ADDISON

Caledonian

Caledonian Railway Cables

TRACTION CABLES & HIGH TEMPERATURE CABLES FOR RAILWAY APPLICATION

www.caledonian-cables.co.uk
www.addison-cables.com

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COMPANY PROFILE

ISO 9001
REGISTERED FIRM

Registration Certificate

This document certifies that the administration systems of

Caledonian Cables Limited/Addison Technology Limited

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

ISO 9001 : 2008

The approved administration systems apply to the following:

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

Original Approval
Current Certificate
Certificate Expiry
Certificate Number

On behalf of QAS International

Caledonian & Addison, established in 1978, produced a wide range of copper and fiber optic cables for communication, power and electronics in its 2 plants in UK and 5 plants in China. Caledonian products are sold in more than 35 countries around the globe.

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 and logistics 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 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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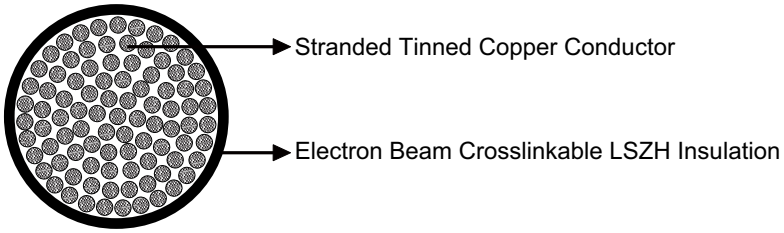
GKW-RW 300/500V Thin Wall Single Core

↘ Applications

Single core power and control cable designed for protected, fixed installation inside and outside railway vehicles for connecting fixed and moving parts in direct current and alternating voltage technology, especially converter technology.

↘ Standard

- EN 45545-2
- BS 6853 -Ia
- DIN 5510-2 1-4
- NFF 16-101 F0



↘ Construction

- **Conductors:** Circular Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Insulation:** Electron beam crosslinkable LSZH compound.

↘ Electrical Characteristics at 20℃

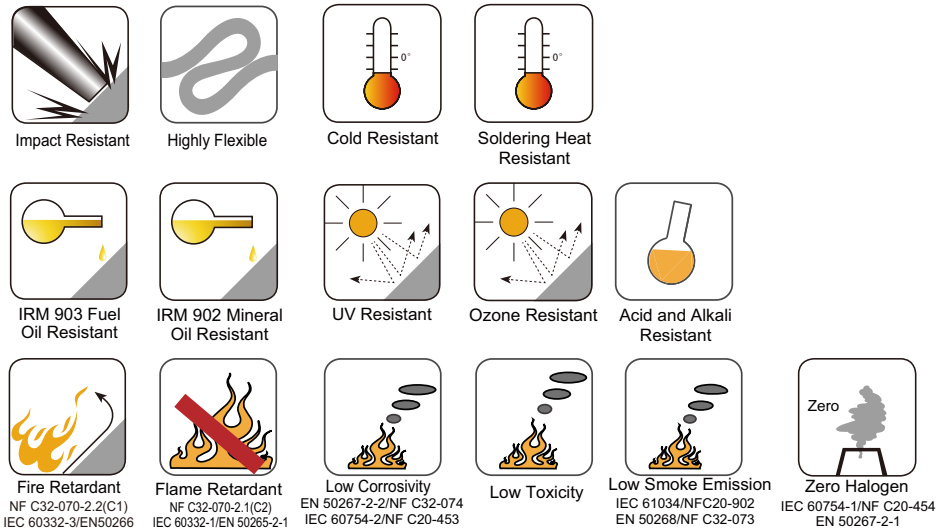
Nominal Conductor Cross Section	mm²	0.5	0.75	1	1.5	2.5
Maximum Conductor Resistance	Ω/km	40.1	26.7	20.0	13.7	8.21
Voltage Rating	KV	0.3/0.5				

↘ Mechanical and Thermal Properties

Minimum Bending Radius: 4xOD (Static); 6xOD (Flexing)
Temperature Range: -40℃ ~+120℃ (Static); -35℃ ~+90℃ (Flexing)
Short Circuit Temperature: +280℃

↘ Dimensions and Weight

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm	Min. Insulation Thickness mm	Approx. Overall Diameter mm	Approx. Weight kg/km
1×0.5	16/0.20	0.18	1.3	6
1×0.75	24/0.20	0.18	1.56	9
1×1.0	32/0.20	0.18	1.7	12
1×1.5	30/0.25	0.22	2.04	17
1×2.5	50/0.25	0.28	2.66	27



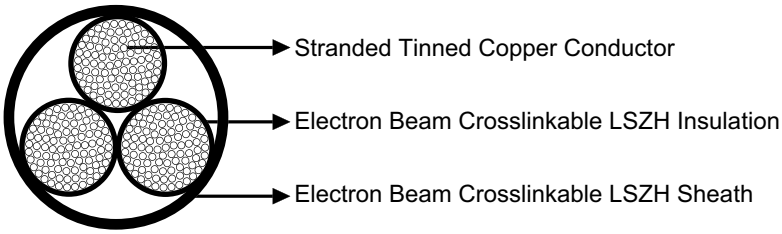
GKW-RW/S 300/500V Thin Wall Multicore

↘ Applications

Multi core power and control cable designed for protected, fixed installation inside and outside railway vehicles for connecting fixed and moving parts in direct current and alternating voltage technology, especially converter technology.

↘ Standard

- EN 45545-2
- BS 6853 -Ia
- DIN 5510-2 1-4
- NFF 16-101 F0



↘ Construction

- **Conductors:** Circular Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Insulation:** Electron beam crosslinkable LSZH compound.
- **Sheath:** Electron beam crosslinkable LSZH compound.

↘ Electrical Characteristics at 20℃

Nominal Conductor Cross Section	mm²	0.5	0.75	1	1.5	2.5
Maximum Conductor Resistance	Ω/km	40.1	26.7	20.0	13.7	8.21
Voltage Rating	KV	0.3/0.5				

↘ Mechanical and Thermal Properties

Minimum Bending Radius: 4xOD (Static); 6xOD (Flexing)
Temperature Range: -60℃ ~+120℃ (Static); -40℃ ~+90℃ (Flexing)
Short Circuit Temperature: +280℃

↘ Dimensions and Weight

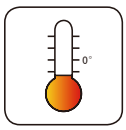
No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm	Min. Insulation Thickness mm	Approx. Overall Diameter mm	Approx. Weight kg/km
2×0.5	16/0.20	0.18	4.5	29
3×0.5	16/0.20	0.18	4.6	36
4×0.5	16/0.20	0.18	5.0	44
5×0.5	16/0.20	0.18	5.4	52
6×0.5	16/0.20	0.18	5.9	59
7×0.5	16/0.20	0.18	6.4	71
8×0.5	16/0.20	0.18	6.8	81
9×0.5	16/0.20	0.18	7.1	81
10×0.5	16/0.20	0.18	7.3	88
12×0.5	16/0.20	0.18	7.5	101
14×0.5	16/0.20	0.18	7.9	115
16×0.5	16/0.20	0.18	8.3	128
18×0.5	16/0.20	0.18	8.8	144
19×0.5	16/0.20	0.18	8.8	148
20×0.5	16/0.20	0.18	9.3	161
24×0.5	16/0.20	0.18	10.2	181
27×0.5	16/0.20	0.18	10.6	200
36×0.5	16/0.20	0.18	11.9	261
48×0.5	16/0.20	0.18	13.5	337
2×0.75	24/0.20	0.18	4.8	37
3×0.75	24/0.20	0.18	5.1	48
4×0.75	24/0.20	0.18	5.6	58
5×0.75	24/0.20	0.18	6.1	69
6×0.75	24/0.20	0.18	6.7	81
7×0.75	24/0.20	0.18	7.1	93
8×0.75	24/0.20	0.18	7.7	108
9×0.75	24/0.20	0.18	8.1	108
10×0.75	24/0.20	0.18	8.3	118
12×0.75	24/0.20	0.18	8.6	137
14×0.75	24/0.20	0.18	9.0	156
16×0.75	24/0.20	0.18	9.5	175
18×0.75	24/0.20	0.18	10.0	198
19×0.75	24/0.20	0.18	10.1	202
20×0.75	24/0.20	0.18	10.5	219
24×0.75	24/0.20	0.18	11.7	248
27×0.75	24/0.20	0.18	12.2	275
36×0.75	24/0.20	0.18	13.7	362
48×0.75	24/0.20	0.18	15.5	468
2×1.0	32/0.20	0.18	5.2	45
3×1.0	32/0.20	0.18	5.5	59
4×1.0	32/0.20	0.18	6.2	73

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm	Min. Insulation Thickness mm	Approx. Overall Diameter mm	Approx. Weight kg/km
5×1.0	32/0.20	0.18	6.7	87
6×1.0	32/0.20	0.18	7.3	102
7×1.0	32/0.20	0.18	7.9	119
8×1.0	32/0.20	0.18	8.4	135
9×1.0	32/0.20	0.18	8.9	137
10×1.0	32/0.20	0.18	9.1	150
12×1.0	32/0.20	0.18	9.4	174
14×1.0	32/0.20	0.18	9.9	199
16×1.0	32/0.20	0.18	10.4	223
18×1.0	32/0.20	0.18	11.0	254
19×1.0	32/0.20	0.18	11.1	259
20×1.0	32/0.20	0.18	11.7	282
24×1.0	32/0.20	0.18	12.9	319
27×1.0	32/0.20	0.18	13.4	354
36×1.0	32/0.20	0.18	15.1	467
48×1.0	32/0.20	0.18	17.2	607
2×1.5	30/0.25	0.22	6.0	59
3×1.5	30/0.25	0.22	6.4	81
4×1.5	30/0.25	0.22	7.1	99
5×1.5	30/0.25	0.22	7.7	123
6×1.5	30/0.25	0.22	8.5	143
7×1.5	30/0.25	0.22	9.1	163
8×1.5	30/0.25	0.22	9.8	188
9×1.5	30/0.25	0.22	10.5	189
10×1.5	30/0.25	0.22	10.7	215
12×1.5	30/0.25	0.22	11.1	244
14×1.5	30/0.25	0.22	11.7	279
16×1.5	30/0.25	0.22	12.3	326
18×1.5	30/0.25	0.22	13.0	358
19×1.5	30/0.25	0.22	13.1	366
20×1.5	30/0.25	0.22	13.7	396
24×1.5	30/0.25	0.22	15.3	450
27×1.5	30/0.25	0.22	15.9	501
36×1.5	30/0.25	0.22	17.9	663
37×1.5	30/0.25	0.22	18.5	719
48×1.5	30/0.25	0.22	20.5	864
2×2.5	50/0.25	0.28	7.1	89
3×2.5	50/0.25	0.28	7.4	117
4×2.5	50/0.25	0.28	8.3	150
5×2.5	50/0.25	0.28	9.1	182
6×2.5	50/0.25	0.28	9.9	209
7×2.5	50/0.25	0.28	10.8	246
8×2.5	50/0.25	0.28	11.7	285
9×2.5	50/0.25	0.28	12.5	286

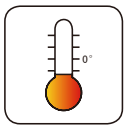
No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm	Min. Insulation Thickness mm	Approx. Overall Diameter mm	Approx. Weight kg/km
10×2.5	50/0.25	0.28	12.7	318
12×2.5	50/0.25	0.28	13.1	372
14×2.5	50/0.25	0.28	13.9	428
16×2.5	50/0.25	0.28	14.7	483
18×2.5	50/0.25	0.28	15.2	538
19×2.5	50/0.25	0.28	15.5	565
20×2.5	50/0.25	0.28	16.4	612
24×2.5	50/0.25	0.28	18.3	695
27×2.5	50/0.25	0.28	18.9	776
36×2.5	50/0.25	0.28	21.3	1030
48×2.5	50/0.25	0.28	24.5	1347

Impact Resistant

Highly Flexible


Cold Resistant

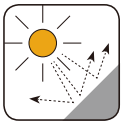
Soldering Heat Resistant

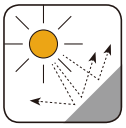

Low Temperature Resistant

Abrasion Resistant

IRM 903 Fuel Oil Resistant

IRM 902 Mineral Oil Resistant


UV Resistant


Ozone Resistant

Acid and Alkali Resistant

Corona Resistant

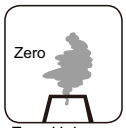
Fire Retardant
NF C32-070-2.2(C1)
IEC 60332-3/EN50266

Flame Retardant
NF C32-070-2.1(C2)
IEC 60332-1/EN 50265-2-1

Low Corrosivity
EN 50267-2-2/NF C32-074
IEC 60754-2/NF C20-453

Low Smoke Emission
IEC 61034/NFC20-902
EN 50268/NF C32-073

Low Toxicity



Zero Halogen
IEC 60754-1/NF C20-454
EN 50267-2-1

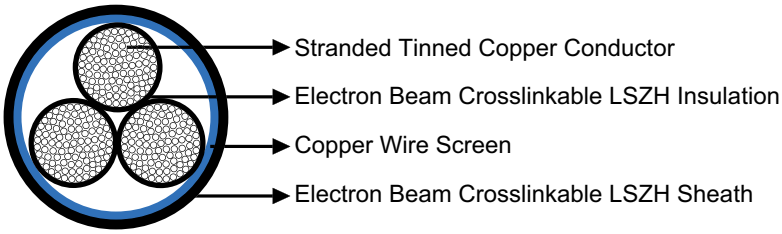
GKW-RW/S EMC 300/500V
Thin Wall Screened Multicore

↘ Applications

Multi core power and control cable designed for protected, fixed installation inside and outside railway vehicles for connecting fixed and moving parts in direct current and alternating voltage technology, especially converter technology.

↘ Standard

- EN 45545-2
- BS 6853 -Ia
- DIN 5510-2 1-4
- NFF 16-101 F0



↘ Construction

- **Conductors:** Circular Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Insulation:** Electron beam crosslinkable LSZH compound.
- **Screen:** Copper wire screen.
- **Sheath:** Electron beam crosslinkable LSZH compound.

↘ Electrical Characteristics at 20℃

Nominal Conductor Cross Section	mm²	0.5	0.75	1	1.5	2.5
Maximum Conductor Resistance	Ω/km	40.1	26.7	20.0	13.7	8.21
Voltage Rating	KV	0.3/0.5				

↘ Mechanical and Thermal Properties

Minimum Bending Radius: 4xOD (Static); 8xOD (Flexing)
Temperature Range: -60℃ ~+120℃ (Static); -40℃ ~+90℃ (Flexing)
Short Circuit Temperature: +280℃

↘ Dimensions and Weight

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm	Min. Insulation Thickness mm	Approx. Overall Diameter mm	Approx. Weight kg/km
2×0.5	16/0.20	0.20	4.8	31
3×0.5	16/0.20	0.20	5.0	43
4×0.5	16/0.20	0.20	5.4	50
5×0.5	16/0.20	0.20	6.1	58
6×0.5	16/0.20	0.20	6.5	77
7×0.5	16/0.20	0.20	7.0	81
8×0.5	16/0.20	0.20	7.4	91
9×0.5	16/0.20	0.20	7.7	93
10×0.5	16/0.20	0.20	7.7	97
12×0.5	16/0.20	0.20	8.1	113
14×0.5	16/0.20	0.20	8.5	126
16×0.5	16/0.20	0.20	8.7	140
18×0.5	16/0.20	0.20	9.4	156
22×0.5	16/0.20	0.20	10.3	192
24×0.5	16/0.20	0.20	10.6	198
27×0.5	16/0.20	0.20	11.1	238
36×0.5	16/0.20	0.20	12.3	282
48×0.5	16/0.20	0.20	13.9	362
2×2×0.5	16/0.20	0.20	7.1	89
3×2×0.5	16/0.20	0.20	7.5	103
4×2×0.5	16/0.20	0.20	8.2	130
2×0.75	24/0.20	0.20	5.3	46
3×0.75	24/0.20	0.20	5.6	55
4×0.75	24/0.20	0.20	6.2	63
5×0.75	24/0.20	0.20	6.7	77
6×0.75	24/0.20	0.20	7.4	90
7×0.75	24/0.20	0.20	7.7	103
8×0.75	24/0.20	0.20	8.3	120
9×0.75	24/0.20	0.20	8.7	122
10×0.75	24/0.20	0.20	8.7	129
12×0.75	24/0.20	0.20	9.3	149
14×0.75	24/0.20	0.20	9.6	168
16×0.75	24/0.20	0.20	9.8	187
18×0.75	24/0.20	0.20	10.7	213
22×0.75	24/0.20	0.20	11.7	259
24×0.75	24/0.20	0.20	12.1	269
27×0.75	24/0.20	0.20	12.6	297
36×0.75	24/0.20	0.20	14.1	387
2×2×0.75	24/0.20	0.20	8.0	100
6×2×0.75	24/0.20	0.20	11.6	202
2×1.0	32/0.20	0.20	5.9	63
3×1.0	32/0.20	0.20	6.2	75
4×1.0	32/0.20	0.20	6.8	89
5×1.0	32/0.20	0.20	7.3	108

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm	Min. Insulation Thickness mm	Approx. Overall Diameter mm	Approx. Weight kg/km
6×1.0	32/0.20	0.20	7.9	114
7×1.0	32/0.20	0.20	8.5	129
8×1.0	32/0.20	0.20	9.0	146
9×1.0	32/0.20	0.20	9.5	152
10×1.0	32/0.20	0.20	9.5	161
12×1.0	32/0.20	0.20	10.0	209
24×1.0	32/0.20	0.20	13.3	342
27×1.0	32/0.20	0.20	13.8	378
36×1.0	32/0.20	0.20	15.7	515
2×2×1.0	32/0.20	0.20	8.9	116
2×1.5	30/0.25	0.20	6.7	80
3×1.5	30/0.25	0.20	7.1	98
4×1.5	30/0.25	0.20	7.6	118
5×1.5	30/0.25	0.20	8.3	127
6×1.5	30/0.25	0.20	9.1	151
7×1.5	30/0.25	0.20	9.7	175
8×1.5	30/0.25	0.20	10.4	201
9×1.5	30/0.25	0.20	11.1	211
10×1.5	30/0.25	0.20	11.1	225
12×1.5	30/0.25	0.20	11.7	285
24×1.5	30/0.25	0.20	15.9	499
27×1.5	30/0.25	0.20	16.5	552
36×1.5	30/0.25	0.20	18.5	720
2×2.5	50/0.25	0.20	7.7	98
3×2.5	50/0.25	0.20	8.1	120
4×2.5	50/0.25	0.20	8.9	150
5×2.5	50/0.25	0.20	9.7	185
6×1.5	50/0.25	0.20	10.5	220
7×2.5	50/0.25	0.20	11.4	261
8×2.5	50/0.25	0.20	12.3	299
9×2.5	50/0.25	0.20	13.1	309
10×2.5	50/0.25	0.20	13.1	331
12×2.5	50/0.25	0.20	13.7	386
24×2.5	50/0.25	0.20	18.9	755
27×2.5	50/0.25	0.20	19.5	837
36×2.5	50/0.25	0.20	21.9	1100

Impact Resistant

Highly Flexible

Cold Resistant

Soldering Heat Resistant

Low Temperature Resistant

Corona Resistant

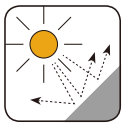
Fire Retardant
NF C32-070-2.2(C1)
IEC 60332-3/EN50266

Flame Retardant
NF C32-070-2.1(C2)
IEC 60332-1/EN 50265-2-1

Low Corrosivity
EN 50267-2-2/NF C32-074
IEC 60754-2/NF C20-453

IRM 903 Fuel Oil Resistant

IRM 902 Mineral Oil Resistant


UV Resistant

Ozone Resistant

Acid and Alkali Resistant

Abrasion Resistant

Low Smoke Emission
IEC 61034/NFC20-902
EN 50268/NF C32-073

Low Toxicity

Zero Halogen
IEC 60754-1/NF C20-454
EN 50267-2-1

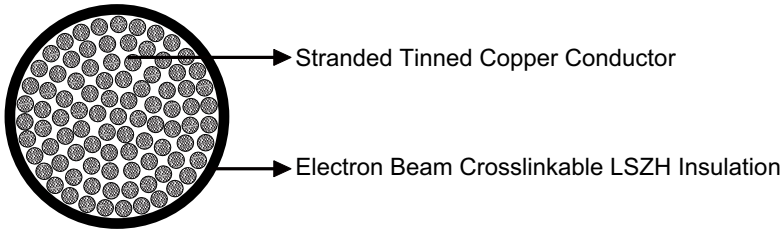
3GKW-RW 0.6/1KV Thin Wall Single Core

Applications

Single core power and control cable designed for protected, fixed installation inside and outside railway vehicles for connecting fixed and moving parts in direct current and alternating voltage technology, especially converter technology.

Standard

- EN 45545-2
- BS 6853 -Ia
- DIN 5510-2 1-4
- NFF 16-101 F0



Construction

- **Conductors:** Circular Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Insulation:** Electron beam crosslinkable LSZH compound.

Electrical Characteristics at 20℃

Nominal Conductor Cross Section	mm²	0.5	0.6	0.75	1	1.2	1.5	2.0	2.5	3	4.0
AWG			20		18	16		14		12	
Maximum Conductor Resistance	Ω/km	40.1	31.1	26.7	20.0	15.5	13.7	10.5	8.21	6.56	5.09
Voltage Rating	KV	0.6/1									

Mechanical and Thermal Properties

Minimum Bending Radius: 4xOD (Static); 6xOD (Flexing)
Temperature Range: -40℃ ~+120℃ (Static); -35℃ ~+90℃ (Flexing)
Short Circuit Temperature: +280℃

↘ Dimensions and Weight

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm		Nominal Insulation Thickness mm	Approx. Overall Diameter mm	Nominal Weight kg/km
1×0.5	19/0.18	16/0.20	0.3	1.40	6
1×0.6	19/0.20		0.3	1.50	7
1×0.75	19/0.22	24/0.20	0.3	1.60	8.3
1×1.0	19/0.25	32/0.20	0.3	1.75	11
1×1.2	19/0.29		0.3	2.00	13
1×1.5	19/0.31	30/0.25	0.3	2.15	16
1×2.0	37/0.25		0.4	2.40	19
1×2.5	19/0.40	50/0.25	0.4	2.75	26
1×4	56/0.30		0.4	3.35	40

Impact Resistant

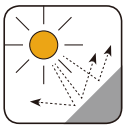
Highly Flexible

Cold Resistant

Soldering Heat Resistant

IRM 902 Mineral Oil Resistant

UV Resistant


Ozone Resistant

Acid and Alkali Resistant

Fire Retardant
NF C32-070-2.2(C1)
IEC 60332-3/EN50266

Flame Retardant
NF C32-070-2.1(C2)
IEC 60332-1/EN 50265-2-1

Low Corrosivity
EN 50267-2-2/NF C32-074
IEC 60754-2/NF C20-453

Low Toxicity

Low Smoke Emission
IEC 61034/NFC20-902
EN 50268/NF C32-073

Zero Halogen
IEC 60754-1/NF C20-454
EN 50267-2-1

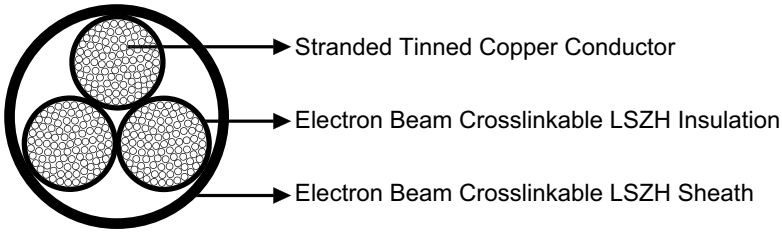
3GKW-RW/S 0.6/1KV Thin Wall Multicore

Applications

Multi core power and control cable designed for protected, fixed installation inside and outside railway vehicles for connecting fixed and moving parts in direct current and alternating voltage technology, especially converter technology.

Standard

- EN 45545-2
- BS 6853 -Ia
- DIN 5510-2 1-4
- NFF 16-101 F0



Construction

- **Conductors:** Circular Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Insulation:** Electron beam crosslinkable LSZH compound.
- **Sheath:** Electron beam crosslinkable LSZH compound.

Electrical Characteristics at 20℃

Nominal Conductor Cross Section	mm²	0.5	0.75	1	1.5	2.5
Maximum Conductor Resistance	Ω/km	40.1	26.7	20.0	13.7	8.21
Voltage Rating	KV	0.6/1				

Mechanical and Thermal Properties

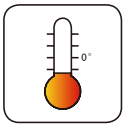
Minimum Bending Radius: 4xOD (Static); 6xOD (Flexing)
Temperature Range: -60℃ ~+120℃ (Static); -40℃ ~+90℃ (Flexing)
Short Circuit Temperature: +280℃

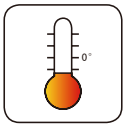
↘ Dimensions and Weight

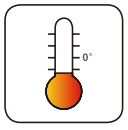
No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm		Min. Insulation Thickness mm	Approx. Overall Diameter mm	Nominal Weight kg/km
2×0.5	19/0.18	16/0.20	0.3	4.4	29
3×0.5	19/0.18	16/0.20	0.3	4.6	36
4×0.5	19/0.18	16/0.20	0.3	5.0	44
5×0.5	19/0.18	16/0.20	0.3	5.5	52
6×0.5	19/0.18	16/0.20	0.3	6.0	62
2×2×0.5	19/0.18	16/0.20	0.3	6.5	58
4×2×0.5	19/0.18	16/0.20	0.3	8.7	99
2×0.75	19/0.22	24/0.20	0.3	4.75	35
3×0.75	19/0.22	24/0.20	0.3	5.2	48
4×0.75	19/0.22	24/0.20	0.3	5.6	58
6×0.75	19/0.22	24/0.20	0.3	6.75	83
2×2×0.75	19/0.22	24/0.20	0.3	7.75	81
2×1.0	19/0.25	32/0.20	0.3	5.1	45
3×1.0	19/0.25	32/0.20	0.3	5.4	54
4×1.0	19/0.25	32/0.20	0.3	5.8	64
6×1.0	19/0.25	32/0.20	0.3	7.3	98
10×1.0	19/0.25	32/0.20	0.3	8.7	150
25×1.0	19/0.25	32/0.20	0.3	12.8	324
2×1.5	19/0.31	30/0.25	0.3	6.0	63
3×1.5	19/0.31	30/0.25	0.3	6.3	76
4×1.5	19/0.31	30/0.25	0.3	6.9	94
5×1.5	19/0.31	30/0.25	0.3	7.8	120
6×1.5	19/0.31	30/0.25	0.3	8.5	141
7G1.5	19/0.31	30/0.25	0.3	9.1	165
8×1.5	19/0.31	30/0.25	0.3	10.3	201
10×1.5	19/0.31	30/0.25	0.3	10.6	216
18×1.5	19/0.31	30/0.25	0.3	13.4	358
25G1.5	19/0.31	30/0.25	0.3	15.5	494
2×2.5	19/0.40	50/0.25	0.4	7.3	98
3×2.5	19/0.40	50/0.25	0.4	7.8	122
4×2.5	19/0.40	50/0.25	0.4	8.7	147
5×2.5	19/0.40	50/0.25	0.4	9.4	180
6×2.5	19/0.40	50/0.25	0.4	10.6	223

Impact Resistant

Highly Flexible


Cold Resistant


Soldering Heat Resistant


Low Temperature Resistant

Corona Resistant

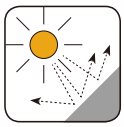
Fire Retardant
NF C32-070-2.2(C1)
IEC 60332-3/EN50266

Flame Retardant
NF C32-070-2.1(C2)
IEC 60332-1/EN 50265-2-1

Low Corrosivity
EN 50267-2-2/NF C32-074
IEC 60754-2/NF C20-453

IRM 903 Fuel Oil Resistant

IRM 902 Mineral Oil Resistant


UV Resistant

Ozone Resistant

Acid and Alkali Resistant

Abrasion Resistant

Low Smoke Emission
IEC 61034/NFC20-902
EN 50268/NF C32-073

Low Toxicity

Zero Halogen
IEC 60754-1/NF C20-454
EN 50267-2-1

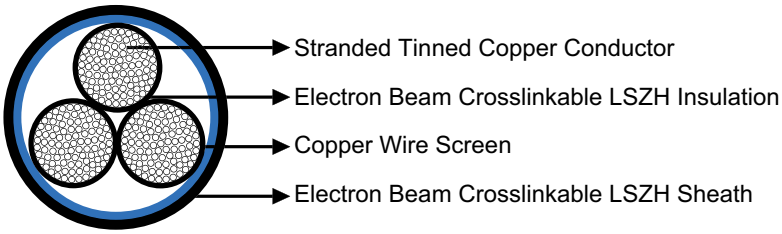
3GKW-RW/S EMC 0.6/1KV
Thin Wall Screened Multicore

Applications

Multi core power and control cable designed for protected, fixed installation inside and outside railway vehicles for connecting fixed and moving parts in direct current and alternating voltage technology, especially converter technology.

Standard

- EN 45545-2
- BS 6853 -Ia
- DIN 5510-2 1-4
- NFF 16-101 F0



Construction

- **Conductors:** Circular Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Insulation:** Electron beam crosslinkable LSZH compound.
- **Screen:** Copper wire screen.
- **Sheath:** Electron beam crosslinkable LSZH compound.

Electrical Characteristics at 20℃

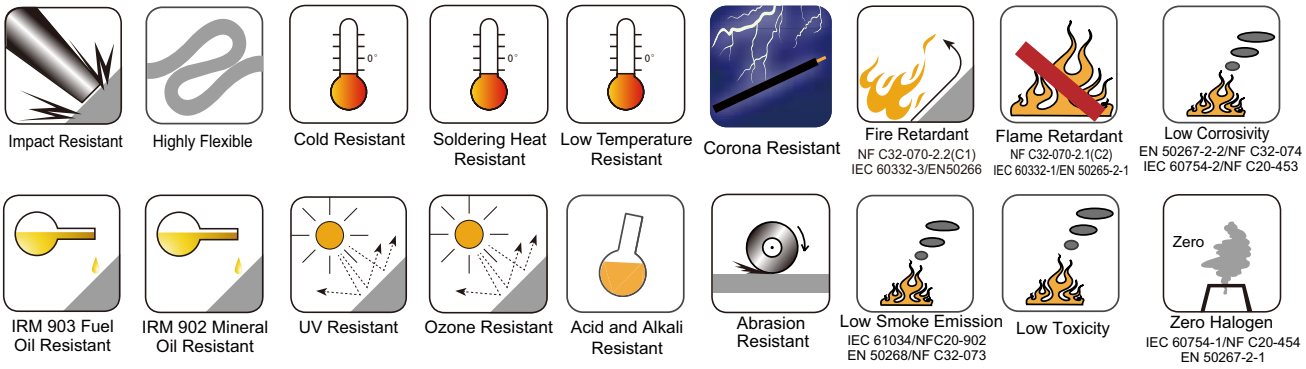
Nominal Conductor Cross Section	mm²	0.5	0.75	1	1.5	2.5
Maximum Conductor Resistance	Ω/km	40.1	26.7	20.0	13.7	8.21
Voltage Rating	KV	0.6/1				

Mechanical and Thermal Properties

Minimum Bending Radius: 4xOD (Static); 8xOD (Flexing)
Temperature Range: -60℃ ~+120℃ (Static); -40℃ ~+90℃ (Flexing)
Short Circuit Temperature: +280℃

↘ Dimensions and Weight

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm		Min. Insulation Thickness mm	Approx. Overall Diameter mm	Nominal Weight kg/km
2×0.5	19/0.18	16/0.20	0.3	4.8	42
3×0.5	19/0.18	16/0.20	0.3	5.3	51
4×0.5	19/0.18	16/0.20	0.3	5.4	56
6×0.5	19/0.18	16/0.20	0.3	6.5	82
15×0.5	19/0.18	16/0.20	0.3	9.0	167
2×2×0.5	19/0.18	16/0.20	0.3	7.2	80
3×2×0.5	19/0.18	16/0.20	0.3	8.1	98
4×2×0.5	19/0.18	16/0.20	0.3	9.3	131
12×2×0.5	19/0.18	16/0.20	0.3	13.0	276
2×0.75	19/0.22	24/0.20	0.3	5.0	48
4×0.75	19/0.22	24/0.20	0.3	6.0	72
6×0.75	19/0.22	24/0.20	0.3	7.2	103
10×0.75	19/0.22	24/0.20	0.3	8.7	152
18×0.75	19/0.22	24/0.20	0.3	11.0	244
3×2×0.75	19/0.22	24/0.20	0.3	9.0	127
2×1.0	19/0.25	32/0.20	0.3	5.6	60
3×1.0	19/0.25	32/0.20	0.3	6.0	76
4×1.0	19/0.25	32/0.20	0.3	6.5	88
6×1.0	19/0.25	32/0.20	0.3	7.8	114
8×1.0	19/0.25	32/0.20	0.3	8.9	171
25×1.0	19/0.25	32/0.20	0.3	13.8	392
2×2×1.0	19/0.25	32/0.20	0.3	8.3	117
2×1.5	19/0.31	30/0.25	0.3	6.5	86
3×1.5	19/0.31	30/0.25	0.3	6.8	95
4×1.5	19/0.31	30/0.25	0.3	7.4	118
6×1.5	19/0.31	30/0.25	0.3	9.0	168
18×1.5	19/0.31	30/0.25	0.3	14.4	452
2×2.5	19/0.40	50/0.25	0.4	7.8	122
6×2.5	19/0.40	50/0.25	0.4	11.4	268



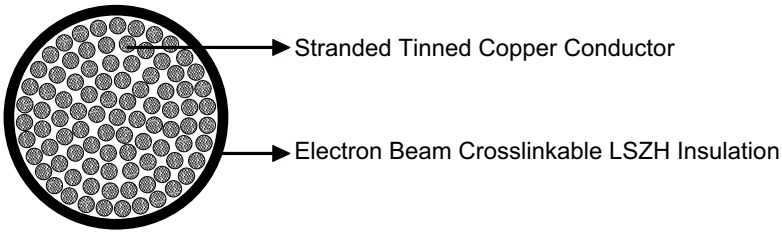
3GKW-MW 0.6/1KV
Medium Wall Single Core

Applications

Single core power and control cable designed for protected, fixed installation inside and outside railway vehicles for connecting fixed and moving parts in direct current and alternating voltage technology, especially converter technology.

Standard

- EN 45545-2
- BS 6853 -Ia
- DIN 5510-2 1-4
- NFF 16-101 F0



Construction

- **Conductors:** Circular Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Insulation:** Electron beam crosslinkable LSZH compound.

Electrical Characteristics at 20℃

Nominal Conductor Cross Section	mm²	0.5	0.75	1	1.5	2.5	4.0	6.0	10	16	25	35
Maximum Conductor Resistance	Ω/km	40.1	26.7	20.0	13.7	8.21	5.09	3.39	1.95	1.24	0.795	0.565
Voltage Rating	KV	0.6/1										

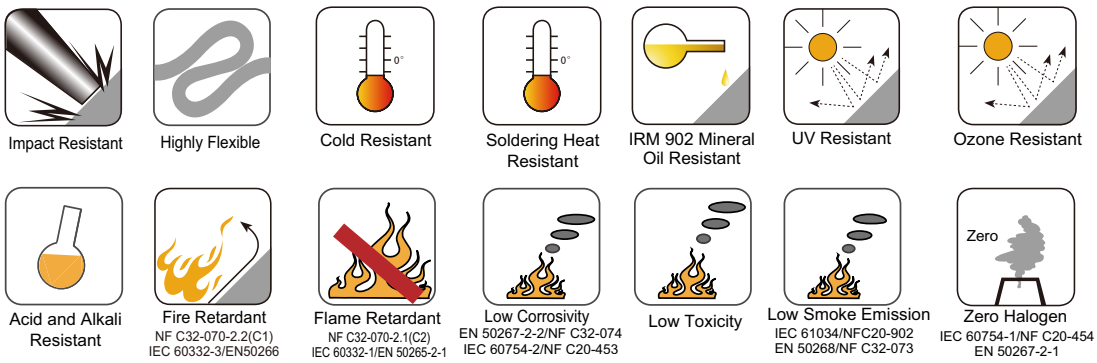
Nominal Conductor Cross Section	mm²	50	70	95	120	150	185	240	300	400
Maximum Conductor Resistance	Ω/km	0.393	0.277	0.21	0.164	0.132	0.108	0.0817	0.0654	0.0495
Voltage Rating	KV	0.6/1								

Mechanical and Thermal Properties

Minimum Bending Radius: 4xOD (Static); 6xOD (Flexing)
Temperature Range: -40℃ ~+120℃ (Static); -35℃ ~+90℃ (Flexing)
Short Circuit Temperature: +280℃

↘ Dimensions and Weight

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm		Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
1×0.5	19/0.18	16/0.20	0.5	2.0	8
1×0.75	24/0.20		0.5	2.2	11
1×1.0	32/0.20		0.55	2.45	14
1×1.5	30/0.25		0.55	2.7	20
1×2.5	50/0.25		0.6	3.3	31
1×4	56/0.30		0.65	3.95	45
1×6	84/0.30		0.7	4.7	69
1×10	80/0.40		0.8	5.85	113
1×16	119/0.41	126/0.40	0.9	7.3	156
1×25	182/0.41	196/0.40	1.0	8.9	250
1×35	266/0.41	276/0.40	1.1	10.2	330
1×50	378/0.41	396/0.40	1.2	11.9	500
1×70	348/0.51	360/0.50	1.3	14.3	690
1×95	444/0.51	475/0.50	1.4	15.9	883
1×120	551/0.51	608/0.50	1.5	17.9	1180
1×150	722/0.51	756/0.50	1.6	20.3	1460
1×185	874/0.51	925/0.50	1.7	22.0	1780
1×240	1147/0.51	1221/0.50	1.9	25.2	2220
1×300	1443/0.51	1525/0.50	2.0	28.0	3000
1×400	2016/0.51	2013/0.50	2.2	33.8	4000



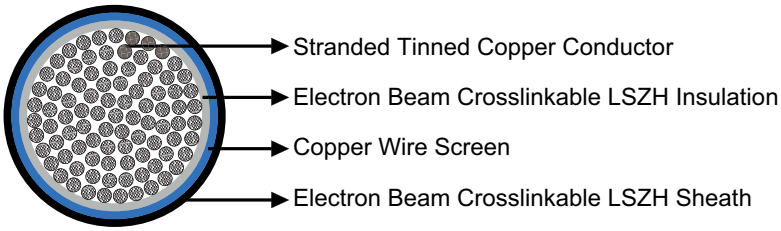
3GKW-MW EMC 0.6/1KV Medium Wall Screened Single Core

Applications

Single core power and control cable designed for protected, fixed installation inside and outside railway vehicles for connecting fixed and moving parts in direct current and alternating voltage technology, especially converter technology.

Standard

- EN 45545-2
- BS 6853 -Ia
- DIN 5510-2 1-4
- NFF 16-101 F0



Construction

- Conductors: Circular Class 5 stranded tinned copper to IEC60228/VDE 0295.
- Insulation: Electron beam crosslinkable LSZH compound.
- Screen: Copper wire screen.
- Sheath: Electron beam crosslinkable LSZH compound.

Electrical Characteristics at 20℃

Nominal Conductor Cross Section	mm²	0.5	0.75	1	1.5	2.5	4.0	6.0	10	16
Maximum Conductor Resistance	Ω/km	40.1	26.7	20.0	13.7	8.21	5.09	3.39	1.95	1.24
Voltage Rating	KV	0.6/1								

Nominal Conductor Cross Section	mm²	25	35	50	70	95	120	150	185
Maximum Conductor Resistance	Ω/km	0.795	0.565	0.393	0.277	0.21	0.164	0.132	0.108
Voltage Rating	KV	0.6/1							

Mechanical and Thermal Properties

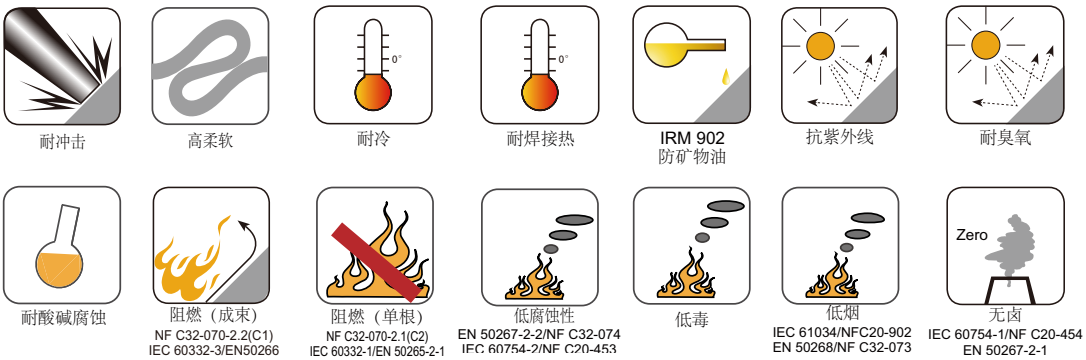
Minimum Bending Radius: 4xOD (Static); 8xOD (Flexing)

Temperature Range: -40℃ ~+120℃ (Static); -35℃ ~+90℃ (Flexing)

Short Circuit Temperature: +280℃

↘ Dimensions and Weight

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm		Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
1×0.5	19/0.18	16/0.20	0.5	4.0	26
1×0.75	24/0.20		0.5	4.2	30
1×1.0	32/0.20		0.55	4.5	34
1×1.5	30/0.25		0.55	4.8	43
1×2.5	50/0.25		0.6	5.5	61
1×4	56/0.30		0.65	6.15	84
1×6	84/0.30		0.7	7.0	112
1×10	80/0.40		0.8	8.4	170
1×16	119/0.41	126/0.40	0.9	10.2	250
1×25	182/0.41	196/0.40	1.0	12.2	360
1×35	266/0.41	276/0.40	1.1	13.7	490
1×50	378/0.41	396/0.40	1.2	15.7	690
1×70	348/0.51	360/0.50	1.3	18.7	920
1×95	444/0.51	475/0.50	1.4	20.5	1170
1×120	551/0.51	608/0.50	1.5	22.7	1430
1×150	722/0.51	756/0.50	1.6	25.5	1830
1×185	874/0.51	925/0.50	1.7	27.6	2190



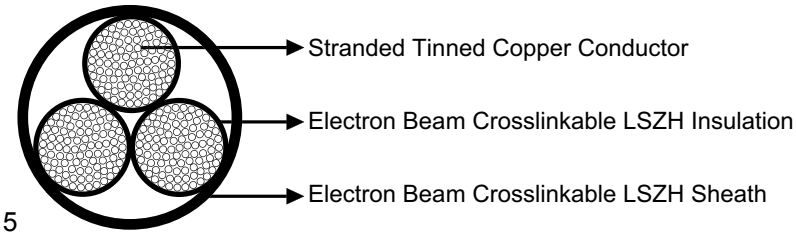
3GKW-MW/S 0.6/1KV Medium Wall Multicore

Applications

Multi core power and control cable designed for protected, fixed installation inside and outside railway vehicles for connecting fixed and moving parts in direct current and alternating voltage technology, especially converter technology.

Standard

- EN 45545-2
- BS 6853 -Ia
- DIN 5510-2 1-4
- NFF 16-101 F0



Construction

- **Conductors:** Circular Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Insulation:** Electron beam crosslinkable LSZH compound.
- **Sheath:** Electron beam crosslinkable LSZH compound.

Electrical Characteristics at 20℃

Nominal Conductor Cross Section	mm²	0.5	0.75	1	1.5	2.5	4.0	6.0	10	16	25	35
Maximum Conductor Resistance	Ω/km	40.1	26.7	20.0	13.7	8.21	5.09	3.39	1.95	1.24	0.795	0.565
Voltage Rating	KV	0.6/1										

Mechanical and Thermal Properties

Minimum Bending Radius: 4xOD (Static); 6xOD (Flexing)
Temperature Range: -60℃ ~+120℃ (Static); -40℃ ~+90℃ (Flexing)
Short Circuit Temperature: +280℃

↘ Dimensions and Weight

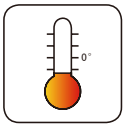
No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm		Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
2×0.5	19/0.18	16/0.20	0.5	5.9	39
3×0.5	19/0.18	16/0.20	0.5	6.1	50
4×0.5	19/0.18	16/0.20	0.5	7.0	55
5×0.5	19/0.18	16/0.20	0.5	7.3	74
6×0.5	19/0.18	16/0.20	0.5	7.5	85
7×0.5	19/0.18	16/0.20	0.5	9.1	99
8×0.5	19/0.18	16/0.20	0.5	9.3	111
9×0.5	19/0.18	16/0.20	0.5	9.5	114
10×0.5	19/0.18	16/0.20	0.5	9.5	122
12×0.5	19/0.18	16/0.20	0.5	10.0	145
14×0.5	19/0.18	16/0.20	0.5	10.5	163
16×0.5	19/0.18	16/0.20	0.5	11.2	185
18×0.5	19/0.18	16/0.20	0.5	12.7	205
20×0.5	19/0.18	16/0.20	0.5	13.0	233
24×0.5	19/0.18	16/0.20	0.5	13.9	264
27×0.5	19/0.18	16/0.20	0.5	14.5	295
36×0.5	19/0.18	16/0.20	0.5	16.3	386
48×0.5	19/0.18	16/0.20	0.5	19.0	516
2×0.75	19/0.21	24/0.20	0.5	6.0	49
3×0.75	19/0.21	24/0.20	0.5	6.8	63
4×0.75	19/0.21	24/0.20	0.5	6.9	77
5×0.75	19/0.21	24/0.20	0.5	8.4	96
6×0.75	19/0.21	24/0.20	0.5	8.7	107
7×0.75	19/0.21	24/0.20	0.5	9.1	131
8×0.75	19/0.21	24/0.20	0.5	10.9	147
9×0.75	19/0.21	24/0.20	0.5	11.3	152
10×0.75	19/0.21	24/0.20	0.5	11.6	162
12×0.75	19/0.21	24/0.20	0.5	11.9	175
14×0.75	19/0.21	24/0.20	0.5	12.1	213
16×0.75	19/0.21	24/0.20	0.5	12.4	241
20×0.75	19/0.21	24/0.20	0.5	15.2	325
24×0.75	19/0.21	24/0.20	0.5	15.6	349
27×0.75	19/0.21	24/0.20	0.5	16.1	385
36×0.75	19/0.21	24/0.20	0.5	18.1	505
48×0.75	19/0.21	24/0.20	0.5	21.2	678
2×1.0	32/0.20		0.55	6.4	59
3×1.0	32/0.20		0.55	6.8	78
4×1.0	32/0.20		0.55	7.4	93
5×1.0	32/0.20		0.55	8.3	115
6×1.0	32/0.20		0.55	10.0	130
7×1.0	32/0.20		0.55	10.3	158
8×1.0	32/0.20		0.55	10.7	181
9×1.0	32/0.20		0.55	12.5	200
10×1.0	32/0.20		0.55	12.7	210
12×1.0	32/0.20		0.55	12.9	234

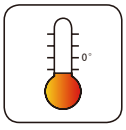
No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm	Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
14×1.0	32/0.20	0.55	13.2	265
16×1.0	32/0.20	0.55	13.5	300
20×1.0	32/0.20	0.55	14.7	377
24×1.0	32/0.20	0.55	16.9	433
25×1.0	32/0.20	0.55	18.7	519
27×1.0	32/0.20	0.55	19.0	600
36×1.0	32/0.20	0.55	19.9	644
48×1.0	32/0.20	0.55	22.9	837
2×1.5	30/0.25	0.55	7.5	75
3×1.5	30/0.25	0.55	8.0	96
4×1.5	30/0.25	0.55	8.3	120
5×1.5	30/0.25	0.55	10.2	146
6×1.5	30/0.25	0.55	11.6	173
7×1.5	30/0.25	0.55	12.1	185
8×1.5	30/0.25	0.55	12.5	207
9×1.5	30/0.25	0.55	12.9	210
10×1.5	30/0.25	0.55	13.3	236
12×1.5	30/0.25	0.55	14.2	305
14×1.5	30/0.25	0.55	14.6	346
16×1.5	30/0.25	0.55	15.0	393
20×1.5	30/0.25	0.55	16.5	500
24×1.5	30/0.25	0.55	19.1	582
27×1.5	30/0.25	0.55	19.7	644
36×1.5	30/0.25	0.55	23.0	905
48×1.5	30/0.25	0.55	25.7	1120
2×2.5	50/0.25	0.6	8.5	115
3×2.5	50/0.25	0.6	8.9	149
4×2.5	50/0.25	0.6	9.9	183
5×2.5	50/0.25	0.6	11.1	228
6×2.5	50/0.25	0.6	12.1	265
7×2.5	50/0.25	0.6	13.0	309
8×2.5	50/0.25	0.6	14.3	360
9×2.5	50/0.25	0.6	15.4	366
10×2.5	50/0.25	0.6	15.1	400
12×2.5	50/0.25	0.6	15.9	467
14×2.5	50/0.25	0.6	16.5	532
16×2.5	50/0.25	0.6	17.5	600
20×2.5	50/0.25	0.6	20.1	777
24×2.5	50/0.25	0.6	21.4	873
27×2.5	50/0.25	0.6	22.5	972
2×4	56/0.30	0.65	9.5	151
3×4	56/0.30	0.65	10.2	207
4×4	56/0.30	0.65	11.3	261
5×4	56/0.30	0.65	12.6	324
6×4	56/0.30	0.65	13.9	379
7×4	56/0.30	0.65	15.2	433
8×4	56/0.30	0.65	16.3	518
9×4	56/0.30	0.65	17.5	550

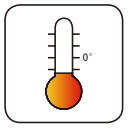
No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm		Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
10×4	56/0.30		0.65	17.7	581
12×4	56/0.30		0.65	18.3	675
14×4	56/0.30		0.65	19.2	785
16×4	56/0.30		0.65	20.4	886
20×4	56/0.30		0.65	23.0	1129
24×4	56/0.30		0.65	24.7	1276
27×4	56/0.30		0.65	26.1	1435
2×6	84/0.30		0.7	10.7	205
3×6	84/0.30		0.7	11.4	279
4×6	84/0.30		0.7	12.6	353
5×6	84/0.30		0.7	14.0	436
6×6	84/0.30		0.7	15.7	501
7×6	84/0.30		0.7	17.2	597
2×10	80/0.40		0.8	12.8	313
3×10	80/0.40		0.8	13.7	433
4×10	80/0.40		0.8	15.4	514
5×10	80/0.40		0.8	17.0	641
6×10	80/0.40		0.8	19.1	794
7×10	80/0.40		0.8	20.7	919
2×16	119/0.40	126/0.40	0.9	16.5	482
3×16	119/0.40	126/0.40	0.9	17.6	590
4×16	119/0.40	126/0.40	0.9	19.8	787
5×16	119/0.40	126/0.40	0.9	22.1	992
6×16	119/0.40	126/0.40	0.9	24.3	1192
7×16	119/0.40	126/0.40	0.9	26.5	1409
2×25	182/0.40	196/0.40	1.0	19.9	716
3×25	182/0.40	196/0.40	1.0	21.4	899
4×25	182/0.40	196/0.40	1.0	23.8	1182
5×25	182/0.40	196/0.40	1.0	26.4	1482
6×25	182/0.40	196/0.40	1.0	29.9	1818
7×25	182/0.40	196/0.40	1.0	32.1	2128
2×35	266/0.40	276/0.40	1.1	22.3	775
3×35	266/0.40	276/0.40	1.1	24.0	938
4×35	266/0.40	276/0.40	1.1	26.7	1230
5×35	266/0.40	276/0.40	1.1	29.6	1543
6×35	266/0.40	276/0.40	1.1	33.3	1890
7×35	266/0.40	276/0.40	1.1	36.7	2263

Impact Resistant

Highly Flexible


Cold Resistant


Soldering Heat Resistant


Low Temperature Resistant

Corona Resistant

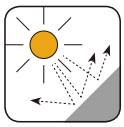
Fire Retardant
NF C32-070-2.2(C1)
IEC 60332-3/EN50266

Flame Retardant
NF C32-070-2.1(C2)
IEC 60332-1/EN 50265-2-1

Low Corrosivity
EN 50267-2-2/NF C32-074
IEC 60754-2/NF C20-453

IRM 903 Fuel Oil Resistant

IRM 902 Mineral Oil Resistant


UV Resistant

Ozone Resistant

Acid and Alkali Resistant

Abrasion Resistant

Low Smoke Emission
IEC 61034/NFC20-902
EN 50268/NF C32-073

Low Toxicity

Zero Halogen
IEC 60754-1/NF C20-454
EN 50267-2-1

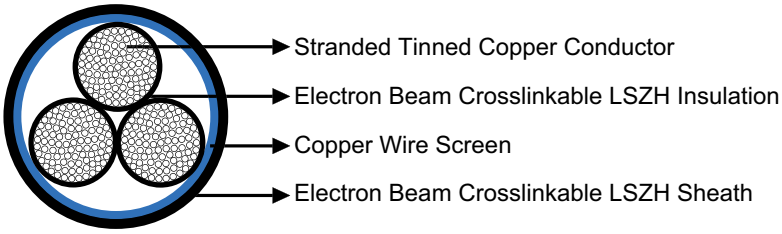
3GKW-MW/S EMC 0.6/1KV Medium Wall Screened Multicore

Applications

Multi core power and control cable designed for protected, fixed installation inside and outside railway vehicles for connecting fixed and moving parts in direct current and alternating voltage technology, especially converter technology.

Standard

- EN 45545-2
- BS 6853 -Ia
- DIN 5510-2 1-4
- NFF 16-101 F0



Construction

- **Conductors:** Circular Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Insulation:** Electron beam crosslinkable LSZH compound.
- **Screen:** Copper wire screen.
- **Sheath:** Electron beam crosslinkable LSZH compound.

Electrical Characteristics at 20℃

Nominal Conductor Cross Section	mm²	1.5	2.5	4.0	10	16	25	35	50
Maximum Conductor Resistance	Ω/km	13.7	8.21	5.09	1.95	1.24	0.795	0.565	0.393
Voltage Rating	KV	0.6/1							

Mechanical and Thermal Properties

Minimum Bending Radius: 4xOD (Static); 8xOD (Flexing)
Temperature Range: -60℃ ~+120℃ (Static); -40℃ ~+90℃ (Flexing)
Short Circuit Temperature: +280℃

↘ Dimensions and Weight

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm		Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
2×0.5	19/0.18	16/0.20	0.5	6.6	68
3×0.5	19/0.18	16/0.20	0.5	6.9	75
4×0.5	19/0.18	16/0.20	0.5	7.5	81
5×0.5	19/0.18	16/0.20	0.5	8.2	93
6×0.5	19/0.18	16/0.20	0.5	8.8	111
7×0.5	19/0.18	16/0.20	0.5	9.8	125
8×0.5	19/0.18	16/0.20	0.5	10.3	143
9×0.5	19/0.18	16/0.20	0.5	10.8	149
10×0.5	19/0.18	16/0.20	0.5	11.0	154
12×0.5	19/0.18	16/0.20	0.5	12.3	175
14×0.5	19/0.18	16/0.20	0.5	13.0	198
15×0.5	19/0.18	16/0.20	0.5	13.4	210
16×0.5	19/0.18	16/0.20	0.5	13.7	223
20×0.5	19/0.18	16/0.20	0.5	14.0	274
24×0.5	19/0.18	16/0.20	0.5	14.2	310
27×0.5	19/0.18	16/0.20	0.5	14.5	343
9×2×0.5	19/0.18	16/0.20	0.5	20.6	540
2×0.75	19/0.21	24/0.20	0.5	7.2	80
3×0.75	19/0.21	24/0.20	0.5	7.5	90
4×0.75	19/0.21	24/0.20	0.5	8.3	116
5×0.75	19/0.21	24/0.20	0.5	9.1	133
6×0.75	19/0.21	24/0.20	0.5	9.9	165
7×0.75	19/0.21	24/0.20	0.5	10.7	186
8×0.75	19/0.21	24/0.20	0.5	11.5	194
9×0.75	19/0.21	24/0.20	0.5	12.3	220
10×0.75	19/0.21	24/0.20	0.5	12.6	250
12×0.75	19/0.21	24/0.20	0.5	13.2	278
14×0.75	19/0.21	24/0.20	0.5	13.8	300
16×0.75	19/0.21	24/0.20	0.5	14.4	348
20×0.75	19/0.21	24/0.20	0.5	14.5	354
24×0.75	19/0.21	24/0.20	0.5	15.6	401
27×0.75	19/0.21	24/0.20	0.5	16.3	459
5×2×0.75	19/0.21	24/0.20	0.5	16.0	350
2×1.0	32/0.20		0.55	7.4	93
3×1.0	32/0.20		0.55	8.1	114
4×1.0	32/0.20		0.55	8.8	140
5×1.0	32/0.20		0.55	9.8	158
6×1.0	32/0.20		0.55	10.8	170
7×1.0	32/0.20		0.55	11.8	189
8×1.0	32/0.20		0.55	11.8	219
9×1.0	32/0.20		0.55	12.0	223
10×1.0	32/0.20		0.55	12.2	234

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm	Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
12×1.0	32/0.20	0.55	12.5	268
14×1.0	32/0.20	0.55	13.2	305
16×1.0	32/0.20	0.55	13.9	339
20×1.0	32/0.20	0.55	15.6	430
24×1.0	32/0.20	0.55	17.1	511
27×1.0	32/0.20	0.55	17.7	560
2×1.5	30/0.25	0.55	8.1	114
3×1.5	30/0.25	0.55	8.6	124
4×1.5	30/0.25	0.55	9.9	139
5×1.5	30/0.25	0.55	10.9	150
6×1.5	30/0.25	0.55	11.7	173
7×1.5	30/0.25	0.55	13.2	203
8×1.5	30/0.25	0.55	14.6	243
9×1.5	30/0.25	0.55	14.9	274
10×1.5	30/0.25	0.55	15.5	299
12×1.5	30/0.25	0.55	16.2	342
14×1.5	30/0.25	0.55	16.8	390
16×1.5	30/0.25	0.55	17.5	560
20×1.5	30/0.25	0.55	17.6	614
24×1.5	30/0.25	0.55	19.3	670
27×1.5	30/0.25	0.55	19.9	734
6×2×1.5	30/0.25	0.55	18.9	540
2×2.5	50/0.25	0.6	9.6	160
3×2.5	50/0.25	0.6	10.5	200
4×2.5	50/0.25	0.6	11.3	220
5×2.5	50/0.25	0.6	12.7	250
6×2.5	50/0.25	0.6	13.7	345
7×2.5	50/0.25	0.6	14.8	400
8×2.5	50/0.25	0.6	14.9	410
9×2.5	50/0.25	0.6	16.0	437
10×2.5	50/0.25	0.6	16.0	461
12×2.5	50/0.25	0.6	16.8	531
14×2.5	50/0.25	0.6	17.7	601
16×2.5	50/0.25	0.6	19.0	691
20×2.5	50/0.25	0.6	23.3	969
24×2.5	50/0.25	0.6	23.5	1004
27×2.5	50/0.25	0.6	24.0	1104
2×4	56/0.30	0.65	10.8	216
3×4	56/0.30	0.65	11.8	260
4×4	56/0.30	0.65	13.3	345
5×4	56/0.30	0.65	14.7	440
5×4	56/0.30	0.65	14.7	460
5×4	56/0.30	0.65	15.7	485
5×4	56/0.30	0.65	17.2	584
5×4	56/0.30	0.65	18.3	605

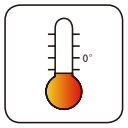
No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm		Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
5×4	56/0.30		0.65	18.3	641
12×4	56/0.30		0.65	19.5	760
2×6	84/0.30		0.7	12.1	291
3×6	84/0.30		0.7	13.8	370
4×6	84/0.30		0.7	16.3	458
5×6	84/0.30		0.7	17.4	620
6×6	84/0.30		0.7	17.4	640
7×6	84/0.30		0.7	17.8	673
8×6	84/0.30		0.7	19.4	774
9×6	84/0.30		0.7	20.7	820
10×6	84/0.30		0.7	20.7	875
12×6	84/0.30		0.7	21.8	1026
2×10	80/0.40		0.8	14.3	432
3×10	80/0.40		0.8	17.1	580
4×10	80/0.40		0.8	19.2	750
5×10	80/0.40		0.8	21.1	850
6×10	80/0.40		0.8	21.9	875
7×10	80/0.40		0.8	22.8	1019
8×10	80/0.40		0.8	23.7	1190
2×16	119/0.40	126/0.40	0.9	18.2	660
3×16	119/0.40	126/0.40	0.9	20.5	820
4×16	119/0.40	126/0.40	0.9	20.4	874
5×16	119/0.40	126/0.40	0.9	22.7	1083
6×16	119/0.40	126/0.40	0.9	24.9	1294
7×16	119/0.40	126/0.40	0.9	27.1	1521
8×16	119/0.40	126/0.40	0.9	29.6	1808
2×25	182/0.40	196/0.40	1.0	22.9	990
3×25	182/0.40	196/0.40	1.0	24.4	1075
4×25	182/0.40	196/0.40	1.0	25.2	1404
5×25	182/0.40	196/0.40	1.0	27.0	1750
3×35	266/0.40	276/0.40	1.1	27.9	1600
6×35	266/0.40	276/0.40	1.1	39.7	3350
2×50	378/0.40	396/0.40	1.2	29.8	1760

Impact Resistant

Highly Flexible

Cold Resistant

Soldering Heat Resistant


Low Temperature Resistant

Corona Resistant

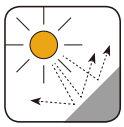
Fire Retardant
NF C32-070-2.2(C1)
IEC 60332-3/EN50266

Flame Retardant
NF C32-070-2.1(C2)
IEC 60332-1/EN 50265-2-1

Low Corrosivity
EN 50267-2-2/NF C32-074
IEC 60754-2/NF C20-453

IRM 903 Fuel Oil Resistant

IRM 902 Mineral Oil Resistant


UV Resistant

Ozone Resistant

Acid and Alkali Resistant

Abrasion Resistant

Low Smoke Emission
IEC 61034/NFC20-902
EN 50268/NF C32-073

Low Toxicity

Zero Halogen
IEC 60754-1/NF C20-454
EN 50267-2-1

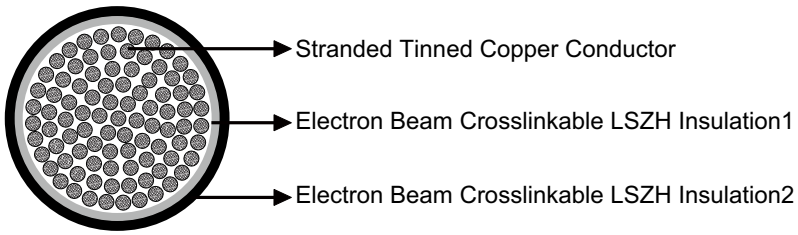
3GKW-DW 0.6/1KV Dual Wall Single Core

Applications

Single core power and control cable designed for protected, fixed installation inside and outside railway vehicles for connecting fixed and moving parts in direct current and alternating voltage technology, especially converter technology.

Standard

- EN 45545-2
- BS 6853 -Ia
- DIN 5510-2 1-4
- NFF 16-101 F0



Construction

- **Conductors:** Circular Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Insulation1:** Electron beam crosslinkable LSZH compound.
- **Insulation2:** Electron beam crosslinkable LSZH compound.

Electrical Characteristics at 20℃

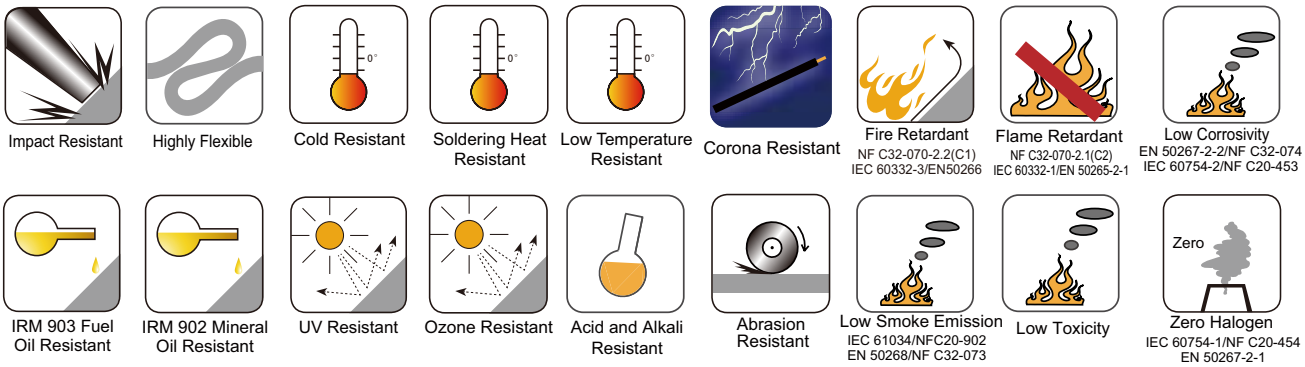
Nominal Conductor Cross Section	mm²	0.5	0.6	0.75	1	1.2	1.5	2.0	2.5	3	4.0
AWG			20		18	16		14		12	
Maximum Conductor Resistance	Ω/km	40.1	31.1	26.7	20.0	15.5	13.7	10.5	8.21	6.56	5.09
Voltage Rating	KV	0.6/1									

Mechanical and Thermal Properties

Minimum Bending Radius: 4xOD (Static); 6xOD (Flexing)
Temperature Range: -60℃ ~+120℃ (Static); -40℃ ~+90℃ (Flexing)
Short Circuit Temperature: +280℃

↘ Dimensions and Weight

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm		Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
1×0.5	19/0.18	16/0.20	0.2	1.3	5.5
1×0.6	19/0.20		0.2	1.39	6.5
1×0.75	19/0.22	24/0.20	0.2	1.52	8
1×1.0	19/0.25	32/0.20	0.2	1.67	10
1×1.2	19/0.28		0.2	1.83	12
1×1.5	19/0.31	30/0.25	0.3	2.04	15
1×2.0	37/0.25		0.3	2.29	19
1×2.5	19/0.40	50/0.25	0.3	2.54	24
1×3	37/0.32		0.3	2.78	29
1×4	56/0.30		0.4	3.21	39



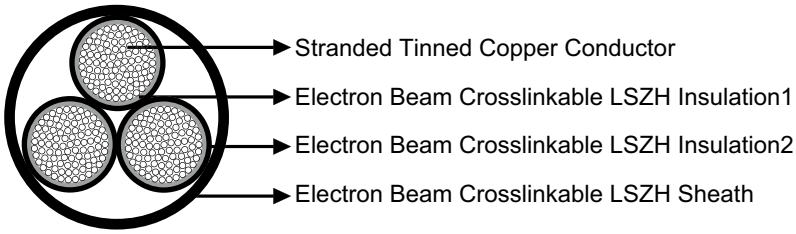
3GKW-DW/S 0.6/1KV Dual Wall Multicore

Applications

Multi core power and control cable designed for protected, fixed installation inside and outside railway vehicles for connecting fixed and moving parts in direct current and alternating voltage technology, especially converter technology.

Standard

- EN 45545-2
- BS 6853 -Ia
- DIN 5510-2 1-4
- NFF 16-101 F0



Construction

- **Conductors:** Circular Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Insulation1:** Electron beam crosslinkable LSZH compound.
- **Insulation2:** Electron beam crosslinkable LSZH compound.
- **Sheath:** Electron beam crosslinkable LSZH compound.

Electrical Characteristics at 20℃

Nominal Conductor Cross Section	mm²	0.5	0.75	1	1.5	2.5
Maximum Conductor Resistance	Ω/km	40.1	26.7	20.0	13.7	8.21
Voltage Rating	KV	0.6/1				

Mechanical and Thermal Properties

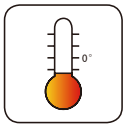
Minimum Bending Radius: 4xOD (Static); 6xOD (Flexing)

Temperature Range: -60℃ ~+120℃ (Static); -40℃ ~+90℃ (Flexing)

Short Circuit Temperature: +280℃

Impact Resistant

Highly Flexible


Cold Resistant

Soldering Heat Resistant

Low Temperature Resistant

Corona Resistant

Fire Retardant
NF C32-070-2.2(C1)
IEC 60332-3/EN50266

Flame Retardant
NF C32-070-2.1(C2)
IEC 60332-1/EN 50265-2-1

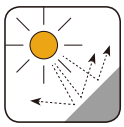
Low Corrosivity
EN 50267-2-2/NF C32-074
IEC 60754-2/NF C20-453

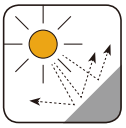
↘ Dimensions and Weight

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm		Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
2×0.5	19/0.18	16/0.20	0.2	4.0	24
3×0.5	19/0.18	16/0.20	0.2	4.2	30
5×0.5	19/0.18	16/0.20	0.2	5.0	43
6×0.5	19/0.18	16/0.20	0.2	5.4	51
9×0.5	19/0.18	16/0.20	0.2	6.7	64
12×0.5	19/0.18	16/0.20	0.2	6.9	89
16×0.5	19/0.18	16/0.20	0.2	7.8	115
25×0.5	19/0.18	16/0.20	0.2	9.5	170
30×0.5	19/0.18	16/0.20	0.2	10.1	204
2×2×0.5	19/0.18	16/0.20	0.2	5.8	50
2×0.75	19/0.22	24/0.20	0.2	4.4	32
4×0.75	19/0.22	24/0.20	0.2	5.0	49
9×0.75	19/0.22	24/0.20	0.2	7.7	106
14×0.75	19/0.22	24/0.20	0.2	8.4	140
27×0.75	19/0.22	24/0.20	0.2	11.3	268
36×0.75	19/0.22	24/0.20	0.2	12.8	360
3×1.0	19/0.25	32/0.20	0.2	5.0	45
4×1.0	19/0.25	32/0.20	0.2	5.5	60
6×1.0	19/0.25	32/0.20	0.2	6.6	88
12×1.0	19/0.25	32/0.20	0.2	8.6	160
14×1.0	19/0.25	32/0.20	0.2	9.1	174
20×1.0	19/0.25	32/0.20	0.2	11.2	255
50×1.0	19/0.25	32/0.20	0.2	16.8	620
2×1.5	37/0.22	30/0.25	0.3	5.4	55
5×1.5	37/0.22	30/0.25	0.3	7.1	110
7×1.5	37/0.22	30/0.25	0.3	8.4	150
10×1.5	37/0.22	30/0.25	0.3	9.9	170
16×1.5	37/0.22	30/0.25	0.3	11.7	310
18×1.5	37/0.22	30/0.25	0.3	12.4	350
24×1.5	37/0.22	30/0.25	0.3	14.4	450
30×1.5	37/0.22	30/0.25	0.3	15.6	560
50×1.5	37/0.22	30/0.25	0.3	20.1	868
3×2.5	37/0.29	50/0.25	0.3	7.0	105
6×2.5	37/0.29	50/0.25	0.3	9.6	200
12×2.5	37/0.29	50/0.25	0.3	12.6	360
18×2.5	37/0.29	50/0.25	0.3	15.3	545
24×2.5	37/0.29	50/0.25	0.3	17.8	695
27×2.5	37/0.29	50/0.25	0.3	18.2	780
30×2.5	37/0.29	50/0.25	0.3	19.3	870
36×2.5	37/0.29	50/0.25	0.3	21.0	1050

IRM 903 Fuel Oil Resistant

IRM 902 Mineral Oil Resistant


UV Resistant


Ozone Resistant

Acid and Alkali Resistant

Abrasion Resistant

Low Smoke Emission
IEC 61034/NFC20-902
EN 50268/NF C32-073

Low Toxicity

Zero Halogen
IEC 60754-1/NF C20-454
EN 50267-2-1

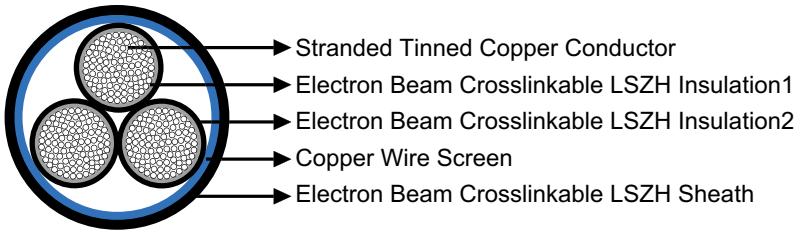
3GKW-DW/S EMC 0.6/1KV
Dual Wall Screened Multicore

Applications

Multi core power and control cable designed for protected, fixed installation inside and outside railway vehicles for connecting fixed and moving parts in direct current and alternating voltage technology, especially converter technology.

Standard

- EN 45545-2
- BS 6853 -Ia
- DIN 5510-2 1-4
- NFF 16-101 F0



Construction

- **Conductors:** Circular Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Insulation1:** Electron beam crosslinkable LSZH compound.
- **Insulation2:** Electron beam crosslinkable LSZH compound.
- **Screen:** Copper wire screen.
- **Sheath:** Electron beam crosslinkable LSZH compound.

Electrical Characteristics at 20℃

Nominal Conductor Cross Section	mm²	0.25	0.5	0.75	1	1.5	2.5
Maximum Conductor Resistance	Ω/km	88.5	40.1	26.7	20.0	13.7	8.21
Voltage Rating	KV	0.6/1					

Mechanical and Thermal Properties

Minimum Bending Radius: 4xOD (Static); 8xOD (Flexing)
Temperature Range: -60℃ ~+120℃ (Static); -40℃ ~+90℃ (Flexing)
Short Circuit Temperature: +280℃

↘ Dimensions and Weight

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm		Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
2×2×0.25	19/0.13		0.2	5.7	48
3×2×0.25	19/0.13		0.2	6.1	57
4×2×0.25	19/0.13		0.2	7.0	72
7×2×0.25	19/0.13		0.2	7.8	92
25×0.25	19/0.13		0.2	8.9	139
2×0.5	19/0.18	16/0.20	0.2	4.3	34
3×0.5	19/0.18	16/0.20	0.2	4.5	40
4×0.5	19/0.18	16/0.20	0.2	4.8	47
5×0.5	19/0.18	16/0.20	0.2	5.4	58
6×0.5	19/0.18	16/0.20	0.2	5.9	70
7×0.5	19/0.18	16/0.20	0.2	6.3	80
8×0.5	19/0.18	16/0.20	0.2	6.8	86
9×0.5	19/0.18	16/0.20	0.2	7.2	95
10×0.5	19/0.18	16/0.20	0.2	7.2	101
12×0.5	19/0.18	16/0.20	0.2	7.4	110
15×0.5	19/0.18	16/0.20	0.2	8.5	135
16×0.5	19/0.18	16/0.20	0.2	8.5	142
18×0.5	19/0.18	16/0.20	0.2	8.9	162
20×0.5	19/0.18	16/0.20	0.2	9.3	183
22×0.5	19/0.18	16/0.20	0.2	9.9	195
25×0.5	19/0.18	16/0.20	0.2	10.3	213
27×0.5	19/0.18	16/0.20	0.2	10.5	231
30×0.5	19/0.18	16/0.20	0.2	11.3	265
36×0.5	19/0.18	16/0.20	0.2	12.1	301
42×0.5	19/0.18	16/0.20	0.2	12.9	359
48×0.5	19/0.18	16/0.20	0.2	13.6	410
50×0.5	19/0.18	16/0.20	0.2	14.2	430
2×2×0.5	19/0.18	16/0.20	0.2	6.4	69
3×2×0.5	19/0.18	16/0.20	0.2	6.7	80
4×2×0.5	19/0.18	16/0.20	0.2	7.4	95
5×2×0.5	19/0.18	16/0.20	0.2	9.2	136
6×2×0.5	19/0.18	16/0.20	0.2	9.2	148
8×2×0.5	19/0.18	16/0.20	0.2	9.7	155
10×2×0.5	19/0.18	16/0.20	0.2	10.9	200
12×2×0.5	19/0.18	16/0.20	0.2	12.1	239
15×2×0.5	19/0.18	16/0.20	0.2	13.0	300
16×2×0.5	19/0.18	16/0.20	0.2	13.0	320
20×2×0.5	19/0.18	16/0.20	0.2	14.4	360
2×3×0.5	19/0.18	16/0.20	0.2	7.3	90
2×0.75	19/0.22	24/0.20	0.2	4.8	40
3×0.75	19/0.22	24/0.20	0.2	5.0	50
4×0.75	19/0.22	24/0.20	0.2	5.5	62

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm		Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
5×0.75	19/0.22	24/0.20	0.2	6.1	75
6×0.75	19/0.22	24/0.20	0.2	6.6	85
7×0.75	19/0.22	24/0.20	0.2	7.2	100
8×0.75	19/0.22	24/0.20	0.2	7.7	113
10×0.75	19/0.22	24/0.20	0.2	8.1	130
12×0.75	19/0.22	24/0.20	0.2	8.4	150
14×0.75	19/0.22	24/0.20	0.2	9.1	169
16×0.75	19/0.22	24/0.20	0.2	9.7	206
18×0.75	19/0.22	24/0.20	0.2	10.1	230
20×0.75	19/0.22	24/0.20	0.2	11.1	256
24×0.75	19/0.22	24/0.20	0.2	12.0	294
25×0.75	19/0.22	24/0.20	0.2	12.3	300
2×2×0.75	19/0.22	24/0.20	0.2	7.1	85
3×2×0.75	19/0.22	24/0.20	0.2	7.6	109
4×2×0.75	19/0.22	24/0.20	0.2	9.9	143
5×2×0.75	19/0.22	24/0.20	0.2	10.7	182
6×2×0.75	19/0.22	24/0.20	0.2	11.9	226
7×2×0.75	19/0.22	24/0.20	0.2	13.2	279
8×2×0.75	19/0.22	24/0.20	0.2	13.4	291
10×2×0.75	19/0.22	24/0.20	0.2	14.8	333
3×3×0.75	19/0.22	24/0.20	0.2	8.9	151
5×4×0.75	19/0.22	24/0.20	0.2	12.8	288
2×1.0	19/0.25	32/0.20	0.2	5.0	50
3×1.0	19/0.25	32/0.20	0.2	5.5	60
4×1.0	19/0.25	32/0.20	0.2	5.8	72
5×1.0	19/0.25	32/0.20	0.2	6.6	88
6×1.0	19/0.25	32/0.20	0.2	7.3	114
7×1.0	19/0.25	32/0.20	0.2	7.9	133
8×1.0	19/0.25	32/0.20	0.2	8.5	150
9×1.0	19/0.25	32/0.20	0.2	8.9	160
10×1.0	19/0.25	32/0.20	0.2	8.9	168
12×1.0	19/0.25	32/0.20	0.2	9.2	188
16×1.0	19/0.25	32/0.20	0.2	10.5	250
18×1.0	19/0.25	32/0.20	0.2	11.2	275
25×1.0	19/0.25	32/0.20	0.2	12.7	355
27×1.0	19/0.25	32/0.20	0.2	13.3	395
30×1.0	19/0.25	32/0.20	0.2	13.8	450
36×1.0	19/0.25	32/0.20	0.2	15.1	530
42×1.0	19/0.25	32/0.20	0.2	16.3	604
50×1.0	19/0.25	32/0.20	0.2	17.8	690
2×2×1.0	19/0.25	32/0.20	0.2	7.8	107
4×2×1.0	19/0.25	32/0.20	0.2	9.4	128
6×2×1.0	19/0.25	32/0.20	0.2	11.6	239
12×2×1.0	19/0.25	32/0.20	0.2	14.3	400

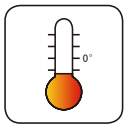
No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm		Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
4×3×1.0	19/0.25	32/0.20	0.2	11.5	230
3×4×1.0	19/0.25	32/0.20	0.2	11.3	245
4×4×1.0	19/0.25	32/0.20	0.2	12.5	265
2×1.5	37/0.22	30/0.25	0.3	5.8	70
3×1.5	37/0.22	30/0.25	0.3	6.1	81
4×1.5	37/0.22	30/0.25	0.3	6.7	100
5×1.5	37/0.22	30/0.25	0.3	7.7	134
6×1.5	37/0.22	30/0.25	0.3	8.3	153
7×1.5	37/0.22	30/0.25	0.3	9.1	184
8×1.5	37/0.22	30/0.25	0.3	10.3	222
9×1.5	37/0.22	30/0.25	0.3	10.5	234
10×1.5	37/0.22	30/0.25	0.3	10.5	240
12×1.5	37/0.22	30/0.25	0.3	10.9	268
16×1.5	37/0.22	30/0.25	0.3	12.5	364
18×1.5	37/0.22	30/0.25	0.3	13.2	405
25×1.5	37/0.22	30/0.25	0.3	15.8	562
48×1.5	37/0.22	30/0.25	0.3	20.7	988
2×2×1.5	37/0.22	30/0.25	0.3	9.2	153
3×2×1.5	37/0.22	30/0.25	0.3	9.8	205
7×2×1.5	37/0.22	30/0.25	0.3	12.6	330
2×2.5	37/0.29	50/0.25	0.3	7.0	105
3×2.5	37/0.29	50/0.25	0.3	7.6	130
4×2.5	37/0.29	50/0.25	0.3	8.4	170
5×2.5	37/0.29	50/0.25	0.3	9.4	190
6×2.5	37/0.29	50/0.25	0.3	10.3	225
7×2.5	37/0.29	50/0.25	0.3	11.4	270
8×2.5	37/0.29	50/0.25	0.3	12.6	343
10×2.5	37/0.29	50/0.25	0.3	13.2	370
12×2.5	37/0.29	50/0.25	0.3	13.6	420
16×2.5	37/0.29	50/0.25	0.3	15.6	560
18×2.5	37/0.29	50/0.25	0.3	16.6	620
25×2.5	37/0.29	50/0.25	0.3	19.3	834
27×2.5	37/0.29	50/0.25	0.3	20.5	870
48×2.5	37/0.29	50/0.25	0.3	25.6	1560

Impact Resistant

Highly Flexible

Cold Resistant

Soldering Heat Resistant


Low Temperature Resistant

Corona Resistant

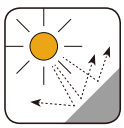
Fire Retardant
NF C32-070-2.2(C1)
IEC 60332-3/EN50266

Flame Retardant
NF C32-070-2.1(C2)
IEC 60332-1/EN 50265-2-1

Low Corrosivity
EN 50267-2-2/NF C32-074
IEC 60754-2/NF C20-453

IRM 903 Fuel Oil Resistant

IRM 902 Mineral Oil Resistant


UV Resistant

Ozone Resistant

Acid and Alkali Resistant

Abrasion Resistant

Low Smoke Emission
IEC 61034/NFC20-902
EN 50268/NF C32-073

Low Toxicity

Zero Halogen
IEC 60754-1/NF C20-454
EN 50267-2-1

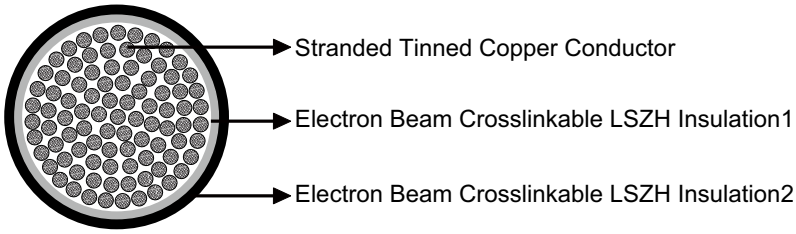
4GKW-AXplus-DW 1.8/3KV
Dual Wall Single Core

Applications

Single core power and control cable designed for protected, fixed installation inside and outside railway vehicles for connecting fixed and moving parts in direct current and alternating voltage technology, especially converter technology.

Standard

- EN 45545-2
- BS 6853 -Ia
- DIN 5510-2 1-4
- NFF 16-101 F0



Construction

- **Conductors:** Circular Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Insulation1:** Electron beam crosslinkable LSZH compound.
- **Insulation2:** Electron beam crosslinkable LSZH compound.

Electrical Characteristics at 20℃

Nominal Conductor Cross Section	mm²	1.0	1.5	2.5	4.0	6.0	10	16	25	35	50
Maximum Conductor Resistance	Ω/km	20.0	13.7	8.21	5.09	3.39	1.95	1.24	0.795	0.565	0.393
Voltage Rating	KV	1.8/3.0									

Nominal Conductor Cross Section	mm²	70	95	120	150	185	240	300	400
Maximum Conductor Resistance	Ω/km	0.277	0.21	0.164	0.132	0.108	0.0817	0.0654	0.0495
Voltage Rating	KV	1.8/3.0							

Mechanical and Thermal Properties

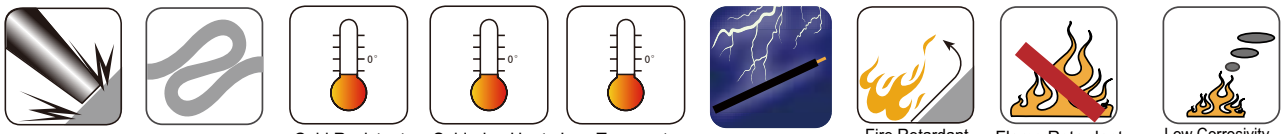
Minimum Bending Radius: 4xOD (Static); 6xOD (Flexing)

Temperature Range: -60℃ ~+120℃ (Static); -40℃ ~+90℃ (for flexible installation)

Short Circuit Temperature: +280℃

↘ Dimensions and Weight

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm		Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
1×1.0	32/0.20		0.7	2.8	17
1×1.5	30/0.25		0.8	3.2	23
1×2.0	37/0.26		0.8	3.55	28
1×2.5	50/0.25		0.9	3.75	34
1×4.0	56/0.30		1.0	4.5	53
1×6.0	84/0.30		1.1	5.1	74
1×10	80/0.40		1.2	6.35	118
1×16	119/0.41	126/0.40	1.5	8.3	180
1×25	182/0.41	196/0.40	1.8	10.2	274
1×35	266/0.41	276/0.40	2.0	11.7	379
1×50	378/0.41	396/0.40	2.2	13.6	550
1×70	348/0.51	360/0.50	2.1	15.6	730
1×95	444/0.51	475/0.50	2.3	17.3	940
1×120	551/0.51	608/0.50	2.4	19.6	1180
1×150	722/0.51	756/0.50	2.6	21.9	1510
1×185	874/0.51	925/0.50	2.8	23.8	1802
1×240	1147/0.51	1221/0.50	2.9	26.9	2290
1×300	1443/0.51	1525/0.50	3.0	29.7	2928
1×400	2016/0.51	2013/0.50	3.4	35.8	4040



Impact Resistant | Highly Flexible | Cold Resistant | Soldering Heat Resistant | Low Temperature Resistant | Corona Resistant | Fire Retardant NF C32-070-2.2(C1) IEC 60332-3/EN50266 | Flame Retardant NF C32-070-2.1(C2) IEC 60332-1/EN 50265-2-1 | Low Corrosivity EN 50267-2-2/NF C32-074 IEC 60754-2/NF C20-453

IRM 903 Fuel Oil Resistant | IRM 902 Mineral Oil Resistant | UV Resistant | Ozone Resistant | Acid and Alkali Resistant | Abrasion Resistant | Low Smoke Emission IEC 61034/NFC20-902 EN 50268/NF C32-073 | Low Toxicity | Zero Halogen IEC 60754-1/NF C20-454 EN 50267-2-1

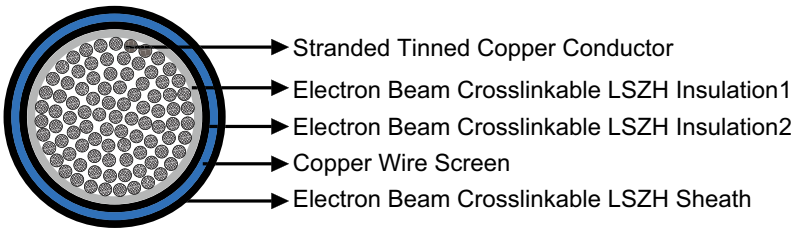
4GKW-AXplus-DW EMC 1.8/3KV Dual Wall Screened Single Core

Applications

Single core power and control cable designed for protected, fixed installation inside and outside railway vehicles for connecting fixed and moving parts in direct current and alternating voltage technology, especially converter technology.

Standard

- EN 45545-2
- BS 6853 -Ia
- DIN 5510-2 1-4
- NFF 16-101 F0



Construction

- **Conductors:** Circular Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Insulation1:** Electron beam crosslinkable LSZH compound.
- **Insulation2:** Electron beam crosslinkable LSZH compound.
- **Screen:** Copper wire screen.
- **Sheath:** Electron beam crosslinkable LSZH compound.

Electrical Characteristics at 20℃

Nominal Conductor Cross Section	mm²	1.5	2.5	4.0	6.0	10	16	25	35	50
Maximum Conductor Resistance	Ω/km	13.7	8.21	5.09	3.39	1.95	1.24	0.795	0.565	0.393
Voltage Rating	KV	1.8/3								

Nominal Conductor Cross Section	mm²	70	95	120	150	185	240	300	400
Maximum Conductor Resistance	Ω/km	0.277	0.21	0.164	0.132	0.108	0.0817	0.0654	0.0495
Voltage Rating	KV	1.8/3							

↘ Mechanical and Thermal Properties

Minimum Bending Radius: 4xOD (Static); 8xOD (Flexing)

Temperature Range: -60℃ ~+120℃ (Static); -40℃ ~+90℃ (Flexing)

Short Circuit Temperature: +280℃

↘ Dimensions and Weight

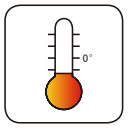
No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm		Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
1×1.0	32/0.20		0.7	4.6	38
1×1.5	30/0.25		0.8	5.2	47
1×2.5	50/0.25		0.9	5.8	63
1×4	56/0.30		1.0	6.7	89
1×6	84/0.30		1.1	7.4	123
1×10	80/0.40		1.2	9.0	178
1×16	119/0.41	126/0.40	1.5	11.2	280
1×25	182/0.41	196/0.40	1.8	13.4	371
1×35	266/0.41	276/0.40	2.0	14.8	492
1×50	378/0.41	396/0.40	2.2	16.8	693
1×70	348/0.51	360/0.50	2.1	19.0	913
1×95	444/0.51	475/0.50	2.3	20.7	1160
1×120	551/0.51	608/0.50	2.4	23.4	1441
1×150	722/0.51	756/0.50	2.6	25.9	1730
1×185	874/0.52	925/0.50	2.8	27.8	2088
1×240	1147/0.51	1221/0.50	2.9	31.2	2908
1×300	1443/0.51	1525/0.50	3.0	34.2	3375
1×400	1887/0.50	2013/0.50	3.4	37.1	4250

Impact Resistant

Highly Flexible

Cold Resistant

Soldering Heat Resistant


Low Temperature Resistant

Corona Resistant

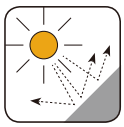
Fire Retardant
NF C32-070-2.2(C1)
IEC 60332-3/EN50266

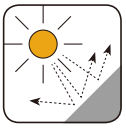
Flame Retardant
NF C32-070-2.1(C2)
IEC 60332-1/EN 50265-2-1

Low Corrosivity
EN 50267-2-2/NF C32-074
IEC 60754-2/NF C20-453

IRM 903 Fuel Oil Resistant

IRM 902 Mineral Oil Resistant


UV Resistant


Ozone Resistant

Acid and Alkali Resistant

Abrasion Resistant

Low Smoke Emission
IEC 61034/NFC20-902
EN 50268/NF C32-073

Low Toxicity

Zero Halogen
IEC 60754-1/NF C20-454
EN 50267-2-1

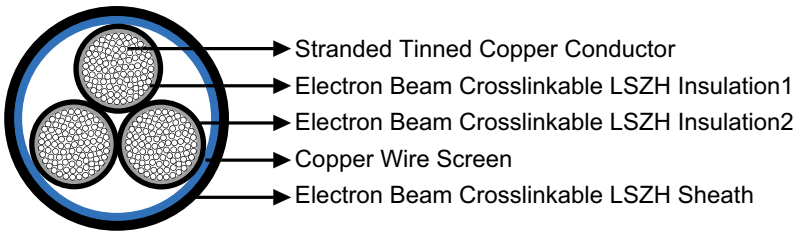
4GKW-AXplus-DW/S EMC 1.8/3KV Dual Wall Screened Multicore

Applications

Multi core power and control cable designed for protected, fixed installation inside and outside railway vehicles for connecting fixed and moving parts in direct current and alternating voltage technology, especially converter technology.

Standard

- EN 45545-2
- BS 6853 -Ia
- DIN 5510-2 1-4
- NFF 16-101 F0



Construction

- **Conductors:** Circular Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Insulation1:** Electron beam crosslinkable LSZH compound.
- **Insulation2:** Electron beam crosslinkable LSZH compound.
- **Screen:** Copper wire screen.
- **Sheath:** Electron beam crosslinkable LSZH compound.

Electrical Characteristics at 20℃

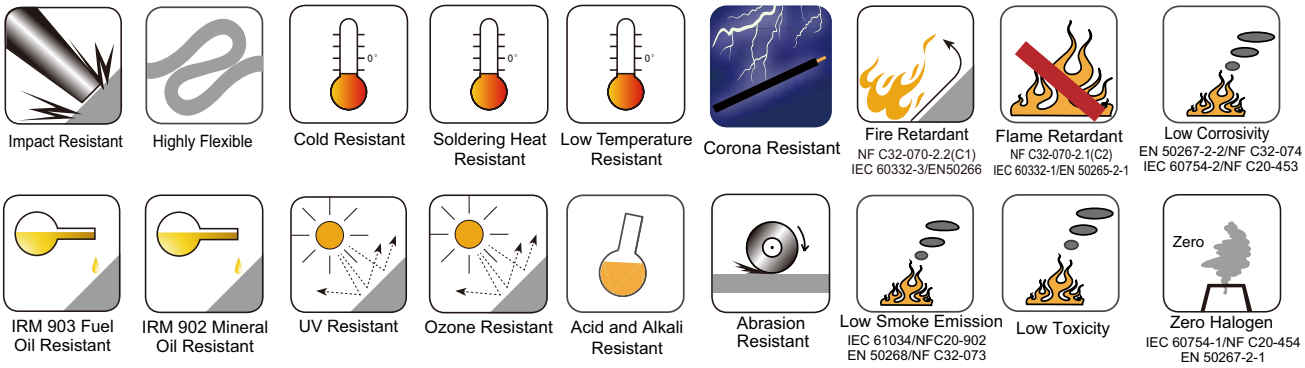
Nominal Conductor Cross Section	mm²	1.5	2.5	4.0	10	16	25	35
Maximum Conductor Resistance	Ω/km	13.7	8.21	5.09	1.95	1.24	0.795	0.565
Voltage Rating	KV	1.8/3						

Mechanical and Thermal Properties

Minimum Bending Radius: 4xOD (Static); 8xOD (Flexing)
Temperature Range: -60℃ ~+120℃ (Static); -40℃ ~+90℃ (Flexing)
Short Circuit Temperature: +280℃

↘ Dimensions and Weight

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm		Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
2×1.5	30/0.25		0.8	9.2	135
3×1.5	30/0.25		0.8	10.0	164
6×1.5	30/0.25		0.8	13.8	315
3×2.5	50/0.25		0.9	11.4	225
4×4	56/0.30		1.0	15.4	427
3×10	80/0.40		1.2	18.2	648
3×16	119/0.40	126/0.40	1.5	23.1	900
3×25	182/0.40	196/0.40	1.8	28.4	1520
4×25	182/0.40	196/0.40	1.8	34.1	1869
2×35	266/0.40	276/0.40	2.0	29.8	1580
3×35	266/0.40	276/0.40	2.0	31.6	1970
4×35	266/0.40	276/0.40	2.0	37.0	2102



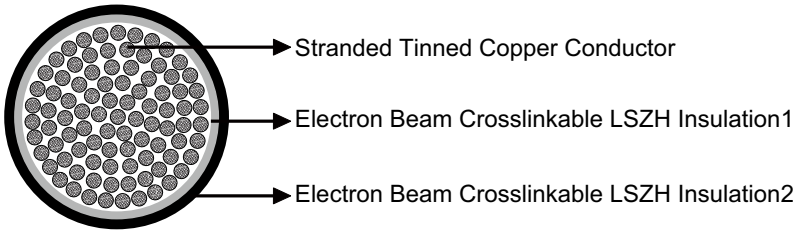
9GKW-AXplus-DW 3.6/6KV
Dual Wall Single Core

Applications

Single core power and control cable designed for protected, fixed installation inside and outside railway vehicles for connecting fixed and moving parts in direct current and alternating voltage technology, especially converter technology.

Standard

- EN 45545-2
- BS 6853 -Ia
- DIN 5510-2 1-4
- NFF 16-101 F0



Construction

- **Conductors:** Circular Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Insulation1:** Electron beam crosslinkable LSZH compound.
- **Insulation2:** Electron beam crosslinkable LSZH compound.

Electrical Characteristics at 20℃

Nominal Conductor Cross Section	mm²	1.5	2.5	4.0	6.0	10	16	25	35	50
Maximum Conductor Resistance	Ω/km	13.7	8.21	5.09	3.39	1.95	1.24	0.795	0.565	0.393
Voltage Rating	KV	3.6/6								

Nominal Conductor Cross Section	mm²	70	95	120	150	185	240	300	400
Maximum Conductor Resistance	Ω/km	0.277	0.21	0.164	0.132	0.108	0.0817	0.0654	0.0495
Voltage Rating	KV	3.6/6							

Mechanical and Thermal Properties

Minimum Bending Radius: 4xOD (Static); 6xOD (Flexing)

Temperature Range: -60℃ ~+120℃ (Static); -40℃ ~+90℃ (Flexing)

Short Circuit Temperature: +280℃

↘ Dimensions and Weight

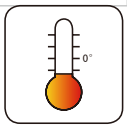
No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm		Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
1×1.5	30/0.25		1.3	4.4	34
1×2.5	50/0.25		1.4	4.9	47
1×4	56/0.30		1.5	5.7	68
1×6	84/0.30		1.5	6.3	88
1×10	80/0.40		1.5	7.5	140
1×16	119/0.41	126/0.40	1.7	9.4	205
1×25	182/0.41	196/0.40	1.8	11.0	297
1×35	266/0.41	276/0.40	2.0	12.5	410
1×50	378/0.41	396/0.40	2.3	14.5	570
1×70	348/0.51	360/0.50	2.2	16.5	760
1×95	444/0.51	475/0.50	2.5	18.5	980
1×120	551/0.51	608/0.50	2.7	20.8	1236
1×150	722/0.51	756/0.50	2.8	23.1	1570
1×185	874/0.51	925/0.50	3.0	25.0	1848
1×240	1147/0.51	1221/0.50	3.1	28.0	2400
1×300	1443/0.51	1525/0.50	3.1	30.9	2970
1×400	2016/0.51	2013/0.50	3.3	36.5	4090

Impact Resistant

Highly Flexible

Cold Resistant

Soldering Heat Resistant


Low Temperature Resistant

Corona Resistant

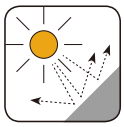
Fire Retardant
NF C32-070-2.2(C1)
IEC 60332-3/EN50266

Flame Retardant
NF C32-070-2.1(C2)
IEC 60332-1/EN 50265-2-1

Low Corrosivity
EN 50267-2-2/NF C32-074
IEC 60754-2/NF C20-453

IRM 903 Fuel Oil Resistant

IRM 902 Mineral Oil Resistant


UV Resistant

Ozone Resistant

Acid and Alkali Resistant

Abrasion Resistant

Low Smoke Emission
IEC 61034/NFC20-902
EN 50268/NF C32-073

Low Toxicity

Zero Halogen
IEC 60754-1/NF C20-454
EN 50267-2-1

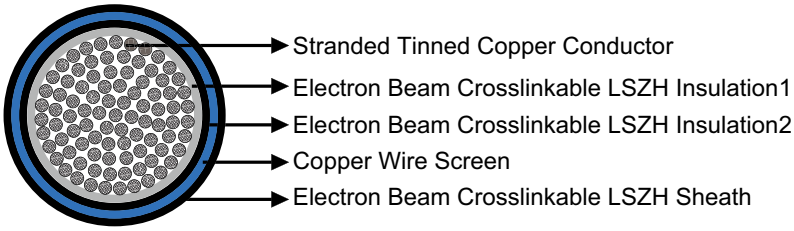
9GKW-AXplus-DW EMC 3.6/6KV Dual Wall Screened Single Core

Applications

Single core power and control cable designed for protected, fixed installation inside and outside railway vehicles for connecting fixed and moving parts in direct current and alternating voltage technology, especially converter technology.

Standard

- EN 45545-2
- BS 6853 -Ia
- DIN 5510-2 1-4
- NFF 16-101 F0



Construction

- **Conductors:** Circular Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Insulation1:** Electron beam crosslinkable LSZH compound.
- **Insulation2:** Electron beam crosslinkable LSZH compound.
- **Screen:** Copper wire screen.
- **Sheath:** Electron beam crosslinkable LSZH compound.

Electrical Characteristics at 20℃

Nominal Conductor Cross Section	mm²	1.5	2.5	4.0	6.0	10	16	25	35	50
Maximum Conductor Resistance	Ω/km	13.7	8.21	5.09	3.39	1.95	1.24	0.795	0.565	0.393
Voltage Rating	KV	3.6/6								

Nominal Conductor Cross Section	mm²	70	95	120	150	185	240	300	400
Maximum Conductor Resistance	Ω/km	0.277	0.21	0.164	0.132	0.108	0.0817	0.0654	0.0495
Voltage Rating	KV	3.6/6							

↘ Mechanical and Thermal Properties

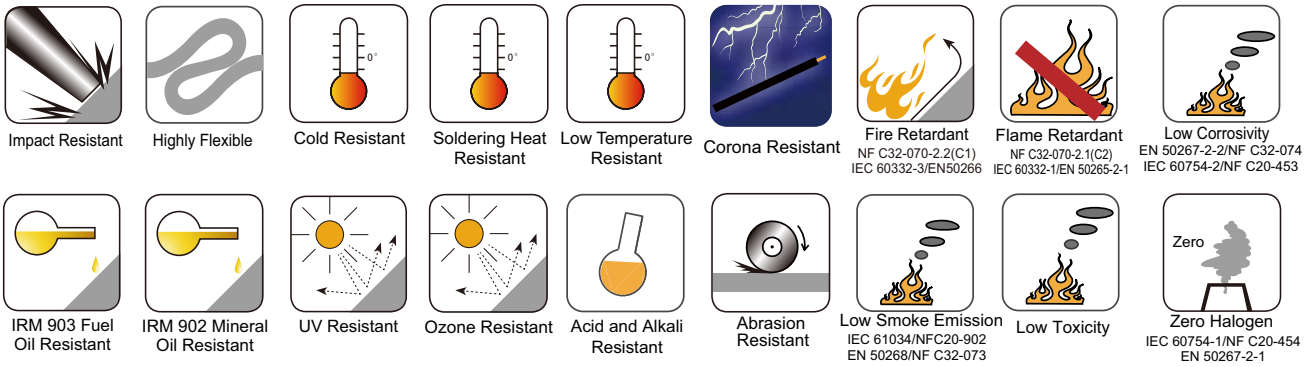
Minimum Bending Radius: 4xOD (Static); 8xOD (Flexing)

Temperature Range: -60℃ ~+120℃ (Static); -40℃ ~+90℃ (Flexing)

Short Circuit Temperature: +280℃

↘ Dimensions and Weight

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm		Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
1×1.5	30/0.25		1.3	6.6	72
1×2.5	50/0.25		1.4	7.2	89
1×4	56/0.30		1.5	8.2	119
1×6	84/0.30		1.5	9.1	150
1×10	80/0.40		1.5	10.4	220
1×16	119/0.41	126/0.40	1.7	12.4	330
1×25	182/0.41	196/0.40	1.8	14.3	390
1×35	266/0.41	276/0.40	2.0	15.7	550
1×50	378/0.41	396/0.40	2.3	17.7	733
1×70	348/0.51	360/0.50	2.2	20.0	970
1×95	444/0.51	475/0.50	2.5	22.0	1216
1×120	551/0.51	608/0.50	2.7	24.7	1510
1×150	722/0.51	756/0.50	2.8	27.1	1900
1×185	874/0.51	925/0.50	3.0	29.1	2195
1×240	1147/0.51	1221/0.50	3.1	32.3	2830
1×300	1443/0.51	1525/0.50	3.1	35.6	3520
1×400	2016/0.51	2013/0.50	3.3	38.3	4364



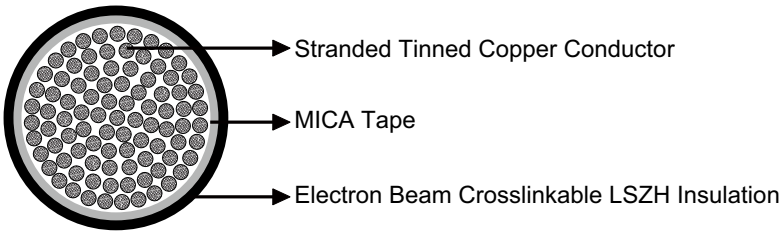
GKW-RW FE180 300/500V
Thin Wall Single Core

Applications

Single core power and control cable designed for protected, fixed installation inside and outside railway vehicles for connecting fixed and moving parts in direct current and alternating voltage technology, especially converter technology.

Standard

- EN 45545-2
- BS 6853 -Ia
- DIN 5510-2 1-4
- NFF 16-101 F0



Construction

- **Conductors:** Circular Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Flame Barrier:** MICA tape.
- **Insulation:** Electron beam crosslinkable LSZH compound.

Electrical Characteristics at 20℃

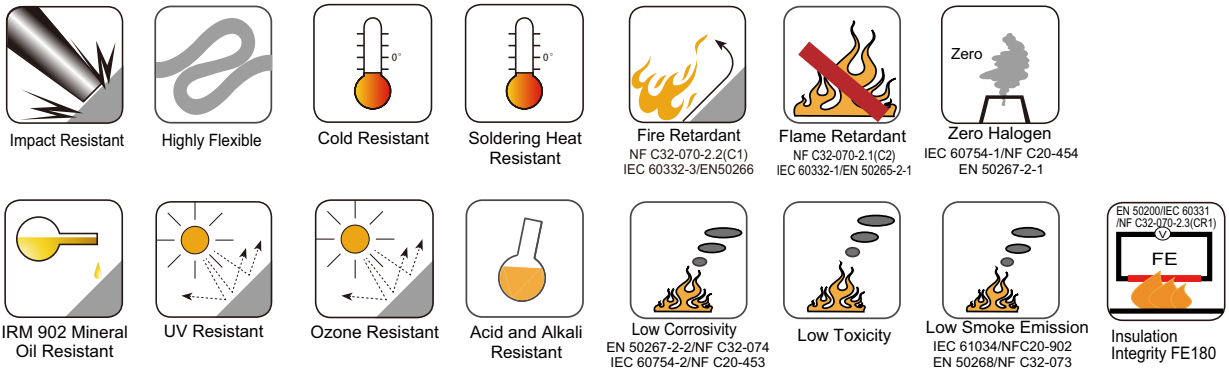
Nominal Conductor Cross Section	mm²	0.5	0.75	1	1.5	2.5
Maximum Conductor Resistance	Ω/km	40.1	26.7	20.0	13.7	8.21
Voltage Rating	KV	0.3/0.5				

Mechanical and Thermal Properties

Minimum Bending Radius: 4xOD (Static); 6xOD (Flexing)
Temperature Range: -40℃ ~+120℃ (Static); -35℃ ~+90℃ (Flexing)
Short Circuit Temperature: +280℃

↘ Dimensions and Weight

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm		Min. Insulation Thickness mm	Approx. Overall Diameter mm	Nominal Weight kg/km
1×0.5	19/0.18	16/0.20	0.3	2.00	8
1×0.75	19/0.21	24/0.20	0.3	2.25	10
1×1.0	32/0.20		0.35	2.50	14
1×1.5	30/0.25		0.35	2.80	18
1×2.5	50/0.25		0.35	3.20	29



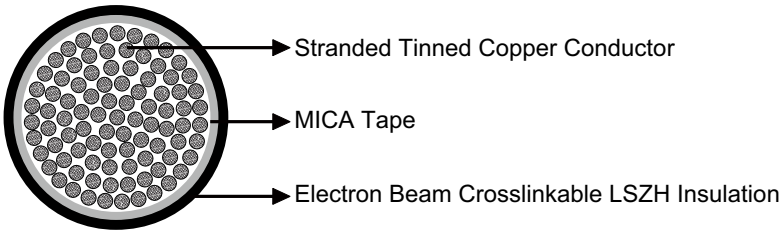
3GKW-MW FE180 0.6/1KV
Medium Wall Single Core

Applications

Single core power and control cable designed for protected, fixed installation inside and outside railway vehicles for connecting fixed and moving parts in direct current and alternating voltage technology, especially converter technology.

Standard

- EN 45545-2
- BS 6853 -Ia
- DIN 5510-2 1-4
- NFF 16-101 F0



Construction

- **Conductors:** Circular Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Flame Barrier:** MICA tape.
- **Insulation:** Electron beam crosslinkable LSZH compound.

Electrical Characteristics at 20℃

Nominal Conductor Cross Section	mm²	1	1.5	2.5	4.0	6.0	10	16
Maximum Conductor Resistance	Ω/km	20.0	13.7	8.21	5.09	3.39	1.95	1.24
Voltage Rating	KV	0.6/1						

Nominal Conductor Cross Section	mm²	25	35	50	70	95	150
Maximum Conductor Resistance	Ω/km	0.795	0.565	0.393	0.277	0.21	0.132
Voltage Rating	KV	0.6/1					

Mechanical and Thermal Properties

Minimum Bending Radius: 4xOD (Static); 6xOD (Flexing)

Temperature Range: -40℃ ~+120℃ (Static); -35℃ ~+90℃ (Flexing)

Short Circuit Temperature: +280℃

↘ Dimensions and Weight

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm		Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
1×1.0	32/0.20		0.55	3.15	19
1×1.5	30/0.25		0.55	3.40	24
1×2.5	50/0.25		0.60	4.05	36.6
1×4	56/0.30		0.65	4.60	52.5
1×6	84/0.30		0.70	5.30	73
1×10	80/0.40		0.80	6.35	122
1×16	119/0.41	126/0.40	0.90	8.15	182
1×25	182/0.41	196/0.40	1.0	9.65	263
1×35	266/0.41	276/0.40	1.1	10.80	365
1×50	378/0.41	396/0.40	1.2	12.80	530
1×70	348/0.51	360/0.50	1.3	15.10	730
1×95	444/0.51	475/0.50	1.4	17.00	930
1×150	722/0.51	756/0.50	1.6	21.30	1450

Impact Resistant

Highly Flexible

Cold Resistant

Soldering Heat Resistant

Fire Retardant
NF C32-070-2.2(C1)
IEC 60332-3/EN50266

Flame Retardant
NF C32-070-2.1(C2)
IEC 60332-1/EN 50265-2-1

Zero Halogen
IEC 60754-1/NF C20-454
EN 50267-2-1

IRM 902 Mineral Oil Resistant

UV Resistant

Ozone Resistant

Acid and Alkali Resistant

Low Corrosivity
EN 50267-2-2/NF C32-074
IEC 60754-2/NF C20-453

Low Toxicity

Low Smoke Emission
IEC 61034/NFC20-902
EN 50268/NF C32-073

Insulation Integrity FE180

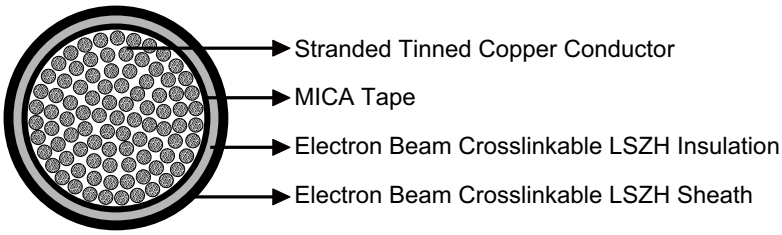
4GKW-AXplus-DW FE180 1.8/3KV
Dual Wall Single Core

Applications

Single core power and control cable designed for protected, fixed installation inside and outside railway vehicles for connecting fixed and moving parts in direct current and alternating voltage technology, especially converter technology.

Standard

- EN 45545-2
- BS 6853 -Ia
- DIN 5510-2 1-4
- NFF 16-101 F0



Construction

- **Conductors:** Circular Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Flame Barrier:** MICA tape.
- **Insulation:** Electron beam crosslinkable LSZH compound.
- **Sheath:** Electron beam crosslinkable LSZH compound.

Electrical Characteristics at 20℃

Nominal Conductor Cross Section	mm²	1.5	2.5	4.0	6.0	10	16	25	35	50
Maximum Conductor Resistance	Ω/km	13.7	8.21	5.09	3.39	1.95	1.24	0.795	0.565	0.393
Voltage Rating	KV	1.8/3.0								

Nominal Conductor Cross Section	mm²	70	95	120	150	185	240
Maximum Conductor Resistance	Ω/km	0.277	0.21	0.164	0.132	0.108	0.0817
Voltage Rating	KV	1.8/3.0					

↘ Mechanical and Thermal Properties

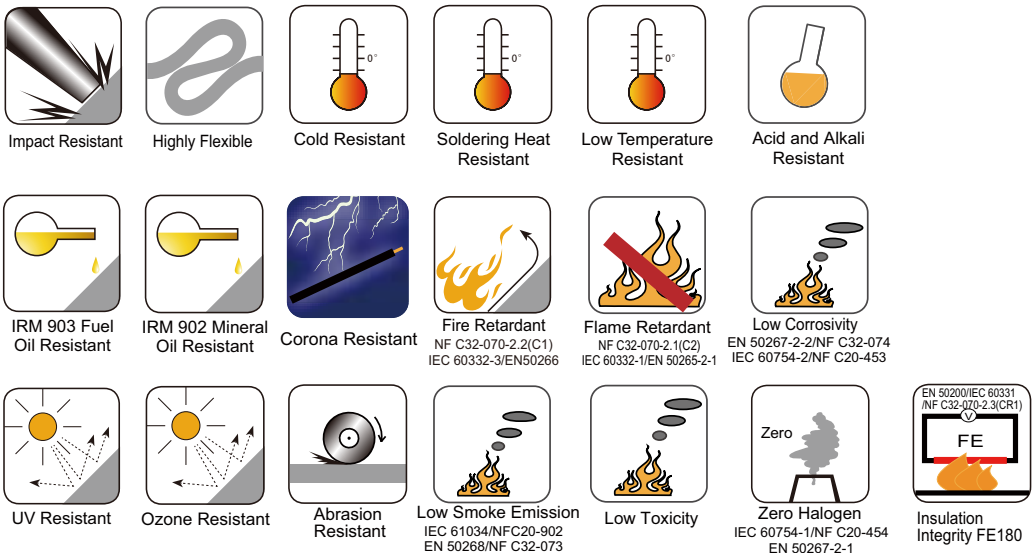
Minimum Bending Radius: 4xOD (Static); 6xOD (Flexing)

Temperature Range: -60℃ ~+120℃ (Static); -40℃ ~+90℃ (Flexing)

Short Circuit Temperature: +280℃

↘ Dimensions and Weight

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm		Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
1×1.5	30/0.25		1.05	4.90	38
1×2.5	50/0.25		1.15	5.35	50
1×4	56/0.30		1.25	6.10	88
1×6	84/0.30		1.30	7.00	93
1×10	80/0.40		1.30	8.10	142
1×16	119/0.41	126/0.40	1.15	9.30	210
1×25	182/0.41	196/0.40	1.50	10.8	290
1×35	266/0.41	276/0.40	1.50	12.1	400
1×50	378/0.41	396/0.40	1.60	13.8	561
1×70	348/0.51	360/0.50	1.70	16.2	760
1×95	444/0.51	475/0.50	1.90	18.0	980
1×120	551/0.51	608/0.50	2.10	20.2	1212
1×150	722/0.51	756/0.50	2.20	22.7	1520
1×185	874/0.51	925/0.50	2.40	24.6	1830
1×240	1147/0.51	1221/0.50	2.50	27.6	2411



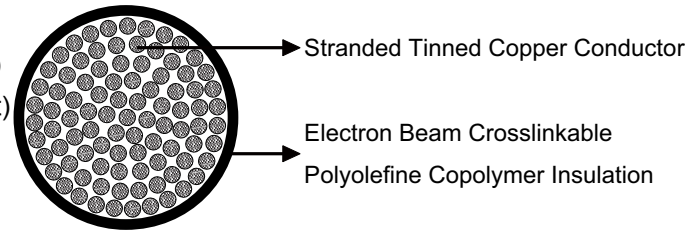
FRA 145 Single Core

↘ Applications

Single core cable with improved fire performance and very high resistance to temperature designed for internal wiring in lamps, heating appliances and distribution boxes in apparatus, mechanical and plant engineering, etc. Used for laying in tubes, surface wiring, direct in plaster or underneath it, as well in conduits.

↘ Standard

- EN 45545-2
- IEC 60754-1, EN 50267-2-1 (halogen free)
- IEC 60754-2, EN 50267-2-2 (no corrosive gases)
- NES 02-713, NFC 20-454 (no toxic gases)
- IEC 61034, EN 50268-2 (low smoke density)
- IEC 60332-1, EN 50265-2-1 (flame retardant)
- IEC 60332-3, EN 50266-2, NF C 32-070 (non-flame propagating)
- DIN 51900 (low fire load)



↘ Construction

- **Conductors:** Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Insulation:** Electron beam crosslinkable polyolefine copolymer.
- **Colour Code:** Various colours on request.

↘ Electrical Characteristics at 20℃

Nominal Conductor Cross Section	mm²	0.25	0.34	0.50	0.75	1.0	1.5	2.5	4.0	6.0	10	16
Maximum Conductor Resistance	Ω/km	85.9	57.2	40.1	26.7	20.0	13.7	8.21	5.09	3.39	1.95	1.24
Voltage Rating	V	300/500V (≤1mm²); 450/750V (≥1.5mm²)										

Nominal Conductor Cross Section	mm²	25	35	50	70	95	120	150	185	240	300
Maximum Conductor Resistance	Ω/km	0.795	0.565	0.393	0.277	0.21	0.164	0.132	0.108	0.0817	0.0654
Voltage Rating	V	300/500V (≤1mm²); 450/750V (≥1.5mm²)									

↘ Mechanical and Thermal Properties

Minimum Bending Radius: 4xOD (Static); 6xOD (Flexing)

Temperature Range: -55℃ ~+145℃ (Static); -40℃ ~+120℃ (Flexing)

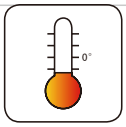
Short Circuit Temperature: +280℃

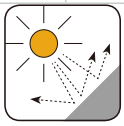
↘ Dimensions and Weight

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm	Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
1×0.25	19/0.13	0.5	1.5	5
1×0.34	19/0.16	0.5	1.7	6
1×0.50	19/0.18	0.5	1.9	8
1×0.75	24/0.20	0.6	2.2	11
1×1.0	32/0.20	0.6	2.5	14
1×1.5	30/0.25	0.6	3.0	21
1×2.5	48/0.25	0.7	3.7	33
1×4.0	56/0.30	0.8	4.2	48
1×6.0	81/0.30	0.9	4.7	67
1×10.0	78/0.40	1.0	6.1	112
1×16.0	119/0.40	1.1	7.5	172
1×25.0	182/0.40	1.3	9.0	262
1×35.0	266/0.40	1.3	10.1	362
1×50.0	378/0.40	1.6	12.7	512
1×70.0	348/0.50	1.6	14.7	710
1×95.0	444/0.50	1.8	16.4	937
1×120.0	551/0.50	1.8	18.2	1159
1×150.0	722/0.50	1.9	20.9	1447
1×185.0	874/0.50	2.0	22.9	1790
1×240.0	1147/0.50	2.2	25.8	2318
1×300.0	1443/0.50	2.4	28.3	2897

Impact Resistant

Highly Flexible


Weather Resistant


UV Resistant

Fire Retardant
NF C32-070-2.2(C1)
IEC 60332-3/EN50266

Flame Retardant
NF C32-070-2.1(C2)
IEC 60332-1/EN 50265-2-1

Low Corrosivity
EN 50267-2-2/NF C32-074
IEC 60754-2/NF C20-453

Low Toxicity

Low Smoke Emission
IEC 61034/NFC20-902
EN 50268/NF C32-073

Zero Halogen
IEC 60754-1/NF C20-454
EN 50267-2-1

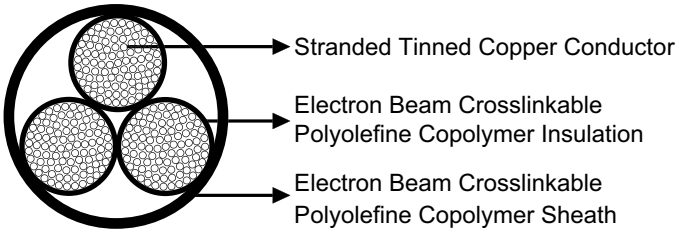
FRA 145/S Multicore

↘ Applications

Multicore cable with improved fire performance and very high resistance to temperature designed for internal wiring in lamps, heating appliances and distribution boxes in apparatus, mechanical and plant engineering, etc. Used for fixed and flexible application in dry, humid and wet rooms.

↘ Standard

- EN 45545-2
- IEC 60754-1, EN 50267-2-1 (halogen free)
- IEC 60754-2, EN 50267-2-2 (no corrosive gases)
- NES 02-713, NFC 20-454 (no toxic gases)
- IEC 61034, EN 50268-2 (low smoke density)
- IEC 60332-1, EN 50265-2-1 (flame retardant)
- IEC 60332-3, EN 50266-2, NF C 32-070 (non-flame propagating)
- DIN 51900 (low fire load)



↘ Construction

- **Conductors:** Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Insulation:** Electron beam crosslinkable polyolefine copolymer.
- **Sheath:** Electron beam crosslinkable polyolefine copolymer.

↘ Electrical Characteristics at 20℃

Nominal Conductor Cross Section	mm²	0.50	0.75	1.0	1.5	2.5	4.0	6.0
Maximum Conductor Resistance	Ω/km	40.1	26.7	20.0	13.7	8.21	5.09	3.39
Voltage Rating	V	300/500V (≤1mm²); 450/750V (≥1.5mm²)						

Nominal Conductor Cross Section	mm²	10	16	25	35	50	70	95
Maximum Conductor Resistance	Ω/km	1.95	1.24	0.795	0.565	0.393	0.277	0.21
Voltage Rating	V	300/500V (≤1mm²); 450/750V (≥1.5mm²)						

↘ Mechanical and Thermal Properties

Minimum Bending Radius: 4xOD (Static); 6xOD (Flexing)
Temperature Range: -55℃ ~+145℃ (Static); -40℃ ~+120℃ (Flexing)
Short Circuit Temperature: +280℃

↘ Dimensions and Weight

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm	Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
2×0.5	19/0.18	0.5	5.1	38
3G0.5	19/0.18	0.5	5.5	46
4×(G)0.5	19/0.18	0.5	5.9	55
5G0.5	19/0.18	0.5	6.7	68
6G0.5	19/0.18	0.5	7.1	77
7G0.5	19/0.18	0.5	7.8	93
8G0.5	19/0.18	0.5	8.6	102
10G0.5	19/0.18	0.5	9.4	130
12G0.5	19/0.18	0.5	9.4	125
14G0.5	19/0.18	0.5	10.0	145
16G0.5	19/0.18	0.5	10.7	166
2×0.75	24/0.20	0.6	5.9	52
3G0.75	24/0.20	0.6	6.2	61
4×(G)0.75	24/0.20	0.6	6.9	75
5G0.75	24/0.20	0.6	7.7	94
6G0.75	24/0.20	0.6	8.3	107
7G0.75	24/0.20	0.6	9.1	127
8G0.75	24/0.20	0.6	10.2	144
10G0.75	24/0.20	0.6	11.1	186
14G0.75	24/0.20	0.6	11.7	203
16G0.75	24/0.20	0.6	12.5	233
1×1	32/0.20	0.6	3.9	25
2×1	32/0.20	0.6	6.3	50
3G1	32/0.20	0.6	6.8	67
4G1	32/0.20	0.6	7.4	87
5G1	32/0.20	0.6	8.4	107
6G1	32/0.20	0.6	8.9	124
7G1	32/0.20	0.6	10.2	152
8G1	32/0.20	0.6	11.0	177
10G1	32/0.20	0.6	12.1	222
14G1	32/0.20	0.6	12.7	252
16G1	32/0.20	0.6	13.6	290
19G1	32/0.20	0.6	15.1	338
21G1	32/0.20	0.6	16.0	380
24G1	32/0.20	0.6	17.1	437

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm	Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
25G1	32/0.20	0.6	17.1	468
27G1	32/0.20	0.6	17.1	497
30G1	32/0.20	0.6	17.7	514
33G1	32/0.20	0.6	18.9	582
37G1	32/0.20	0.6	20.3	714
1×1.5	30/0.25	0.6	4.3	32
2×1.5	30/0.25	0.6	7.8	89
3G1.5	30/0.25	0.6	9.1	106
4×(G)1.5	30/0.25	0.6	9.1	123
5G1.5	30/0.25	0.6	10.1	156
7G1.5	30/0.25	0.6	12.1	224
10G1.5	30/0.25	0.6	15.0	314
12G1.5	30/0.25	0.6	15.0	346
14G1.5	30/0.25	0.6	15.4	366
16G1.5	30/0.25	0.6	16.8	415
19G1.5	30/0.25	0.6	18.3	486
21G1.5	30/0.25	0.6	19.7	562
24G1.5	30/0.25	0.6	21.1	644
25G1.5	30/0.25	0.6	21.7	693
27G1.5	30/0.25	0.6	21.7	731
30G1.5	30/0.25	0.6	21.8	760
33G1.5	30/0.25	0.6	22.6	831
37G1.5	30/0.25	0.6	24.8	1032
1×2.5	48/0.25	0.7	5.0	45
2×2.5	48/0.25	0.7	9.1	102
3G2.5	48/0.25	0.7	9.9	145
4G2.5	48/0.25	0.7	10.9	189
5G2.5	48/0.25	0.7	12.2	235
6G2.5	48/0.25	0.7	13.2	288
7G2.5	48/0.25	0.7	14.6	344
8G2.5	48/0.25	0.7	15.7	379
10G2.5	48/0.25	0.7	17.7	482
12G2.5	48/0.25	0.7	18.7	483
14G2.5	48/0.25	0.7	19.0	572
16G2.5	48/0.25	0.7	20.1	651
19G2.5	48/0.25	0.7	20.7	765
21G2.5	48/0.25	0.7	23.7	857
24G2.5	48/0.25	0.7	25.8	984
25G2.5	48/0.25	0.7	25.8	1121
27G2.5	48/0.25	0.7	25.8	1069
30G2.5	48/0.25	0.7	26.7	1175
33G2.5	48/0.25	0.7	28.0	1301
37G2.5	48/0.25	0.7	30.6	1599
1×4	56/0.30	0.8	5.6	62

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm	Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
2×4	56/0.30	0.8	10.2	161
3G4	56/0.30	0.8	10.9	217
4G4	56/0.30	0.8	12.8	268
5G4	56/0.30	0.8	14.2	334
6G4	56/0.30	0.8	14.9	398
7G4	56/0.30	0.8	16.4	458
8G4	56/0.30	0.8	17.6	523
10G4	56/0.30	0.8	20.1	674
12G4	56/0.30	0.8	20.1	688
14G4	56/0.30	0.8	21.5	805
1×6	81/0.30	0.9	6.1	83
2×6	81/0.30	0.9	11.6	213
3G6	81/0.30	0.9	12.4	279
4G6	81/0.30	0.9	13.8	341
5G6	81/0.30	0.9	15.8	494
6G6	81/0.30	0.9	16.7	519
7G6	81/0.30	0.9	18.3	616
1×10	78/0.40	1.0	7.7	136
2×10	78/0.40	1.0	14.7	351
3G10	78/0.40	1.0	15.7	457
4G10	78/0.40	1.0	17.5	590
5G10	78/0.40	1.0	19.6	746
6G10	78/0.40	1.0	21.7	875
7G10	78/0.40	1.0	23.7	1024
1×16	119/0.40	1.1	9.1	204
2×16	119/0.40	1.1	17.7	530
3G16	119/0.40	1.1	19.3	707
4G16	119/0.40	1.1	21.5	919
5G16	119/0.40	1.1	23.9	1148
6G16	119/0.40	1.1	26.2	1369
7G16	119/0.40	1.1	28.9	1569
1×25	182/0.40	1.3	10.9	308
2×25	182/0.40	1.3	21.3	792
3G25	182/0.40	1.3	22.7	977
4G25	182/0.40	1.3	25.4	1299
5G25	182/0.40	1.3	28.1	1630
6G25	182/0.40	1.3	31.1	1964
7G25	182/0.40	1.3	34.5	2351
1×35	266/0.40	1.3	12.1	414
2×35	266/0.40	1.3	23.7	1050
3G35	266/0.40	1.3	25.5	1325
4G35	266/0.40	1.3	28.4	1747
5G35	266/0.40	1.3	31.3	2173
1×50	378/0.40	1.6	14.9	589

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm	Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
2×50	378/0.40	1.6	29.3	1471
3G50	378/0.40	1.6	31.5	3133
4G50	378/0.40	1.6	35.3	2514
5G50	378/0.40	1.6	39.1	3133
1×70	348/0.50	1.6	17.1	800
2×70	348/0.50	1.6	33.7	1982
3G70	348/0.50	1.6	36.4	2585
4G70	348/0.50	1.6	40.3	3390
5G70	348/0.50	1.6	44.5	4233
1×95	444/0.50	1.8	19.2	1054
2×95	444/0.50	1.8	37.5	2565
3G95	444/0.50	1.8	40.0	3326
4G95	444/0.50	1.8	45.3	4451
5G95	444/0.50	1.8	50.7	5602

Impact Resistant

Highly Flexible

Weather Resistant

UV Resistant

Fire Retardant
NF C32-070-2.2(C1)
IEC 60332-3/EN50266

Flame Retardant
NF C32-070-2.1(C2)
IEC 60332-1/EN 50265-2-1

Low Corrosivity
EN 50267-2-2/NF C32-074
IEC 60754-2/NF C20-453

Low Toxicity

Low Smoke Emission
IEC 61034/NFC20-902
EN 50268/NF C32-073

Zero Halogen
IEC 60754-1/NF C20-454
EN 50267-2-1

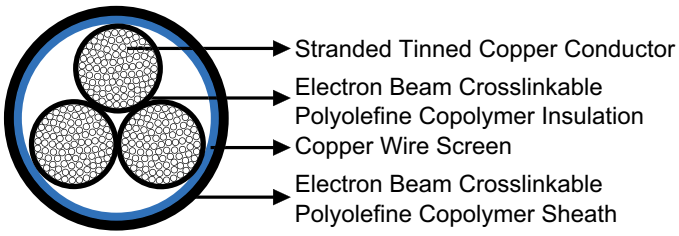
FRA 145/S EMC Screened Multicore

↘ Applications

Multicore cable with improved fire performance and very high resistance to temperature designed for internal wiring in lamps, heating appliances and distribution boxes in apparatus, mechanical and plant engineering, etc. Used for fixed and flexible application in dry, humid and wet rooms.

↘ Standard

- EN 45545-2
- IEC 60754-1, EN 50267-2-1 (halogen free)
- IEC 60754-2, EN 50267-2-2 (no corrosive gases)
- NES 02-713, NFC 20-454 (no toxic gases)
- IEC 61034, EN 50268-2 (low smoke density)
- IEC 60332-1, EN 50265-2-1 (flame retardant)
- IEC 60332-3, EN 50266-2, NF C 32-070 (non-flame propagating)
- DIN 51900 (low fire load)



↘ Construction

- **Conductors:** Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Insulation:** Electron beam crosslinkable polyolefine copolymer.
- **Screen:** Copper wire screen.
- **Sheath:** Electron beam crosslinkable polyolefine copolymer.

↘ Electrical Characteristics at 20℃

Nominal Conductor Cross Section	mm²	0.50	0.75	1.0	1.5	2.5	4.0	6.0	10
Maximum Conductor Resistance	Ω/km	40.1	26.7	20.0	13.7	8.21	5.09	3.39	1.95
Voltage Rating	V	300/500V (≤1mm²); 450/750V (≥1.5mm²)							

Mechanical and Thermal Properties

Minimum Bending Radius: 4xOD (Static); 6xOD (Flexing)
Temperature Range: -55℃ ~+145℃ (Static); -40℃ ~+120℃ (Flexing)
Short Circuit Temperature: +280℃

Dimensions and Weight

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm	Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
1×0.5	19/0.18	0.5	3.7	23
2×0.5	19/0.18	0.5	5.6	45
3×0.5	19/0.18	0.5	6.1	59
4×0.5	19/0.18	0.5	6.7	72
5×0.5	19/0.18	0.5	7.3	86
6×0.5	19/0.18	0.5	7.9	102
7×0.5	19/0.18	0.5	8.4	118
8×0.5	19/0.18	0.5	9.0	133
10×0.5	19/0.18	0.5	10.0	157
12×0.5	19/0.18	0.5	10.0	164
1×0.75	24/0.20	0.6	4.0	28
2×0.75	24/0.20	0.6	6.7	66
3×0.75	24/0.20	0.6	7.1	78
4×0.75	24/0.20	0.6	7.7	94
5×0.75	24/0.20	0.6	8.5	113
6×0.75	24/0.20	0.6	8.9	132
7×0.75	24/0.20	0.6	9.9	158
8×0.75	24/0.20	0.6	10.6	181
10×0.75	24/0.20	0.6	11.5	209
12×0.75	24/0.20	0.6	11.5	219
14×0.75	24/0.20	0.6	12.2	251
16×0.75	24/0.20	0.6	12.9	279
19×0.75	24/0.20	0.6	14.5	347
21×0.75	24/0.20	0.6	15.3	385
1×1	32/0.20	0.6	4.2	33
2×1	32/0.20	0.6	7.2	79
3×1	32/0.20	0.6	7.7	89
4×1	32/0.20	0.6	8.3	113
5×1	32/0.20	0.6	9.0	134
6×1	32/0.20	0.6	9.5	156
7G1	32/0.20	0.6	10.9	187
8×1	32/0.20	0.6	11.4	218
10×1	32/0.20	0.6	12.5	253
12×1	32/0.20	0.6	12.5	266
1×1.5	30/0.25	0.6	4.8	43

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm	Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
2×1.5	30/0.25	0.6	8.4	105
3×(G)1.5	30/0.25	0.6	8.9	119
4×(G)1.5	30/0.25	0.6	9.9	163
5×1.5	30/0.25	0.6	10.7	183
6×1.5	30/0.25	0.6	11.5	219
7×(G)1.5	30/0.25	0.6	12.7	273
8×1.5	30/0.25	0.6	13.7	305
10×1.5	30/0.25	0.6	15.0	309
12×1.5	30/0.25	0.6	15.0	371
14×1.5	30/0.25	0.6	16.0	455
16×1.5	30/0.25	0.6	17.0	502
19×1.5	30/0.25	0.6	19.3	627
21×1.5	30/0.25	0.6	20.3	698
25×1.5	30/0.25	0.6	21.7	737
1×2.5	50/0.25	0.7	5.6	61
2×2.5	50/0.25	0.7	9.9	157
3×(G)2.5	50/0.25	0.7	10.5	198
4×2.5	50/0.25	0.7	11.5	236
5×(G)2.5	50/0.25	0.7	12.6	287
6×2.5	50/0.25	0.7	13.8	321
7G2.5	50/0.25	0.7	15.5	430
8×2.5	50/0.25	0.7	16.5	461
10×2.5	50/0.25	0.7	18.3	534
12×2.5	50/0.25	0.7	18.3	569
14×2.5	50/0.25	0.7	19.6	664
16×2.5	50/0.25	0.7	20.7	753
19×2.5	50/0.25	0.7	23.5	934
21×2.5	50/0.25	0.7	24.4	1022
1×4	56/0.30	0.8	6.3	84
2×4	56/0.30	0.8	10.9	174
3×4	56/0.30	0.8	11.5	226
4×4	56/0.30	0.8	13.2	317
5G4	56/0.30	0.8	14.5	376
6×4	56/0.30	0.8	15.6	436
7×4	56/0.30	0.8	17.0	531
8×4	56/0.30	0.8	18.3	610
10×4	56/0.30	0.8	20.7	736
12×4	56/0.30	0.8	20.7	791
14×4	56/0.30	0.8	22.1	910
1×6	81/0.30	0.9	6.9	109
2×6	81/0.30	0.9	12.1	250
3×6	81/0.30	0.9	12.8	316
4×6	81/0.30	0.9	14.3	404

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm	Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
5×6	81/0.30	0.9	16.0	518
6×6	81/0.30	0.9	17.4	595
7×6	81/0.30	0.9	19.3	716
1×10	78/0.40	1.0	8.4	168
2×10	78/0.40	1.0	15.1	390
3G10	78/0.40	1.0	16.4	529
4G10	78/0.40	1.0	18.1	669
5G10	78/0.40	1.0	20.2	840
6G10	78/0.40	1.0	22.3	973
7G10	78/0.40	1.0	24.3	1132

Impact Resistant

Highly Flexible

Weather Resistant

UV Resistant

Fire Retardant
NF C32-070-2.2(C1)
IEC 60332-3/EN50266

Flame Retardant
NF C32-070-2.1(C2)
IEC 60332-1/EN 50265-2-1

Low Corrosivity
EN 50267-2-2/NF C32-074
IEC 60754-2/NF C20-453

Low Toxicity

Low Smoke Emission
IEC 61034/NFC20-902
EN 50268/NF C32-073

Zero Halogen
IEC 60754-1/NF C20-454
EN 50267-2-1

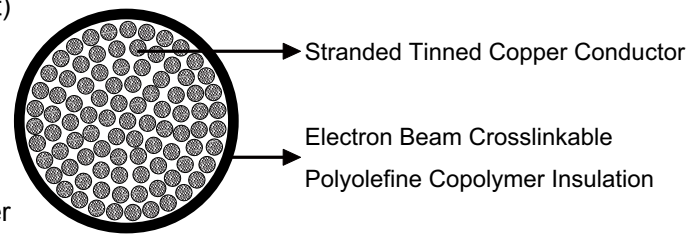
FRA 155 Single Core

↘ Applications

Single core cable with very high resistance to temperature designed for internal wiring in lamps, heating appliances and distribution boxes in apparatus, mechanical and plant engineering, etc.

↘ Standard

- EN 45545-2
- IEC 60332-1, EN 50265-2-1 (flame retardant)
- EN 50266-2 (non-flame propagating)



↘ Construction

- **Conductors:** Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Insulation:** Electron beam crosslinkable polyolefine copolymer.
- **Colour Code:** Various colours on request.

↘ Electrical Characteristics at 20℃

Nominal Conductor Cross Section	mm²	0.25	0.34	0.50	0.75	1.0	1.5	2.5	4.0	6.0	10	16
Maximum Conductor Resistance	Ω/km	85.9	57.2	40.1	26.7	20.0	13.7	8.21	5.09	3.39	1.95	1.24
Voltage Rating	V	450/750V (≤0.5mm²); 600/1000V (>0.5mm²)										

Nominal Conductor Cross Section	mm²	25	35	50	70	95	120	150	185	240
Maximum Conductor Resistance	Ω/km	0.795	0.565	0.393	0.277	0.21	0.164	0.132	0.108	0.0817
Voltage Rating	V	450/750V (≤0.5mm²); 600/1000V (>0.5mm²)								

↘ Mechanical and Thermal Properties

Minimum Bending Radius: 4xOD (Static); 6xOD (Flexing)
Temperature Range: -55℃ ~+155℃ (Static); -40℃ ~+120℃ (Flexing)
Short Circuit Temperature: +280℃

↘ Dimensions and Weight

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm	Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
1×0.25	19/0.13	0.5	1.5	4
1×0.34	19/0.16	0.5	1.6	5
1×0.50	19/0.18	0.5	1.7	7
1×0.75	24/0.20	0.6	2.2	10
1×1.0	32/0.20	0.6	2.6	13
1×1.5	30/0.25	0.6	2.7	20
1×2.5	48/0.25	0.7	3.4	31
1×4.0	56/0.30	0.8	4.1	46
1×6.0	81/0.30	0.9	5.2	65
1×10.0	78/0.40	1.0	6.4	110
1×16.0	119/0.40	1.1	7.6	165
1×25.0	182/0.40	1.3	9.2	250
1×35.0	266/0.40	1.3	10.6	345
1×50.0	378/0.40	1.6	12.3	550
1×70.0	348/0.50	1.6	14.6	780
1×95.0	444/0.50	1.8	16.3	1010
1×120.0	551/0.50	1.8	18.4	1280
1×150.0	722/0.50	1.9	20.8	1420
1×185.0	874/0.50	2.0	22.5	1710
1×240.0	1147/0.50	2.2	25.7	2250

Impact Resistant

Highly Flexible

Weather Resistant

UV Resistant

Fire Retardant
NF C32-070-2.2(C1)
IEC 60332-3/EN50266

Flame Retardant
NF C32-070-2.1(C2)
IEC 60332-1/EN 50265-2-1

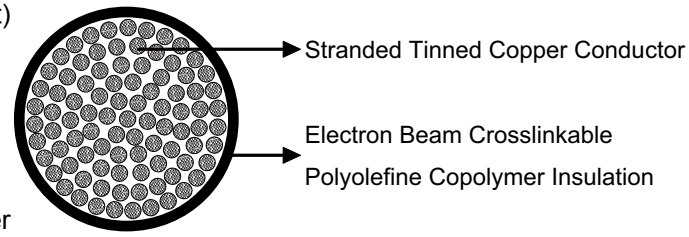
FRA 155S Oil Resistant Single Core

↘ Applications

Single core cable with very high resistance to temperature designed for internal wiring in lamps, heating appliances and distribution boxes in apparatus, mechanical and plant engineering, etc.

↘ Standard

- EN 45545-2
- IEC 60332-1, EN 50265-2-1 (flame retardant)
- EN 50266-2 (non-flame propagating)



↘ Construction

- **Conductors:** Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Insulation:** Electron beam crosslinkable polyolefine copolymer.
- **Colour Code:** Various colours on request.

↘ Electrical Characteristics at 20℃

Nominal Conductor Cross Section	mm²	0.50	0.75	1.0	1.5	2.5	4.0	6.0
Maximum Conductor Resistance	Ω/km	40.1	26.7	20.0	13.7	8.21	5.09	3.39
Voltage Rating	V	450/750V (≤0.5mm²); 600/1000V (>0.5mm²)						

↘ Mechanical and Thermal Properties

Minimum Bending Radius: 4xOD (Static); 6xOD (Flexing)
Temperature Range: -55℃ ~+155℃ (Static); -40℃ ~+120℃ (Flexing)
Short Circuit Temperature: +280℃

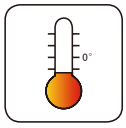
↘ Dimensions and Weight

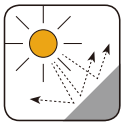
No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm	Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
1×0.50	19/0.18	0.4	1.7	7
1×0.75	24/0.20	0.5	2.2	11
1×1.0	32/0.20	0.6	2.6	15
1×1.5	30/0.25	0.6	2.7	19
1×2.5	48/0.25	0.7	3.5	30
1×4.0	56/0.30	0.8	4.2	45
1×6.0	81/0.30	0.9	5.2	66

Oil Resistant

Impact Resistant

Highly Flexible


Weather Resistant


UV Resistant

Fire Retardant
NF C32-070-2.2(C1)
IEC 60332-3/EN50266

Flame Retardant
NF C32-070-2.1(C2)
IEC 60332-1/EN 50265-2-1

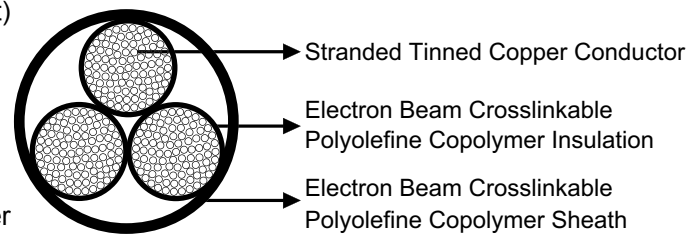
FRA 155/S Multicore

↘ Applications

Multicore cable very high resistance to temperature designed for internal wiring in lamps, heating appliances and distribution boxes in apparatus, mechanical and plant engineering, etc. Used for fixed and flexible application in dry, humid and wet rooms.

↘ Standard

- EN 45545-2
- IEC 60332-1, EN 50265-2-1 (flame retardant)
- EN 50266-2 (non-flame propagating)



↘ Construction

- **Conductors:** Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Insulation:** Electron beam crosslinkable polyolefine copolymer.
- **Sheath:** Electron beam crosslinkable polyolefine copolymer.

↘ Electrical Characteristics at 20℃

Nominal Conductor Cross Section	mm²	0.25	0.50	0.75	1.0	1.5	2.5
Maximum Conductor Resistance	Ω/km	85.9	40.1	26.7	20.0	13.7	8.21
Voltage Rating	V	450/750V (≤0.5mm²); 600/1000V (>0.5mm²)					

↘ Mechanical and Thermal Properties

Minimum Bending Radius: 4xOD (Static); 6xOD (Flexing)
Temperature Range: -55℃ ~+155℃ (Static); -40℃ ~+120℃ (Flexing)
Short Circuit Temperature: +280℃

↘ Dimensions and Weight

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm	Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
4×0.25	19/0.13	0.5	5.4	33
3×0.34	19/0.15	0.5	5.1	28
2×0.5	19/0.18	0.5	5.2	30
3×0.5	19/0.18	0.5	5.6	40
8×0.5	19/0.18	0.5	8.8	102
16×0.5	19/0.18	0.5	10.4	166
3×0.75	24/0.20	0.6	6.7	59
4×0.75	24/0.20	0.6	7.5	80
2×1	32/0.20	0.6	7.0	61
3×1	32/0.20	0.6	7.6	77
2×1.5	30/0.25	0.6	7.5	66
3×1.5	30/0.25	0.6	7.9	92
4×1.5	30/0.25	0.6	8.8	117
5×1.5	30/0.25	0.6	10.1	150
3×2.5	50/0.25	0.7	9.9	145
4×2.5	50/0.25	0.7	11.0	186
5×2.5	50/0.25	0.7	12.0	223
5×1.5	30/0.25	0.6	10.1	150
3×2.5	50/0.25	0.7	9.9	145
4×2.5	50/0.25	0.7	11.0	186
5×2.5	50/0.25	0.7	12.0	223

Impact Resistant

Highly Flexible

Weather Resistant

UV Resistant

Fire Retardant
NF C32-070-2.2(C1)
IEC 60332-3/EN50266

Flame Retardant
NF C32-070-2.1(C2)
IEC 60332-1/EN 50265-2-1

FRA 155/S EMC Screened Multicore

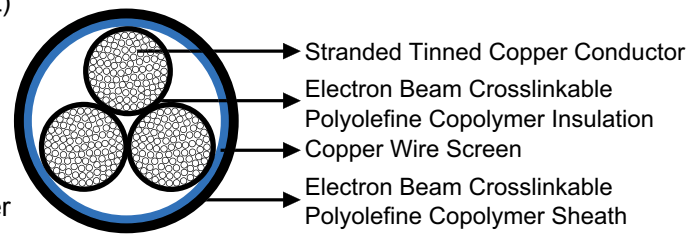
↘ Applications

Multicore cable with very high resistance to temperature designed for internal wiring in lamps, heating appliances and distribution boxes in apparatus, mechanical and plant engineering, etc. Used for fixed and flexible application in dry, humid and wet rooms.

↘ Standard

- EN 45545-2
- IEC 60332-1, EN 50265-2-1 (flame retardant)
- EN 50266-2 (non-flame propagating)

↘ Construction



- **Conductors:** Class 5 stranded tinned copper to IEC60228/VDE 0295.
- **Insulation:** Electron beam crosslinkable polyolefine copolymer.
- **Screen:** Copper wire screen.
- **Sheath:** Electron beam crosslinkable polyolefine copolymer.

↘ Electrical Characteristics at 20℃

Nominal Conductor Cross Section	mm²	0.25	0.50	1.5	2.5
Maximum Conductor Resistance	Ω/km	85.9	40.1	13.7	8.21
Voltage Rating	V	450/750V (≤0.5mm²); 600/1000V (>0.5mm²)			

↘ Mechanical and Thermal Properties

Minimum Bending Radius: 4xOD (Static); 6xOD (Flexing)
Temperature Range: -55℃ ~+155℃ (Static); -40℃ ~+120℃ (Flexing)
Short Circuit Temperature: +280℃

↘ Dimensions and Weight

No. of cores& Nominal Conductor Cross Sectional Area No.×mm²	Number and Nominal Diameter of Strands No/mm	Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
2×0.25	19/0.12	0.5	5.1	34
6×0.25	19/0.12	0.5	7.0	67
4×2×0.25	19/0.12	0.5	14.0	277
4×0.5	19/0.18	0.5	7.6	76
16×0.5	19/0.18	0.5	11.6	206
3G1.5	30/0.25	0.6	8.7	119
10G1.5	30/0.25	0.6	14.7	332
16G1.5	30/0.25	0.6	22.0	740
8G2.5	50/0.25	0.7	18.0	498
9G2.5	50/0.25	0.7	18.6	518

Impact Resistant

Highly Flexible

Weather Resistant

UV Resistant

Fire Retardant
NF C32-070-2.2(C1)
IEC 60332-3/EN50266

Flame Retardant
NF C32-070-2.1(C2)
IEC 60332-1/EN 50265-2-1

Ordering Information For GKW Cables

↘ Cable Code Designation

3GKW - W/S EMC

- Testing Voltage
- Electron-beam Cross-linked Insulation
- Cold Resistant
- Heat Resistant
- EMC:Screen / Blank: Non Screened
- /S: Multicore / Blank: Single core
- RW: Reduced Wall/Thin Wall / DW: Dual Wall / MW: Medium Wall

GKW - W FE180

- Electron-beam Cross-linked Insulation
- Cold Resistant
- Heat Resistant
- FE180: Fire Resistant Cable
- RW: Reduced Wall/Thin Wall / DW: Dual Wall / MW: Medium Wall

Ordering Information
For High Temperature Cables

↘ Cable Code Designation

FRA 145/S EMC

145: -55℃ ~+145℃
155: -55℃ ~+155℃

EMC: Screen
Blank: Non Screened

/S: Multicore
S: Oil Resistant
Blank: Single Core

UNITED KINGDOM

Marchants Industrial Centre,
Mill Lane, Laughton, Lewes,
East Sussex, BN8 6AJ, UK
Tel: 44-207-4195087
Fax: 44-207-8319489
Email: sales@caledonian-cables.co.uk
Website: www.caledonian-cables.co.uk

HONG KONG

Unit B 22/F CMA Building
64-66 Connaught Road Central
Hong Kong
Tel: 852-36527508
Fax: 852-35834834
Email: hk@caledonian-cables.co.uk
hk@caledonian-cables.com

SHANGHAI

Room 3501, CITIC Square, 1168 Nanjing Xi Lu,
Shanghai 200041, P.R. China
Tel: 86-21-51119178
Fax: 86-21-52524616
Email: cn@caledonian-cables.co.uk
shanghai@caledonian-cables.com