Caledonian
www.caledonian-cables.co.uk

Caledonian Mining Cables

German Standard (VDE)

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 2011
Certificate Expiry 7th February 2012
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, The Gig House, 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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H07RN-F/A07RN-F 450/750V Harmonized Rubber Cables

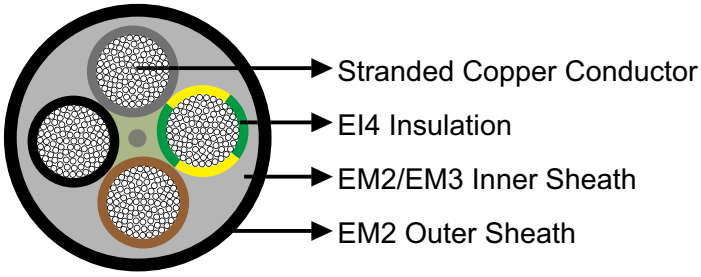
» Applications

These cables are designed for the connection of heating units, industrial tools, mobile equipment and machines, e.g. vulcanisation plates, hand-operated equipment, transportable motors etc., under normal mechanical loads in dry and damp areas, outdoors and in explosion hazard areas, as well as in industrial and agricultural applications and on building sites.

» Standards

DIN VDE 0282 Part1 and Part 4
HD 22.1
HD 22.4

» Construction



Conductors: Stranded copper conductor, class 5 according to DIN VDE 0295/HD 383 S2.
Insulation: Rubber type EI4 according to DIN VDE 0282 Part 1/HD 22.1.
Inner Sheath (for ≥ 10 mm² or more than 5 cores): NR/SBR rubber type EM1.
Outer Sheath: CR/PCP rubber type EM2.

» Dimensions and Weight

Number of Cores×Nominal Cross Section	Insulation Thickness	Thickness of Inner Sheath	Thickness of Outer Sheath	Minimum Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	mm	mm	mm	kg/km
1×1.5	0.8	-	1.4	5.7	6.7	60
2×1.5	0.8	-	1.5	8.5	10.5	120

Number of Cores×Nominal Cross Section	Insulation Thickness	Thickness of Inner Sheath	Thickness of Outer Sheath	Minimum Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	mm	mm	mm	kg/km
3G1.5	0.8	-	1.6	9.2	11.2	170
4G1.5	0.8	-	1.7	10.2	12.5	210
5G1.5	0.8	-	1.8	11.2	13.5	260
7G1.5	0.8	1.0	1.6	14.0	17.0	360
12G1.5	0.8	1.2	1.7	17.6	20.5	515
19G1.5	0.8	1.4	2.1	20.7	26.3	795
24G1.5	0.8	1.4	2.1	24.3	28.5	920
1×2.5	0.9	-	1.4	6.3	7.5	75
2×2.5	0.9	-	1.7	10.2	12.5	170
3G2.5	0.9	-	1.8	10.9	13.0	230
4G2.5	0.9	-	1.9	12.1	14.5	290
5G2.5	0.9	-	2.0	13.3	16.0	360
7G2.5	0.9	1.1	1.7	17.0	20.0	510
12G2.5	0.9	1.2	1.9	20.6	23.5	740
19G2.5	0.9	1.5	2.2	24.4	30.9	1190
24G2.5	0.9	1.6	2.3	28.8	33.0	1525
1×4	1.0	-	1.5	7.2	8.5	100
2×4	1.0	-	1.8	11.8	14.5	195
3G4	1.0	-	1.9	12.7	15.0	305
4G4	1.0	-	2.0	14.0	17.0	400
5G4	1.0	-	2.2	15.6	19.0	505
1×6	1.0	-	1.6	7.9	9.5	130
2×6	1.0	-	2.0	13.1	16.0	285
3G6	1.0	-	2.1	14.1	17.0	380
4G6	1.0	-	2.3	15.7	19.0	550
5G6	1.0	-	2.5	17.5	21.0	660
1×10	1.2	-	1.8	9.5	11.5	195
2×10	1.2	1.2	1.9	17.7	21.5	565
3G10	1.2	1.3	2.0	19.1	22.5	715
4G10	1.2	1.4	2.0	20.9	24.5	875
5G10	1.2	1.4	2.2	22.9	27.0	1095
1×16	1.2	-	1.9	10.8	13.0	280
2×16	1.2	1.3	2.0	20.2	23.5	795
3G16	1.2	1.4	2.1	21.8	25.5	1040
4G16	1.2	1.4	2.2	23.8	28.0	1280
5G16	1.2	1.5	2.4	26.4	31.0	1610
1×25	1.4	-	2.0	12.7	15.0	405
4G25	1.4	1.6	2.2	28.9	33.0	1890
5G25	1.4	1.7	2.7	32.0	36.0	2335
1×35	1.4	-	2.2	14.3	17.0	545

Number of Cores×Nominal Cross Section	Insulation Thickness	Thickness of Inner Sheath	Thickness of Outer Sheath	Minimum Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	mm	mm	mm	kg/km
4G35	1.4	1.7	2.7	32.5	36.5	2505
5G35	1.4	1.8	2.8	35.0	39.5	2718
1×50	1.6	-	2.4	16.5	19.5	730
4G50	1.6	1.9	2.9	37.7	42.0	3350
5G50	1.6	2.1	3.1	41.0	46.0	3804
1×70	1.6	-	2.6	18.6	22.0	955
4G70	1.6	2.0	3.2	42.7	47.0	4785
1×95	1.8	-	2.8	20.8	24.0	1135
4G95	1.8	2.3	3.6	48.4	54.0	6090
1×120	1.8	-	3.0	22.8	26.5	1560
4G120	1.8	2.4	3.6	53.0	59.0	7550
5G120	1.8	2.8	4.0	59.0	65.0	8290
1×150	2.0	-	3.2	25.2	29.0	1925
4G150	2.0	2.6	3.9	58.0	64.0	8495
1×185	2.2	-	3.4	27.6	31.5	2230
4G185	2.2	2.8	4.2	64.0	71.0	9850
1×240	2.4	-	3.5	30.6	35.0	2945
1×300	2.6	-	3.6	33.5	38.0	3495
1×630	3.0	-	4.1	45.5	51.0	7020

H07RN8-F 450/750V Harmonized Rubber Cables

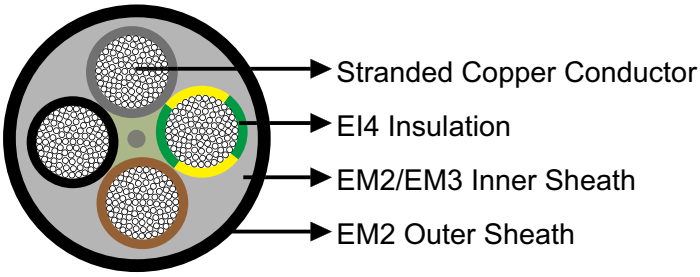
» Applications

These cables are designed for use in submersible pumps and similar applications in water for industrial use up to a water depth of 10 m and water temperature-ranges up to 40□, also approved for dry, humid and wet applications.

» Standards

DIN VDE 0282 Part1 and Part 16
HD 22.1
HD 22.16 S1

» Construction



Conductors: Stranded copper conductor, class 5 according to DIN VDE 0295/IEC 60228.
Insulation: Rubber type EI4 according to DIN VDE 0282 Part 16.
Inner Sheath (for ≥ 10 mm² or more than 5 cores): Rubber type EM2/EM3 according to DIN VDE 0282 Part 16.
Outer Sheath: Rubber type EM2 according to DIN VDE 0282 Part 16.

» Dimensions and Weight

Number of Cores×Nominal Cross Section	Insulation Thickness	Thickness of Inner Sheath	Thickness of Outer Sheath	Minimum Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	mm	mm	mm	kg/km
1×1.5	0.8	-	1.4	5.7	6.7	60

Number of Cores×Nominal Cross Section	Insulation Thickness	Thickness of Inner Sheath	Thickness of Outer Sheath	Minimum Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	mm	mm	mm	kg/km
2×1.5	0.8	-	1.5	8.5	10.5	120
3G1.5	0.8	-	1.6	9.2	11.2	170
4G1.5	0.8	-	1.7	10.2	12.5	210
5G1.5	0.8	-	1.8	11.2	13.5	260
7G1.5	0.8	1.0	1.6	14.0	17.0	360
12G1.5	0.8	1.2	1.7	17.6	20.5	515
19G1.5	0.8	1.4	2.1	20.7	26.3	795
24G1.5	0.8	1.4	2.1	24.3	28.5	920
1×2.5	0.9	-	1.4	6.3	7.5	75
2×2.5	0.9	-	1.7	10.2	12.5	170
3G2.5	0.9	-	1.8	10.9	13.0	230
4G2.5	0.9	-	1.9	12.1	14.5	290
5G2.5	0.9	-	2.0	13.3	16.0	360
7G2.5	0.9	1.1	1.7	17.0	20.0	510
12G2.5	0.9	1.2	1.9	20.6	23.5	740
19G2.5	0.9	1.5	2.2	24.4	30.9	1190
24G2.5	0.9	1.6	2.3	28.8	33.0	1525
1×4	1.0	-	1.5	7.2	8.5	100
2×4	1.0	-	1.8	11.8	14.5	195
3G4	1.0	-	1.9	12.7	15.0	305
4G4	1.0	-	2.0	14.0	17.0	400
5G4	1.0	-	2.2	15.6	19.0	505
1×6	1.0	-	1.6	7.9	9.5	130
2×6	1.0	-	2.0	13.1	16.0	285
3G6	1.0	-	2.1	14.1	17.0	380
4G6	1.0	-	2.3	15.7	19.0	550
5G6	1.0	-	2.5	17.5	21.0	660
1×10	1.2	-	1.8	9.5	11.5	195
2×10	1.2	1.2	1.9	17.7	21.5	565
3G10	1.2	1.3	2.0	19.1	22.5	715
4G10	1.2	1.4	2.0	20.9	24.5	875
5G10	1.2	1.4	2.2	22.9	27.0	1095
1×16	1.2	-	1.9	10.8	13.0	280
2×16	1.2	1.3	2.0	20.2	23.5	795
3G16	1.2	1.4	2.1	21.8	25.5	1040
4G16	1.2	1.4	2.2	23.8	28.0	1280
5G16	1.2	1.5	2.4	26.4	31.0	1610
1×25	1.4	-	2.0	12.7	15.0	405
4G25	1.4	1.6	2.2	28.9	33.0	1890

Number of Cores×Nominal Cross Section	Insulation Thickness	Thickness of Inner Sheath	Thickness of Outer Sheath	Minimum Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	mm	mm	mm	kg/km
5G25	1.4	1.7	2.7	32.0	36.0	2335
1×35	1.4	-	2.2	14.3	17.0	545
4G35	1.4	1.7	2.7	32.5	36.5	2505
5G35	1.4	1.8	2.8	35.0	39.5	2718
1×50	1.6	-	2.4	16.5	19.5	730
4G50	1.6	1.9	2.9	37.7	42.0	3350
5G50	1.6	2.1	3.1	41.0	46.0	3804
1×70	1.6	-	2.6	18.6	22.0	955
4G70	1.6	2.0	3.2	42.7	47.0	4785
1×95	1.8	-	2.8	20.8	24.0	1135
4G95	1.8	2.3	3.6	48.4	54.0	6090
1×120	1.8	-	3.0	22.8	26.5	1560
4G120	1.8	2.4	3.6	53.0	59.0	7550
5G120	1.8	2.8	4.0	59.0	65.0	8290
1×150	2.0	-	3.2	25.2	29.0	1925
4G150	2.0	2.6	3.9	58.0	64.0	8495
1×185	2.2	-	3.4	27.6	31.5	2230
4G185	2.2	2.8	4.2	64.0	71.0	9850
1×240	2.4	-	3.5	30.6	35.0	2945
1×300	2.6	-	3.6	33.5	38.0	3495
1×630	3.0	-	4.1	45.5	51.0	7020

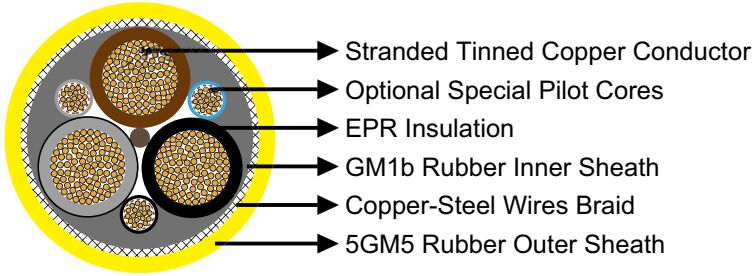
NTSWOEU 0.6/1kV E-Loader Cable

» Applications

These cables are used for the connection of mobile machines under extremely high mechanical loads, predominantly in mining situations, also can be operated via guide pulleys (cable cars) or used as a reeling cable (LHD), suitable for extreme bending loads, high tensile stress, and impact and crushing loads.

» Standards

VDE 0250 Part 813



» Construction

Conductors: Flexible stranded tinned copper conductor, class 6 according to DIN VDE 0295.
Insulation: EPR.
Pilot Cores (optional): Special conductor, tinned copper braid and galvanised steel wire braid.
Inner Sheath: Rubber type GM1b.
Armour/Earth Conductor: Concentric earth conductor as tensile-stress-resistant braided armour of combined copper-steel wires.
Outer Sheath: Chlorinated rubbe type 5GM5, abrasion and tear resistant, oil resistant and flame retardant.

» Dimensions and Weight

Number of Cores×Nominal Cross Section	Insulation Thickness	Thickness of Inner Sheath	Thickness of Outer Sheath	Nominal Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	mm	mm	kg/km
3x50/25KON + 3xST	2.0	3.0	5.0	56	4950

NTMTWOEU 0.6/1kV Mine Hoist Cables

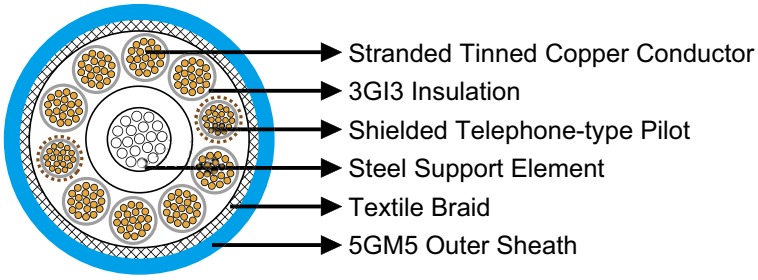
» Applications

These cables are used as suspended cable for intrinsically safe control of user-operated mine hoists (lifts) with telephonic connection in underground mines.

» Standards

VDE 0250 Part 813

» Construction



Conductors: Flexible stranded tinned copper conductor, class 5 according to DIN VDE 0295.
Insulation: EPR type 3GI3.
Support Element: Central steel support element.
Anti-torsion Braid: Textile braid.
Outer Sheath: PCP rubber type 5GM5.

» Dimensions and Weight

Number of Cores×Nominal Cross Section	Minimum Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
8x2.5ST+2x1FM(C)	21.7	23.7	800
8x2.5ST+10x (2x1FM)C	34.0	37.5	1450
14x2.5ST+6x1FM(C)	27.0	31.0	1200
18x2.5ST+6x1FM(C)	38.0	42.0	1800
19x1.5(C)ST+6x (2x1FM)C	35.1	38.1	2145

NSHTOEU 0.6/1kV LHD Cables

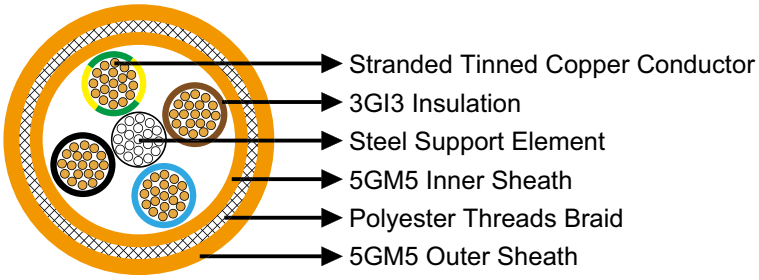
» Applications

These cables are used for frequently changing dynamic loads, such as reeling cables for scoops (LHDs) in underground mines, suitable for mono-spiral reels and cylindrical reels.

» Standards

VDE 0250 Part 814

» Construction



Conductors: Flexible stranded tinned copper conductor.

Insulation: EPR type 3GI3.

Support Element: Central steel support element.

Inner Sheath: PCP type 5GM5.

Anti-torsion Braid: Reinforced braid of polyester threads in a vulcanized bond between inner and outer sheath.

Outer Sheath: PCP type 5GM5.

» Dimensions and Weight

Number of Cores×Nominal Cross Section	Minimum Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
4x16(6 kN)	27.5	31.5	1500
4x35(12 kN)	37.5	42.0	2920
4x50(12 kN)	43.0	48.0	3970
4x50(30 kN)	42.0	44.0	3660
4x70 (20kN)	47.0	52.0	5530
4x95 (50kN)	53.0	58.0	6500

NSSHCGEOEU 0.6/1kV Coal Cutter Cable (High Tensile Stress)

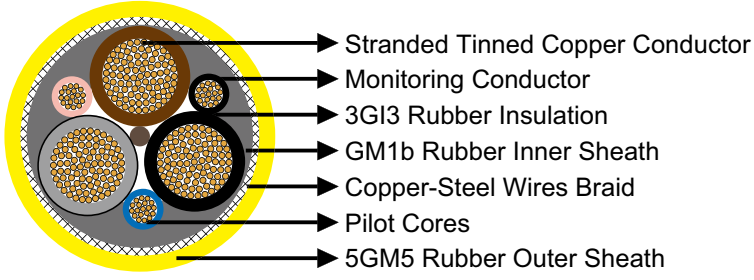
» Applications

These cables are used for the connection of mobile machines under extremely high mechanical loads, predominantly in mining situations, e.g. for coal-cutting machines, also can be operated via guide pulleys (cable cars) or used as a reeling cable (LHD), suitable for extreme bending loads, high tensile stress, and impact and crushing loads.

» Standards

VDE 0250 Part 812

» Construction



Conductors: Flexible stranded tinned copper conductor.

Insulation: Heat resistant 3GI3 rubber based on EPR.

Outer Conductor Layer: Easy strippable outer conductive layer.

Pilot Cores: Copper and steel conductor capable of expansion and compression with 3GI3 EPR rubber insulation.

Monitoring Conductor: Copper and steel conductor capable of expansion and compression covert with semi conductive rubber compound.

Inner Sheath: Rubber type GM1b.

Armour/Earth Conductor: Concentric earth conductor as tensile-stress-resistant braided armour of combined copper-steel wires.

Outer Sheath: Rubber type 5GM5, abrasion and tear resistant, oil resistant and flame retardant.

» Dimensions and Weight

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×16/16KON+2ST+UEL	38.5	41.5	2430
3×25/16KON+2ST+UEL	41.0	44.5	3050
3×35/16KON+2ST+UEL	44.5	48.0	3620
3×50/25KON+2ST+UEL	50.0	54.0	4810
3×70/35KON+2ST+UEL	54.5	58.5	5890
3×95/50KON+2ST+UEL	62.5	66.5	7800
3×35/16KON+3ST+3UEL	44.5	48.0	3860
3×50/25KON+3ST+3UEL	50.0	54.0	5050
3×70/35KON+3ST+3UEL	54.5	58.5	6000
3×95/50KON+3ST+3UEL	62.5	66.5	8050
3×120/70KON+3ST+3UEL	67.5	72.0	9380
3×150/70KON+3ST+3UEL	74.5	79.0	11120

NSSHCGEOEU 0.6/1kV Coal Cutter Cable (Low Tensile Stress)

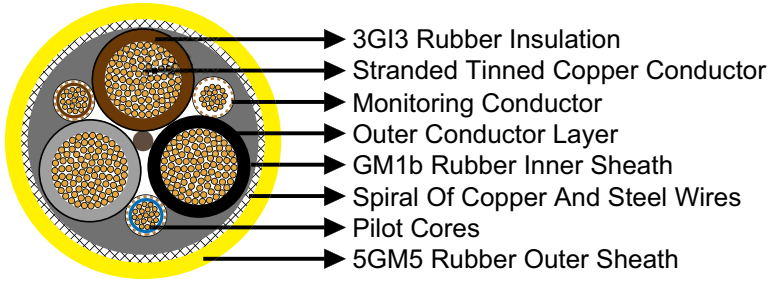
» Applications

These cables are used for the connection of mobile machines under extremely high mechanical loads, predominantly in mining situations, e.g. for coal-cutting machines, suitable for extreme bending loads under low tensile stress.

» Standards

DIN VDE 0250 Part 812

» Construction



Conductors: Flexible stranded tinned copper conductor.

Insulation: Heat resistant 3GI3 rubber based on EPR.

Outer Conductor Layer: Easy strippable outer conductive layer.

Pilot Cores: Copper strand and steel braid conductor capable of expansion and compression with EPR rubber insulation.

Monitoring Cores: Spiral of tinned copper wires above the pilot cores, covered with a semi-conductive tape.

Inner Sheath: Rubber type GM1b.

Armour/Earth Conductor: Concentric earth conductor as spiral of copper and steel wires, fibreglas tape, embedded in the outer sheath which prevents sheath exchanging.

Outer Sheath: Rubber type 5GM5, abrasion and tear resistant, oil resistant and flame retardant.

» Dimensions and Weight

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×16/16KON+2ST+UEL	35.0	38.0	2130
3×25/16KON+2ST+UEL	38.0	41.0	2790
3×35/16KON+2ST+UEL	41.0	45.0	3390
3×50/25KON+2ST+UEL	47.0	51.0	4340
3×70/35KON+2ST+UEL	52.0	56.0	5680
3×95/50KON+2ST+UEL	58.0	62.0	7180
3×25/16KON+3×(1.5ST+UEL)	38.0	41.0	2920
3×35/16KON+3×(1.5ST+UEL)	41.0	45.0	3630
3×50/25KON+3×(1.5ST+UEL)	45.0	48.0	4500
3×70/35KON+3×(1.5ST+UEL)	48.0	53.0	5850
3×95/50KON+3×(1.5ST+UEL)	52.0	56.0	7400
3×120/70KON+3×(1.5ST+UEL)	58.0	63.0	8300
3×150/70KON+3×(1.5ST+UEL)	62.0	68.0	9300

(N)SSHOEU 0.6/1kV Heavy Duty Flexible Cable

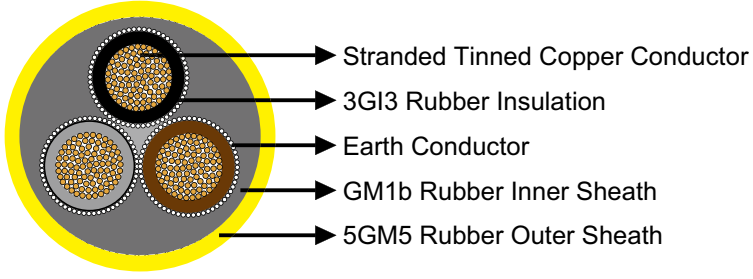
» Applications

These cables are used for connection of mobile equipment and machines under very high mechanical loads in dry and damp areas, outdoors and in explosion hazard areas, particularly in mining and at quarries and building sites.

» Standards

Based on VDE 0250 Part 812

» Construction



Conductors: Flexible stranded copper conductor, class 5 according to DIN VDE 0295.
Insulation: Rubber type 3GI3.
Pilot Cores (optional): Tinned copper conductor with EPR insulation.
Earth Conductor: Spiral of tinned copper wires.
Inner Sheath: Rubber type GM1b.
Outer Sheath: Rubber type 5GM5.

» Dimensions and Weight

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3x2.5+3x2.5/3E	14.0	17.0	300
3x6+3x6/3E	18.0	21.0	580
3x10+3x10/3E	21.0	25.0	860

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3x2.5+3x2.5/3E+3x1.5	17.0	20.0	450
3x6+3x6/3E+3x1.5	18.0	22.0	660
3x10+3x10/3E+3x2.5	21.0	26.0	950
3x25+3x16/3E+3x2.5	28.0	33.0	1660
3x35+3x16/3E+3x2.5	30.0	35.0	1970
3x50+3x25/3E+3x2.5	36.0	41.0	2840
3x70+3x35/3E+3x2.5	41.0	46.0	3700
3x95+3x50/3E+3x2.5	47.0	52.0	4950
3x120+3x70/3E+3x2.5	52.0	57.0	5650
3x150+3x70/3E+3x2.5	58.0	63.0	6520

NSSHOEU-O/J 0.6/1kV Heavy Duty Flexible Cable

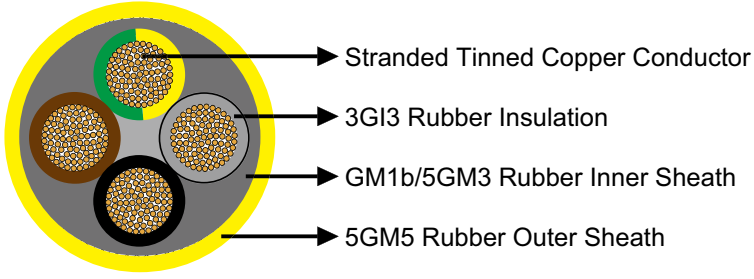
» Applications

These cables are designed for the connection of mobile equipment and machines under very high mechanical loads in dry and damp areas, outdoors and in explosion hazard areas, particularly in mining and industry, quarries and building sites.

» Standards

VDE 0250 Part 812

» Construction



Conductors: Flexible stranded tinned copper conductor, class 5 according to DIN VDE 0295.
Insulation: Heat resistant EPR type 3GI3.
Inner Sheath: SR/SBR/PCP/CR type GM1b/5GM3.
Outer Sheath: Chlorinated rubber PCP/CR type 5GM5, abrasion and tear resistant, oil resistant and flame retardant.

» Dimensions and Weight

NSSHOEU-O

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
1×16	11.0	13.0.5.0	260
1×25	13.0	16.0	390
1×35	14.0	17.0	500

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
1×50	16.0	19.0	680
1×70	18.0	21.0	900
1×95	20.0	24.0	1150
1×120	23.0	27.0	1440
1×150	24.0	28.0	1750
1×185	28.0	31.0	2300
1×240	32.0	36.0	3000
2×1.5	11.0	14.0	210
3×2.5	13.0	16.0	300

NSSHOEU-J

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×1.5	12.0	15.0	240
3×70/35	46.0	51.0	4450
3×95/50	54.0	59.0	5870
3×120/70	59.0	64.0	7340
4×1.5	13.0	16.0	280
4×2.5	15.0	18.0	400
4×4	17.0	20.0	510
4×6	18.0	21.0	630
4×10	22.0	26.0	950
4×16	28.0	32.0	1430
4×25	33.0	37.0	2100
4×35	36.0	40.0	2650
4×50	42.0	47.0	3660
5×1.5	13.0	16.0	320
5×2.5	16.0	19.0	470
5×4	18.0	21.0	600
5×6	20.0	24.0	780
5×10	24.0	28.0	1130
5×16	29.0	34.0	1720
5×25	35.0	39.0	2470
6×2.5	13.0	16.0	300
7×1.5	16.0	19.0	470
7×2.5	18.0	21.0	600
10×1.5	19.0	22.0	570
10×2.5	21.0	25.0	790
12×2.5	22.0	26.0	860
18×2.5	28.0	32.0	1240

NSSHOEU .../3E + ST 0.6/1kV Heavy Duty Flexible Cable

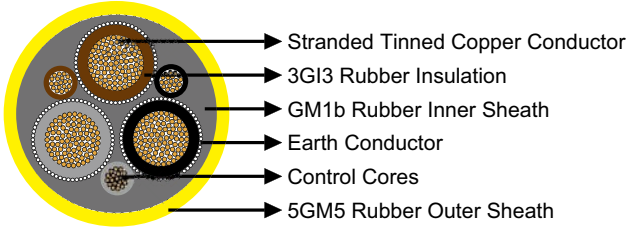
» Applications

These cables are designed for the connection of mobile equipment and machines under very high mechanical loads in dry and damp areas, outdoors and in explosion hazard areas, particularly in mining and industry, quarries and building sites.

» Standards

VDE 0250 Part 812

» Construction



Conductors: Flexible stranded tinned copper conductor, class 5 according to DIN VDE 0295.

Insulation: Heat resistant EPR type 3GI3.

Earth Conductor: Distributed as spiral of tinned copper wires over core insulating coverings (coding .../3E) or located concentrically between the inner and outer sheaths (coding ...kon).

Control Cores: Laid in the interstices, film wrap.

Inner Sheath: Rubber type GM1b.

Outer Sheath: Chlorinated rubber type 5GM5, abrasion and tear resistant, oil resistant and flame retardant.

» Dimensions and Weight

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×2.5+3×2.5/3E	15.0	18.0	410

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×4+3×4/3E	19.0	22.0	500
3×6+3×6/3E	18.0	21.0	660
3×10+3×10/3E	22.0	26.0	950
3×16+3×16/3E	28.0	32.0	1350
3×25+3×16/3E	29.0	33.0	1800
3×50+3×25/3E	40.0	44.0	3300
3×70+3×35/3E	44.0	49.0	4360
3×95+3×50/3E	52.0	57.0	5740
3×120+3×70/3E	56.0	61.0	6870
3×150+3×70/3E	62.0	68.0	8140
3×2.5+3×2.5/3E+3×1.5ST	18.0	20.0	500
3×4+3×4/3E+3×1.5ST	19.0	22.0	550
3×6+3×6/3E+3×1.5ST	20.0	24.0	810
3×10+3×10/3E+3×2.5ST	24.0	28.0	1150
3×16+3×16/3E+3×2.5ST	28.0	32.0	1470
3×25+3×16/3E+3×2.5ST	30.0	34.0	1960
3×35+3×16/3E+3×2.5ST	34.0	38.0	2590
3×50+3×25/3E+3×2.5ST	41.0	46.0	3560
3×70+3×35/3E+3×2.5ST	44.0	49.0	4470
3×95+3×50/3E+3×2.5ST	52.0	57.0	5850
3×120+3×70/3E+3×2.5ST	51.0	56.0	6800
3×150+3×70/3E+3×2.5ST	59.0	64.0	8100
3×2.5/2.5KON	14.0	17.0	380
5×2.5/2.5KON	18.0	21.0	560
5×4/4KON	20.0	24.0	710
5×6/6KON	20.0	24.0	910
10×1.5/1.5KON	20.0	24.0	800
10×2.5/2.5KON	26.0	29.0	1100

NSSHOEU/NTSWOEU Submersible Cable Up To 6kv

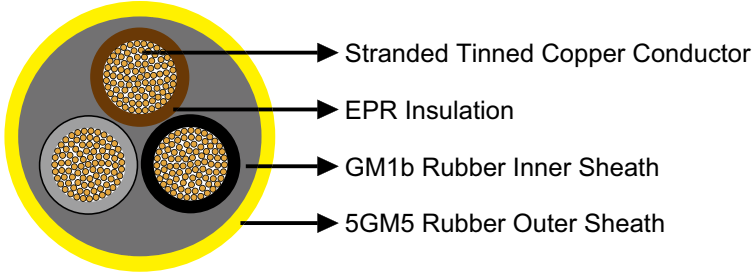
» Applications

These cables are used for the connection of electrical operating equipment in industrial water, notably for submersible pumps. 3-core cables without earth cores are used where the ascending pipe serves as earth conductor.

» Standards

VDE 0250 Part 812
VDE 0250 Part 813

» Construction



Conductors: Flexible stranded tinned copper conductor, class 5 according to DIN VDE 0295.
Insulation: Heat resistant EPR.
Inner Sheath: Rubber type GM1b.
Outer Sheath: Chlorinated rubber type 5GM5, abrasion and tear resistant, oil resistant and flame retardant (for 0.6/1kV). Chlorinated rubber type 5GM3, oil resistant and flame retardant (for 1.8/3kV, 3.6/6kV).

» Dimensions and Weight

NSSHOEU 0.6/1kV

Number of Cores×Nominal Cross Section	Nominal Overall Diameter	Nominal Weight
No. ×mm²	mm	kg/km
3×4	17.0	400

Number of Cores×Nominal Cross Section	Nominal Overall Diameter	Nominal Weight
No. ×mm²	mm	kg/km
3×10	22.0	720
3×16	26.0	1050
3×25	31.0	1500
3×35	35.0	2050
3×50	41.0	2820
3×70	45.0	3540
3×95	52.0	4750
4×25	35.0	2010
4×35	38.0	2530
4×50	45.0	3500
3×70/35	49.0	4190

NTSWOEU 1.8/3kV

Number of Cores×Nominal Cross Section	Nominal Overall Diameter	Nominal Weight
No. ×mm²	mm	kg/km
3×25	35.0	1840
3×35	39.0	2410
3×50	43.0	3040
3×70	48.0	3920
3×95	53.0	4950

NTSWOEU 3.6/6kV

Number of Cores×Nominal Cross Section	Nominal Overall Diameter	Nominal Weight
No. ×mm²	mm	kg/km
3×25	45.0	2690
3×35	47.0	3180
3×50	51.0	3860
3×70	56.0	4870
3×95	60.0	5870

NTSCGERLWOEU 3.6/6kV Flexible Submersible Cable

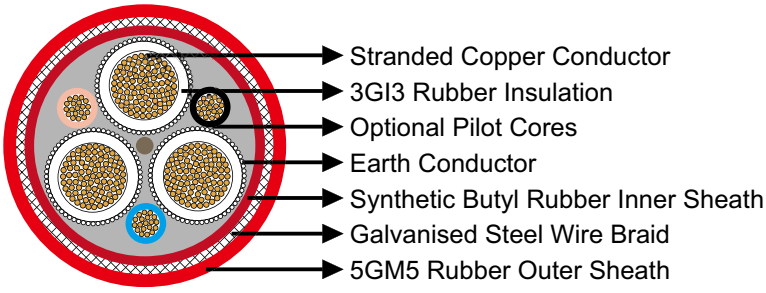
» Applications

These cables are used for permanent operation in water where the cable is required to have additional mechanical protection.

» Standards

VDE 0250 Part 813

» Construction



Conductors: Flexible stranded tinned copper conductor, class 5 according to DIN VDE 0295.
Inner Conductor Layer: Special rubber compound, conductive.
Insulation: Rubber type 3GI3.
Outer Conductor Layer: Special rubber, conductive, easy strippable.
Pilot Cores (optional): Copper conductor with EPR insulation.
Earth Conductor: Spiral of tinned annealed copper wires.
Inner Sheath: Waterproof synthetic butyl rubber.
Armouring: Braid of galvanised steel strands.
Outer Sheath: Rubber type 5GM5.

» Dimensions and Weight

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×35+3×16/3E	55.0	60.0	4600
3×50+3×25/3E	59.0	67.0	5600
3×70+3×35/3E	64.0	70.0	6700
3×95+3×50/3E	68.0	75.0	7900
3×120+3×70/3E	75.0	80.0	9980

NTSKCGERLOEU Medium Voltage Coal Cutter Cable

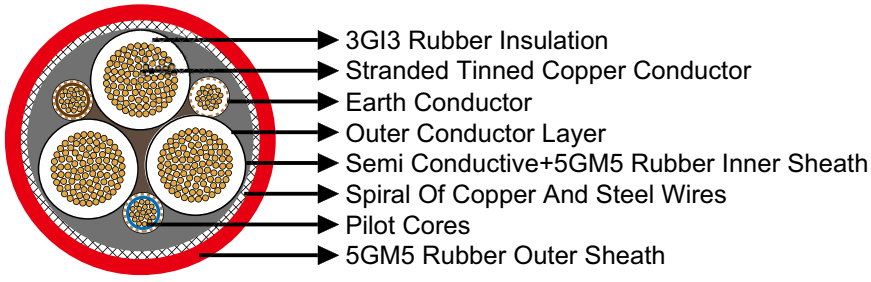
» Applications

These cables are used for the connection of mobile electrical equipment in underground mines, e.g. for coal-cutting machines, especially for the use in bretby chains with extreme bending loads under low tensile stress.

» Standards

VDE 0250 Part 813

» Construction



Conductors: Flexible stranded tinned copper conductor.

Insulation: Heat resistant 3GI3 rubber based on EPR.

Outer Conductor Layer (for 3.6/6kV): Easy strippable outer conductive layer.

Pilot Cores: Copper/steel conductor capable of expansion and compression with EPR rubber insulation.

Earth Conductor: Spiral of tinned copper wires and a conductive tape.

Inner Sheath: 2 layer design, semi conductive rubber + Rubber type 5GM5.

Armour: Spiral of steel wires, embedded in the outer sheath, fiberglas tape which prevents sheath exchanging.

Outer Sheath: Rubber type 5GM5, abrasion and tear resistant, oil resistant and flame retardant.

» Dimensions and Weight

1.8/3kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×35+3×(1.5ST+25/3)+UEL	44.0	49.0	3900
3×50+3×(1.5ST+25/3)+UEL	50.0	55.0	5100
3×70+3×(1.5ST+35/3)+UEL	52.0	56.0	6200
3×95+3×(1.5ST+50/3)+UEL	58.0	62.0	7500
3×120+3×(1.5ST+70/3)+UEL	64.0	70.0	9350

3.6/6kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×35+3×(1.5ST+25/3)+UEL	49.0	54.0	5800
3×50+3×(1.5ST+25/3)+UEL	56.0	61.0	6100
3×70+3×(1.5ST+35/3)+UEL	57.0	62.0	6700
3×95+3×(1.5ST+50/3)+UEL	62.0	66.0	8000
3×120+3×(1.5ST+70/3)+UEL	67.0	71.0	10200

NTSCGECWOEU Medium Voltage Coal Cutter Cable

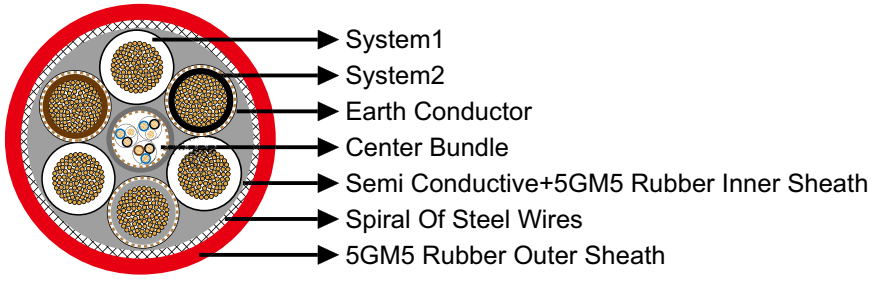
» Applications

These cables are used for the connection of mobile electrical equipment in underground mines, e.g. for coal-cutting machines, especially for the use in bretby chains with extreme bending loads under low tensile stress.

» Standards

VDE 0250 Part 813

» Construction



System1 (1.8/3kV or 3.6/6kV): Flexible stranded tinned copper conductor with heat resistant 3GI3 rubber based on EPR, easy strippable outer conductive layer.

System2 (0.6/1kV): Flexible stranded tinned copper conductor with heat resistant 3GI3 rubber based on EPR.

Earth Conductor: Spiral of tinned copper.

Center Bundle: Control and pilot cores with copper/steel conductors capable of expansion and compression, EPR insulation, optional with fiber optics, covered with tinned copper wires semi conductive rubber sheath.

Inner Sheath: 2 layer design, semi conductive rubber + Rubber type 5GM5.

Armour: Spiral of steel wires, embedded in the outer sheath, fiberglas tape which prevents sheath exchanging.

Outer Sheath: Rubber type 5GM5, abrasion and tear resistant, oil resistant and flame retardant.

» Dimensions and Weight

1.8/3kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×50+3×(35+35/3)+2×(2×0.75ST)+2×0.75UEL	62.0	66.0	7210
3×70+3×(50+50/3)+2×(2×0.75ST)+2×0.75UEL	64.0	68.0	8200
3×95+3×(70+70/3)+2×(2×0.75ST)+2×0.75UEL	74.0	78.0	10300

3.6/6kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×35+3×(35+35/3)+2×(2×0.75ST)+2×0.75UEL	66.0	72.0	7600
3×50+3×(50+50/3)+2×(2×0.75ST)+2×0.75UEL	69.0	75.0	9200
3×70+3×(70+70/3)+2×(2×0.75ST)+2×0.75UEL	76.0	81.0	11150
3×95+3×(95+95/3)+2×(2×0.75ST)+2×0.75UEL	85.0	90.0	13300

(N)TSCGECWOEU Medium Voltage Trailing Cable

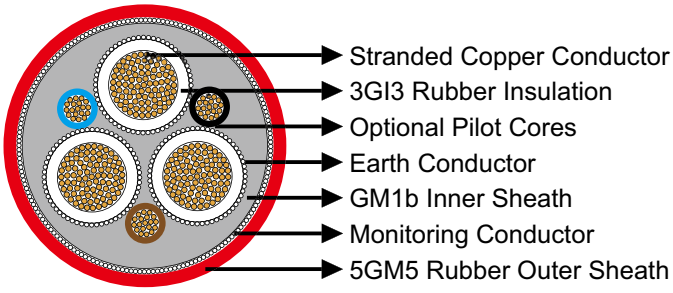
» Applications

These cables are used for the connection of electrical equipment, in mines and underground excavations with hazardous environments under particularly high mechanical loads, e.g. high-voltage transformers on power lines in underground mining and tunnelling.

» Standards

Based on VDE 0250 Part 813

» Construction



Conductors: Flexible stranded copper conductor, class 5 according to DIN VDE 0295.
Inner Conductor Layer: Special rubber compound, conductive.
Insulation: Rubber type 3GI3.
Outer Conductor Layer: Special rubber compound, conductive, easy strippable.
Pilot Cores (optional): Tinned copper conductor with EPR insulation.
Earth Conductor: Spiral of tinned copper wires.
Inner Sheath: Rubber type GM1b.
Monitoring Shield/Armour: Braided armour of combined copper-steel wires; or wrap of copper and steel wires, copper tape in opposite direction, reinforcing tape.
Outer Sheath: Rubber type 5GM5.

» Dimensions and Weight

6/10kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×16/3E+3×2.5ST+6UEL	48.0	52.0	3500
3×35+3×16/3E+3×2.5ST+6UEL	51.0	55.0	3750
3×50+3×25/3E+3×2.5ST+6UEL	56.0	60.0	4720
3×95+3×50/3E+3×2.5ST+6UEL	66.0	71.0	7260
3×120+3×70/3E+6UEL	70.0	75.0	9700
3×150+3×70/3E+6UEL	73.0	78.0	9950

12/20 (24) kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×25/3E+6UEL	62.0	67.0	5800
3×95+3×50/3E+6UEL	74.0	78.0	11000
3×120+3×70/3E+6UEL	80.0	85.0	13000

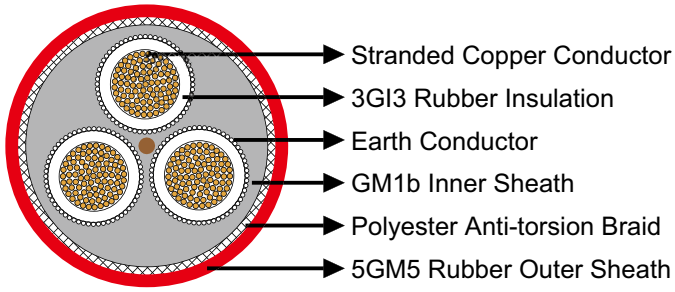
(N)TSCGEWOEU Medium Voltage Trailing Cable With Anti-Torsion Braid

» Applications

These cables are used for the connection of electrical equipment, in mines and underground excavations with hazardous environments under particularly high mechanical loads, e.g. high-voltage transformers on power lines in underground mining and tunnelling.

» Standards

Based on VDE 0250 Part 813



» Construction

Conductors: Flexible stranded copper conductor, class 5 according to DIN VDE 0295.

Inner Conductor Layer: Special rubber compound, conductive.

Insulation: Rubber type 3GI3.

Outer Conductor Layer: Special rubber compound, conductive, easy strippable.

Earth Conductor: Spiral of tinned copper wires.

Inner Sheath: Rubber type GM1b.

Reinforcement: Polyester anti-torsion braid between the jackets embedded.

Outer Sheath: Rubber type 5GM5.

» Dimensions and Weight

8.7/15kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×150+3×70/3E	73.0	78.0	10150

NSGAFOEU/NSHXAFOE Medium Voltage Single Core Cables

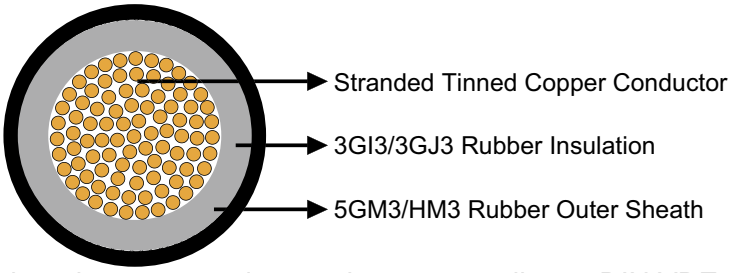
» Applications

These cables are designed for fixed installation in track-bound vehicles and buses, in pipes and closed installation ducts, as well as for the connection of mobile parts. 3 kV-rated cables can be used in low-voltage switch boards to ensure inherently short-circuit and earth-fault proof connections.

» Standards

DIN VDE 0250 Part 602 (for NSGAFOEU/NSGAFCMOEU)
DIN VDE 0250 Part 606 (for halogen free version NSHXAFOE/NSHXAFCMOE)

» Construction



Conductors: Stranded tinned copper conductor, class 5 according to DIN VDE 0295/IEC 60228.
Inner Conductor Layer (for 6kV): Semi-conducting layer.
Insulation: EPR compound type 3GI3/3GJ3.
Optional Screen (for NSGAFCMOEU/NSHXAFCMOE): Tinned copper wires.
Outer Sheath: Chlorinated rubber type 5GM3, oil resistant and flame retardant (for NSGAFOEU/NSGAFCMOEU). Halogen-free polymer compound HM3, oil-resistant, flame retardant, low smoke (for NSHXAFOE/NSHXAFOE).

» Dimensions and Weight

NSGAFOEU/ NSHXAFOE 1.8/3kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
1×1.5	5.7	7.0	50

Number of Cores×Nominal Cross Section	Minimum Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
1×2.5	6.0	7.5	60
1×4	6.8	9.0	80
1×6	7.3	9.5	100
1×10	8.7	11.0	160
1×16	10.0	13.0	230
1×25	12.4	15.0	340
1×35	13.4	16.5	430
1×50	14.9	18.0	580
1×70	16.6	20.5	780
1×95	19.3	24.0	1030
1×120	20.8	26.0	1270
1×150	23.0	28.0	1570
1×185	25.2	31.0	1900
1×240	28.1	34.5	2500
1×300	30.8	38.0	3000
1×400	40.0	34.6	4000

NSGAFOEU/NSHXAFOE 3.6/6kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
1×1.5	8.3	9.5	135
1×2.5	8.6	10.5	150
1×4	9.4	12.0	170
1×6	9.9	13.0	200
1×10	10.9	14.5	250
1×16	12.6	15.5	350
1×25	14.5	17.5	480
1×35	15.6	19.0	600
1×50	17.1	21.0	760
1×70	18.8	23.0	960
1×95	21.3	26.5	1240
1×120	23.2	28.5	1530
1×150	25.0	30.5	1790
1×185	26.8	33.0	2130

NSGAFCMOEU/NSHXAFCMOE 3.6/6kV

Number of Cores×Nominal Cross Section	Nominal Overall Diameter	Nominal Weight
No. ×mm²	mm	kg/km
1×185	38.5	3060

N3GHSSYCY Medium Voltage Cable

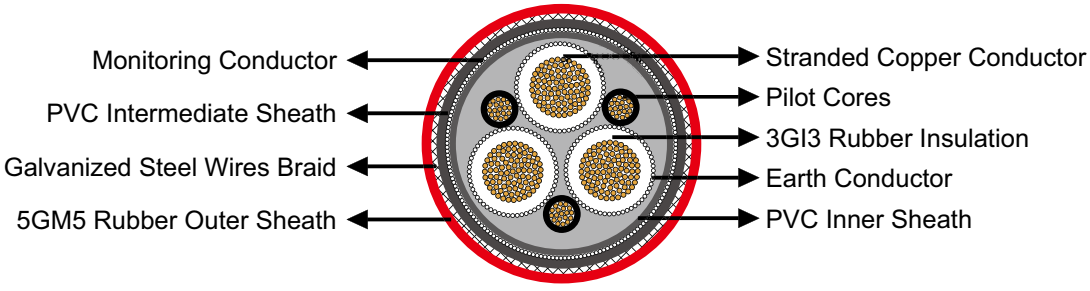
» Applications

These cables are used for the connection of mobile operating equipment, in mines and underground excavations with hazardous environments, in stationary operation, e.g. high-voltage transformers in mining and tunnelling.

» Standards

VDE 0250 Part 605

» Construction



Conductors: Flexible stranded copper conductor, class 5 according to DIN VDE 0295.
Insulation: EPR compound type 3GI3.
Electrical Field Control: Inner and outer semiconductive layer of semiconductive rubber, for 6 kV outer semiconductive layer only.
Pilot Cores: Stranded copper conductor with EPR insulation.
Earth Conductor: Spiral of copper wires over the outer semi-conductive layer of the cores.
Inner Sheath: PVC compound type YM5.
Monitoring Conductor: Conductive tape serving and overall concentric Cu wire spinning.
Intermediate Sheath: PVC compound type YM5.
Armour: Braid of galvanized steel wires.
Outer Sheath: PVC compound type YM5.

» Dimensions and Weight

3.6/6kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×16/3E+3×2.5ST+UEL	49.0	53.0	4190
3×35+3×16/3E+3×2.5ST+UEL	52.0	56.0	4800
3×50+3×25/3E+3×2.5ST+UEL	55.0	59.0	5600
3×70+3×35/3E+3×2.5ST+UEL	59.0	63.0	6650
3×95+3×50/3E+3×2.5ST+UEL	63.0	67.0	7940

6/10kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×16/3E+3×2.5ST+UEL	55.0.	58.0	5300
3×35+3×16/3E+3×2.5ST+UEL	58.0	61.0	5910
3×50+3×25/3E+3×2.5ST+UEL	61.0	65.0	6790
3×70+3×35/3E+3×2.5ST+UEL	65.0	69.0	7860
3×95+3×50/3E+3×2.5ST+UEL	68.0	73.0	9180

8.7/15kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×16/3E+3×2.5ST+UEL	58.0	62.0	6810
3×35+3×16/3E+3×2.5ST+UEL	61.0	65.0	7850
3×50+3×25/3E+3×2.5ST+UEL	64.7	68.7	9130
3×70+3×35/3E+3×2.5ST+UEL	67.9	71.9	10750
3×95+3×50/3E+3×2.5ST+UEL	72.4	76.4	12290

12/20kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×16/3E+3×2.5ST+UEL	62.3	66.3	8790
3×35+3×16/3E+3×2.5ST+UEL	65.3	69.3	9930
3×50+3×25/3E+3×2.5ST+UEL	69.0	73.0	11360
3×70+3×35/3E+3×2.5ST+UEL	72.2	76.2	13100
3×95+3×50/3E+3×2.5ST+UEL	76.8	80.8	14750

(N)SHOEU 0.6/1kV Flexible cable

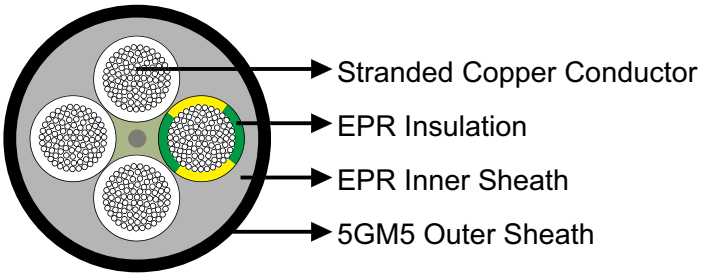
» Applications

These cables are designed for use in open cast mining factories for laying of excavators and conveyor belts with permanent movements between parts of the equipment. These cables are used where the ascending pipe serves as earth conductor, for instance for submersible pumps.

» Standards

VDE 0250 Part 812

» Construction



Conductors: Flexible stranded copper conductor, class 5 according to DIN VDE 0295/IEC 60228.
Insulation: EPR.
Earth Conductor (for –J type): Incorporated as a fourth core or split into three in the outer interstices.
Inner Sheath: EPR.
Outer Sheath: CM type 5GM5.

» Dimensions and Weight

(N)SHOEU-J

Number of Cores×Nominal Cross Section	Insulation Thickness	Thickness of Inner Sheath	Thickness of Outer Sheath	Minimum Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	mm	mm	mm	kg/km
3×1.0	0.60	0.8	1.2	9.2	9.6	160

Number of Cores×Nominal Cross Section	Insulation Thickness	Thickness of Inner Sheath	Thickness of Outer Sheath	Minimum Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	mm	mm	mm	kg/km
3×1.5	0.60	0.8	1.2	10.4	12.0	180
3×2.5	0.70	0.8	1.2	11.3	12.9	240
3×4	0.80	0.9	1.3	12.5	14.1	295
3×6	0.80	1.0	1.4	13.9	15.5	370
3×10	1.00	1.0	1.4	16.8	18.8	570
3x50+3x25/3	1.10	1.4	2.5	31.5	34.5	2500
3x70+3x35/3	1.10	1.4	2.5	36.2	39.2	3400
3x95+3x50/3	1.20	1.7	2.8	42.0	45.0	4475
3x120+3x70/3	1.20	2.0	3.0	46.0	49.0	5400
4×1.5	0.60	0.8	1.2	10.7	13.0	210
4×2.5	0.70	0.9	1.4	11.7	13.7	260
4×4	0.80	0.9	1.4	13.7	15.7	350
4×6	0.80	1.0	1.4	15.2	17.2	485
4×10	1.00	1.0	1.6	19.0	21.0	690
4×16	1.00	1.2	1.8	22.0	24.0	1090
4×25	1.00	1.3	2.2	26.5	29.5	1600
4×35	1.00	1.3	2.3	30.0	33.0	2090
4×50	1.10	1.5	2.6	34.5	38.5	2700
4×70	1.10	1.5	2.6	39.5	43.5	3620
4×95	1.20	1.7	2.8	45.0	49.0	4710
4×120	1.20	2.0	3.3	51.0	55.0	6020

(N)SHOEU-O

Number of Cores×Nominal Cross Section	Insulation Thickness	Thickness of Inner Sheath	Thickness of Outer Sheath	Minimum Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	mm	mm	mm	kg/km
5×1.5	0.60	0.8	1.2	12.0	14.0	240
5×2.5	0.70	0.9	1.3	13.0	14.8	305
5×4	0.80	0.9	1.4	14.8	17.0	440
5×6	0.80	1.0	1.6	17.0	19.0	580
5×10	1.00	1.0	1.6	20.0	23.0	870
5×16	1.00	1.2	1.8	23.8	26.8	1280
5×25	1.00	1.3	2.3	29.5	32.5	1950
2×1.5	0.60	0.8	1.2	9.8	11.8	155
7×1.5	0.60	0.9	1.4	13.0	14.6	295
8×1.5	0.60	0.9	1.4	14.0	15.6	320
10×1.5	0.60	1.0	1.6	15.5	17.5	390

Number of Cores×Nominal Cross Section	Insulation Thickness	Thickness of Inner Sheath	Thickness of Outer Sheath	Minimum Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	mm	mm	mm	kg/km
12×1.5	0.60	1.0	1.6	16.5	18.5	445
2×2.5	0.70	0.8	1.2	10.8	12.8	195
4×2.5	0.70	0.9	1.4	11.7	13.7	290
7×2.5	0.70	0.9	1.4	15.0	17.0	410
8×2.5	0.70	0.9	1.4	16.0	19.0	430
10×2.5	0.70	1.0	1.6	18.0	20.5	520
12×2.5	0.70	1.0	1.6	18.5	21.5	580
18×2.5	0.70	1.0	1.6	21.5	24.5	835
24×2.5	0.70	1.2	1.8	25.5	28.5	895
2×4	0.80	0.9	1.2	12.0	13.6	250
12×4	0.80	1.2	1.8	25.0	28.0	990
1×16	1.00	-	1.4	9.6	11.2	215
1×25	1.00	-	1.7	11.2	13.2	325
1×35	1.00	-	1.8	12.6	14.6	430
1×50	1.10	-	2.0	14.6	16.6	610
1×70	1.10	-	2.2	16.6	18.6	825
1×95	1.20	-	2.3	18.9	20.9	1070
1×120	1.20	-	2.4	20.8	22.8	1300
1×150	1.30	-	2.5	23.0	25.0	1610
1×185	1.40	-	2.6	24.9	27.9	2000
1×240	1.50	-	2.8	28.2	31.2	2500
1×300	1.80	-	3.3	31.8	34.8	3200
3×2.5	0.70	0.8	1.2	11.3	12.9	240
3×4	0.80	0.9	1.3	12.5	14.1	295
3×6	0.80	1.0	1.4	13.9	15.5	370
3×10	1.00	1.0	1.4	16.8	18.8	570
3×16	1.00	1.0	1.6	19.0	22.0	770
3×25	1.00	1.2	2.0	23.5	26.5	1200
3×35	1.10	1.3	2.2	27.5	30.5	1570
3×50	1.10	1.5	2.6	31.5	35.5	2200
3×70	1.10	1.5	2.6	36.0	40.0	2910
3×95	1.20	1.7	2.8	41.0	45.0	3780
3×120	1.20	1.8	3.0	45.0	49.0	4700
3×150	1.30	1.7	2.8	49.0	53.0	5650
3×185	1.40	2.2	3.4	55.0	59.0	7050

2YSLGCGOEU Signal & Control Cable

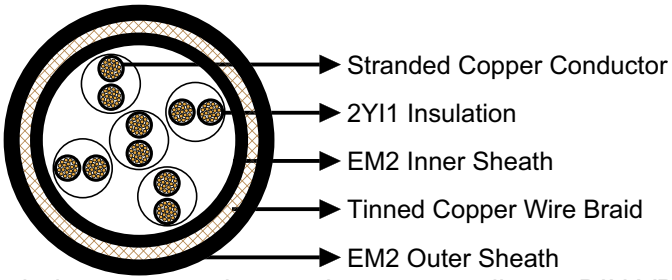
» Applications

These control, signalling and bus cables are used for electric and electronic equipment, such as for measured value and process data processing and automation units in open-cast mining applications, suitable for laying alongside conveyor belts and on material handling equipment.

» Standards

VDE 0250 Part 812

» Construction



Conductors: Flexible stranded copper conductor, class 5 according to DIN VDE 0295.

Insulation: PE type 2YI1.

Cable Element: Cores are laid-up in pairs in layers with a continuous serving of non-hygroscopic material over the conductor assembly

Inner Sheath: CM type EM2.

Screen: Tinned copper wire braid.

Outer Sheath: CM type EM2.

» Dimensions and Weight

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
2×2×1	11.0	13.0	245
5×2×1	16.0	19.0	440
10×2×1	20.0	23.0	700
20×2×1	25.0	29.0	1040

(N)TSCGEWOEU Medium Voltage Reeling Cable

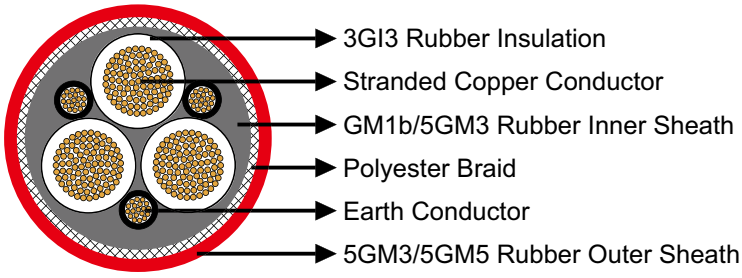
Without Fibre Optics

» Applications

These cables are used for connection of large mobile equipment such as excavators and spreaders, loading bridges, gantry cranes, construction machines, etc., under very high mechanical loads, in dry or damp environment, also in environments with high explosion risk.

» Standards

Based on VDE 0250 Part 813



» Construction

Conductors: Flexible stranded copper conductor, class 5 according to DIN VDE 0295.
Inner Conductor Layer: Semiconductive layer.
Insulation: EPR type 3GI3.
Outer Conductor Layer: Semiconductive layer.
Earth Conductor: Incorporated as a fourth core or distributed within the outer interstices.
Inner Sheath: Rubber type GM1b/5GM3.
Reinforcement: Polyester anti-torsion braid.
Outer Sheath: Chlorinated rubber type 5GM3/5GM5, flame retardant and oil resistant.

» Dimensions and Weight

3.6/6kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×25/3	39.0	42.0	2410
3×35+3×25/3	42.0	45.0	2995
3×50+3×25/3	45.0	48.0	3645
3×70+3×35/3	50.0	54.0	4760
3×95+3×50/3	54.0	58.0	5580

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×120+3×70/3	58.0	62.0	6690
3×150+3×70/3	63.0	67.0	7990
3×185+3×95/3	67.0	72.0	9330

6/10 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×25/3	40.0	43.0	2450
3×35+3×25/3	43.0	46.0	3035
3×50+3×25/3	46.0	49.0	3690
3×70+3×35/3	51.0	55.0	4800
3×95+3×50/3	55.0	59.0	5620
3×120+3×70/3	59.0	63.0	6740
3×150+3×70/3	64.0	68.0	8040
3×185+3×95/3	69.0	74.0	9380

8.7/15 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×25/3	42.1	45.1	2707
3×25+3×50/3	43.8	46.8	3062
3×35+3×25/3	44.9	47.9	3198
3×35+3×50/3	44.9	47.9	3382
3×50+3×25/3	49.5	53.5	4083
3×50+3×50/3	49.5	53.5	4267
3×70+3×35/3	53.1	57.1	5028
3×70+3×50/3	53.1	57.1	5303
3×95+3×50/3	57.3	61.3	6216
3×120+3×70/3	63.0	67.0	7673
3×150+3×70/3	66.6	70.6	8852
3×185+3×95/3	70.5	74.5	10351
3×240+3×120/3	78.0	82.0	13125
3×300+3×150/3	84.9	89.9	16020

12/20 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×25/3	46.0	49.0	3050
3×35+3×25/3	49.0	52.0	3490

Number of Cores×Nominal Cross Section	Minimum Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×50+3×25/3	53.0	57.0	4340
3×70+3×35/3	57.0	61.0	5320
3×95+3×50/3	61.0	65.0	6360
3×120+3×70/3	67.0	71.0	7810
3×150+3×70/3	70.0	74.0	8900
3×185+3×95/3	76.0	80.0	10700

14/25 kV

Number of Cores×Nominal Cross Section	Minimum Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×25/3	49.9	53.9	3542
3×25+3×50/3	49.9	53.9	3726
3×35+3×25/3	52.7	56.7	4075
3×35+3×50/3	52.7	56.7	4258
3×50+3×25/3	56.4	60.4	4872
3×50+3×50/3	56.4	60.4	5054
3×70+3×35/3	61.5	65.5	6083
3×70+3×50/3	61.5	65.5	6356
3×95+3×50/3	65.8	69.8	7303
3×120+3×70/3	69.9	73.9	8652
3×150+3×70/3	75.0	79.0	10139
3×185+3×95/3	78.9	82.9	11705
3×240+3×120/3	86.2	91.2	14670
3×300+3×150/3	91.8	96.8	17332

18/30kV

Number of Cores×Nominal Cross Section	Minimum Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×25/3	55.0	59.0	3960
3×35+3×25/3	58.0	62.0	4550
3×50+3×25/3	63.0	67.0	5510
3×70+3×35/3	66.0	70.0	6560
3×95+3×50/3	71.0	75.0	7850
3×120+3×70/3	76.0	80.0	9410
3×150+3×70/3	80.0	84.0	10690
3×185+3×95/3	86.0	90.0	12550

(N)TSCGEWOEU Medium Voltage Reeling Cable With Fiber Optics

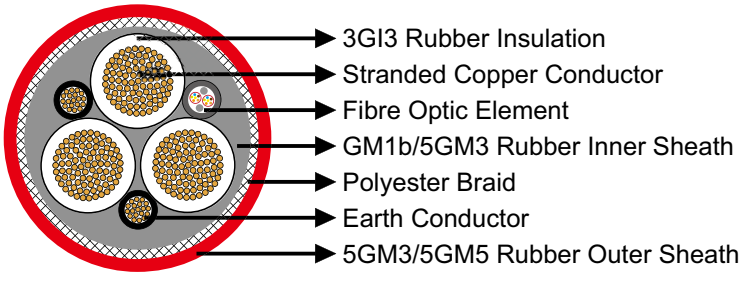
» Applications

These cables are used for connection of large mobile equipment such as excavators and spreaders, gantry cranes, etc., under very high mechanical loads, suitable for motorised reeling on monospiral or level-wind reelers.

» Standards

Based on VDE 0250 Part 813

» Construction



Conductors: Flexible stranded copper conductor, class 5 according to DIN VDE 0295.
Inner Conductor Layer: Semiconductive layer.
Insulation: EPR type 3GI3.
Outer Conductor Layer: Semiconductive layer.
Earth Conductor: Split into two in the outer interstices.
Inner Sheath: Rubber type GM1b/5GM3.
Fiber Optics: 12 FO 50/125 or 62.5/125 or E9/125µm within protection sheath.
Reinforcement: Polyester anti-torsion braid.
Outer Sheath: Rubber type 5GM3/5GM5, flame retardant and oil resistant.

» Dimensions and Weight

3.6/6 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+2×25/2+12×LWL	39.0	42.0	2410
3×35+2×25/2+12×LWL	42.0	45.0	2995
3×50+2×25/2+12×LWL	45.0	48.0	3645
3×70+2×35/2+12×LWL	50.0	54.0	4760
3×95+2×50/2+12×LWL	54.0	58.0	5580
3×120+2×70/2+12×LWL	58.0	62.0	6690
3×150+2×70/2+12×LWL	63.0	67.0	7990
3×185+2×95/2+12×LWL	67.0	72.0	9330

6/10 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+2×25/2+12×LWL	40.0	43.0	2450
3×35+2×25/2+12×LWL	43.0	46.0	3035
3×50+2×25/2+12×LWL	46.0	49.0	3690
3×70+2×35/2+12×LWL	51.0	55.0	4800
3×95+2×50/2+12×LWL	55.0	59.0	5620
3×120+2×70/2+12×LWL	59.0	63.0	6740
3×150+2×70/2+12×LWL	64.0	68.0	8040
3×185+2×95/2+12×LWL	68.0	72.0	9380

12/20 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+2×25/2+12×LWL	46.0	49.0	3050
3×35+2×25/2+12×LWL	49.0	52.0	3490
3×50+2×25/2+12×LWL	53.0	57.0	4340
3×70+2×35/2+12×LWL	57.0	61.0	5320
3×95+2×50/2+12×LWL	61.0	65.0	6360
3×120+2×70/2+12×LWL	67.0	71.0	7810
3×150+2×70/2+12×LWL	70.0	74.0	8900
3×185+2×95/2+12×LWL	76.0	80.0	10700

18/30 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+2×25/2+12×LWL	55.0	59.0	3960
3×35+2×25/2+12×LWL	58.0	62.0	4550
3×50+2×25/2+12×LWL	63.0	67.0	5510
3×70+2×35/2+12×LWL	66.0	70.0	6560
3×95+2×50/2+12×LWL	71.0	75.0	7850
3×120+2×70/2+12×LWL	76.0	80.0	10690
3×185+2×95/2+12×LWL	86.0	90.0	12550

(N)TSCGEWOEU Medium Voltage Fixed Installation Cable Without Fibre Optics

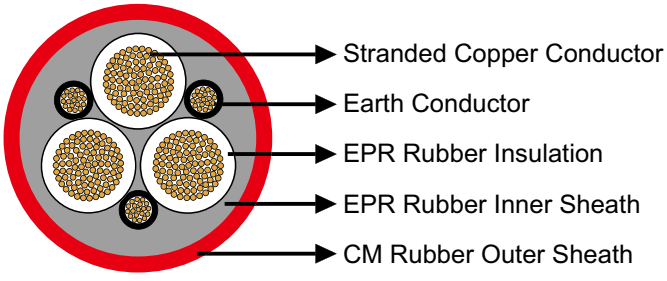
» Applications

These cables are used for laying alongside the conveyor belts (also for shiftable units) and on material handling equipment (even with continuous movement such as in cable booms or as connection between upper and lower car) and for connection of submersible pump units.

» Standards

Based on VDE 0250 Part 813

» Construction



Conductors: Flexible stranded copper conductor, class 5 according to DIN VDE 0295.
Inner Conductor Layer: Semiconductive layer.
Insulation: EPR.
Outer Conductor Layer: Semiconductive layer.
Earth Conductor: Split into three in the outer interstices.
Inner Sheath: EPR.
Outer Sheath: CM.

» Dimensions and Weight

3.6/6 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×25/3	36.7	39.7	2320
3×25+3×50/3	40.6	43.6	2860
3×35+3×25/3	40.5	43.5	2860
3×35+3×50/3	42.3	45.3	3220
3×50+3×25/3	43.8	46.8	3500
3×50+3×50/3	43.8	46.8	3650
3×70+3×35/3	47.0	50.0	4360
3×70+3×50/3	49.7	53.7	5010
3×95+3×50/3	52.2	56.2	5550
3×120+3×70/3	55.9	59.9	6690
3×150+3×70/3	61.0	65.0	8030
3×185+3×95/3	64.0	68.0	9320
3×240+3×120/3	72.1	76.1	11960
3×300+3×150/3	77.3	81.3	14260

6/10 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×25/3	39.0	42.0	2520
3×25+3×50/3	41.4	44.4	2930
3×35+3×25/3	41.8	44.8	2980
3×35+3×50/3	43.6	46.6	3350
3×50+3×25/3	45.1	48.1	3640
3×50+3×50/3	45.1	48.1	3780
3×70+3×35/3	48.3	51.3	4500
3×70+3×50/3	48.3	51.3	4730
3×95+3×50/3	53.5	57.5	5710
3×120+3×70/3	57.2	61.2	6860
3×150+3×70/3	62.3	66.3	8210
3×185+3×95/3	65.3	69.3	9510
3×240+3×120/3	73.4	77.4	12170
3×300+3×150/3	78.6	82.6	14500

8.7/15 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×25/3	42.5	45.5	2850
3×25+3×50/3	44.2	47.2	3210
3×35+3×25/3	45.3	48.3	3340
3×35+3×50/3	45.3	48.3	3480
3×50+3×25/3	49.4	53.4	4180
3×50+3×50/3	49.4	53.4	4320
3×70+3×35/3	52.7	56.7	5090
3×70+3×50/3	52.7	56.7	5310
3×95+3×50/3	57.0	61.0	6160
3×120+3×70/3	62.1	66.1	7550
3×150+3×70/3	65.7	69.7	8710
3×185+3×95/3	68.7	72.7	10020
3×240+3×120/3	76.8	80.8	12750
3×300+3×150/3	82.0	86.0	15110

12/20 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×25/3	45.5	48.5	3150
3×25+3×50/3	45.5	48.5	3300
3×35+3×25/3	48.3	51.3	3660
3×35+3×50/3	48.3	51.3	3800
3×50+3×25/3	52.5	56.5	4540
3×50+3×50/3	52.5	56.5	4680
3×70+3×35/3	55.7	59.7	5460
3×70+3×50/3	55.7	59.7	5690
3×95+3×50/3	61.4	65.4	6770
3×120+3×70/3	65.1	69.1	7980
3×150+3×70/3	68.7	72.7	9170
3×185+3×95/3	73.2	77.2	10780
3×240+3×120/3	79.8	83.8	13280
3×300+3×150/3	86.3	91.3	16070

14/25 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×25/3	50.3	54.3	3750

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×50/3	50.3	54.3	3900
3×35+3×25/3	53.1	57.1	4290
3×35+3×50/3	53.1	57.1	4430
3×50+3×25/3	56.3	60.3	5020
3×50+3×50/3	56.3	60.3	5160
3×70+3×35/3	61.0	65.0	6190
3×70+3×50/3	61.0	65.0	6410
3×95+3×50/3	65.3	69.3	7340
3×120+3×70/3	69.0	73.0	8580
3×150+3×70/3	74.0	78.0	10050
3×185+3×95/3	77.0	81.0	11430
3×240+3×120/3	85.0	90.0	14400
3×300+3×150/3	90.2	95.2	16860

18/30kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×25/3	53.7	57.7	4160
3×25+3×50/3	53.7	57.7	4300
3×35+3×25/3	56.6	60.6	4730
3×35+3×50/3	56.6	60.6	4870
3×50+3×25/3	61.2	65.2	5700
3×50+3×50/3	61.2	65.2	5840
3×70+3×35/3	64.4	68.4	6680
3×70+3×50/3	64.4	68.4	6900
3×95+3×50/3	68.7	72.7	7860
3×120+3×70/3	73.8	77.8	9390
3×150+3×70/3	77.5	81.5	10660
3×185+3×95/3	80.5	84.5	12060
3×240+3×120/3	88.5	93.5	15090
3×300+3×150/3	94.7	99.7	17820

(N)TSCGEWOEU Medium Voltage Fixed Installation Cable With Fiber Optics

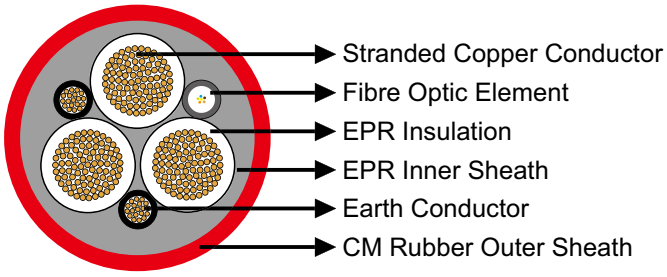
» Applications

These cables are used for For laying alongside the conveyor belts (also for shiftable units) and on material handling equipment (even with continuous movement such as in cable booms or as connection between upper and lower car) and for connection of submersible pump units.

» Standards

Based on VDE 0250 Part 813

» Construction



Conductors: Flexible stranded copper conductor, class 5 according to DIN VDE 0295.
Inner Conductor Layer: Semiconductive layer.
Insulation: EPR.
Outer Conductor Layer: Semiconductive layer.
Earth Conductor: Split into two in the outer interstices.
Fiber Optics: FO 50/125 or 62.5/125 or E9/125µm within protection sheath.
Inner Sheath: EPR.
Outer Sheath: CM.

» Dimensions and Weight

3.6/6 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+2×25/2+1×(6LWL)	40.1	43.1	2650
3×25+2×50/2+1×(6LWL)	42.4	45.4	3060
3×35+2×25/2+1×(6LWL)	42.3	45.3	3060
3×35+2×50/2+1×(6LWL)	44.0	47.0	3410
3×50+2×25/2+1×(6LWL)	43.8	46.8	3490
3×50+2×50/2+1×(6LWL)	46.1	49.1	3640
3×70+2×35/2+1×(6LWL)	47.0	50.0	4350
3×70+2×50/2+1×(6LWL)	52.0	56.0	5280
3×95+2×50/2+1×(6LWL)	52.2	56.2	5550
3×120+2×70/2+1×(6LWL)	49.6	50.9	7040
3×150+2×70/2+1×(6LWL)	48.4	52.3	8000
3×185+2×95/2+1×(6LWL)	51.3	55.3	9310
3×240+2×120/2+1×(6LWL)	58.0	62.0	11940
3×300+2×150/2+1×(6LWL)	63.2	67.2	14230

6/10 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+2×25/2+1×(6LWL)	41.4	44.4	2770
3×25+2×50/2+1×(6LWL)	43.1	46.1	3120
3×35+2×25/2+1×(6LWL)	43.6	46.6	3190
3×35+2×50/2+1×(6LWL)	44.7	47.7	3470
3×50+2×25/2+1×(6LWL)	45.1	48.1	3620
3×50+2×50/2+1×(6LWL)	46.8	49.8	4010
3×70+2×35/2+1×(6LWL)	48.3	51.3	4500
3×70+2×50/2+1×(6LWL)	52.7	56.7	5360
3×95+2×50/2+1×(6LWL)	53.5	57.5	5710
3×120+2×70/2+1×(6LWL)	57.2	61.2	6830
3×150+2×70/2+1×(6LWL)	62.3	66.3	8180
3×185+2×95/2+1×(6LWL)	65.3	69.3	9500
3×240+2×120/2+1×(6LWL)	73.4	77.4	12160
3×300+2×150/2+1×(6LWL)	78.6	82.6	14460

8.7/15 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+2×25/2+1×(6LWL)	44.2	47.2	3050
3×25+2×50/2+1×(6LWL)	45.4	48.4	3350
3×35+2×25/2+1×(6LWL)	45.3	48.3	3320
3×35+2×50/2+1×(6LWL)	47.0	50.0	3710
3×50+2×25/2+1×(6LWL)	49.4	53.4	4160
3×50+2×50/2+1×(6LWL)	51.2	55.2	4590
3×70+2×35/2+1×(6LWL)	52.7	56.7	5080
3×70+2×50/2+1×(6LWL)	55.0	59.0	5640
3×95+2×50/2+1×(6LWL)	57.0	61.0	6160
3×120+2×70/2+1×(6LWL)	62.1	66.1	7520
3×150+2×70/2+1×(6LWL)	65.7	69.7	8670
3×185+2×95/2+1×(6LWL)	68.7	72.7	10010
3×240+2×120/2+1×(6LWL)	76.8	80.8	12730
3×300+2×150/2+1×(6LWL)	82.0	86.0	15080

12/20 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+2×25/2+1×(6LWL)	45.5	48.5	3140
3×25+2×50/2+1×(6LWL)	47.2	50.2	3530
3×35+2×25/2+1×(6LWL)	48.3	51.3	3640
3×35+2×50/2+1×(6LWL)	51.0	55.0	4240
3×50+2×25/2+1×(6LWL)	52.5	56.5	4530
3×50+2×50/2+1×(6LWL)	52.5	56.5	4690
3×70+2×35/2+1×(6LWL)	55.7	59.7	5460
3×70+2×50/2+1×(6LWL)	58.0	62.0	6040
3×95+2×50/2+1×(6LWL)	61.4	65.4	6770
3×120+2×70/2+1×(6LWL)	65.1	69.1	7950
3×150+2×70/2+1×(6LWL)	68.7	72.7	9130
3×185+2×95/2+1×(6LWL)	73.2	77.2	10770
3×240+2×120/2+1×(6LWL)	79.8	83.8	13260
3×300+2×150/2+1×(6LWL)	86.3	91.3	16040

14/25 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+2×25/2+1×(6LWL)	50.3	54.3	3740
3×25+2×50/2+1×(6LWL)	50.3	54.3	3900

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×35+2×25/2+1×(6LWL)	53.1	57.1	4270
3×35+2×50/2+1×(6LWL)	53.1	57.1	4440
3×50+2×25/2+1×(6LWL)	56.3	60.3	5000
3×50+2×50/2+1×(6LWL)	56.3	60.3	5160
3×70+2×35/2+1×(6LWL)	61.0	65.0	6190
3×70+2×50/2+1×(6LWL)	61.0	65.0	6390
3×95+2×50/2+1×(6LWL)	65.3	69.3	7340
3×120+2×70/2+1×(6LWL)	69.0	73.0	8550
3×150+2×70/2+1×(6LWL)	74.0	78.0	10020
3×185+2×95/2+1×(6LWL)	77.0	81.0	11410
3×240+2×120/2+1×(6LWL)	85.0	90.0	14380
3×300+2×150/2+1×(6LWL)	90.2	95.2	16820

18/30 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+2×25/2+1×(6LWL)	53.7	57.7	4140
3×25+2×50/2+1×(6LWL)	53.7	57.7	4310
3×35+2×25/2+1×(6LWL)	56.6	60.6	4720
3×35+2×50/2+1×(6LWL)	56.6	60.6	4880
3×50+2×25/2+1×(6LWL)	61.2	65.2	5680
3×50+2×50/2+1×(6LWL)	61.2	65.2	5840
3×70+2×35/2+1×(6LWL)	64.4	68.4	6670
3×70+2×50/2+1×(6LWL)	64.4	68.4	6870
3×95+2×50/2+1×(6LWL)	68.7	72.7	7860
3×120+2×70/2+1×(6LWL)	73.8	77.8	9350
3×150+2×70/2+1×(6LWL)	77.5	81.5	10630
3×185+2×95/2+1×(6LWL)	80.5	84.5	12040
3×240+2×120/2+1×(6LWL)	88.5	93.5	15070
3×300+2×150/2+1×(6LWL)	94.7	99.7	17780

NTSCGEWOEU Medium Voltage Flexible Cable For Use In Water

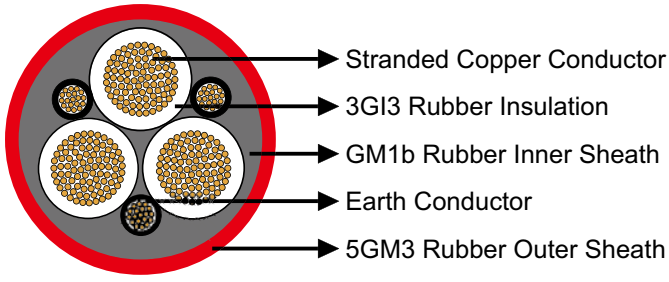
» Applications

These cables are designed for operation in water for connection to dredgers, floating docks, pumps, etc., in applications where high mechanical stresses are to be expected, also suitable for use in sewage, salt water and brackish water at water depths of up to 500 m.

» Standards

VDE 0250 Part 813

» Construction



Conductors: Flexible stranded tinned copper conductor, class 5 according to DIN VDE 0295.
Inner Conductor Layer: Semiconductive layer.
Insulation: Rubber type 3GI3.
Outer Conductor Layer: Semiconductive layer.
Earth Conductor: Split into three in the outer interstices or Individual concentric distributed over core insulating coverings (coding…../3E) or incorporated as a fourth core.
Inner Sheath: Rubber compound type GM1b with characteristics of waterproof and prevention of formation of water bubbles.
Outer Sheath: Waterproof rubber type 5GM3.

» Dimensions and Weight

1.8/3kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×25/3	38.6	41.6	2480
3×35+3×25/3	42.5	45.5	3090
3×50+3×25/3	46.0	49.0	3750
3×70+3×35/3	49.2	52.2	4620
3×95+3×50/3	57.2	61.2	6200
3×120+3×70/3	60.9	64.9	7390
3×150+3×70/3	66.3	70.3	8830
3×185+3×95/3	69.4	73.4	10170
3×25+3×16/3E	41.3	44.3	1180
3×35+3×16/3E	43.9	46.9	1650
3×50+3×25/3E	47.8	50.8	2310
3×70+3×35/3E	52.5	56.5	3220
3×95+3×50/3E	59.4	63.4	4335
3×120+3×70/3E	65.5	69.5	5480
3×150+3×70/3E	69.2	73.2	6800
3×185+3×95/3E	72.2	76.2	8375

3.6/6kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×16/16	47.0	52.0	3240
3×25/25	50.0	55.0	3870
3×35/35	55.0	55.0	4780
3×50/50	59.0	64.0	5700
3×70/70	64.0	70.0	7000
3×25+3×25/3	44.7	47.7	3120
3×35+3×25/3	47.3	50.3	3600
3×50+3×25/3	52.2	56.2	4560
3×70+3×35/3	55.5	59.5	5470
3×95+3×50/3	59.8	63.8	6570
3×120+3×70/3	65.3	69.3	8090
3×150+3×70/3	68.9	72.9	9250
3×185+3×95/3	72.0	76.0	10600
3×25+3×16/3E	46.0	49.0	3160
3×35+3×16/3E	48.6	51.6	3640
3×50+3×25/3E	54.0	58.0	4600
3×70+3×35/3E	57.2	61.2	5510
3×95+3×50/3E	63.8	67.8	6610

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×120+3×70/3E	68.1	72.1	8130
3×150+3×70/3E	71.8	75.8	9290
3×185+3×95/3E	76.6	80.6	10840

6/10 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×16/16	49.0	54.0	3450
3×25/25	54.0	59.0	4350
3×35/35	57.0	62.0	5050
3×25+3×25/3	46.4	49.4	3320
3×35+3×25/3	49.0	52.0	3810
3×50+3×25/3	54.0	58.0	4780
3×70+3×35/3	57.2	61.2	5700
3×95+3×50/3	61.5	65.5	6830
3×120+3×70/3	67.0	71.0	8360
3×150+3×70/3	70.7	74.7	9530
3×185+3×95/3	73.7	77.7	10890
3×25+3×16/3E	47.8	50.8	3360
3×35+3×16/3E	51.9	55.9	3850
3×50+3×25/3E	55.5	59.5	4820
3×70+3×35/3E	59.0	63.0	5740
3×95+3×50/3E	65.5	69.5	6870
3×120+3×70/3E	69.8	73.8	8400
3×150+3×70/3E	73.5	77.5	9570
3×185+3×95/3E	78.3	82.3	10930

8.7/15 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×25/3	52.7	56.7	4050
3×35+3×25/3	55.3	59.3	4650
3×50+3×25/3	58.7	62.7	5390
3×70+3×35/3	63.8	67.8	6740
3×95+3×50/3	68.1	72.1	7870
3×120+3×70/3	71.7	75.7	9150
3×150+3×70/3	77.2	81.2	10770
3×185+3×95/3	80.2	84.2	12310
3×25+3×16/3E	54.0	58.0	4090
3×35+3×16/3E	56.6	60.6	4690
3×50+3×25/3E	60.3	64.3	5430
3×70+3×35/3E	65.5	69.5	6780

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×95+3×50/3E	70.3	74.3	7910
3×120+3×70/3E	76.4	80.4	9190
3×150+3×70/3E	80.1	84.1	10810
3×185+3×95/3E	83.1	87.1	12350

12/20 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25/25	66,0	72.0	6140
3×35/35	69.0	75.0	6900
3×25+3×25/3	57.0	61.0	4690
3×35+3×25/3	59.6	63.6	5260
3×50+3×25/3	64.8	68.8	6380
3×70+3×35/3	68.1	72.1	7370
3×95+3×50/3	72.4	76.4	8600
3×120+3×70/3	77.9	81.9	10290
3×150+3×70/3	81.5	85.5	11560
3×185+3×95/3	84.3	89.3	13000
3×25+3×16/3E	58.3	62.3	4730
3×35+3×16/3E	60.9	64.9	5300
3×50+3×25/3E	66.4	70.4	6420
3×70+3×35/3E	69.8	73.8	7410
3×95+3×50/3E	76.4	80.4	8640
3×120+3×70/3E	80.7	84.7	10330
3×150+3×70/3E	84.2	89.2	11600
3×185+3×95/3E	89.0	94.0	13040

14/25 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×50/50	81.0	88.0	9600
3×70/70	86.0	93.0	11100
3×95/95	92.0	99.0	13020
3×25+3×25/3	64.4	68.4	5860
3×35+3×25/3	67.0	71.0	8390
3×50+3×25/3	70.4	74.4	7220
3×70+3×35/3	73.7	77.7	8720
3×95+3×50/3	79.8	83.8	9950
3×120+3×70/3	83.5	87.5	11380
3×150+3×70/3	88.7	93.7	13120
3×185+3×95/3	91.8	96.8	14770
3×25+3×16/3E	65.7	69.7	5900

Number of Cores×Nominal Cross Section	Minimum Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×35+3×16/3E	68.3	72.3	8430
3×50+3×25/3E	72.0	76.0	7260
3×70+3×35/3E	77.2	81.2	8760
3×95+3×50/3E	82.0	86.0	9990
3×120+3×70/3E	87.9	92.9	11420
3×150+3×70/3E	91.6	96.6	13160
3×185+3×95/3E	94.6	99.6	14810

18/30kV

Number of Cores×Nominal Cross Section	Minimum Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×70/70	93.0	100.0	12780
3×95/95	97.0	104.0	14350
3×25+3×25/3	69.6	73.6	7010
3×35+3×25/3	72.2	76.2	7440
3×50+3×25/3	77.4	81.4	8590
3×70+3×35/3	80.7	84.7	9670
3×95+3×50/3	84.8	89.8	11010
3×120+3×70/3	90.2	95.2	12890
3×150+3×70/3	93.9	98.9	14260
3×185+3×95/3	96.8	102.0	15780
3×25+3×16/3E	70.9	74.9	7050
3×35+3×16/3E	73.5	77.5	7490
3×50+3×25/3E	79.0	83.0	8630
3×70+3×35/3E	82.4	86.4	9710
3×95+3×50/3E	88.8	93.8	11050
3×120+3×70/3E	93.1	98.1	12930
3×150+3×70/3E	96.8	101.8	14300
3×185+3×95/3E	101.6	106.6	15820

20/35 kV

Number of Cores×Nominal Cross Section	Minimum Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×70/70	102.0	110.0	14950
3×95/95	106.0	114.0	16540
3×95+3×50/3	95.0	102.0	13670
3×120+3×70/3	101.0	109.0	15760

NTSCGEWOEU Flexible Medium Voltage Trailing Cable

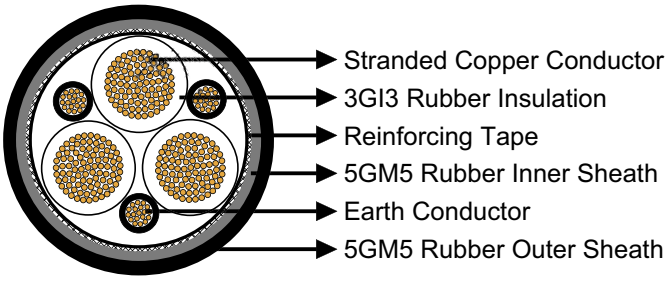
» Applications

These cables are used as power supply or connection cables for large material handling machines, e.g. excavators in open-cast mines subject to extremely high mechanical stresses. Particularly suitable for applications in which abrasion and chaffing stresses are to be expected in trailing operation.

» Standards

VDE 0250 Part 813

» Construction



Conductors: Flexible stranded tinned copper conductor, class 5 according to DIN VDE 0295.
Inner Conductor Layer: Semiconductive layer.
Insulation: Rubber type 3GI3.
Outer Conductor Layer: Semiconductive layer.
Earth Conductor: Split into three in the outer interstices or Individual concentric distributed over core insulating coverings (coding…../3E).
Reinforcing Tape: Extremely tear-resistant reinforcing tape.
Inner Sheath: Rubber type 5GM5, abrasion and tear resistant, oil and ozone resistant.
Outer Sheath: Rubber type 5GM5, abrasion and tear resistant, oil and ozone resistant, inseparably bonded with inner sheath.

» Dimensions and Weight

1.8/3kV

Number of Cores×Nominal Cross Section	Minimum Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×25/3	38.5	41.5	2470
3×35+3×25/3	42.9	45.9	3080
3×50+3×25/3	46.1	49.1	3750
3×70+3×35/3	49.7	53.7	4690
3×95+3×50/3	57.4	61.4	6210
3×120+3×70/3	61.2	65.2	7430
3×150+3×70/3	66.7	70.7	8900
3×185+3×95/3	70.6	74.6	10330
3×25+2×25/2+1×10ST	40.3	44.3	2470
3×35+2×25/2+1×10ST	42.9	46.9	3080
3×50+2×25/2+1×10ST	46.8	50.8	3750
3×70+2×35/2+1×10ST	51.5	55.5	4690
3×95+2×50/2+1×10ST	57.4	62.4	6210
3×120+2×70/2+1×10ST	63.6	68.6	7430
3×150+2×70/2+1×10ST	67.2	72.2	8900
3×185+2×95/2+1×10ST	70.2	75.2	10330

3.6/6kV

Number of Cores×Nominal Cross Section	Minimum Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×25/3	44.6	47.6	3080
3×35+3×25/3	47.6	50.6	3590
3×50+3×25/3	52.4	56.4	4520
3×70+3×35/3	56.3	60.3	5520
3×95+3×50/3	59.9	63.9	6580
3×120+3×70/3	65.6	69.6	8110
3×150+3×70/3	69.3	73.3	9320
3×185+3×95/3	73.2	77.2	10780
3×25+2×25/2+1×10ST	45.0	49.0	3200
3×35+2×25/2+1×10ST	47.6	51.6	3680
3×50+2×25/2+1×10ST	53.0	57.0	4640
3×70+2×35/2+1×10ST	56.2	60.2	5550
3×95+2×50/2+1×10ST	61.8	66.8	6650
3×120+2×70/2+1×10ST	66.1	71.1	8160
3×150+2×70/2+1×10ST	69.8	74.8	9340
3×185+2×95/2+1×10ST	74.6	79.6	10890

6/10 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×25/3	46.4	49.4	3270
3×35+3×25/3	49.1	53.1	3800
3×50+3×25/3	54.1	58.1	4750
3×70+3×35/3	58.0	62.0	5750
3×95+3×50/3	61.7	65.7	6830
3×120+3×70/3	67.4	71.4	8380
3×150+3×70/3	71.0	75.0	9620
3×185+3×95/3	76.7	80.7	11430
3×25+2×25/2+1×10ST	46.8	50.8	3410
3×35+2×25/2+1×10ST	50.9	54.9	3890
3×50+2×25/2+1×10ST	54.5	58.9	4860
3×70+2×35/2+1×10ST	58.0	62.0	5780
3×95+2×50/2+1×10ST	63.5	68.5	6920
3×120+2×70/2+1×10ST	67.8	72.8	8450
3×150+2×70/2+1×10ST	71.5	76.5	9620
3×185+2×95/2+1×10ST	76.3	81.3	10980

8.7/15 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×25/3	52.6	56.6	4040
3×35+3×25/3	55.6	59.6	4630
3×50+3×25/3	58.9	62.9	5370
3×70+3×35/3	64.5	68.5	6720
3×95+3×50/3	68.2	72.2	7850
3×120+3×70/3	72.1	76.1	9130
3×150+3×70/3	77.6	81.6	10750
3×185+3×95/3	81.5	85.5	12290
3×25+2×25/2+1×10ST	53.0	57.0	4130
3×35+2×25/2+1×10ST	55.6	59.6	4740
3×50+2×25/2+1×10ST	59.3	63.3	5470
3×70+2×35/2+1×10ST	64.6	68.6	6820
3×95+2×50/2+1×10ST	68.3	73.3	7950
3×120+2×70/2+1×10ST	74.4	79.4	9240
3×150+2×70/2+1×10ST	78.1	83.1	10860
3×185+2×95/2+1×10ST	81.1	86.1	12400

12/20 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×25/3	56.9	60.9	4620
3×35+3×25/3	59.9	63.9	5220
3×50+3×25/3	65.0	69.0	6300
3×70+3×35/3	68.9	72.9	7410
3×95+3×50/3	72.5	76.5	8560
3×120+3×70/3	78.2	82.2	10260
3×150+3×70/3	81.9	85.9	11570
3×185+3×95/3	87.4	92.4	13530
3×25+2×25/2+1×10ST	57.3	61.3	4770
3×35+2×25/2+1×10ST	59.9	63.9	5340
3×50+2×25/2+1×10ST	65.4	69.4	6460
3×70+2×35/2+1×10ST	68.8	72.8	7450
3×95+2×50/2+1×10ST	74.4	79.4	8680
3×120+2×70/2+1×10ST	78.7	83.7	10370
3×150+2×70/2+1×10ST	82.2	87.2	11650
3×185+2×95/2+1×10ST	87.0	92.0	13090

14/25kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+2×25/2+1×10ST	64.7	68.7	5940
3×35+2×25/2+1×10ST	67.3	71.3	6470
3×50+2×25/2+1×10ST	71.0	75.0	7300
3×70+2×35/2+1×10ST	75.2	80.2	8800
3×95+2×50/2+1×10ST	80.0	85.0	10050
3×120+2×70/2+1×10ST	85.9	90.9	11470
3×150+2×70/2+1×10ST	89.6	94.6	13210
3×185+2×95/2+1×10ST	92.6	97.6	14860

18/30kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×25+3×25/3	69.5	73.5	6680
3×35+3×25/3	72.5	76.5	7380
3×50+3×25/3	77.6	81.6	8460
3×70+3×35/3	81.5	85.5	9690
3×95+3×50/3	84.9	89.9	10960
3×120+3×70/3	90.6	95.6	12830

Number of Cores×Nominal Cross Section	Minimum Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
3×150+3×70/3	94.3	99.3	14250
3×185+3×95/3	100.0	105.0	16390
3×25+2×25/2+1×10ST	69.9	73.9	7100
3×35+2×25/2+1×10ST	72.6	76.6	7540
3×50+2×25/2+1×10ST	78.0	82.0	8680
3×70+2×35/2+1×10ST	80.4	85.4	9760
3×95+2×50/2+1×10ST	86.8	91.8	11100
3×120+2×70/2+1×10ST	91.1	96.1	12980
3×150+2×70/2+1×10ST	94.8	99.8	14350
3×185+2×95/2+1×10ST	99.6	104.6	15870

NTMCWOEU Flexible Medium Voltage Single Core Cable

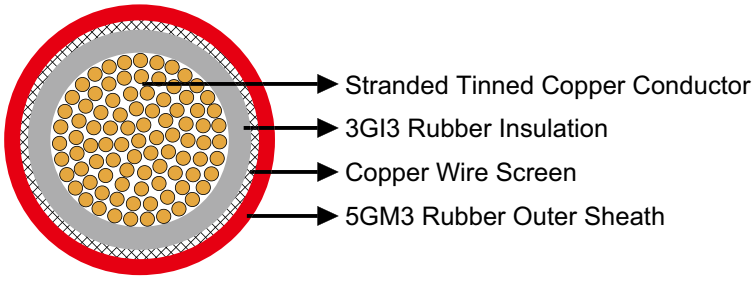
» Applications

These cables are used for connection in switch-gear and for connection of mobile transformer substations to the overhead line.

» Standards

VDE 0250 Part 813

» Construction



Conductors: Flexible stranded tinned copper conductor, class 5 according to DIN VDE 0295.
Inner Conductor Layer: Special conductive rubber.
Insulation: EPR type 3GI3.
Outer Conductor Layer: Special conductive rubber.
Screen: Spiral of tinned copper wires.
Outer Sheath: PCP type 5GM3.

» Dimensions and Weight

6/10kV

Number of Cores×Nominal Cross Section	Insulation Thickness	Thickness of Outer Sheath	Nominal Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	mm	kg/km
1×16/16	3.4	2.2	22.0	760
1×25/16	3.4	2.2	23.5	910

Number of Cores×Nominal Cross Section	Insulation Thickness	Thickness of Outer Sheath	Nominal Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	mm	kg/km
1×35/16	3.4	2.2	24.5	1040
1×50/16	3.4	2.2	27.0	1260
1×70/16	3.4	2.5	28.5	1530
1×95/16	3.4	2.5	30.5	1770
1×120/16	3.4	2.5	33.5	2180
1×150/25	3.4	3.0	35.0	2550
1×185/25	3.4	3.0	37.0	2900
1×240/25	3.4	3.5	41.0	3590
1×300/25	3.4	3.5	43.0	4280
1×400/35	3.4	4.0	46.0	5120
1×500/35	3.4	4.0	49.0	5950
1×630/35	3.4	4.0	53.5	7860

12/20kV

Number of Cores×Nominal Cross Section	Insulation Thickness	Thickness of Outer Sheath	Nominal Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	mm	kg/km
1×25/16	5.5	2.5	28.0	1180
1×35/16	5.5	2.5	29.5	1320
1×50/16	5.5	2.5	31.5	1560
1×70/16	5.5	3.0	34.0	1920
1×95/16	5.5	3.0	36.0	2190
1×120/16	5.5	3.0	38.0	2460
1×150/25	5.5	3.5	40.0	2990
1×185/25	5.5	3.5	42.0	3350
1×240/25	5.5	3.5	45.0	3990
1×300/25	5.5	3.5	48.0	4760
1×400/35	5.5	4.0	52.0	6100
1×500/35	5.5	4.0	56.0	7010
1×630/35	5.5	4.0	60.0	8180

14/25kV

Number of Cores×Nominal Cross Section	Insulation Thickness	Thickness of Outer Sheath	Nominal Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	mm	kg/km
1×25/16	6.8	3.0	30.5	1300
1×300/25	6.8	4.0	49.0	4900

18/30kV

Number of Cores×Nominal Cross Section	Insulation Thickness	Thickness of Outer Sheath	Nominal Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	mm	kg/km
1×50/16	8.0	3.0	35.0	1870

20/35 kV

Number of Cores×Nominal Cross Section	Insulation Thickness	Thickness of Outer Sheath	Nominal Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	mm	kg/km
1×95/16	9.5	3.5	44.0	2900
1×150/25	9.5	3.5	46.3	3600
1×240/25	9.5	4.0	51.7	5000

NTMCGCWOEU Flexible Medium Voltage Single Core Cable

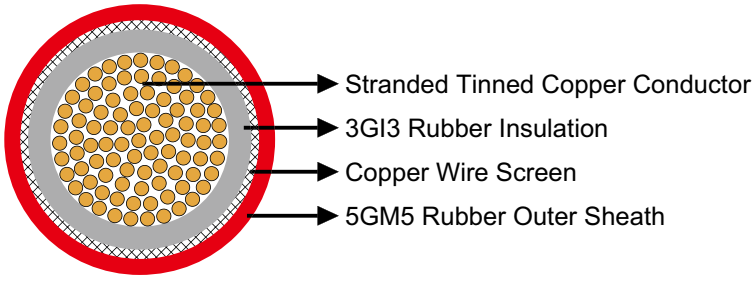
» Applications

These cables are used for connection in switch-gear and for connection of mobile transformer substations to the overhead line.

» Standards

VDE 0250 Part 813

» Construction



Conductors: Flexible stranded tinned copper conductor, class 5 according to DIN VDE 0295.
Inner Conductor Layer: Semiconductive rubber.
Insulation: EPR type 3GI3.
Outer Conductor Layer: Semiconductive rubber.
Screen: Copper wire braid.
Outer Sheath: PCP type 5GM5.

» Dimensions and Weight

3.6/6kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
1×16/16KON	19.4	21.4	601
1×25/16KON	21.4	23.4	825
1×35/16KON	22.6	24.6	882

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
1×50/16KON	24.6	27.6	1104
1×70/16KON	26.5	29.5	1346
1×95/16KON	28.5	31.5	1614
1×120/16KON	31.2	34.2	1983
1×150/25KON	32.9	35.9	2300
1×185/25KON	34.3	37.3	2642
1×240/25KON	38.6	41.6	3371

6/10 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
1×16/16KON	20.4	22.4	644
1×25/16KON	22.2	24.2	791
1×35/16KON	23.4	25.4	1050
1×50/16KON	25.4	28.4	1153
1×70/16KON	27.3	30.3	1399
1×95/16KON	29.3	32.3	1910
1×120/16KON	32.0	35.0	2044
1×150/25KON	33.7	36.7	2364
1×185/25KON	35.1	38.1	2709
1×240/25KON	39.4	42.4	3446

8.7/15 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
1×16/16KON	22.6	24.6	760
1×25/16KON	24.8	27.8	954
1×35/16KON	26.4	29.4	1101
1×50/16KON	28.0	31.0	1304
1×70/16KON	30.5	33.5	1623
1×95/16KON	32.5	35.5	1912
1×120/16KON	34.2	37.2	2219
1×150/25KON	36.9	39.9	2637
1×185/25KON	38.3	41.3	2995
1×240/25KON	41.6	44.6	3658

12/20 kV

Number of Cores×Nominal Cross Section	Minimium Overall Diameter	Maximum Overall Diameter	Nominal Weight
No. ×mm²	mm	mm	kg/km
1×16/16KON	26.0	29.0	971
1×25/16KON	27.2	30.2	1090
1×35/16KON	28.4	31.4	1236
1×50/16KON	31.0	34.0	1680
1×70/16KON	32.5	35.5	1776
1×95/16KON	34.5	37.5	2170
1×120/16KON	37.2	40.2	2481
1×150/25KON	38.9	41.9	3020
1×185/25KON	40.3	43.3	3182
1×240/25KON	43.6	46.6	3870

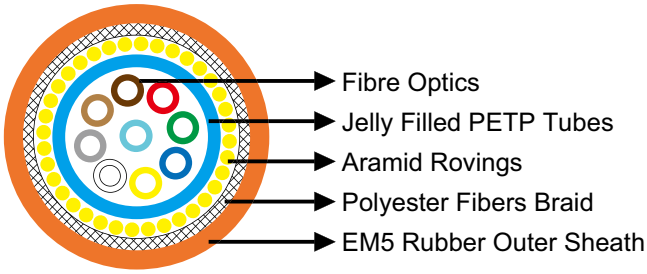
Flexible Fibre Optic cable

» Applications

These cables are designed for the optical transmission of data and signals in tough operational conditions, such as on materials handling equipment (no reeling) or alongside conveyor belts etc., withstanding to high mechanical loads; suitable for outdoor and indoor use, also for hazardous environment.

» Standards

DIN VDE 0888



» Construction

Fiber Optics: Type: 9/125, 50/125 or 62.5/125.
Plastic Tubes: PETP tubes filled with jelly.
Stress Relief: Aramid rovings.
Braid: Polyester fibers.
Sheath: Rubber type EM5.

» Dimensions and Weight

Number of Fibers & Fibre Type	Minimum Overall Diameter	Maximum Overall Diameter	Nominal Weight
	mm	mm	kg/km
1×12G50/125	9	11.0	105
1×12G62.5/125	9	11.0	105
1×12E9/125	9	11.0	105
1×18G50/125	9	11.0	105
1×18G62.5/125	9	11.0	105
1×18E9/125	9	11.0	105
1×24G50/125	9	11.0	105
1×24G62.5/125	9	11.0	105
1×24E9/125	9	11.0	105

Reeling Fibre Optic cable

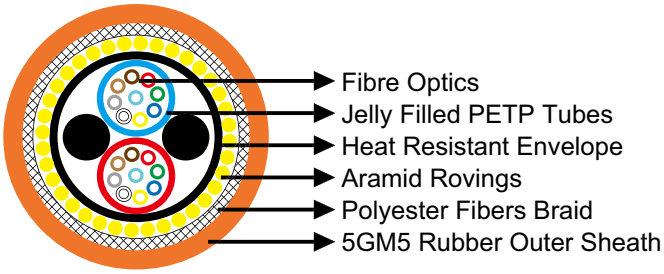
» Applications

These cables are designed for the optical transmission of data and signals in tough operational conditions, such as on materials handling equipment (no reeling) or alongside conveyor belts etc., withstanding to high mechanical loads; suitable for outdoor and indoor use, also for hazardous environment.

» Standards

DIN VDE 0888

» Construction



Fiber Optics: Type: 9/125, 50/125 or 62.5/125.
Plastic Tubes: PETP tubes filled with jelly.
Envelope: Heat resistant compound.
Stress Relief: Aramid rovings.
Braid: Polyester fibers.
Sheath: Rubber type 5GM5.

» Dimensions and Weight

Number of Fibers & Fibre Type	Minimum Overall Diameter	Maximum Overall Diameter	Nominal Weight
	mm	mm	kg/km
2×6G50/125	11.0	13.0	200
2×6G62.5/125	11.0	13.0	200
2×6E9/125	11.0	13.0	200
2×9G50/125	11.0	13.0	200
2×9G62.5/125	11.0	13.0	200
2×9E9/125	11.0	13.0	200
2×12G50/125	11.0	13.0	200
2×12G62.5/125	11.0	13.0	200
2×12E9/125	11.0	13.0	200
2×18G50/125	11.0	13.0	200
2×18G62.5/125	11.0	13.0	200
2×18E9/125	11.0	13.0	200

Cable Type Designation

Type	Type Designation
..C..	Conducting metal casing over the stranded cores or between the inner and outer sheath (shield)
(C)	Additional information about the shield for the conductor cross-sections, e.g. 12×1 (C) which means 1 mm² individually shielded or 6×(2×1)C which means 2×1 mm² twisted and shielded pairs
...CE...	Conducting metal casing over the insulation of the outer conductors
...CG...	Conducting non-metal casing over the stranded cores or between the inner and outer sheath (shield)
..CGE...	Conducting non-metal casing over the insulation of the outer conductors
FM	Telecommunication lines within the cable
G	Rubber compound
...K...	Rubber cradle separator in the centre of the cable
KON	Concentric protective conductor between the inner and outer sheath or concentric control/ monitoring conductor
LWL	Fibre-optic (FO)
N	Design according to the corresponding standard
(N)	Based on a standard
-J	Additional information about the type: with green/yellow marked core
-O	Additional information about the type: without green/yellow marked core
Ö	Oil-resistant outer sheath (according to DIN VDE 0473, Part -2-1, Para. 10) (OE)
...SH...	Heavy tough rubber-sheathed flexible mining- type cable (Rough handling)
...SHT...	1 kV reeling cable
...SL...	Control cable
ST	Control cores within the cable
...T...	Support element
...TM...	Trailing cable for medium mechanical stresses
...TS...	Trailing cable
U	Flame-retardant outer sheath (according to DIN VDE 0472, Part 804) “non-inflammable“
ÜL	Monitoring conductor within the cable (UEL)
...W...	Weather resistant
Y	PVC compound
2Y...	Definition of the insulation material (2Y = PE)
/3	Protective-earth conductor uniformly distributed in the three interstices
/3E	Protective-earth conductor uniformly distributed over the insulation of the outer conductor
...3G...	Definition of the insulating material (3G = EPR)

Wire Diameters and Conductor Resistance

Nominal cross-section	Maximum diameter of the single wires mm		Resistance of the conductor at 20℃ Ω/km	
mm²	Conductor (Class 5)	Conductor (Class 6)	Bare single wires	Tinned single wires
0.5	0.21	0.16	39	40.1
0.75	0.21	0.16	26	26.7
1	0.21	0.16	19.5	20
1.5	0.26	0.16	13.3	13.7
2.5	0.26	0.16	7.98	8.21
4	0.31	0.16	4.95	5.09
6	0.31	0.21	3.30	3.39
10	0.41	0.21	1.91	1.95
16	0.41	0.21	1.21	1.24
25	0.41	0.21	0.780	0.795
35	0.41	0.21	0.554	0.565
50	0.41	0.31	0.386	0.393
70	0.41	0.31	0.272	0.277
95	0.41	0.31	0.206	0.210
120	0.41	0.31	0.161	0.164
150	0.41	0.31	0.129	0.132
185	0.41	0.41	0.106	0.108
240	0.41	0.41	0.0801	0.0817
300	0.41	0.41	0.0641	0.0654

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