

### 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 15.0 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

15 m

### electrical data

#### number of electrical connections

2

#### attenuation factor per length

- at 10 MHz / maximum
- at 100 MHz / maximum

0.063 dB/m  
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 insulated conductor

0.75 mm

#### outer diameter

- of inner conductor
- of the wire insulation
- of the inner sheath of the cable
- of cable sheath

0.75 mm  
1.5 mm  
3.9 mm  
6.5 mm

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

0.2 mm

#### material

- of the wire insulation
- of the inner sheath of the cable
- of cable sheath

polyethylene (PE)  
PVC  
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
<b>ambient conditions</b>	
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
fire behavior	flame resistant according to UL 1685 (CSA FT 4)
chemical resistance	
• to mineral oil	conditional resistance
• to grease	Conditional resistance
• to water	conditional resistance
radiological resistance / to UV radiation	resistant
<b>product features, product functions, product components / general</b>	
product feature	
• halogen-free	No
• silicon-free	Yes
<b>standards, specifications, approvals</b>	
UL/ETL listing / 300 V Rating	Yes; c(ETL)us, CMG FT4 / (ETL)us PLTC / Sun Res / OIL RES
UL/ETL style / 600 V Rating	Yes; cRUus AWM 21694 AWM I A/B 60°C 600V FT2
certificate of suitability	
• EAC approval	Yes
• CE marking	Yes
• RoHS conformity	Yes
standard for structured cabling	Cat5e
Marine classification association	
• American Bureau of Shipping Europe Ltd. (ABS)	No
• French marine classification society (BV)	No
• Det Norske Veritas (DNV)	No
• Germanische Lloyd (GL)	No
• Lloyds Register of Shipping (LRS)	No
• Nippon Kaiji Kyokai (NK)	No
• Polski Rejestr Statkow (PRS)	No
reference code	
• according to IEC 81346-2	WG
• according to IEC 81346-2:2019	WGB
<b>further information / internet links</b>	
internet link	
• to website: Selection guide for cables and connectors	<a href="https://support.industry.siemens.com/cs/ww/en/view/109766358">https://support.industry.siemens.com/cs/ww/en/view/109766358</a>
• to web page: selection aid TIA Selection Tool	<a href="https://www.siemens.com/tstcloud">https://www.siemens.com/tstcloud</a>
• to web page: SiePortal	<a href="https://sieportal.siemens.com/">https://sieportal.siemens.com/</a>
• to website: Image database	<a href="https://www.automation.siemens.com/bilddb">https://www.automation.siemens.com/bilddb</a>
• to website: CAX-Download-Manager	<a href="https://www.siemens.com/cax">https://www.siemens.com/cax</a>
• to website: Industry Online Support	<a href="https://support.industry.siemens.com">https://support.industry.siemens.com</a>
<b>security information</b>	
security information	Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept. Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is

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Approvals / Certificates

General Product Approval

Environment



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Industrial Communication

[PROFINET](#)

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