

### Product type designation

Product description

### IE Connecting Cable M12-180/IE FC RJ45-145

Flexible plug-in cable (4-core), preferred length, preassembled with one 4-pole M12 connector (D-coded) and one IE FC RJ45 plug 145 IE connecting cable M12-180/IE FC RJ45 Plug-145; IE FC Trailing cable GP pre-assembled with M12 connector (D-coded) and IE FC RJ45 plug; Length 10.0 m



|  |  |
|--|--|
| Suitability for use                                    | For connecting Industrial Ethernet stations (e.g. SIMATIC ET200pro, SCALANCE X208PRO and SIMOTION) |
| Cable designation                                      | 2YY (ST) CY 2x2x0,75/1,5-100 LI GN   |
| Wire length  | 10 m   |
| <b>Electrical data</b>                                 |  |
| Damping ratio per length                               |  |
| • at 10 MHz / maximum                                  | 0.063 dB/m   |
| • at 100 MHz / maximum                                 | 0.213 dB/m   |
| Impedance  |  |
| • at 1 MHz ... 100 MHz                                 | 100 Ω  |
| Relative symmetrical tolerance                         |  |
| • of the characteristic impedance at 1 MHz ... 100 MHz | 5 %  |
| Near-end crosstalk per length                          |  |
| • at 1 MHz ... 100 MHz                                 | 0.5 dB/m   |
| Transfer impedance per length / at 10 MHz              | 20 mΩ/m  |
| Loop resistance per length / maximum                   | 120 mΩ/m   |

|                      |      |
|----------------------|------|
| Operating voltage    |      |
| • RMS value          | 80 V |
| NVP value in percent | 66 % |

### Mechanical data

|   |   |
|---|---|
| Number of electrical cores                                    | 4   |
| Design of the shield  | Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires  |
| Core diameter   |   |
| • of AWG22 core   | 0.75 mm   |
| Outer diameter  |   |
| • of inner conductor  | 0.75 mm   |
| • of the wire insulation                                      | 1.5 mm  |
| • of the inner sheath of the cable                            | 3.9 mm  |
| • of cable sheath   | 6.5 mm  |
| Symmetrical tolerance of the outer diameter / of cable sheath | 0.2 mm  |
| Material  |   |
| • of the wire insulation                                      | polyethylene (PE)   |
| • of the inner sheath of the cable                            | PVC   |
| • of cable sheath   | PVC   |
| Color   |   |
| • of the insulation of data wires                             | white/yellow/blue/orange  |
| • of cable sheath   | green   |
| Bending radius  |   |
| • with single bend / minimum permissible                      | 32.5 mm   |
| • with multiple bends / minimum permissible                   | 49 mm   |
| • with continuous bending                                     | 100 mm  |
| Number of bending cycles                                      | 3000000; Drag chain suitable for 3 million bending cycles at a bending radius of 100 mm, a speed of 4 m/s and an acceleration of 4 m/s <sup>2</sup> |
| Tensile load / maximum  | 150 N   |
| Weight per length   | 68 kg/km  |

### Permitted ambient conditions

|                       |  |
|-----------------------|--|
| Ambient temperature   |  |
| • during operation    | -25 ... +75 °C   |
| • during storage      | -25 ... +75 °C   |
| • during transport    | -25 ... +75 °C   |
| • during installation | -10 ... +60 °C   |
| • Note                | Electrical properties measured at 20 °C, tests according to DIN VDE 0472 |
| Burning behavior      | flame resistant according to UL 1685 (CSA FT 4)                          |
| Chemical resistance   |  |

|   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• to mineral oil</li> <li>• to grease</li> <li>• to water</li> </ul> | conditional resistance<br>Conditional resistance<br>conditional resistance |
| Radiological resistance / to UV radiation   | resistant  |

### Product properties, functions, components / general

|  |     |
|--|-----|
| Product feature  |     |
| <ul style="list-style-type: none"> <li>• halogen-free</li> </ul> | No  |
| <ul style="list-style-type: none"> <li>• silicon-free</li> </ul> | Yes |

### Standards, specifications, approvals

|   |  |
|---|--|
| UL/ETL listing / 300 V Rating   | Yes; c(UL)us, CMG / PLTC / Sun Res / OIL RES |
| UL/ETL style / 600 V Rating   | Yes  |
| Certificate of suitability  |  |
| <ul style="list-style-type: none"> <li>• RoHS conformity</li> </ul>   | Yes  |
| Standard for structured cabling   | Cat5e  |
| Marine classification association   |  |
| <ul style="list-style-type: none"> <li>• American Bureau of Shipping Europe Ltd. (ABS)</li> <li>• Bureau Veritas (BV)</li> <li>• Det Norske Veritas (DNV)</li> <li>• Germanische Lloyd (GL)</li> <li>• Lloyds Register of Shipping (LRS)</li> <li>• Nippon Kaiji Kyokai (NK)</li> <li>• Polski Rejestr Statkow (PRS)</li> </ul> | No<br>No<br>No<br>No<br>No<br>No<br>No       |

### Further Information / Internet Links

|  |   |
|--|---|
| Internet-Link  |   |
| <ul style="list-style-type: none"> <li>• to website: Selector SIMATIC NET SELECTION TOOL</li> <li>• to website: Industrial communication</li> <li>• to website: Industry Mall</li> <li>• to website: Information and Download Center</li> <li>• to website: Image database</li> <li>• to website: CAx Download Manager</li> <li>• to website: Industry Online Support</li> </ul> | <a href="http://www.siemens.com/snst">http://www.siemens.com/snst</a><br><br><a href="http://www.siemens.com/simatic-net">http://www.siemens.com/simatic-net</a><br><a href="https://mall.industry.siemens.com">https://mall.industry.siemens.com</a><br><a href="http://www.siemens.com/industry/infocenter">http://www.siemens.com/industry/infocenter</a><br><a href="http://automation.siemens.com/bilddb">http://automation.siemens.com/bilddb</a><br><a href="http://www.siemens.com/cax">http://www.siemens.com/cax</a><br><a href="https://support.industry.siemens.com">https://support.industry.siemens.com</a> |
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