

### product type designation

product description

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

Flexible plug-in cable (8-wire), preferred length, prefabricated with two IE FC M12 connectors 4X2 (X-coded)

IE TP Cord M12-90/M12-90 pre-assembled IE Flexible Cable, with 2 M12 connectors (X-coded); 90-degree cable outlet; length 0.5 m.



Technical Product Detail Page

<https://i.siemens.com/1P6XV1878-5GE50>

suitability for use

For connecting Industrial Ethernet stations with an M12 interface (e.g. SCALANCE W and XP-200)

cable designation

S/FTP

wire length

0.5 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

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

NVP value in percent

68 %

### mechanical data

number of electrical cores

8

design of the shield

S/FTP, overlapped aluminum-clad foil, sheathed in a protective braided shield of tinned copper wires

type of electrical connection / FastConnect

No

core diameter

- of AWG26 insulated conductor 0.48 mm

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)

<ul style="list-style-type: none"> <li>• of cable sheath</li> </ul>	PUR
color	
<ul style="list-style-type: none"> <li>• of the insulation of data wires</li> </ul>	white/blue, white/orange, white/green, white/brown
<ul style="list-style-type: none"> <li>• of cable sheath</li> </ul>	green
bending radius	
<ul style="list-style-type: none"> <li>• with single bend / minimum permissible</li> </ul>	32.5 mm
<ul style="list-style-type: none"> <li>• with multiple bends / minimum permissible</li> </ul>	65 mm
tensile load / maximum	100 N
weight per length	45 kg/km
<b>plug</b>	
type of plug interlock	screwed
design of plug-in connection	M12-90
connector coding	M12
<ul style="list-style-type: none"> <li>• of the M12 circular connector</li> </ul>	X-coded
<b>ambient conditions</b>	
ambient temperature	
<ul style="list-style-type: none"> <li>• during operation</li> </ul>	-30 ... +80 °C
<ul style="list-style-type: none"> <li>• during storage</li> </ul>	-40 ... +80 °C
<ul style="list-style-type: none"> <li>• during transport</li> </ul>	-40 ... +80 °C
<ul style="list-style-type: none"> <li>• during installation</li> </ul>	-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> </ul>	oil resistant according to DIN EN 60811-2-1
<ul style="list-style-type: none"> <li>• to grease</li> </ul>	Conditional resistance
<ul style="list-style-type: none"> <li>• to water</li> </ul>	conditional resistance
radiological resistance / to UV radiation	resistant
protection class IP	IP65, IP67
<b>product features, product functions, product components / general</b>	
product feature	
<ul style="list-style-type: none"> <li>• halogen-free</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• PoE capability</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• PoE+ capability</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• PoE++ capability</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• silicon-free</li> </ul>	Yes
<b>standards, specifications, approvals</b>	
UL/ETL listing / 300 V Rating	Yes
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> </ul>	Yes
<ul style="list-style-type: none"> <li>• CE marking</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• RoHS conformity</li> </ul>	Yes
standard for structured cabling	Cat6A
Marine classification association	
<ul style="list-style-type: none"> <li>• American Bureau of Shipping Europe Ltd. (ABS)</li> </ul>	No
<ul style="list-style-type: none"> <li>• French marine classification society (BV)</li> </ul>	No
<ul style="list-style-type: none"> <li>• Det Norske Veritas (DNV)</li> </ul>	No
<ul style="list-style-type: none"> <li>• Germanische Lloyd (GL)</li> </ul>	No
<ul style="list-style-type: none"> <li>• Lloyds Register of Shipping (LRS)</li> </ul>	No
<ul style="list-style-type: none"> <li>• Nippon Kaiji Kyokai (NK)</li> </ul>	No
<ul style="list-style-type: none"> <li>• Polski Rejestr Statkow (PRS)</li> </ul>	No
<b>further information / internet links</b>	
internet link	
<ul style="list-style-type: none"> <li>• to website: Selection guide for cables and connectors</li> </ul>	<a href="https://support.industry.siemens.com/cs/ww/en/view/109766358">https://support.industry.siemens.com/cs/ww/en/view/109766358</a>
<ul style="list-style-type: none"> <li>• to web page: selection aid TIA Selection Tool</li> </ul>	<a href="https://www.siemens.com/tstcloud">https://www.siemens.com/tstcloud</a>
<ul style="list-style-type: none"> <li>• to web page: SiePortal</li> </ul>	<a href="https://sieportal.siemens.com/">https://sieportal.siemens.com/</a>
<ul style="list-style-type: none"> <li>• to website: Image database</li> </ul>	<a href="https://www.automation.siemens.com/bilddb">https://www.automation.siemens.com/bilddb</a>
<ul style="list-style-type: none"> <li>• to website: CAx-Download-Manager</li> </ul>	<a href="https://www.siemens.com/cax">https://www.siemens.com/cax</a>
<ul style="list-style-type: none"> <li>• to website: Industry Online Support</li> </ul>	<a href="https://support.industry.siemens.com">https://support.industry.siemens.com</a>

## security information

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 necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. For additional information on industrial cybersecurity measures that may be implemented, please visit [www.siemens.com/cybersecurity-industry](http://www.siemens.com/cybersecurity-industry). Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under <https://www.siemens.com/cert>. (V4.7)

## Approvals / Certificates

General Product Approval

Industrial Communication

[Declaration of Con-  
formity](#)



[Manufacturer Declara-  
tion](#)

[PROFINET](#)

last modified:

10/28/2025 