

### 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 15.0 m.



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

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 tinned 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

polyethylene (PE)  
PVC

|   |  |
|---|--|
| <ul style="list-style-type: none"> <li>of cable sheath</li> </ul>   | 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<br>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<br>49 mm<br>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   |  |
| <ul style="list-style-type: none"> <li>during operation</li> <li>during storage</li> <li>during transport</li> <li>during installation</li> <li>note</li> </ul>   | -25 ... +75 °C<br>-25 ... +75 °C<br>-25 ... +75 °C<br>-10 ... +60 °C<br>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   |  |
| <ul style="list-style-type: none"> <li>to mineral oil</li> <li>to grease</li> </ul>   | conditional resistance<br>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>silicon-free</li> </ul>  | No<br>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 style="list-style-type: none"> <li>EAC approval</li> <li>CE marking</li> <li>RoHS conformity</li> </ul>   | Yes<br>Yes<br>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<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> <li>to website: Image database</li> <li>to website: CAx-Download-Manager</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><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><br><a href="http://automation.siemens.com/bilddb">http://automation.siemens.com/bilddb</a><br><a href="http://www.siemens.com/cax">http://www.siemens.com/cax</a><br><a href="https://support.industry.siemens.com">https://support.industry.siemens.com</a> |

last modified:

12/31/2021 