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## AXCMK/PE

### Aluminium power cable

### 0,6/1 (1,2) kV



PoweRex

### Application

Aluminium power cable for fixed installations outdoors. May be buried directly in soil, also by ploughing. Installations must be in accordance with national regulations and rules of installations. The cable is halogen-free, but without fire protection. The cable is not CPR-classified.

### Design

|                       |                                                                                                                                                       |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Standards</b>      | SFS 5800                                                                                                                                              |
| <b>Conductor</b>      | 25 mm <sup>2</sup> circular stranded aluminium, EN/IEC 60228 class 2<br>35-240 mm <sup>2</sup> sector shaped stranded aluminium, EN/IEC 60228 class 2 |
| <b>Insulation</b>     | Cross-linked polyethylene XLPE                                                                                                                        |
| <b>Core</b>           | Brown, black, grey                                                                                                                                    |
| <b>Identification</b> | Blue, brown, black, grey                                                                                                                              |
| <b>Inner covering</b> | Plastic tape                                                                                                                                          |
| <b>Metal screen</b>   | Copper wires and copper tape                                                                                                                          |
| <b>Oversheath</b>     | UV-protected halogen-free polyethylene compound PELLD, Black                                                                                          |

### Temperature limits

|                                                   |     |
|---------------------------------------------------|-----|
| <b>Max. conductor temperature °C</b>              | 90  |
| <b>Max. cond. temp. short circuit max. 5 s °C</b> | 250 |
| <b>Min. cable temperature during operation °C</b> | -50 |
| <b>Min. cable temperature during handling °C</b>  | -15 |
| <b>Min. cable temperature during transport °C</b> | -40 |

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| Technical information                                     | 3x25/16        | 3x50/29        | 3x95/29        | 3x95/57        | 3x150/88       | 3x185/95       | 3x240/146      | 4x95/29        | 4x185/57       |
|-----------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| <b>Product code</b>                                       | <b>1703862</b> | <b>1703866</b> | <b>1703863</b> | <b>1703879</b> | <b>1703864</b> | <b>1703993</b> | <b>1703878</b> | <b>1703969</b> | <b>1703970</b> |
| Nominal cross-sectional area of conductor mm <sup>2</sup> | 25             | 50             | 95             | 95             | 150            | 185            | 240            | 95             | 185            |
| Nominal thickness of insulation mm                        | 0,9            | 1,0            | 1,1            | 1,1            | 1,4            | 1,6            | 1,7            | 1,1            | 1,6            |
| Nominal size of metal screen mm <sup>2</sup>              | 16             | 29             | 29             | 57             | 88             | 95             | 146            | 29             | 57             |
| Nominal thickness of oversheath mm                        | 1,8            | 1,8            | 2,1            | 2,1            | 2,4            | 2,5            | 2,7            | 2,2            | 2,7            |
| Nominal cable diameter mm                                 | 22,640         | 24,180         | 31,550         | 31,990         | 39,670         | 44,860         | 48,970         | 35,320         | 49,460         |
| Nominal cable weight kg/km                                | 530,908        | 852,140        | 1344,771       | 1604,534       | 2495,434       | 2926,786       | 4013,081       | 1677,934       | 3203,380       |
| Metall weight Cu kg/m                                     | 0,149          | 0,259          | 0,259          | 0,516          | 0,810          | 0,867          | 1,349          | 0,260          | 0,516          |
| Metall weight Al kg/m                                     | 0,199          | 0,375          | 0,751          | 0,751          | 1,165          | 1,414          | 1,910          | 1,001          | 1,886          |
| <b>Maximum forces during installation when pulling by</b> |                |                |                |                |                |                |                |                |                |
| Max. pulling force by pulling-eye kN                      | 1,1            | 2,3            | 4,3            | 4,3            | 6,8            | 8,3            | 10,8           | 5,7            | 11,1           |
| Max. pulling force by pulling-stocking kN                 | 1,1            | 2,3            | 4,3            | 4,3            | 6,8            | 8,3            | 8,5            | 5,7            | 8,5            |
| <b>Minimum bending radii</b>                              |                |                |                |                |                |                |                |                |                |
| During handling and installation, phase conductor cm      | 9              | 20             | 27             | 27             | 35             | 38             | 43             | 26             | 37             |
| During handling and installation, cable cm                | 27             | 29             | 38             | 38             | 48             | 54             | 59             | 42             | 59             |
| In final installation, phase conductor cm                 | 6              | 14             | 19             | 19             | 24             | 27             | 30             | 18             | 26             |
| In final installation, cable cm                           | 19             | 20             | 27             | 27             | 33             | 38             | 41             | 30             | 42             |
| <b>Minimum bending radii</b>                              |                |                |                |                |                |                |                |                |                |
| During handling and installation, cable m                 | 0,27           | 0,29           | 0,38           | 0,38           | 0,48           | 0,54           | 0,59           | 0,42           | 0,59           |
| In final installation, cable m                            | 0,19           | 0,20           | 0,27           | 0,27           | 0,33           | 0,38           | 0,41           | 0,30           | 0,41           |
| <b>DC resistance</b>                                      |                |                |                |                |                |                |                |                |                |
| Max. DC resistance of conductor at 20 °C Ω/km             | 1,20           | 0,641          | 0,320          | 0,320          | 0,206          | 0,164          | 0,125          | 0,320          | 0,164          |
| Maximum DC resistance at 20 °C, metal screen Ω/km         | 1,15           | 0,641          | 0,641          | 0,320          | 0,206          | 0,320          | 0,125          | 0,641          | 0,320          |

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|-----------------------------------------------------------------------------|---------|---------|---------|---------|----------|----------|-----------|---------|----------|
| <b>Current ratings</b>                                                      |         |         |         |         |          |          |           |         |          |
| <b>Cables in air (25 °C)</b>                                                |         |         |         |         |          |          |           |         |          |
| two loaded conductor, conductor 70 °C A                                     | 93      | 140     | 218     | 218     | 293      | 335      | 395       | 218     | 335      |
| three loaded conductor, conductor 70 °C A                                   | 81      | 122     | 190     | 190     | 255      | 291      | 343       | 190     | 291      |
| two loaded conductor, conductor 90 °C A                                     | 112     | 171     | 267     | 267     | 360      | 413      | 489       | 267     | 413      |
| three loaded conductor, conductor 90 °C A                                   | 101     | 152     | 236     | 236     | 316      | 361      | 425       | 236     | 361      |
| <b>Cables in air (30 °C)</b>                                                |         |         |         |         |          |          |           |         |          |
| two loaded conductor, conductor 70 °C A                                     | 89      | 135     | 210     | 210     | 282      | 322      | 380       | 210     | 322      |
| three loaded conductor, conductor 70 °C A                                   | 78      | 117     | 183     | 183     | 245      | 280      | 330       | 183     | 280      |
| two loaded conductor, conductor 90 °C A                                     | 108     | 164     | 257     | 257     | 346      | 397      | 470       | 257     | 397      |
| three loaded conductor, conductor 90 °C A                                   | 97      | 146     | 227     | 227     | 304      | 347      | 409       | 227     | 347      |
| <b>Cables in the ground (15 °C and 1,0 K.m/W), Installation depth 0,7 m</b> |         |         |         |         |          |          |           |         |          |
| Cables in the ground, conductor 65 °C A                                     | 100     | 150     | 220     | 220     | 280      | 330      | 375       | 220     | 330      |
| <b>Cables in the ground (20 °C and 2,5 K.m/W), Installation depth 0,7 m</b> |         |         |         |         |          |          |           |         |          |
| Cables in the ground, conductor 90 °C A                                     | 82      | 117     | 172     | 172     | 220      | 250      | 290       | 172     | 250      |
| <b>Maximum thermal short circuit current during 1 s</b>                     |         |         |         |         |          |          |           |         |          |
| Phase (initial 65 °C, final 250 °C) kA                                      | 2,6     | 5,2     | 9,8     | 9,8     | 15,5     | 19,2     | 24,9      | 9,8     | 19,2     |
| Phase (initial 90 °C, final 250 °C) kA                                      | 2,4     | 4,8     | 9,0     | 9,0     | 14,2     | 17,5     | 22,6      | 9,0     | 17,5     |
| Metal screen (initial 80 °C, final 250 °C) kA                               | 2,4     | 4,3     | 4,3     | 8,5     | 13,0     | 8,5      | 21,6      | 4,3     | 8,5      |