

### Product type designation

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

IE CONNECTING CABLE M12-90/M12-90, PREASSEMB. M12 CONNECT. (D-CODED), M12 CONNECT. (D-CODED), LENGTH 5.0 M



Cable designation	2YY (ST) CY 2x2x0,75/1,5-100 LI GN
Wire length	5 m

Electrical data	
Damping ratio 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	Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires
Core diameter <ul style="list-style-type: none"> <li>• of AWG22 core</li> </ul>	0.75 mm
Outer diameter <ul style="list-style-type: none"> <li>• of inner conductor</li> <li>• of the wire insulation</li> <li>• of the inner sheath of the cable</li> <li>• of cable sheath</li> </ul>	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 <ul style="list-style-type: none"> <li>• of the wire insulation</li> <li>• of the inner sheath of the cable</li> <li>• of cable sheath</li> </ul>	PE PVC 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

Permitted ambient conditions	
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 -25 ... +75 °C -25 ... +75 °C -10 ... +60 °C Electrical properties measured at 20 °C, tests according to DIN VDE 0472
Burning 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

## Product properties, functions, components / general

### Product feature

- |                |     |
|----------------|-----|
| • halogen-free | No  |
| • silicon-free | Yes |

## Standards, specifications, approvals

UL/ETL listing / 300 V Rating	Yes; c(UL)us, CMG / PLTC / Sun Res / OIL RES
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UL/ETL style / 600 V Rating	Yes
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### Certificate of suitability

- |                   |     |
|-------------------|-----|
| • RoHS conformity | Yes |
|-------------------|-----|

Standard for structured cabling	Cat5e
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### Marine classification association

- |   |    |
|---|----|
| • American Bureau of Shipping Europe Ltd. (ABS) | No |
| • Bureau Veritas (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 |

## Further Information / Internet Links

### Internet-Link

- |   |   |
|---|---|
| • to website: Selector SIMATIC NET SELECTION TOOL | <a href="http://www.siemens.com/snst">http://www.siemens.com/snst</a>                               |
| • to website: Industrial communication            | <a href="http://www.siemens.com/simatic-net">http://www.siemens.com/simatic-net</a>                 |
| • to website: Industry Mall                       | <a href="https://mall.industry.siemens.com">https://mall.industry.siemens.com</a>                   |
| • to website: Information and Download Center     | <a href="http://www.siemens.com/industry/infocenter">http://www.siemens.com/industry/infocenter</a> |
| • to website: Image database                      | <a href="http://automation.siemens.com/bilddb">http://automation.siemens.com/bilddb</a>             |
| • to website: CAx Download Manager                | <a href="http://www.siemens.com/cax">http://www.siemens.com/cax</a>                                 |
| • to website: Industry Online Support             | <a href="https://support.industry.siemens.com">https://support.industry.siemens.com</a>             |

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