

### product type designation

product description

### IE TP Cord M12-90/RJ45-180

Flexible plug-in cable (8-wire), preferred length, pre-assembled with 1 x IE M12 plug 4X2, X-coded, 90 degrees cable outlet and 1x RJ45 connector; 4x2, 180 degrees cable outlet

IE TP Cord M12-90/RJ45-180 pre-assembled IE Flexible Cable with 1x M12 plug (X-coded); 90-degree cable outlet; 1x RJ45 plug; 180-degree cable outlet; length 2.0 m.



### suitability for use

For connecting Industrial Ethernet stations with an M12 interface (e.g. SCALANCE W and SCALANCE X)

### wire length

2 m

### electrical data

#### number of electrical connections

2

#### attenuation factor per length

• at 10 MHz / maximum	0.086 dB/m
• at 100 MHz / maximum	0.28 dB/m
• at 300 MHz / maximum	0.402 dB/m
• at 600 MHz / maximum	0.735 dB/m

#### impedance

• at 1 MHz ... 100 MHz	100 Ω
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#### near-end crosstalk per length

• at 100 MHz	0.724 dB/m
• at 300 MHz	0.653 dB/m
• at 600 MHz	0.608 dB/m

#### loop resistance per length / maximum

290 mΩ/m

#### insulation resistance coefficient

5000 GΩ·m

#### operating voltage

• RMS value	80 V
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#### 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

No

#### core diameter

• of AWG26 insulated conductor	0.48 mm
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#### outer diameter

• of the wire insulation	1 mm
• of the inner sheath of the cable	5.4 mm
• of cable sheath	6.5 mm

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

0.3 mm

#### material

• of the wire insulation	polyethylene (PE)
• of cable sheath	PUR

#### color

<ul style="list-style-type: none"> <li>of the insulation of data wires</li> <li>of cable sheath</li> </ul>	white/blue, white/orange, white/green, white/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>	32.5 mm 65 mm
tensile load / maximum	100 N
weight per length	45 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>	-30 ... +80 °C -40 ... +80 °C -40 ... +80 °C -40 ... +80 °C
fire behavior	flame resistant according to IEC 60332-1-2, smoke density according to IEC 61034
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 DIN EN 60811-2-1 Conditional resistance conditional resistance
radiological resistance / to UV radiation	resistant
protection class IP	IP65/67 (M12), IP20 (RJ45)
<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>	Yes Yes
<b>standards, specifications, approvals</b>	
UL/ETL listing / 300 V Rating	Yes; AWM Style 21815
UL/ETL style / 600 V Rating	No
certificate of suitability	ISO/IEC 11801-1, IEC 61035
<ul style="list-style-type: none"> <li>EAC approval</li> <li>CE marking</li> <li>RoHS conformity</li> </ul>	Yes Yes Yes
standard for structured cabling	Cat6A
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 No No No No No 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 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> <li>to website: Image database</li> <li>to website: Industry Online Support</li> </ul>	<a href="http://www.siemens.com/tia-selection-tool">http://www.siemens.com/tia-selection-tool</a> <a href="http://www.siemens.com/simatic-net">http://www.siemens.com/simatic-net</a> <a href="https://mall.industry.siemens.com">https://mall.industry.siemens.com</a> <a href="http://www.siemens.com/industry/infocenter">http://www.siemens.com/industry/infocenter</a> <a href="https://sie.ag/2QdlxcP">https://sie.ag/2QdlxcP</a> <a href="http://automation.siemens.com/bilddb">http://automation.siemens.com/bilddb</a> <a href="https://support.industry.siemens.com">https://support.industry.siemens.com</a>

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