

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

### Applications

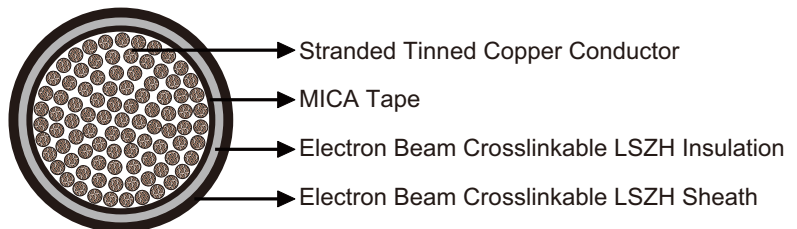
Single core power and control cable designed for protected, fixed installation inside and outside railway vehicles for connecting fixed and moving parts in direct current and alternating voltage technology, especially converter technology.



### Standard

- 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°C

|                                 |                 |         |      |      |      |      |      |       |       |       |
|---------------------------------|-----------------|---------|------|------|------|------|------|-------|-------|-------|
| Nominal Conductor Cross Section | mm <sup>2</sup> | 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 | mm <sup>2</sup> | 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 |      |       |       |       |        |

## cables.com ↘ Mechanical and Thermal Properties

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

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

Short Circuit Temperature: +280°C

## ↘ Dimensions and Weight

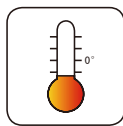
| No. of cores & Nominal Conductor Cross Sectional Area No. × mm <sup>2</sup> | Number and Nominal Diameter of Strands No/mm |           | Nominal Insulation Thickness mm | Nominal Overall Diameter mm | Nominal Weight kg/km |
|---|--|-----------|---------------------------------|-----------------------------|----------------------|
| 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  | 1.60                            | 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                 |



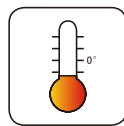
Impact Resistant



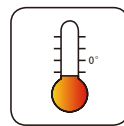
Highly Flexible



Cold Resistant



Soldering Heat Resistant



Low Temperature Resistant



Acid and Alkali Resistant



IRM 903 Fuel Oil Resistant



IRM 902 Mineral Oil Resistant



Corona Resistant



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



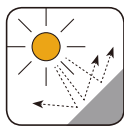
Flame Retardant  
NF C32-070-2.1(C2)  
IEC 60332-1/EN 50265-2-1



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



UV Resistant



Ozone Resistant



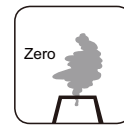
Abrasion Resistant



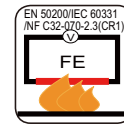
Low Smoke Emission  
IEC 61034/NFC20-902  
EN 50268/NF C32-073



Low Toxicity



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



Insulation Integrity FE180