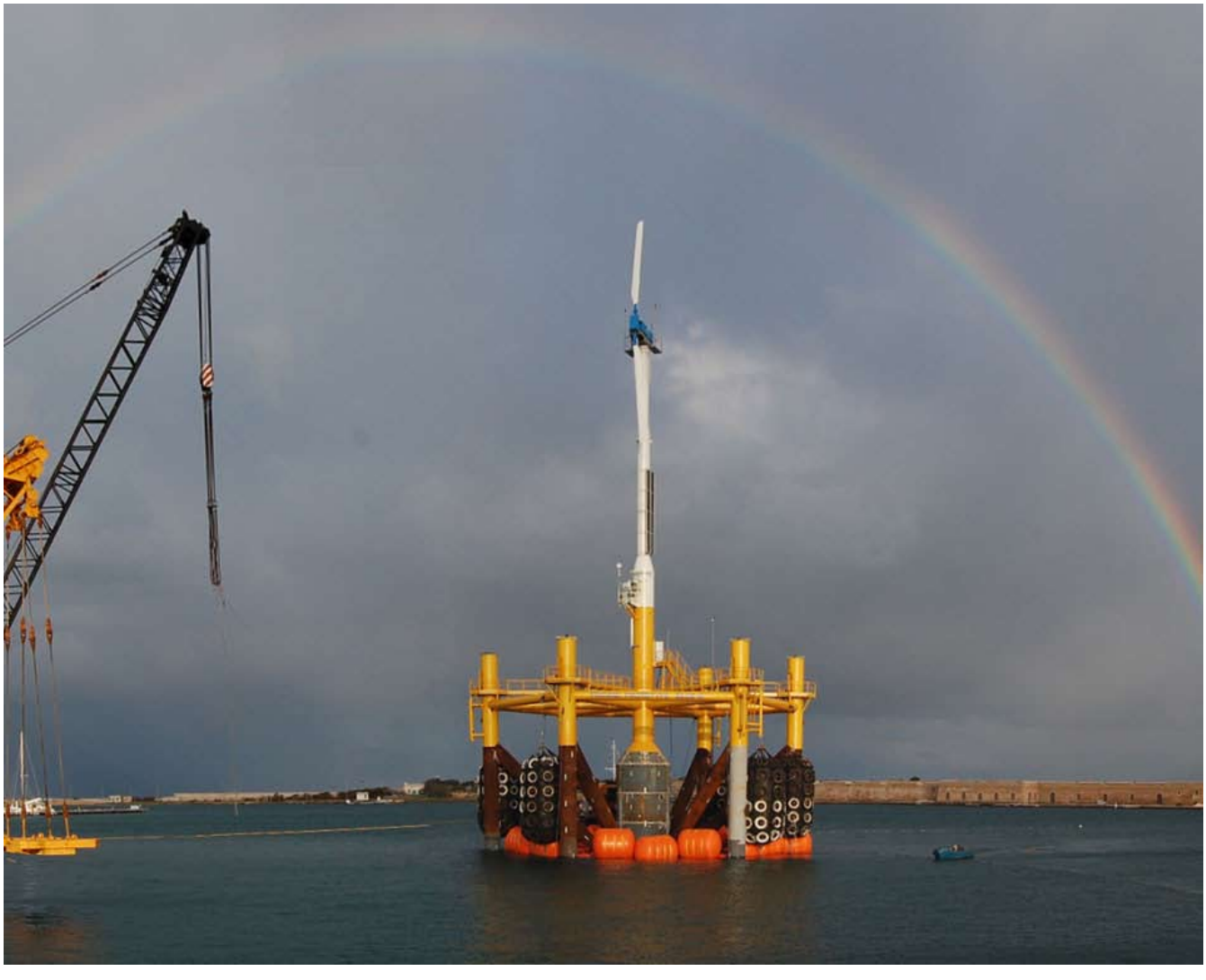
Rated Voltage Uo/U (Um)	250V
Operating Temperatures	flexing: -5℃~+70℃; fixed: -40℃~+70℃
Minimum Bending Radius	flexing: 10×OD; fixed: 7.5×OD
Flame Retardant	DIN VDE 0482 part 265-2-1/EN 50265-2-1/IEC 60332-3
Gases Corrosively	VDE 0482 part 267/DIN EN 50267-2-2/IEC 60754
Halogen Free	VDE 0482 part 267/DIN EN 50267-2-1/IEC 60754
Oil Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
2×0.14	3.4	12
3×0.14	3.6	15
4×0.14	3.8	17
5×0.14	4.1	22
6×0.14	4.4	25
7×0.14	4.4	26
8×0.14	5.1	29
10×0.14	5.4	35
12×0.14	5.8	43
20×0.14	7.2	71
25×0.14	8.0	91
2×0.25	4.0	22
3×0.25	4.2	25
4×0.25	4.5	28
5×0.25	4.9	34
6×0.25	5.3	39
7×0.25	5.3	42
8×0.25	6.4	50
10×0.25	7.0	60
12×0.25	7.2	67
16×0.25	7.9	85
2×0.34	4.4	28
3×0.34	4.6	30
4×0.34	5.0	40
5×0.34	5.7	44
7×0.34	6.1	60
10×0.34	7.8	80
12×0.34	8.0	97
3×2×0.34	7.4	49
4×2×0.34	8.1	60
2×0.5	4.9	31
3×0.5	5.2	37
4×0.5	5.8	45
5×0.5	6.3	58
7×0.5	7.0	72
12×0.5	9.1	117
21×0.5	11.5	176
2×0.75	5.3	41

Data Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
4×0.75	6.3	60
5×0.75	7.1	70
7×0.75	7.7	85
12×0.75	10.4	165
3×1	6.1	57
4×1	6.6	67
3×1.5	7.4	72
4×1.5	8.0	87
5G1.5	8.4	118
7G1.5	9.1	150
5G2.5	10.5	198



LiHCH Multicore Halogen-free Data Cable

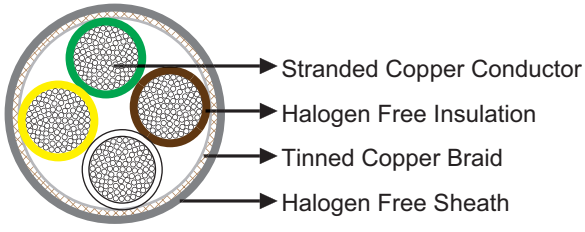
» Application

These screened, halogen-free cables are designed for special purpose of data transmission in wind turbines, suitable for indoor and outdoor installation.

» Standards

VDE 0812

» Construction



Conductor: Stranded bare copper.
Insulation: Halogen free compound.
Screen: Tinned copper wire braid.
Sheath: Halogen free compound.

» Technical Data

Rated Voltage Uo/U (Um)	250V
Operating Temperatures	flexing: -5℃~+70℃; fixed: -40℃~+70℃
Minimum Bending Radius	flexing: 10×OD; fixed: 7.5×OD
Flame Retardant	DIN VDE 0482 part 265-2-1/EN 50265-2-1/IEC 60332-1
Halogen Free	VDE 0482 part 267/DIN EN 50267-2-1/IEC 60754
Gases Corrosively	VDE 0482 part 267/DIN EN 50267-2-2/IEC 60754
Oil Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
2×0.14	4.1	22
3×0.14	4.3	25
4×0.14	4.5	29
6×0.14	5.1	35
7×0.14	5.1	38
8×0.14	6.0	41
12×0.14	6.5	78
16×0.14	7.2	90
25×0.14	8.7	149
2×0.25	4.7	25
3×0.25	4.9	30
4×0.25	5.2	35
6×0.25	6.2	49
7×0.25	6.2	52
8×0.25	7.3	58
10×0.25	7.7	81
25×0.25	10.9	172
2×0.34	5.1	30
3×0.34	5.3	35
4×0.34	5.9	42
5×0.34	6.4	53
7×0.34	7.0	73
8×0.34	8.0	84
10×0.34	8.5	101
16×0.34	9.6	160
25×0.34	12.1	259
2×0.5	5.8	38
3×0.5	6.1	47
4×0.5	6.5	67
5×0.5	7.2	76
6×0.5	7.8	84
7×0.5	7.8	91
8×0.5	8.9	131
10×0.5	9.5	135
12×0.5	9.8	177
18×0.5	11.7	239
25×0.5	13.9	352
2×0.75	6.2	45

Data Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
3×0.75	6.5	69
4×0.75	7.2	80
5×0.75	7.8	99
7×0.75	8.3	120
12G0.75	10.7	168
18G0.75	12.4	237
2×1	6.5	72
3×1	7.0	90
4×1	7.5	109
7×1	8.8	171
10×1	11.2	184
12G1	11.3	205
16×1	12.5	250
19G1	13.1	291
2×1.5	7.7	90
3×1.5	8.1	115
5×1.5	9.5	176
12G1.5	13.0	271
18G1.5	15.5	400
15G2.5	19.8	587

LiHCH Twisted Pair Halogen-free Data Cable

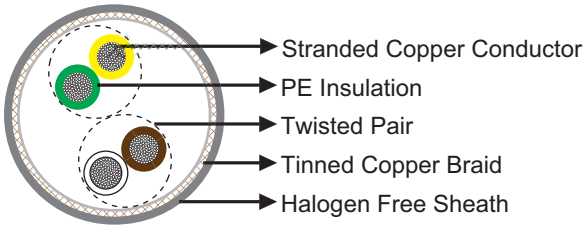
» Application

These screened flexible cables are designed for special purpose of data transmission in wind turbines, suitable for indoor and outdoor installation.

» Standards

DIN VDE 0812

» Construction



Conductor: Stranded bare copper.
Insulation: PE compound type 2YJ1.
Cable Element: Twisted pairs.
Screen: Tinned copper wire braid.
Sheath: Halogen free compound type HM2.

» Technical Data

Rated Voltage Uo/U (Um)	350V (≤0.14 mm²); 500V (>0.14 mm²)
Operating Temperatures	flexing: -5℃~+70℃; fixed: -40℃~+70℃
Minimum Bending Radius	flexing: 10×OD; fixed: 7.5×OD
Flame Retardant	DIN VDE 0482 part 265-2-1/EN 50265-2-1/IEC 60332-1
Halogen Free	VDE 0482 part 267/DIN EN 50267-2-1/IEC 60754
Gases Corrosively	VDE 0482 part 267/DIN EN 50267-2-2/IEC 60754

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
2×2×0.14	5.2	37
3×2×0.14	6.2	47
4×2×0.14	6.4	66
5×2×0.14	7.2	76
6×2×0.14	8.2	87
7×2×0.14	8.7	94
10×2×0.14	9.9	119
12×2×0.14	10.0	135
15×2×0.14	11.3	157
18×2×0.14	12.5	190
2×2×0.25	6.1	44
3×2×0.25	7.0	66
4×2×0.25	7.5	81
5×2×0.25	8.2	98
6×2×0.25	9.3	116
7×2×0.25	9.4	120
10×2×0.25	10.6	153
12×2×0.25	11.4	175
15×2×0.25	12.9	213
18×2×0.25	13.7	248
2×2×0.34	7.3	68
3×2×0.34	8.6	92
4×2×0.34	9.6	110
5×2×0.34	10.1	128
6×2×0.34	10.6	147
7×2×0.34	11.0	154
10×2×0.34	13.1	209
12×2×0.34	14.4	245
15×2×0.34	15.2	279
18×2×0.34	16.9	363
2×2×0.5	7.6	76
3×2×0.5	9.0	107
4×2×0.5	10.3	134
5×2×0.5	10.8	150
6×2×0.5	11.4	176
7×2×0.5	11.8	185
10×2×0.5	14.3	275
12×2×0.5	15.1	330

Data Cable

Construction No. of cores×mm²	Nominal Overall Diameter mm	Nominal Weight kg/km
15×2×0.5	17.0	380
18×2×0.5	18.3	450
2×2×0.75	9.0	105
3×2×0.75	10.1	137
4×2×0.75	11.5	166
5×2×0.75	12.4	200
6×2×0.75	12.5	236
7×2×0.75	13.6	255
10×2×0.75	15.7	363
12×2×0.75	17.8	434
15×2×0.75	19.3	500
18×2×0.75	20.6	580

LiYY Data Cable UL

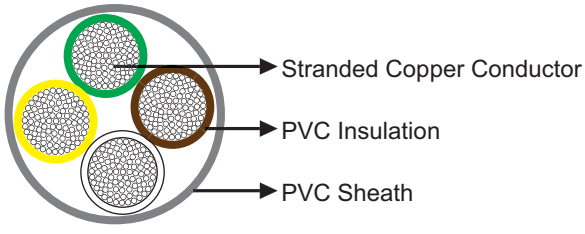
» Application

These data cables are designed for use as measuring and control cables in tool making machinery conveyor system and production lines, in industrial plants and in air conditioning as well as in the steel producing industries.

» Standards

UL Style 2464
UL Style 1061/1729
UL Style 1007/1569

» Construction



Conductor: Stranded tinned copper, according to ASTM-B.
Insulation: PVC class 43.
Sheath: PVC class 43.

» Technical Data

Rated Voltage Uo/U (Um)	300V
Operating Temperatures	flexing: -10℃~+80℃; fixed: -20℃~+80℃
Minimum Bending Radius	flexing: 15×OD; fixed: 6×OD
Flame Retardant	UL VW-1/CSA FT-1
Oil Resistant	Yes
Silicone Free	Yes

» Dimensions and Weight

Construction No. of cores×mm²	Nominal Overall Diameter mm	Nominal Weight kg/km
26AWG		
2×0.14	3.6	13
3×0.14	3.7	15
4×0.14	4.0	18
6×0.14	4.6	25
10×0.14	5.6	38
12×0.14	5.8	46
16×0.14	6.3	56
18×0.14	6.6	62
24×0.14	7.5	82
27×0.14	7.8	97
30×0.14	8.1	110
24AWG		
2×0.23	3.8	16
3×0.23	4.0	19
4×0.23	4.2	23
6×0.23	4.9	32
10×0.23	6.0	55
12×0.23	6.1	60
16×0.23	6.7	75
18×0.23	7.1	82
24×0.23	8.2	116
27×0.23	8.5	140
30×0.23	8.8	150
22AWG		
2×0.34	4.2	25
3×0.34	4.3	30
4×0.34	4.6	45
6×0.34	5.5	60
10×0.34	6.8	80
12×0.34	7.0	105
16×0.34	7.8	130
18×0.34	8.3	140
24×0.34	9.6	190
27×0.34	10.0	207
30×0.34	10.5	225
20AWG		
2×0.56	4.6	30

Data Cable

Construction No. of cores×mm²	Nominal Overall Diameter mm	Nominal Weight kg/km
3×0.56	4.8	33
4×0.56	5.2	41
6×0.56	6.1	65
10×0.56	7.6	102
12×0.56	8.0	120
16×0.56	8.8	152
18×0.56	9.4	168
24×0.56	11.0	224
27×0.56	11.3	260
30×0.56	11.8	300
18AWG		
2×0.82	6.1	50
3×0.82	6.4	62
4×0.82	6.9	72
6×0.82	8.1	100
10×0.82	10.4	180
12×0.82	10.9	182
16×0.82	12.2	240
18×0.82	13.0	270
24×0.82	15.2	370
27×0.82	15.8	400
30×0.82	16.3	470
16AWG		
2×1.3	6.9	70
3×1.3	7.3	90
4×1.3	7.9	110
6×1.3	9.6	160
10×1.3	12.4	250
12×1.3	12.8	300
16×1.3	14.6	400
18×1.3	15.5	450
24×1.3	18.1	650
27×1.3	18.7	680
30×1.3	19.5	750

LiYCY Data Cable UL

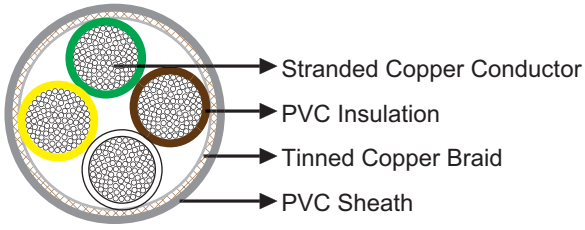
» Application

These screened data cables are suitable for use as flexible connector cables in the fields of electronics, control and command technology as well as for measuring, signal and impulse transfer.

» Standards

UL Style 2464
UL Style 1061/1729
UL Style 1007/1569

» Construction



Conductor: Stranded tinned copper, according to ASTM-B.
Insulation: PVC class 43.
Drain Wire: Tinned copper conductor.
Screen: Tinned copper wire braid.
Sheath: PVC class 43.

» Technical Data

Rated Voltage Uo/U (Um)	300V
Operating Temperatures	flexing: -10℃~+80℃; fixed: -20℃~+80℃
Minimum Bending Radius	flexing: 15×OD; fixed: 6×OD
Flame Retardant	UL VW-1/CSA FT-1
Oil Resistant	Yes
Silicone Free	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
26AWG		
2×0.14	4.1	20
3×0.14	4.3	25
4×0.14	4.5	28
6×0.14	5.1	30
10×0.14	6.1	50
12×0.14	6.3	53
16×0.14	6.8	60
18×0.14	7.0	70
24×0.14	8.1	100
27×0.14	8.3	105
30×0.14	8.6	110
24AWG		
2×0.23	4.3	20
3×0.23	4.5	25
4×0.23	4.8	30
6×0.23	5.4	40
10×0.23	6.5	60
12×0.23	6.7	70
16×0.23	7.4	90
18×0.23	7.7	123
24×0.23	8.8	131
27×0.23	9.0	160
30×0.23	9.3	170
22AWG		
2×0.34	4.7	40
3×0.34	4.9	50
4×0.34	5.5	60
6×0.34	6.0	80
10×0.34	7.4	130
12×0.34	7.6	140
16×0.34	8.3	160
18×0.34	8.7	170
24×0.34	10.0	220
27×0.34	10.2	250
30×0.34	10.5	280
20AWG		
2×0.56	5.1	50

Data Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
3×0.56	5.3	55
4×0.56	5.6	61
6×0.56	6.5	90
10×0.56	8.2	133
12×0.56	8.4	151
16×0.56	9.3	190
18×0.56	9.7	216
24×0.56	11.3	339
27×0.56	11.5	374
30×0.56	12.3	397
18AWG		
2×0.82	6.5	60
3×0.82	6.8	75
4×0.82	7.4	90
6×0.82	8.8	125
10×0.82	10.9	180
12×0.82	11.2	220
16×0.82	12.9	290
18×0.82	13.5	300
24×0.82	15.6	450
27×0.82	15.9	470
30×0.82	16.6	490
16AWG		
2×1.3	7.0	90
3×1.3	7.4	160
4×1.3	8.1	200
6×1.3	9.5	290
10×1.3	12.4	450
12×1.3	12.8	600
16×1.3	14.0	650
18×1.3	14.8	680
24×1.3	17.2	900
27×1.3	18.0	990
30×1.3	18.7	1050

LiYY Twisted Pair Data Cable UL

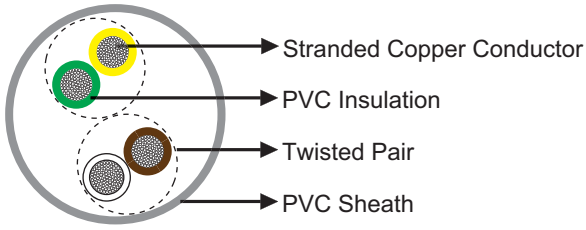
» Application

These twisted pair control cables are suitable for use in tool making machinery conveyor system and production lines, in industrial plants and in air conditioning as well as in the steel producing industries.

» Standards

UL Style 2464
UL Style 1061/1729

» Construction



Conductor: Stranded tinned copper, according to ASTM-B.
Insulation: PVC class 43.
Cable Element: Twisted pairs.
Sheath: PVC class 43.

» Technical Data

Rated Voltage Uo/U (Um)	300V
Operating Temperatures	flexing: -10℃~+80℃; fixed: -20℃~+80℃
Minimum Bending Radius	flexing: 15×OD; fixed: 6×OD
Flame Retardant	UL VW-1/CSA FT-1
Oil Resistant	Yes
Silicone Free	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
26AWG		
1×2×0.14	3.6	20
2×2×0.14	5.1	24
3×2×0.14	5.3	30
4×2×0.14	5.8	38
5×2×0.14	6.2	44
6×2×0.14	6.8	51
7×2×0.14	6.8	57
8×2×0.14	7.3	64
10×2×0.14	7.4	76
12×2×0.14	9.1	93
14×2×0.14	9.8	103
15×2×0.14	10.6	109
16×2×0.14	10.6	112
18×2×0.14	11.1	119
20×2×0.14	11.9	130
22×2×0.14	12.4	150
24×2×0.14	13.1	169
25×2×0.14	13.4	178
24AWG		
1×2×0.23	3.8	32
2×2×0.23	4.0	36
3×2×0.23	5.7	48
4×2×0.23	6.0	56
5×2×0.23	6.6	71
6×2×0.23	7.2	80
7×2×0.23	7.2	89
8×2×0.23	7.8	98
10×2×0.23	9.2	111
12×2×0.23	9.7	135
14×2×0.23	10.2	160
15×2×0.23	10.9	171
16×2×0.23	10.9	185
18×2×0.23	11.5	209
20×2×0.23	12.2	230
22×2×0.23	13.0	248
24×2×0.23	13.7	279
25×2×0.23	14.2	292

Data Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
22AWG		
1×2×0.34	4.2	38
2×2×0.34	5.9	44
3×2×0.34	6.3	60
4×2×0.34	7.0	79
5×2×0.34	7.6	92
6×2×0.34	8.2	119
7×2×0.34	8.2	128
8×2×0.34	9.0	139
10×2×0.34	10.7	171
12×2×0.34	11.3	194
14×2×0.34	12.1	222
15×2×0.34	12.7	231
16×2×0.34	12.7	240
18×2×0.34	13.6	264
20×2×0.34	14.4	291
22×2×0.34	15.1	300
24×2×0.34	16.2	359
25×2×0.34	16.7	381
20AWG		
1×2×0.56	4.6	60
2×2×0.56	6.5	80
3×2×0.56	7.1	94
4×2×0.56	7.8	104
5×2×0.56	8.6	130
6×2×0.56	9.6	151
7×2×0.56	9.6	174
8×2×0.56	12.1	262
10×2×0.56	12.5	298
12×2×0.56	13.1	302
14×2×0.56	13.8	327
15×2×0.56	14.7	370
16×2×0.56	14.7	402
18×2×0.56	15.7	480
20×2×0.56	16.7	551
22×2×0.56	17.2	621
24×2×0.56	18.6	703
25×2×0.56	19.2	721

LiYCY Twisted Pair Data Cable UL

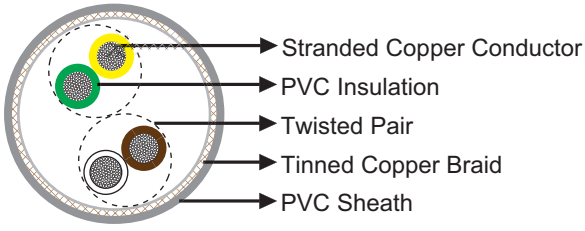
» Application

These twisted pair control cables are suitable for use in tool making machinery conveyor system and production lines, in industrial plants and in air conditioning as well as in the steel producing industries.

» Standards

UL Style 2464
UL Style 1061/1729

» Construction



Conductor: Stranded tinned copper, according to ASTM-B.
Insulation: PVC class 43.
Cable Element: Twisted pairs.
Drain Wire: Tinned copper conductor.
Screen: Tinned copper wire braid.
Sheath: PVC class 43.

» Technical Data

Rated Voltage Uo/U (Um)	300V
Operating Temperatures	flexing: -10℃~+80℃; fixed: -20℃~+80℃
Minimum Bending Radius	flexing: 20×OD; fixed: 10×OD
Flame Retardant	UL VW-1/CSA FT-1
Oil Resistant	Yes
Silicone Free	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
26AWG		
1×2×0.14	4.0	32
2×2×0.14	5.6	39
3×2×0.14	5.8	47
4×2×0.14	6.3	55
5×2×0.14	6.7	68
6×2×0.14	7.3	86
7×2×0.14	7.3	92
8×2×0.14	7.8	97
10×2×0.14	9.1	111
12×2×0.14	9.8	141
14×2×0.14	10.5	150
15×2×0.14	11.1	154
16×2×0.14	11.1	155
18×2×0.14	11.8	170
20×2×0.14	12.4	183
22×2×0.14	13.1	207
24×2×0.14	13.6	228
25×2×0.14	15.1	239
24AWG		
1×2×0.23	4.2	46
2×2×0.23	5.9	53
3×2×0.23	6.2	65
4×2×0.23	6.7	79
5×2×0.23	7.2	98
6×2×0.23	7.7	114
7×2×0.23	7.7	121
8×2×0.23	8.4	129
10×2×0.23	9.9	152
12×2×0.23	10.2	189
14×2×0.23	10.9	213
15×2×0.23	11.4	225
16×2×0.23	11.4	227
18×2×0.23	12.2	238
20×2×0.23	12.7	270
22×2×0.23	13.5	300
24×2×0.23	14.5	321
25×2×0.23	14.8	340

Data Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
22AWG		
1×2×0.34	4.6	58
2×2×0.34	6.4	65
3×2×0.34	6.9	78
4×2×0.34	7.5	88
5×2×0.34	8.1	110
6×2×0.34	8.8	126
7×2×0.34	8.8	140
8×2×0.34	9.7	148
10×2×0.34	11.5	184
12×2×0.34	12.0	210
14×2×0.34	12.6	241
15×2×0.34	13.4	245
16×2×0.34	13.4	251
18×2×0.34	14.4	275
20×2×0.34	15.0	300
22×2×0.34	15.9	320
24×2×0.34	17.0	371
25×2×0.34	17.3	402
20AWG		
1×2×0.56	5.0	70
2×2×0.56	7.0	89
3×2×0.56	7.6	102
4×2×0.56	8.3	119
5×2×0.56	9.1	140
6×2×0.56	10.1	162
7×2×0.56	10.1	198
8×2×0.56	12.7	272
10×2×0.56	13.2	307
12×2×0.56	13.6	318
14×2×0.56	14.4	342
15×2×0.56	15.5	381
16×2×0.56	15.5	417
18×2×0.56	16.3	494
20×2×0.56	17.1	570
22×2×0.56	18.0	643
24×2×0.56	19.4	724
25×2×0.56	19.8	740

PUR Sheathed, Halogen Free Data Cable

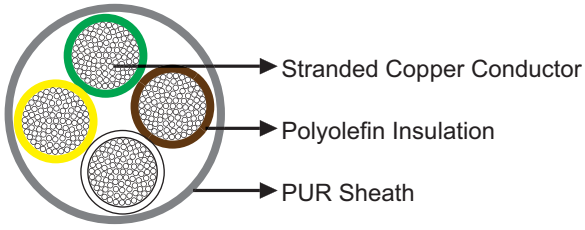
» Application

These halogen free cables are used as drag chain cables for frequent and quick lifting and bending stresses in machine engineering and construction, in robot technology and on permanently moving machine components.

» Standards

UL AWM Style 20233
CSA AWM I/II A/B

» Construction



Conductor: Stranded bare copper, class 6 according to VDE 0295/BS 6360.
Insulation: Polyolefin.
Sheath: Full polyurethane sheath TMPU.

» Technical Data

Rated Voltage Uo/U (Um)	300V
Operating Temperatures	flexing: -40℃~+80℃; fixed: -50℃~+80℃
Minimum Bending Radius	flexing: 5×OD; fixed: 3×OD
Flame Retardant	VDE 0482-332-1-2/DIN EN 60332-1-2/IEC 60332-1
Halogen Free	Yes
Oil Resistant	Yes
Ozone, Oxygen Resistant	Yes
Silicone Free	Yes
UV Resistant	Yes
Abrasion Resistance	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
26AWG		
2×0.14	3.9	22
3×0.14	4.0	24
4×0.14	4.3	29
5×0.14	4.7	33
7×0.14	5.3	47
10×0.14	6.1	57
12×0.14	6.2	63
14×0.14	6.5	72
18×0.14	7.2	80
24×0.14	8.2	110
25×0.14	8.6	115
24AWG		
2×0.25	4.3	26
3×0.25	4.5	30
4×0.25	4.8	39
5×0.25	5.2	44
7×0.25	6.0	52
10×0.25	6.9	70
12×0.25	7.1	84
14×0.25	7.4	97
18×0.25	8.2	114
24×0.25	9.6	157
25×0.25	10.1	160
22AWG		
2×0.34	4.6	31
3×0.34	4.8	38
4×0.34	5.2	51
5×0.34	5.6	54
7×0.34	6.5	77
10×0.34	7.5	104
12×0.34	7.7	122
14×0.34	8.1	140
18×0.34	9.2	162
24×0.34	10.7	204
25×0.34	11.2	229

PUR Sheathed, Screened, Halogen Free Data Cable

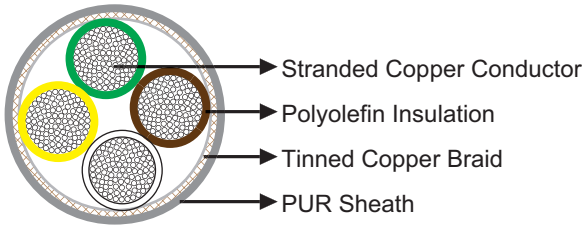
» Application

These halogen free cables are used as drag chain cables for frequent and fast lifting and bending stresses in machines and tool building, robot systems and constantly moving machine components.

» Standards

UL AWM Style 20233
CSA AWM I/II A/B

» Construction



Conductor: Stranded bare copper, class 6 according to VDE 0295/BS 6360.
Insulation: Polyolefin.
Screen: Tinned copper wire braid.
Sheath: Full polyurethane sheath TMPU.

» Technical Data

Rated Voltage Uo/U (Um)	300V
Operating Temperatures	flexing: -40℃~+80℃; fixed: -50℃~+80℃
Minimum Bending Radius	flexing: 7.5×OD; fixed: 4×OD
Flame Retardant	VDE 0482-332-1-2/DIN EN 60332-1-2/IEC 60332-1
Oil Resistant	Yes
Halogen Free	Yes
Ozone, Oxygen Resistant	Yes
Silicone Free	Yes
UV Resistant	Yes
Abrasion Resistance	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
26AWG		
2×0.14	4.3	32
3×0.14	4.6	35
4×0.14	4.8	40
5×0.14	5.1	45
7×0.14	5.8	66
10×0.14	6.8	86
12×0.14	7.4	94
14×0.14	7.4	102
18×0.14	7.8	118
24×0.14	8.8	149
25×0.14	9.2	156
24AWG		
2×0.25	5.0	38
3×0.25	5.2	44
4×0.25	5.6	51
5×0.25	5.9	68
7×0.25	6.8	82
10×0.25	8.3	110
12×0.25	8.4	124
14×0.25	8.9	135
18×0.25	9.5	150
24×0.25	10.8	194
25×0.25	11.3	204
22AWG		
2×0.34	5.4	45
3×0.34	5.7	60
4×0.34	6.0	76
5×0.34	6.5	82
7×0.34	7.7	110
10×0.34	9.1	148
12×0.34	10.0	166
14×0.34	10.0	185
18×0.34	10.6	216
24×0.34	12.1	291
25×0.34	12.8	305

PUR Sheathed, Screened, Halogen Free, Twisted Pair Data Cable

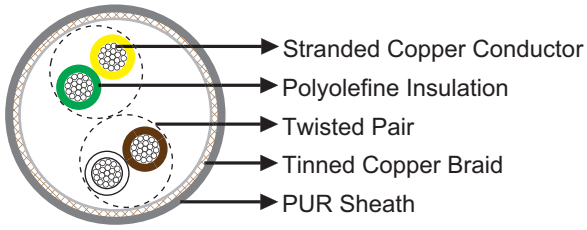
» Application

These halogen free cables are used as drag chain cables for permanent flexible stresses in machineries, machines and tool building, robot systems, constantly moving machine components and multi-shift-operation.

» Standards

UL AWM Style 20233
CSA AWM I/II A/B

» Construction



Conductor: Stranded bare copper, class 6 according to VDE 0295/BS 6360/IEC 60228.
Insulation: Polyolefin.
Screen: Tinned copper wire braid.
Sheath: Full polyurethane sheath TMPU.

» Technical Data

Rated Voltage Uo/U (Um)	350V
Operating Temperatures	flexing: -40℃~+80℃; fixed: -50℃~+80℃
Minimum Bending Radius	flexing: 10×OD; fixed: 5×OD
Flame Retardant	VDE 0482-332-1-2/DIN EN 60332-1-2/IEC 60332-1
Halogen Free	Yes
Oil Resistant	Yes
Ozone Resistant	Yes
Silicone Free	Yes
UV Resistant	Yes
Abrasion Resistance	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
24AWG		
1×2×0.25	4.8	26
2×2×0.25	6.7	61
3×2×0.25	7.1	70
4×2×0.25	7.6	82
5×2×0.25	8.3	99
6×2×0.25	8.9	126
8×2×0.25	9.3	147
10×2×0.25	11.7	179
14×2×0.25	12.7	210
22AWG		
1×2×0.34	5.1	35
2×2×0.34	7.2	80
3×2×0.34	7.6	100
4×2×0.34	8.2	118
5×2×0.34	9.0	134
6×2×0.34	9.7	162
8×2×0.34	10.3	214
10×2×0.34	12.8	270
14×2×0.34	13.8	304
20AWG		
1×2×0.5	5.6	47
2×2×0.5	8.4	100
3×2×0.5	8.9	131
4×2×0.5	9.7	149
5×2×0.5	10.7	169
6×2×0.5	11.7	181
8×2×0.5	12.4	274
10×2×0.5	15.6	332
14×2×0.5	17.1	390
19AWG		
1×2×0.75	6.1	56
2×2×0.75	9.1	102
3×2×0.75	9.6	144
4×2×0.75	10.7	160
5×2×0.75	11.7	193
6×2×0.75	12.9	216
8×2×0.75	13.7	327

Data Cable

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
10×2×0.75	17.2	451
14×2×0.75	18.8	521
18AWG		
1×2×1	6.5	64
2×2×1	10.0	120
3×2×1	10.6	160
4×2×1	11.7	184
5×2×1	13.2	217

PUR Sheathed, Halogen Free CAN BUS 2×2×0.22mm²

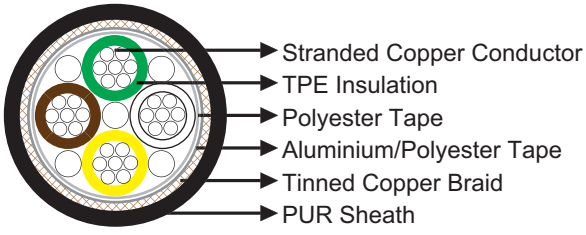
» Application

These cables with its oil-resistant PUR sheath and increased temperature resistance are employed in the wind turbine area and similar sectors for monitoring wind speed, temperature and performance parameters.

» Standards

ISO 11898-2

» Construction



Conductor: Stranded bare copper 7×0.203 mm (Section 0.22 mm²)
Insulation: TPE compound.
Center Filler: Fibrillated polypropylene filler.
Cable Element: Star quad.
Screen 1: Polyester tape over stranded bundle.
Screen 2: Aluminium/Polyester tape (Aluminium outside).
Overall Screen: Tinned copper braid.
Sheath: PUR compound.

» Technical Data

Operating Temperatures	-25℃~+100℃
Minimum Bending Radius	flexing: 10×OD; fixed installation: 5×OD
Impedance	120Ohm +/-15%
Maximum Conductor Resistance @20°C	98Ohm/km

Communication Cable

Nominal Mutual Capacitance	41nF/km
Minimum Insulation resistance	1GOhm×km
Flame Retardant	EN 50265-2-1/IEC 60332-1
Halogen Free	HD22.13/EN50267-1/IEC 60754
Gases Corrosively	HD22.13/EN50267-2/IEC 60754
Smoke Density	EN50268/IEC 61034
Oil Resistant	Yes
Ozone Resistant	Yes
UV Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
2×2×0.22	6.4	60

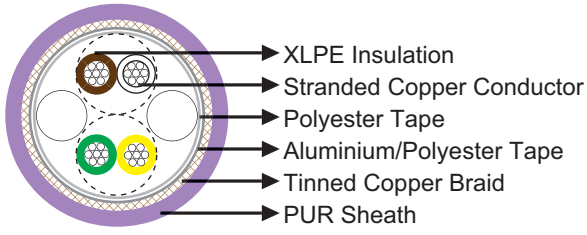
PUR Sheathed CAN BUS 2×2×0.25mm²

» Application

These cables with its oil-resistant PUR sheath and increased temperature resistance is employed in the wind turbine area and similar sectors for monitoring wind speed, temperature and performance parameters.

» Standards

UL/CSA 21223
DIN 19245 T3
EN 50170



» Construction

Conductor: Stranded bare copper 19×24AWG (Section 0.25 mm²).
Insulation: Irradiated cross-linked PE.
Cable Element: Double core.
Screen 1: Polyester tape over stranded bundle.
Screen 2: Aluminium/Polyester tape.
Overall Screen: Tinned copper braid.
Sheath: PUR compound.

» Technical Data

Operating Temperatures	-40℃~+105℃
Minimum Bending Radius	126mm
Impedance	120Ohm +/-10%
Maximum Conductor Resistance @20°C	87Ohm/km
Nominal Mutual Capacitance	42nF/km
Minimum Insulation resistance	1GOhm×km
Oil Resistant	Yes
UV Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
2×2×0.25	8.4	80

Indoor/Outdoor PROFIBUS

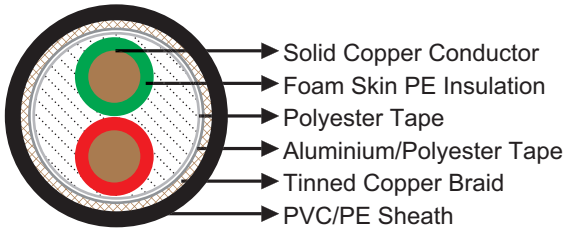
» Application

These cables are used in the cell and field area, suitable for indoor or outdoor installation and are equipped with special PVC or PE sheath.

» Standards

DIN 19245 T3
EN 50170

» Construction



Conductor: Bare copper 1×22AWG.
Insulation: Foam skin PE.
Cable Element: Two cores with filler.
Screen 1: Polyester tape over stranded bundle.
Screen 2: Aluminium/Polyester tape.
Overall Screen: Tinned copper braid.
Sheath: PVC/PE.

» Technical Data

Operating Temperatures	-40℃~+70℃
Minimum Bending Radius	120mm
Impedance	150Ohm +/-10%
Maximum Conductor Resistance @20°C	55Ohm/km
Nominal Mutual Capacitance	35nF/km
Minimum Insulation Resistance	1GOhm×km

Communication Cable

Attenuation @9.6kHz	<2.5dB/km
Attenuation @38.4kHz	<4dB/km
Attenuation @4kHz	<22dB/km
Attenuation @16kHz	<42dB/km
Flame Retardant	IEC 60332-1/FT 1/FT 4
UV Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm	mm	kg/km
1×2×0.64 (PVC Sheath)	8.0	75
1×2×0.64 (PE Sheath)	8.0	65

PUR Sheathed, Halogen Free PROFIBUS

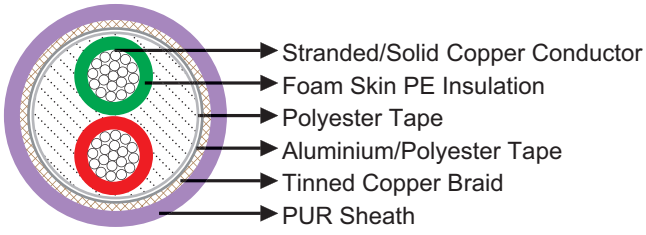
» Application

These cables are used to interconnect Profibus BUS components for the information exchange between different automation systems as well as for communication with the connected decentralized field units.

» Standards

DIN 19245 T3
EN 50170

» Construction



Conductor: Bare copper 1×22AWG (0.64mm) or 19×22AWG (0.8mm).
Insulation: Foam skin PE.
Cable Element: Two cores with filler.
Screen 1: Polyester tape over stranded bundle.
Screen 2: Aluminium/Polyester tape.
Overall Screen: Tinned copper braid.
Sheath: PUR.

» Technical Data

	1×2×0.64mm	1×2×0.8mm
Operating Temperatures	-40℃~+70℃	
Minimum Bending Radius	120mm	
Impedance	150Ohm +/-10%	
Maximum Conductor Resistance @20°C	55Ohm/km	49Ohm/km
Nominal Mutual Capacitance	35nF/km	29nF/km

Communication Cable

Minimum Insulation Resistance	1GOhm×km	1GOhm×km
Attenuation @9.6kHz	<2.5dB/km	<3dB/km
Attenuation @38.4kHz	<4dB/km	<5dB/km
Attenuation @4kHz	<22dB/km	<25dB/km
Attenuation @16kHz	<42dB/km	<51dB/km
Flame Retardant	IEC 60332-1	
Halogen Free	IEC 60754	
Oil Resistant	Yes	
UV Resistant	Yes	

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm	mm	kg/km
1×2×0.64	8.0	71
1×2×0.8	8.0	66

PROFInet AWG 22/1

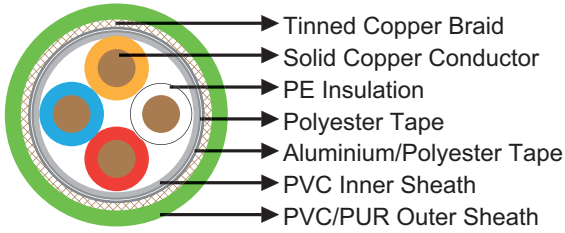
» Application

These cables are designed especially for extreme industrial applications, suitable for Ethernet applications.

» Standards

PROFInet Draft

» Construction



Conductor: Bare copper 1×22AWG.
Insulation: PE.
Cable Element: Star quad.
Screen 1: Polyester tape over stranded bundle.
Screen 2: Aluminium/Polyester tape.
Overall Screen: Tinned copper braid.
Inner Sheath: PVC.
Outer Sheath: PVC/PUR.

» Technical Data

Operating Temperatures	-40℃~+70℃
Minimum Bending Radius	100mm
Impedance @1~100MHz	100Ohm +/-15%
Maximum Conductor Resistance @20°C	62Ohm/km
Nominal Mutual Capacitance	50nF/km
Minimum Insulation Resistance	0.5GOhm×km
Attenuation @10MHz	5.2dB/100m

Communication Cable

Attenuation @16MHz	6.9dB/100m
Attenuation @62.5MHz	15dB/100m
Attenuation @100MHz	19.5dB/100m
Next @10MHz	70dB
Next @16MHz	65dB
Next @62.5MHz	55dB
Next @100MHz	50dB
ACR @10MHz	64.8dB
ACR @16MHz	58.1dB
ACR @62.5MHz	40dB
ACR @100MHz	30.5dB
Flame Retardant	IEC 60332-1
Silicone Free	Yes
UV Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm	mm	kg/km
2×2×0.64 (PVC outer sheath)	6.5	67
2×2×0.64 (PUR outer sheath)	6.5	64

PROFInet AWG 22/7

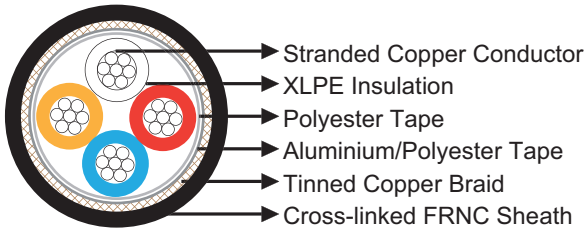
» Application

These cables with oil-resistant FRNC sheath and increased temperature resistance are designed for extreme industrial applications in the wind turbine area and similar sectors.

» Standards

PROFInet Draft

» Construction



Conductor: Tinned copper AWG 22/7 (Section 0.34 mm²).
Insulation: XLPE.
Cable Element: Star quad.
Screen 1: Polyester tape over stranded bundle.
Screen 2: Aluminium/Polyester tape.
Overall Screen: Tinned copper braid.
Sheath: Cross-linked FRNC.

» Technical Data

Operating Temperatures	-40℃~+105℃
Minimum Bending Radius	46mm
Impedance @1~100MHz	100Ohm +/-15%
Maximum Conductor Resistance @20°C	60Ohm/km
Nominal Mutual Capacitance	57nF/km
Minimum Insulation Resistance	0.5GOhm×km
Attenuation @10MHz	6.3dB/100m
Attenuation @16MHz	8dB/100m

Communication Cable

Attenuation @62.5MHz	16.5dB/100m
Attenuation @100MHz	21.3dB/100m
Next @10MHz	70dB
Next @16MHz	65dB
Next @62.5MHz	55dB
Next @100MHz	50dB
ACR @10MHz	63.7dB
ACR @16MHz	57dB
ACR @62.5MHz	38.5dB
ACR @100MHz	28.7dB
Flame Retardant	IEC 60332-1
Halogen Free	IEC 60754
Oil Resistant	Yes
UV Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm²	mm	kg/km
2×2×0.34	6.5	64

PROFInet AWG 22/19

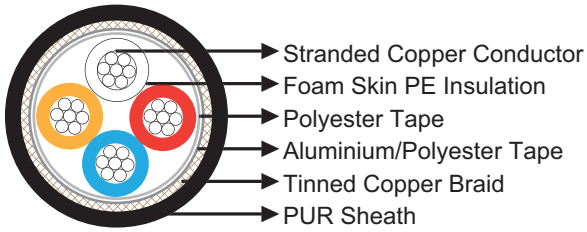
» Application

These cables are designed especially for extreme industrial applications, suitable for Ethernet applications.

» Standards

PROFInet Draft

» Construction



Conductor: Tinned copper AWG 22/19.
Insulation: Foam skin PE.
Cable Element: Star quad.
Screen 1: Polyester tape over stranded bundle.
Screen 2: Aluminium/Polyester tape.
Overall Screen: Tinned copper braid.
Sheath: PUR.

» Technical Data

Operating Temperatures	-40℃~+80℃
Minimum Bending Radius	46mm
Impedance @1~100MHz	100Ohm +/-15%
Maximum Conductor Resistance @20°C	60Ohm/km
Nominal Mutual Capacitance	52nF/km
Minimum Insulation Resistance	0.5GOhm×km
Attenuation @10MHz	7.6dB/100m
Attenuation @16MHz	10dB/100m

Communication Cable

Attenuation @62.5MHz	26.5dB/100m
Attenuation @100MHz	41dB/100m
Next @10MHz	50.3dB
Next @16MHz	47.3dB
Next @62.5MHz	38.4dB
Next @100MHz	35.3dB
ACR @10MHz	42.7dB
ACR @16MHz	37.3dB
ACR @62.5MHz	11.9dB
ACR @100MHz	5.7dB
Flame Retardant	IEC 60332-1
Halogen Free	IEC 60754
Oil Resistant	Yes
UV Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm	mm	kg/km
2×2×0.64	6.5	54

PUR Sheathed, Halogen Free S-FTP Cat5

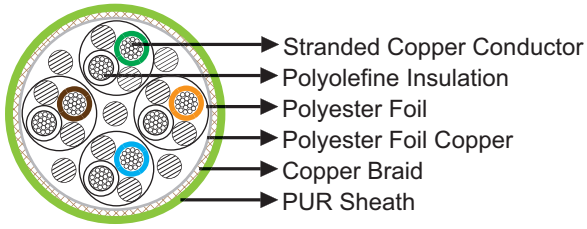
» Application

These cables are designed for the most extreme requirements in the industry and other heavy-duty environments in torsion applications.

» Standards

ISO/IEC 11801
EN 50173
EIA/TIA 568-A, Category 5

» Construction



Conductor: Bare copper 19×26AWG.
Insulation: PO.
Cable Element: Double core.
Shielding: Polyester tape over stranded bundle.
Screen 1: Polyester foil copper, bare.
Screen 2: Copper braid.
Sheath: PUR.

» Technical Data

Operating Temperatures	-20℃~+80℃
Minimum Bending Radius	80mm
Impedance @1~100MHz	100Ohm +/-15%
Nominal Mutual Capacitance	50nF/km
Attenuation @10MHz	<1.3dB/100m
Attenuation @16MHz	<1.6dB/100m

Communication Cable

Attenuation @62.5MHz	<3.2dB/100m
Attenuation @100MHz	<4dB/100m
Next @10MHz	47dB
Next @16MHz	44dB
Next @62.5MHz	35dB
Next @100MHz	32dB
ACR @10MHz	45.7dB
ACR @16MHz	42.4dB
ACR @62.5MHz	31.8dB
ACR @100MHz	28dB
Flame Retardant	IEC 60332-1
Halogen Free	IEC 60754
Smoke Density	IEC 61034
Oil Resistant	Yes
UV Resistant	Yes

» Dimensions and Weight

Construction	Nominal Overall Diameter	Nominal Weight
No. of cores×mm	mm	kg/km
4×2×0.64	7.5	79

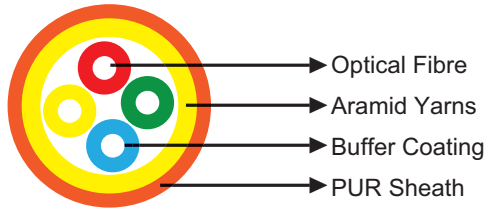
A-V(ZN)11Y Fibre Optic Cable

» Application

These cables are designed for mobile and flexible use, suitable for use in drag chains.

» Standards

IEC 60794



» Construction

Core Type: Tight buffer.
Strain Relief: Aramid yarns.
Sheath: PUR.

» Technical Data

Operating Temperatures	-30℃~+70℃
Minimum Bending Radius	90mm
Torsion Application	110°/m
Flame Retardant	IEC 60332-1
Oil Resistant	Yes
Ozone Resistant	Yes
UV Resistant	Yes
Longitudinally Water-tight	Yes
Hammer Impact Resistant	Yes

» Dimensions and Weight

Construction	Fibre Type	Nominal Overall Diameter	Nominal Weight
No. of fibres	-	mm	kg/km
2	Multimode G50/125	5.0	20
2	Multimode G62.5/125	5.0	20
4	Multimode G50/125	6.0	31
4	Multimode G62.5/125	6.0	31
4	Single-Mode E9/125	6.0	31
8	Multimode G50/125	7.0	47
8	Multimode G62.5/125	7.0	47

I-V(ZN)Y11Y Fibre Optic Breakout Cable

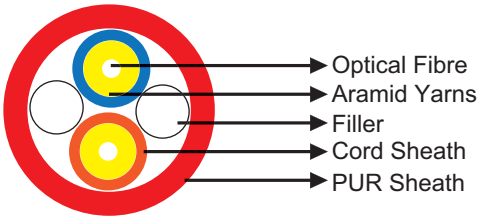
» Application

These flexible and robust cables are designed for industrial use, can use in wind turbines, medium distance communication, factory automation, etc. It contains two break-out units Ø2.2mm, each with a large core step index multi mode fibre.

» Standards

IEC 60794

» Construction



Core Type: Tight buffer.
Strain Relief: Aramid yarns.
Outer Sheath: PUR.

» Technical Data

Operating Temperatures	-40℃~+80℃
Minimum Bending Radius	50mm
Torsion Application	180°/m
Oil Resistant	Yes

» Dimensions and Weight

Construction	Core/Cladding Diameter	Nominal Overall Diameter	Nominal Weight
No. of fibres	μm	mm	kg/km
2	200/230	7.0	43

I-V(ZN)H11Y Fibre Optic Breakout Cable

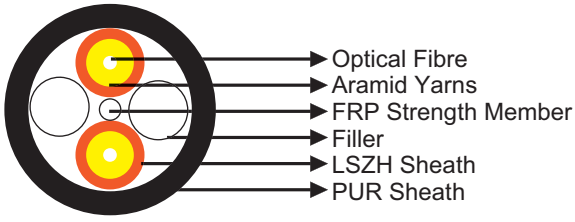
» Application

These cables are designed for wind turbine control or LAN backbone, suitable for indoor installation or outdoor installation in ducts.

» Standards

DIN VDE 0888
IEC 60794

» Construction



Core Type: Tight buffer.
Strain Relief: Aramid yarns.
Break-out Unit Sheath: LSZH.
Central Strength Member: Dielectric Material.
Outer Sheath: PUR.

» Technical Data

Operating Temperatures	-40℃~+70℃
Minimum Bending Radius	20×OD
Torsion Application	+/-180° 500 times/2m; +/-360° 5 times/2m

» Dimensions and Weight

Construction	Fibre Type	Nominal Overall Diameter	Nominal Weight
No. of fibres	-	mm	kg/km
2	Multimode G50/125	7.5	45
2	Multimode G62.5/125	7.5	45
2	Single-Mode E9/125	7.5	45

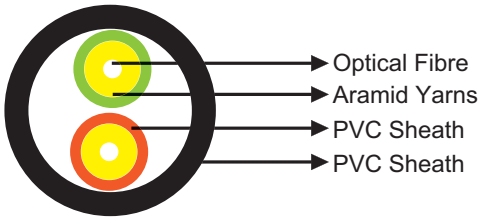
I-V(ZN)YY Fibre Optic Breakout Cable

» Application

These flexible and robust cables are designed for industrial use, suitable for fixed and normal flexible installations.

» Standards

DIN VDE 0888
IEC 60794



» Construction

Core Type: Tight buffer.
Strain Relief: Aramid yarns.
Break-out Unit Sheath: PVC.
Outer Sheath: PVC.

» Technical Data

Operating Temperatures	-40℃~+80℃
Minimum Bending Radius	During Installation: 60mm; Installation: 45mm
Torsion Application	180°/m
Flame Retardant	IEC 60332-1/IEC 60332-3/UL 1685 FT1+FT4
Oil Resistant	Yes
Ozone Resistant	Yes
UV Resistant	Yes

» Dimensions and Weight

Construction	Fibre Type	Nominal Overall Diameter	Nominal Weight
No. of fibres		mm	kg/km
2	HCS 200/230	7.5	68

I-V(ZN)HH Fibre Optic Breakout Cable

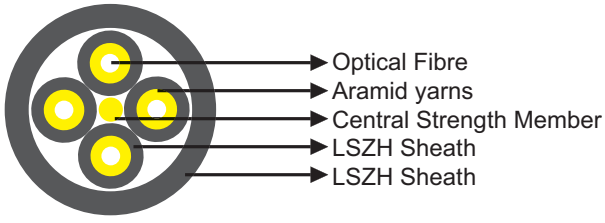
» Application

These flexible and robust cables are designed for industrial use, suitable for fixed and normal flexible installations.

» Standards

EN 187000
IEC 60794-2
IEC 60794-2-20
ISO 11801
EN 50173-1

» Construction



Core Type: Tight buffer.
Strain Relief: Aramid yarns.
Break-out Unit Sheath: LSZH.
Central Strength Member: FRP strength member, covered with LSZH material as appropriate.
Outer Sheath: LSZH.

» Technical Data

Operating Temperatures	-20℃~+70℃
Minimum Bending Radius	75~175mm depend on No. of fibres
Torsion Application	5 cycles +/- 1 turn
Flame Retardant	IEC 60332-1/IEC 60332-3
Halogen Free	IEC 60754
No Acid Matters	IEC 60754

Fibre Optic Cable

Smoke Density	IEC 61034
UV Resistant	Yes

» Dimensions and Weight

Construction	Tight Buffer Fiber Diameter	Nominal Overall Diameter	Nominal Weight
No. of fibres	µm	mm	kg/km
2	900+/-50	7.5	60
4	900+/-50	7.5	60
6	900+/-50	8.5	75
8	900+/-50	10.0	100
12	900+/-50	12.5	160
16	900+/-50	12.0	145
24	900+/-50	14.5	210

I-V2Y POF Cord

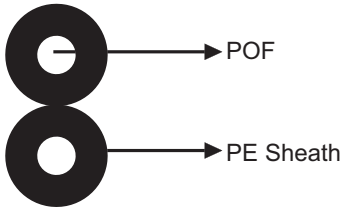
» Application

These flexible and robust cables are used in mechanical engineering, both in mobile and fixed applications, suitable for applications where trouble-free data transmission in necessary under heavy-duty conditions.

» Standards

DIN VDE 0888
IEC 60794

» Construction



Fibre Type: POF 980/1000.
Sheath: PE.

» Technical Data

Operating Temperatures	-20℃~+80℃
Minimum Bending Radius	25mm

» Dimensions and Weight

Construction	Core/Cladding Diameter	Nominal Overall Diameter	Nominal Weight
No. of POF element	μm	mm	kg/km
1	980/1000	2.2	4
2	980/1000	2.2×4.4	8

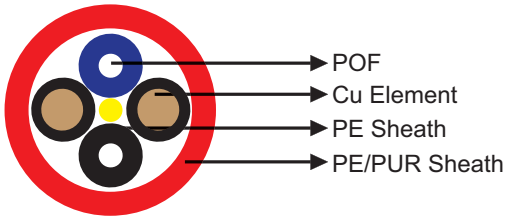
I-V2Y(ZN)11Y/I-V2Y(ZN)2Y POF Breakout Cable

» Application

These flexible and robust cables are used in mechanical engineering, both in mobile and fixed applications, suitable for applications where trouble-free data transmission in necessary under heavy-duty conditions.

» Standards

DIN VDE 0888
IEC 60794



» Construction

Fibre Type: POF 980/1000.
Strain Relief: Aramid yarns.
Break-out Unit Sheath: PE.
Outer Sheath: PE/PUR.
Optional Element: Copper element or dummy element.

» Technical Data

Operating Temperatures	-20℃~+80℃
Minimum Bending Radius	30~95mm depend on cable construction
Oil Resistant	Yes

» Dimensions and Weight

Construction	Copper Element	Core/Cladding Diameter	Nominal Overall Diameter	Nominal Weight
No. of POF element	No. of cores×mm²	μm	mm	kg/km
1	-	980/1000	5.8	30
2	-	980/1000	6.0	36
4	-	980/1000	7.1	65
2	2×1	980/1000	7.8	60
2	3×1.5	980/1000	11.0	132
4	19×1	980/1000	16.0	440

A-DQ(ZN)BH/I-DQ(ZN)BH Fibre Optic Cables

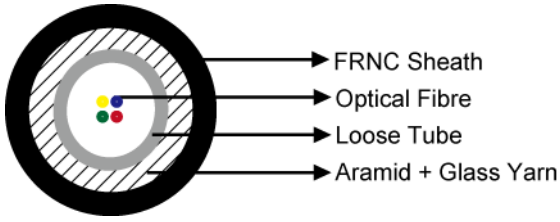
» Application

These cables are used either as central bundle core cable or as stranded versions, suitable for indoor and outdoor cabling of buildings and facilities.

» Standards

DIN VDE 0888
EN 187000
IEC 60794
ISO 11801
EN 50173-1

» Construction



Fibre Type: Loose Tube.
Strain Relief: Aramid.
Armour: Glass yarns.
Sheath: FRNC.

» Technical Data

Operating Temperatures	-20℃~+60℃
Minimum Bending Radius	150mm
Flame Retardant	IEC 60332-1/IEC 60332-3
Halogen Free	IEC 60754
Corrosive Gases	EN 50267-2/ IEC 60754
Smoke Density	IEC 61034
UV Resistant	Yes
Longitudinally Water-tight	Yes

Fibre Optic Cable

» Dimensions and Weight

A-DQ(ZN)BH, Central bundle

Construction	Fibre Type	Nominal Overall Diameter	Nominal Weight
No. of fibres	-	mm	kg/km
4~12	Multimode G50/125	10.0	125
4~12	Multimode G62.5/125	10.0	125
4~12	Single-Mode E9/125	10.0	125
16~24	Multimode G50/125	10.0	145
16~24	Multimode G62.5/125	10.0	145
16~24	Single-Mode E9/125	10.0	145

A-DQ(ZN)BH, Stranded

Construction	Fibre Type	No. of Fibres Per Core	Nominal Overall Diameter	Nominal Weight
No. of fibres	-	-	mm	kg/km
6~36	Multimode G50/125	6	13	160
6~36	Multimode G62.5/125	6	13	160
6~36	Single-Mode E9/125	6	13	160
8~48	Multimode G50/125	8	13	160
8~48	Multimode G62.5/125	8	13	160
8~48	Single-Mode E9/125	8	13	160
12~72	Multimode G50/125	12	13	160
12~72	Multimode G62.5/125	12	13	160
12~72	Single-Mode E9/125	12	13	160
42~48	Multimode G50/125	6	14.5	210
42~48	Multimode G62.5/125	6	14.5	210
42~48	Single-Mode E9/125	6	14.5	210
56~64	Multimode G50/125	8	14.5	210
56~64	Multimode G62.5/125	8	14.5	210
56~64	Single-Mode E9/125	8	14.5	210
84~96	Multimode G50/125	12	14.5	210
84~96	Multimode G62.5/125	12	14.5	210
84~96	Single-Mode E9/125	12	14.5	210

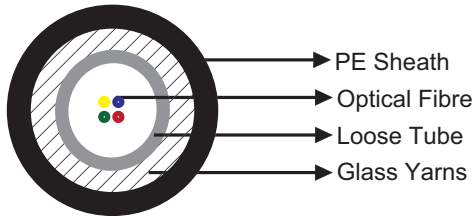
A-DQ(ZN)B2Y Fibre Optic Cables

» Application

These cables are easy to mount and rodent-protected, suitable for underground, tubes and channel areas, where normal tensile stresses and/or transverse compressions occur and rodent infestation is to be expected.

» Standards

DIN VDE 0888
IEC 60794



» Construction

Fibre Type: Loose Tube.
Strain Relief: Glass yarns.
Armour: Glass yarns.
Sheath: PE.

» Technical Data

Operating Temperatures	-20℃~+60℃
Minimum Bending Radius	150mm
Corrosive Gases	EN 50267-2
UV Resistant	Yes
Longitudinally Water-tight	Yes

» Dimensions and Weight

Construction	Fibre Type	Nominal Overall Diameter	Nominal Weight
No. of fibres	-	mm	kg/km
2~12	Multimode G50/125	7.5	40
2~12	Multimode G62.5/125	7.5	40
2~12	Single-Mode E9/125	7.5	40
24	Multimode G50/125	8.5	60
24	Multimode G62.5/125	8.5	60
24	Single-Mode E9/125	8.5	60

Fibre Optic Cable

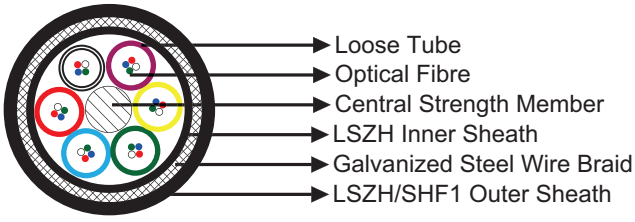
QFCI

» Application

These cables are designed for data transmission in the Tower.

» Standards

IEC 60794



» Construction

Fibre Type: Loose Tube.
Support Element: Central strength member.
Inner Sheath: LSZH.
Armour: Galvanized steel wire braid (GSWB).
Outer Sheath: SHF1/LSZH.

» Technical Data

Operating Temperatures	-40℃~+70℃
Minimum Bending Radius	350mm
Flame Retardant	IEC 60332-3
Halogen Free	IEC 60754
Smoke Density	IEC 61034
Fire Resistant	IEC 60331-25
No-Fire Propagation	IEC 60331-3-24

» Dimensions and Weight

Construction	Fibre Type	Nominal Overall Diameter	Nominal Weight
No. of fibres	-	mm	kg/km
2~48	Multimode G50/125	16.5	350
2~48	Multimode G62.5/125	16.5	350
2~48	Single-Mode E9/125	16.5	350

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