

### product type designation

### product description

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

Flexible plug-in cable (8-wire), preferred length, prefabricated with two IE FC RJ45 connectors 4X2

IE connecting cable IE FC RJ45 Plug-180/IE FC RJ45 Plug-180; IE FC flexible GP 4x2 cable Pre-assembled with 2x IE FC RJ45 plug 180 4 x 2; Length 30 m.



### suitability for use

For connecting Industrial Ethernet stations with an RJ45 interface (10/100/1000/10000Mbps)

### wire length

30 m

### electrical data

#### number of electrical connections

2

#### attenuation factor per length

|                        |            |
|------------------------|------------|
| • at 10 MHz / maximum  | 0.089 dB/m |
| • at 100 MHz / maximum | 0.287 dB/m |
| • at 250 MHz / maximum | 0.466 dB/m |
| • at 300 MHz / maximum | 0.514 dB/m |
| • at 500 MHz / maximum | 0.679 dB/m |

#### impedance

|                        |       |
|------------------------|-------|
| • at 1 MHz ... 100 MHz | 100 Ω |
|------------------------|-------|

#### near-end crosstalk per length

|                        |            |
|------------------------|------------|
| • at 1 MHz ... 100 MHz | 0.453 dB/m |
| • at 1 MHz ... 250 MHz | 0.393 dB/m |
| • at 1 MHz ... 300 MHz | 0.381 dB/m |
| • at 1 MHz ... 500 MHz | 0.348 dB/m |

#### transfer impedance per length / at 10 MHz

20 mΩ/m

#### loop resistance per length / maximum

180 mΩ/m

#### insulation resistance coefficient

5000 GΩ·m

#### operating voltage

|             |      |
|-------------|------|
| • RMS value | 80 V |
|-------------|------|

#### NVP value in percent

68 %

### mechanical data

#### number of electrical cores

8

#### design of the shield

Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires

#### type of electrical connection / FastConnect

Yes

#### core diameter

|                                |         |
|--------------------------------|---------|
| • of AWG24 insulated conductor | 0.51 mm |
|--------------------------------|---------|

#### outer diameter

|                                    |         |
|------------------------------------|---------|
| • of inner conductor               | 0.6 mm  |
| • of the wire insulation           | 1.05 mm |
| • of the inner sheath of the cable | 6.4 mm  |
| • of cable sheath                  | 8 mm    |

#### symmetrical tolerance of the outer diameter / of cable sheath

0.2 mm

#### material

|                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• of the wire insulation</li> <li>• of the inner sheath of the cable</li> <li>• of cable sheath</li> </ul>                                                                                                                                                                                                                                       | polyethylene (PE)<br>FRNC<br>PVC                                                                                                                                                                                                                                                                                                                                                                                                                    |
| color <ul style="list-style-type: none"> <li>• of the insulation of data wires</li> <li>• of cable sheath</li> </ul>                                                                                                                                                                                                                                                                    | white-blue/blue, white-orange/orange, white-green/green, white-brown/brown green                                                                                                                                                                                                                                                                                                                                                                    |
| bending radius <ul style="list-style-type: none"> <li>• with single bend / minimum permissible</li> <li>• with multiple bends / minimum permissible</li> </ul>                                                                                                                                                                                                                          | 24 mm<br>40 mm                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| tensile load / maximum                                                                                                                                                                                                                                                                                                                                                                  | 100 N                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| weight per length                                                                                                                                                                                                                                                                                                                                                                       | 86 kg/km                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>ambient conditions</b>                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| ambient temperature <ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> <li>• during transport</li> <li>• during installation</li> </ul>                                                                                                                                                                                                           | -40 ... +80 °C<br>-40 ... +80 °C<br>-40 ... +80 °C<br>-40 ... +80 °C                                                                                                                                                                                                                                                                                                                                                                                |
| fire behavior                                                                                                                                                                                                                                                                                                                                                                           | flame resistant according to IEC 60332-3-24 (Category C)                                                                                                                                                                                                                                                                                                                                                                                            |
| chemical resistance <ul style="list-style-type: none"> <li>• to mineral oil</li> <li>• to grease</li> <li>• to water</li> </ul>                                                                                                                                                                                                                                                         | oil resistant according to IEC 60811-2-1 (4 h / 70°C)<br>Conditional resistance<br>conditional resistance                                                                                                                                                                                                                                                                                                                                           |
| radiological resistance / to UV radiation                                                                                                                                                                                                                                                                                                                                               | resistant                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>product features, product functions, product components / general</b>                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| product feature <ul style="list-style-type: none"> <li>• halogen-free</li> <li>• silicon-free</li> </ul>                                                                                                                                                                                                                                                                                | No<br>Yes                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| wire length / for Industrial Ethernet <ul style="list-style-type: none"> <li>• with 100BaseTX</li> <li>• with 1000BaseT</li> <li>• for 10GBase T</li> </ul>                                                                                                                                                                                                                             | 80 m<br>80 m<br>70 m                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>standards, specifications, approvals</b>                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| UL/ETL listing / 300 V Rating                                                                                                                                                                                                                                                                                                                                                           | Yes; c(ETL)us, CMG, wiring harness                                                                                                                                                                                                                                                                                                                                                                                                                  |
| UL/ETL style / 600 V Rating                                                                                                                                                                                                                                                                                                                                                             | No                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| certificate of suitability <ul style="list-style-type: none"> <li>• EAC approval</li> <li>• CE marking</li> <li>• RoHS conformity</li> </ul>                                                                                                                                                                                                                                            | Yes<br>Yes<br>Yes                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| product conformity <ul style="list-style-type: none"> <li>• ANSI/TIA-EIA 568-B.2 Cat.5e</li> <li>• IEC 61784-5-2-CP 2/2 (Ethernet/IP)</li> </ul>                                                                                                                                                                                                                                        | Yes<br>Yes                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| standard for structured cabling                                                                                                                                                                                                                                                                                                                                                         | Cat6A, class EA                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Marine classification association <ul style="list-style-type: none"> <li>• American Bureau of Shipping Europe Ltd. (ABS)</li> <li>• French marine classification society (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                                                                                                                                                                                                                                                                                                                                                                                                              |
| reference code <ul style="list-style-type: none"> <li>• according to IEC 81346-2</li> <li>• according to IEC 81346-2:2019</li> </ul>                                                                                                                                                                                                                                                    | WG<br>WGB                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>further information / internet links</b>                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| internet link <ul style="list-style-type: none"> <li>• to web page: selection aid TIA 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: Selection guide for cables and connectors</li> </ul>                                                            | <a href="http://www.siemens.com/tia-selection-tool">http://www.siemens.com/tia-selection-tool</a><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="https://sie.ag/2QdlxcP">https://sie.ag/2QdlxcP</a> |

- to website: Image database
- to website: CAX-Download-Manager
- to website: Industry Online Support

<http://automation.siemens.com/bilddb>  
<http://www.siemens.com/cax>  
<https://support.industry.siemens.com>

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