# AXPK-PLUS

## 1 kV power cable with XLPE insulated aluminium conductors and halogen-free outersheath

### Application

Designed for replacement of AXPK and AXPK-PE. The outer sheath is self-extinguishing and halogen-free. Cable is mechanically as strong as PE sheathed cable. For fixed installation indoors and outdoors, perfect for ploughing down. Suitable for cable ducts and house connections.

### Standards

HD 603-5D S1, IEC 60502-1,
IEC 60332-1 Cat. B, HD 308 S2:2002

### Certificate/approval

CE

### Rated voltage

$U_0/U$ = 0,6/1 kV
$U_m$ = 1,2 kV

### Temperature range

Highest permissible conductor temperature:
- in continuous operation . . . . . .90°C
- in a short circuit (duration up to 5 s) . . . . . 250°C
Lowest recommended temp. during laying . . . . . -20°C

### Construction

Conductor . . . . . 16 mm² - solid round aluminium conductor;
25-300 mm² - stranded, compacted and annealed sector shaped aluminium conductor
Insulation . . . . . black XLPE compound
Laying up . . . . . four insulated conductors stranded together
Sheath . . . . . black halogen-free self-extinguishing PE compound;
insulation and sheath are UV[1] resistible and they don't need extra protection against sunlight.

### Identification of cores

Phase conductors . . brown, black, grey
PEN conductor . . . yellow-green

### Marking

Manufacturer, product name, date of manufacture, outer sheath material designation, meter marking.

| Basic cable data | | | 4G16 | 4G25 | 4G35 | 4G50 | 4G70 | 4G95 |
|---|---|---|---|---|---|---|---|---|
| **Construction data** | | | | | | | | |
| External cable diameter [1] | | mm | 20 | 21 | 23 | 27 | 30 | 34 |
| Weight [1] | aluminium | kg/km | 165 | 265 | 365 | 495 | 720 | 995 |
| | cable | kg/km | 380 | 500 | 670 | 830 | 1170 | 1500 |
| **Delivery data** | | | | | | | | |
| Standard delivery length | | m | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Drum | | | K12 | K14 | K16 | K16 | K18 | K20 |
| Total weight [1] | cable + drum | kg | 470 | 615 | 865 | 1025 | 1400 | 1840 |
| **Mechanical data [2]** | | | | | | | | |
| Minimum permissible bending radius during laying | | m | 0,24 | 0,26 | 0,28 | 0,31 | 0,36 | 0,41 |
| Minimum permissible bending radius at final installation [3] | | m | 0,17 | 0,19 | 0,20 | 0,23 | 0,26 | 0,29 |
| Maximum permissible pulling force with a pulling grip | | kN | 0,9 | 1,5 | 2,1 | 3,0 | 4,2 | 5,7 |
| Maximum permissible pulling force with a pulling eye | | kN | 3,2 | 5,0 | 7,0 | 10,0 | 14,0 | 19,0 |
| **Electrical data [2]** | | | | | | | | |
| Maximum DC resistance of | conductor 20°C | Ω/km | 1,91 | 1,20 | 0,868 | 0,641 | 0,443 | 0,320 |
| Maximum AC resistance of | conductor 70°C | Ω/km | 2,3 | 1,5 | 1,0 | 0,77 | 0,53 | 0,39 |
| **Current ratings [2]** | | | | | | | | |
| In ground | conductor 70°C | A | 78 | 100 | 125 | 150 | 185 | 220 |
| In air | conductor 70°C | A | 64 | 83 | 105 | 125 | 155 | 190 |
| | conductor 90°C | A | 75 | 105 | 130 | 165 | 205 | 245 |
| **Short circuit currents [2]** | | | | | | | | |
| Maximum permissible short circuit current for 1 second [4] | | kA | 1,5 | 2,3 | 3,3 | 4,7 | 6,6 | 8,9 |

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Lowest recommended temp. during laying . . . . . -20°C

### Construction

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### Identification of cores

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PEN conductor . . . yellow-green

### Marking

Manufacturer, product name, date of manufacture, outer sheath material designation, meter marking.

| Basic cable data | | | 4G120 | 4G150 | 4G185 | 4G240 | 4G300 |
|---|---|---|---|---|---|---|---|
| **Construction data** | | | | | | | |
| External cable diameter [1] | | mm | 38 | 42 | 47 | 53 | 58 |
| Weight [1] | aluminium | kg/km | 1260 | 1550 | 1950 | 2550 | 3190 |
| | cable | kg/km | 1900 | 2300 | 2800 | 3700 | 4600 |
| **Delivery data** | | | | | | | |
| Standard delivery length | | m | 1000 | 500 | 500 | 500 | 500 |
| Drum | | | K22 | K20 | K20 | K22 | K24 |
| Total weight [1] | cable + drum | kg | 2310 | 1490 | 1740 | 2260 | 2750 |
| **Mechanical data [2]** | | | | | | | |
| Minimum permissible bending radius during laying | | m | 0,46 | 0,51 | 0,57 | 0,64 | 0,70 |
| Minimum permissible bending radius at final installation [3] | | m | 0,33 | 0,36 | 0,40 | 0,45 | 0,49 |
| Maximum permissible pulling force with a pulling grip | | kN | 7,2 | 8,5 | 8,5 | 8,5 | 8,5 |
| Maximum permissible pulling force with a pulling eye | | kN | 20,0 | 20,0 | 20,0 | 20,0 | 20,0 |
| **Electrical data [2]** | | | | | | | |
| Maximum DC resistance of | conductor 20°C | Ω/km | 0,253 | 0,206 | 0,164 | 0,125 | 0,100 |
| Maximum AC resistance of | conductor 70°C | Ω/km | 0,31 | 0,25 | 0,20 | 0,16 | 0,13 |
| **Current ratings [2]** | | | | | | | |
| In ground | conductor 70°C | A | 255 | 290 | 330 | 375 | 430 |
| In air | conductor 70°C | A | 220 | 250 | 285 | 330 | 380 |
| | conductor 90°C | A | 280 | 320 | 365 | 430 | 480 |
| **Short circuit currents [2]** | | | | | | | |
| Maximum permissible short circuit current for 1 second [4] | | kA | 11,3 | 14,1 | 17,4 | 22,6 | 28,3 |

1) Approximate value.
2) See the basic assumptions at general information of products.
3) Final installation with careful single bending.
4) Initial temperature of conductor before short circuit 90°C, final temperature of conductor after short circuit 250°C.