

## AXMK/PE PoweRex PE

### Aluminium power cable

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



### 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, SEK TS 424 14 18-1, HD 603 5 E & O  |
| <b>Certificates</b>                            | SGS Fimko FI 41546  |
| <b>Product Environmental Profile (PEP/EPD)</b> | PEP NXNS-00450-V01.01-EN  |
| <b>Conductor</b>                               | 16-25 mm <sup>2</sup> circular stranded aluminium, EN/IEC 60228 class 2<br>35-300 mm <sup>2</sup> sector shaped, stranded aluminium, EN/IEC 60228 class 2 |
| <b>Insulation</b>                              | UV-protected cross-linked polyethylene XLPE   |
| <b>Core Identification</b>                     | Yellow-green, brown, black, grey  |
| <b>Inner covering</b>                          | Plastic tape  |
| <b>Oversheath</b>                              | UV-protected polyethylene compound PELLD , Black  |
| <b>Rip cord</b>                                | Aramid cord   |

### 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>  | -20 |
| <b>Min. cable temperature during transport °C</b> | -40 |

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| Technical information                                     | 4x16 S<br>PoweRex PE | 4x25 S<br>PoweRex PE | 4x35 S<br>PoweRex PE | 4x50 S<br>PoweRex PE | 4x70 S<br>PoweRex PE | 4x95 S<br>PoweRex PE | 4x120 S<br>PoweRex PE | 4x150 S<br>PoweRex PE | 4x185 S<br>PoweRex PE | 4x240 S<br>PoweRex PE |
|---|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <b>Product code</b>                                       | <b>1116040</b>       | <b>1116041</b>       | <b>1116042</b>       | <b>1116043</b>       | <b>1116044</b>       | <b>1116045</b>       | <b>1116046</b>        | <b>1116047</b>        | <b>1116048</b>        | <b>1116049</b>        |
| Nominal cable diameter mm                                 | 19                   | 22                   | 22                   | 26                   | 29                   | 33                   | 38                    | 42                    | 46                    | 53                    |
| Nominal cable weight kg/km                                | 317                  | 458                  | 572                  | 765                  | 1056                 | 1345                 | 1743                  | 2143                  | 2614                  | 3453                  |
| Nominal weight of Aluminium kg/km                         | 173                  | 266                  | 364                  | 500                  | 725                  | 961                  | 1265                  | 1554                  | 1886                  | 2547                  |
| Nominal Insulation thickness mm                           | 0,7                  | 0,9                  | 0,9                  | 1,0                  | 1,1                  | 1,1                  | 1,2                   | 1,4                   | 1,6                   | 1,7                   |
| Nominal thickness of oversheath mm                        | 1,8                  | 1,8                  | 1,8                  | 1,9                  | 2,0                  | 2,1                  | 2,3                   | 2,4                   | 2,6                   | 2,8                   |
| <b>Maximum forces during installation when pulling by</b> |                      |                      |                      |                      |                      |                      |                       |                       |                       |                       |
| Max. pulling force by pulling-eye kN                      | 1,0                  | 1,5                  | 2,1                  | 3,0                  | 4,2                  | 5,7                  | 7,2                   | 9,0                   | 11,1                  | 14,4                  |
| Max. pulling force by pulling-stocking kN                 | 1,0                  | 1,5                  | 2,1                  | 3,0                  | 4,2                  | 5,7                  | 7,2                   | 8,5                   | 8,5                   | 8,5                   |
| <b>Minimum bending radii</b>                              |                      |                      |                      |                      |                      |                      |                       |                       |                       |                       |
| Minimum bending radius, handling mm                       | 226                  | 267                  | 266                  | 312                  | 353                  | 394                  | 453                   | 501                   | 553                   | 635                   |
| Minimum bending radius, final bending mm                  | 158                  | 187                  | 186                  | 218                  | 247                  | 276                  | 317                   | 351                   | 387                   | 444                   |
| <b>Minimum bending radii</b>                              |                      |                      |                      |                      |                      |                      |                       |                       |                       |                       |
| During handling and installation, phase conductor cm      | 10                   | 13                   | 16                   | 19                   | 23                   | 26                   | 29                    | 32                    | 37                    | 43                    |
| During handling and installation, cable cm                | 23                   | 27                   | 27                   | 31                   | 35                   | 39                   | 45                    | 50                    | 55                    | 63                    |
| In final installation, phase conductor cm                 | 7                    | 8                    | 11                   | 13                   | 16                   | 18                   | 20                    | 23                    | 26                    | 30                    |
| In final installation, cable cm                           | 16                   | 19                   | 19                   | 22                   | 25                   | 28                   | 32                    | 35                    | 39                    | 44                    |
| <b>Minimum bending radii</b>                              |                      |                      |                      |                      |                      |                      |                       |                       |                       |                       |
| During handling and installation, cable m                 | 0,23                 | 0,27                 | 0,27                 | 0,31                 | 0,35                 | 0,39                 | 0,45                  | 0,50                  | 0,55                  | 0,64                  |
| In final installation, cable m                            | 0,16                 | 0,19                 | 0,19                 | 0,22                 | 0,25                 | 0,28                 | 0,32                  | 0,35                  | 0,39                  | 0,44                  |
| <b>DC resistance</b>                                      |                      |                      |                      |                      |                      |                      |                       |                       |                       |                       |
| Max. DC resistance of conductor at 20 °C Ω/km             | 1,91                 | 1,20                 | 0,868                | 0,641                | 0,443                | 0,320                | 0,253                 | 0,206                 | 0,164                 | 0,125                 |
| <b>Electrical values</b>                                  |                      |                      |                      |                      |                      |                      |                       |                       |                       |                       |
| Calculated inductance mH/km                               | 0,29                 | 0,28                 | 0,28                 | 0,28                 | 0,27                 | 0,27                 | 0,26                  | 0,26                  | 0,26                  | 0,25                  |
| Calculated operation capacitance µF/km                    | 0,30                 | 0,29                 | 0,29                 | 0,29                 | 0,29                 | 0,29                 | 0,28                  | 0,28                  | 0,28                  | 0,27                  |

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|---|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| <b>Current ratings</b>  |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |
| <b>Cables in air (25 °C)</b>  |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |
| two loaded conductor, conductor 70 °C A                                     | 76                        | 93                        | 115                       | 140                       | 180                       | 218                       | 254                       | 293                       | 335                       | 395                       |
| three loaded conductor, conductor 70 °C A                                   | 63                        | 81                        | 100                       | 122                       | 156                       | 190                       | 220                       | 255                       | 291                       | 343                       |
| two loaded conductor, conductor 90 °C A                                     | 95                        | 112                       | 140                       | 171                       | 219                       | 267                       | 312                       | 360                       | 413                       | 489                       |
| three loaded conductor, conductor 90 °C A                                   | 80                        | 101                       | 125                       | 152                       | 194                       | 236                       | 274                       | 316                       | 361                       | 425                       |
| <b>Cables in air (30 °C)</b>  |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |
| two loaded conductor, conductor 70 °C A                                     | 73                        | 89                        | 111                       | 135                       | 173                       | 210                       | 244                       | 282                       | 322                       | 380                       |
| three loaded conductor, conductor 70 °C A                                   | 61                        | 78                        | 96                        | 117                       | 150                       | 183                       | 212                       | 245                       | 280                       | 330                       |
| two loaded conductor, conductor 90 °C A                                     | 91                        | 108                       | 135                       | 164                       | 211                       | 257                       | 300                       | 346                       | 397                       | 470                       |
| three loaded conductor, conductor 90 °C A                                   | 77                        | 97                        | 120                       | 146                       | 187                       | 227                       | 263                       | 304                       | 347                       | 409                       |
| <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                                     | 78                        | 100                       | 125                       | 150                       | 185                       | 220                       | 255                       | 280                       | 330                       | 375                       |
| <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                                     | 64                        | 82                        | 98                        | 117                       | 144                       | 172                       | 197                       | 220                       | 250                       | 290                       |
| <b>Maximum thermal short circuit current during 1 s</b>                     |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |
| Phase (initial 65 °C, final 250 °C) kA                                      | 1,7                       | 2,6                       | 3,6                       | 5,2                       | 7,3                       | 9,8                       | 12,4                      | 15,5                      | 19,2                      | 24,9                      |
| Phase (initial 90 °C, final 250 °C) kA                                      | 1,5                       | 2,4                       | 3,4                       | 4,8                       | 6,7                       | 9,0                       | 11,4                      | 14,2                      | 17,5                      | 22,6                      |
| <b>Environmental information</b>  |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |
| (A1-A3) GWP emission kgCO2e/km  | 1843                      | 2868                      | 3696                      | 5110                      | 7229                      | 9648                      | 12233                     | 15150                     | 18580                     | 24698                     |
| GWP emissions calculation standard  | EN15804:2012<br>+ A2:2019 | EN15804:2012<br>+ A2:2019 | EN15804:2012<br>+ A2:2019 | EN15804:2012<br>+ A2:2019 | EN15804:2012<br>+ A2:2019 | EN15804:2012<br>+ A2:2019 | EN15804:2012<br>+ A2:2019 | EN15804:2012<br>+ A2:2019 | EN15804:2012<br>+ A2:2019 | EN15804:2012<br>+ A2:2019 |

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| STANDARD PACKAGES | 4x16 S PoweRex PE | 4x25 S PoweRex PE | 4x35 S PoweRex PE | 4x50 S PoweRex PE | 4x70 S PoweRex PE | 4x95 S PoweRex PE | 4x120 S PoweRex PE | 4x150 S PoweRex PE | 4x185 S PoweRex PE | 4x240 S PoweRex PE |
|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|--------------------|--------------------|--------------------|
| Product code      | 1116040           | 1116041           | 1116042           | 1116043           | 1116044           | 1116045           | 1116046            | 1116047            | 1116048            | 1116049            |
| GTIN code         | 6438176300213     | 6438176300237     | 6438176300251     | 6438176300275     | 6438176300299     | 6438176300312     | 6438176300336      | 6438176300343      | 6438176300350      | 6438176300367      |
| Package           | 1000 K12          | 1000 K16          | 1000 K16          | 1000 K16          | 1000 K18          | 1000 K20          | 1000 K22           | 500 K20            | 500 K22            | 500 K22            |
| Product code      | 1116040           | 1116041           | 1116042           | 1116043           | 1116044           | 1116045           | 1116046            |                    |                    |                    |
| GTIN code         | 6438176300206     | 6438176300220     | 6438176300244     | 6438176300268     | 6438176300282     | 6438176300305     | 6438176300329      |                    |                    |                    |
| Package           | 500 K11           | 500 K12           | 500 K12           | 500 K12           | 500 K14           | 500 K16           | 500 K18            |                    |                    |                    |

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| Technical information                                     | 4x300 S PowerEx PE |
|---|--------------------|
| <b>Product code</b>                                       | <b>1116050</b>     |
| Nominal cable diameter mm                                 | 57                 |
| Nominal cable weight kg/km                                | 4177               |
| Nominal weight of Aluminium kg/km                         | 3143               |
| Nominal Insulation thickness mm                           | 1,8                |
| Nominal thickness of oversheath mm                        | 3,0                |
| <b>Maximum forces during installation when pulling by</b> |                    |
| Max. pulling force by pulling-eye kN                      | 18,0               |
| Max. pulling force by pulling-stocking kN                 | 8,5                |
| <b>Minimum bending radii</b>                              |                    |
| Minimum bending radius, handling mm                       | 680                |
| Minimum bending radius, final bending mm                  | 476                |
| <b>Minimum bending radii</b>                              |                    |
| During handling and installation, phase conductor cm      | 46                 |
| During handling and installation, cable cm                | 68                 |
| In final installation, phase conductor cm                 | 32                 |
| In final installation, cable cm                           | 48                 |
| <b>Minimum bending radii</b>                              |                    |
| During handling and installation, cable m                 | 0,68               |
| In final installation, cable m                            | 0,48               |
| <b>DC resistance</b>                                      |                    |
| Max. DC resistance of conductor at 20 °C Ω/km             | 0,100              |
| <b>Electrical values</b>                                  |                    |
| Calculated inductance mH/km                               | 0,25               |
| Calculated operation capacitance μF/km                    | 0,26               |

| Technical information   | 4x300 S PowerEx PE     |
|---|------------------------|
| <b>Current ratings</b>  |                        |
| <b>Cables in air (25 °C)</b>  |                        |
| two loaded conductor, conductor 70 °C A                                     | 457                    |
| three loaded conductor, conductor 70 °C A                                   | 396                    |
| two loaded conductor, conductor 90 °C A                                     | 565                    |
| three loaded conductor, conductor 90 °C A                                   | 490                    |
| <b>Cables in air (30 °C)</b>  |                        |
| two loaded conductor, conductor 70 °C A                                     | 439                    |
| three loaded conductor, conductor 70 °C A                                   | 381                    |
| two loaded conductor, conductor 90 °C A                                     | 543                    |
| three loaded conductor, conductor 90 °C A                                   | 471                    |
| <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                                     | 430                    |
| <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                                     | 326                    |
| <b>Maximum thermal short circuit current during 1 s</b>                     |                        |
| Phase (initial 65 °C, final 250 °C) kA                                      | 31,1                   |
| Phase (initial 90 °C, final 250 °C) kA                                      | 28,2                   |
| <b>Environmental information</b>  |                        |
| (A1-A3) GWP emission kgCO <sub>2</sub> e/km                                 | 29975                  |
| GWP emissions calculation standard  | EN15804:2012 + A2:2019 |

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| STANDARD PACKAGES | 4x300 S PoweRex PE |
|-------------------|--------------------|
| Product code      | 1116050            |
| GTIN code         | 6438176300374      |
| Package           | 500 K26            |