

**product type designation**

product description

**IE Connecting Cable M12-90/M12-90**

Flexible plug-in cable (4-wire), preferred length, prefabricated with two 4-pin M12 connectors (D-coded, 90° cable outlet)

IE Connecting Cable M12-90/M12-90, pre-assembled IE FC Trailing Cable GP, with 2 M12 connectors (D-coded) Length 0.5 m.



Technical Product Detail Page

<https://i.siemens.com/1P6XV1870-8GE50>

suitability for use

For connecting Industrial Ethernet stations (e.g. SIMATIC ET200 and SCALANCE XP-200) in IP 65/67 degree of protection

cable designation

SF/UTP, 2YY (ST) CY 2x2x0,75/1,5-100 LI GN

wire length

0.5 m

**electrical data**

number of electrical connections

2

attenuation factor 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

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

core diameter

- of AWG22 insulated conductor

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	
<ul style="list-style-type: none"> <li>• of the insulation of data wires</li> <li>• of cable sheath</li> </ul>	white/yellow/blue/orange green
bending radius	
<ul style="list-style-type: none"> <li>• with single bend / minimum permissible</li> <li>• with multiple bends / minimum permissible</li> <li>• with continuous bending</li> </ul>	32.5 mm 49 mm 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>plug</b>	
type of plug interlock	screwed
design of plug-in connection	M12-90
tightening torque / for M12 round connector / maximum	0.6 N·m
connector coding	M12
<ul style="list-style-type: none"> <li>• of the M12 circular connector</li> </ul>	D-coded
<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>	-25 ... +75 °C -25 ... +75 °C -25 ... +75 °C -10 ... +60 °C
fire 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> </ul>	conditional resistance 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> <li>• PoE capability</li> <li>• PoE+ capability</li> <li>• silicon-free</li> </ul>	No Yes Yes 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	UL 2238
<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	Cat5e
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
<b>further information / internet links</b>	
internet link	
<ul style="list-style-type: none"> <li>• to website: Selection guide for cables and connectors</li> <li>• to web page: selection aid TIA Selection Tool</li> <li>• to web page: SiePortal</li> <li>• to website: Image database</li> <li>• to website: CAx-Download-Manager</li> <li>• to website: Industry Online Support</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> <a href="https://www.siemens.com/tstcloud">https://www.siemens.com/tstcloud</a> <a href="https://sieportal.siemens.com/">https://sieportal.siemens.com/</a> <a href="https://www.automation.siemens.com/bilddb">https://www.automation.siemens.com/bilddb</a> <a href="https://www.siemens.com/cax">https://www.siemens.com/cax</a> <a href="https://support.industry.siemens.com">https://support.industry.siemens.com</a>

## security information

### security information

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## Approvals / Certificates

### General Product Approval



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formity](#)

[Manufacturer Declara-  
tion](#)



### Industrial Communication

[PROFINET](#)

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