

MCMOE-PE

Control cable

450/750 V

Application

Control cable for fixed installations outdoors. May be buried directly in soil, also by ploughing. The conductor insulation must be protected against UV-radiation. Installations must be in accordance with national regulations and rules of installations.

Design

| | |
|----------------------------|-------------------------------------------------|
| Standards | SFS 3713, VR 15.02.2000 |
| Reaction to fire | Fca; EN 13501-6, EN 50575:2014+A1:2016 |
| Conductor | Circular solid copper, EN/IEC 60228 class 1 |
| Insulation | UV-protected polyethylene compound |
| Core Identification | Black, with white numbers |
| Inner covering | Plastic tape |
| Metal screen | Copper wires and copper tape |
| Oversheath | UV-protected polyethylene compound PELLD, Black |



Temperature limits

| | |
|---------------------------------------------------|-----|
| Max. conductor temperature °C | 70 |
| Max. cond. temp. short circuit max. 5 s °C | 160 |
| Min. cable temperature during operation °C | -40 |
| Min. cable temperature during handling °C | -15 |
| Min. cable temperature during transport °C | -40 |

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| Technical information | 4x1,5 | 7x1,5 | 12x1,5 | 19x1,5 | 27x1,5 | 37x1,5 | 48x1,5 | 61x1,5 | 91x1,5 | 7x2,5 |
|-----------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Product code | 1109050 | 1109053 | 1109058 | 1109069 | 1109077 | 1109087 | 1109092 | 1109096 | 1109100 | 1109122 |
| Nominal cross-sectional area of conductor mm ² | 1,5 | 1,5 | 1,5 | 1,5 | 1,5 | 1,5 | 1,5 | 1,5 | 1,5 | 2,5 |
| Nominal diameter of conductor mm | 1,4 | 1,4 | 1,4 | 1,4 | 1,4 | 1,4 | 1,4 | 1,4 | 1,4 | 1,8 |
| Nominal thickness of insulation mm | 0,8 | 0,8 | 0,8 | 0,8 | 0,8 | 0,8 | 0,8 | 0,8 | 0,8 | 0,9 |
| Nominal size of metal screen mm ² | 1,5 | 6 | 6 | 6 | 6 | 10 | 10 | 10 | 10 | 6 |
| Nominal thickness of oversheath mm | 2,0 | 2,0 | 2,0 | 2,1 | 2,2 | 2,3 | 2,4 | 2,5 | 2,7 | 2,0 |
| Nominal cable diameter mm | 12,340 | 14,500 | 17,710 | 20,820 | 24,150 | 27,210 | 31,630 | 35,090 | 41,410 | 16,210 |
| Nominal cable weight kg/km | 148,711 | 262,490 | 369,516 | 527,118 | 717,206 | 965,118 | 1204,485 | 1501,704 | 2118,714 | 343,692 |
| Nominal weight of copper kg/m | 0,066 | 0,149 | 0,213 | 0,305 | 0,417 | 0,588 | 0,736 | 0,927 | 1,329 | 0,206 |
| Maximum forces during installation when pulling by | | | | | | | | | | |
| Max. pulling force by pulling-eye kN | 0,3 | 0,5 | 0,9 | 1,4 | 2,0 | 2,7 | 3,6 | 4,5 | 6,8 | 0,8 |
| Minimum bending radii | | | | | | | | | | |
| Minimum bending radius, handling mm | 123 | 145 | 177 | 208 | 242 | 272 | 316 | 351 | 414 | 162 |
| Minimum bending radius, final bending mm | 99 | 116 | 142 | 167 | 193 | 218 | 253 | 281 | 331 | 130 |
| Minimum bending radii | | | | | | | | | | |
| During handling and installation, cable cm | 12 | 15 | 18 | 21 | 24 | 27 | 32 | 35 | 41 | 16 |
| In final installation, cable cm | 10 | 12 | 14 | 17 | 19 | 22 | 25 | 28 | 33 | 13 |
| DC resistance | | | | | | | | | | |
| Max. DC resistance of conductor at 20 °C Ω/km | 12,1 | 12,1 | 12,1 | 12,1 | 12,1 | 12,1 | 12,1 | 12,1 | 12,1 | 7,41 |
| Maximum DC resistance at 20 °C, metal screen Ω/km | 12,1 | 3,08 | 3,08 | 3,08 | 3,08 | 1,83 | 1,83 | 1,83 | 1,83 | 3,08 |
| Electrical values | | | | | | | | | | |
| Minimum insulation resistance MΩ × km | 0,011 | 0,011 | 0,011 | 0,011 | 0,011 | 0,011 | 0,011 | 0,011 | 0,011 | 0,01 |

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| Technical information | 12x2,5 | 19x2,5 | 27x2,5 | 37x2,5 | 48x2,5 | 61x2,5 |
|-----------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Product code | 1109124 | 1109126 | 1109127 | 1109137 | 1109138 | 1109161 |
| Nominal cross-sectional area of conductor mm ² | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 | 2,5 |
| Nominal diameter of conductor mm | 1,8 | 1,8 | 1,8 | 1,8 | 1,8 | 1,8 |
| Nominal thickness of insulation mm | 0,9 | 0,9 | 0,9 | 0,9 | 0,9 | 0,9 |
| Nominal size of metal screen mm ² | 10 | 10 | 10 | 10 | 10 | 10 |
| Nominal thickness of oversheath mm | 2,1 | 2,2 | 2,3 | 2,4 | 2,5 | 2,6 |
| Nominal cable diameter mm | 20,520 | 24,790 | 28,890 | 32,610 | 36,670 | 40,630 |
| Nominal cable weight kg/km | 523,879 | 760,358 | 1063,661 | 1383,664 | 1753,641 | 2193,752 |
| Nominal weight of copper kg/m | 0,319 | 0,468 | 0,679 | 0,899 | 1,144 | 1,445 |
| Maximum forces during installation when pulling by | | | | | | |
| Max. pulling force by pulling-eye kN | 1,5 | 2,3 | 3,3 | 4,6 | 6,0 | 7,6 |
| Minimum bending radii | | | | | | |
| Minimum bending radius, handling mm | 205 | 248 | 289 | 326 | 367 | 406 |
| Minimum bending radius, final bending mm | 164 | 198 | 231 | 261 | 293 | 325 |
| Minimum bending radii | | | | | | |
| During handling and installation, cable cm | 21 | 25 | 29 | 33 | 37 | 41 |
| In final installation, cable cm | 16 | 20 | 23 | 26 | 29 | 33 |
| DC resistance | | | | | | |
| Max. DC resistance of conductor at 20 °C Ω/km | 7,41 | 7,41 | 7,41 | 7,41 | 7,41 | 7,41 |
| Maximum DC resistance at 20 °C, metal screen Ω/km | 1,83 | 1,83 | 1,83 | 1,83 | 1,83 | 1,83 |
| Electrical values | | | | | | |
| Minimum insulation resistance MΩ × km | 0,01 | 0,01 | 0,01 | 0,01 | 0,01 | 0,01 |