

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 1.5 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

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

wire length

1.5 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

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
- 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
- of cable sheath

polyethylene (PE)
PVC
PVC

color

- of the insulation of data wires

white/yellow/blue/orange

<ul style="list-style-type: none"> of cable sheath 	green
bending radius	
<ul style="list-style-type: none"> with single bend / minimum permissible 	32.5 mm
<ul style="list-style-type: none"> with multiple bends / minimum permissible 	49 mm
<ul style="list-style-type: none"> with continuous bending 	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 ²
tensile load / maximum	150 N
weight per length	68 kg/km

plug	
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"> of the M12 circular connector 	D-coded

ambient conditions	
ambient temperature	
<ul style="list-style-type: none"> during operation 	-25 ... +75 °C
<ul style="list-style-type: none"> during storage 	-25 ... +75 °C
<ul style="list-style-type: none"> during transport 	-25 ... +75 °C
<ul style="list-style-type: none"> during installation 	-10 ... +60 °C
<ul style="list-style-type: none"> note 	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"> to mineral oil 	conditional resistance
<ul style="list-style-type: none"> to grease 	Conditional resistance
radiological resistance / to UV radiation	resistant
protection class IP	IP65, IP67

product features, product functions, product components / general	
product feature	
<ul style="list-style-type: none"> halogen-free 	No
<ul style="list-style-type: none"> PoE capability 	Yes
<ul style="list-style-type: none"> PoE+ capability 	Yes
<ul style="list-style-type: none"> silicon-free 	Yes

standards, specifications, approvals	
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"> EAC approval 	Yes
<ul style="list-style-type: none"> CE marking 	Yes
<ul style="list-style-type: none"> RoHS conformity 	Yes
standard for structured cabling	Cat5e
Marine classification association	
<ul style="list-style-type: none"> American Bureau of Shipping Europe Ltd. (ABS) 	No
<ul style="list-style-type: none"> French marine classification society (BV) 	No
<ul style="list-style-type: none"> Det Norske Veritas (DNV) 	No
<ul style="list-style-type: none"> Germanische Lloyd (GL) 	No
<ul style="list-style-type: none"> Lloyds Register of Shipping (LRS) 	No
<ul style="list-style-type: none"> Nippon Kaiji Kyokai (NK) 	No
<ul style="list-style-type: none"> Polski Rejestr Statkow (PRS) 	No
reference code	
<ul style="list-style-type: none"> according to IEC 81346-2 	WG
<ul style="list-style-type: none"> according to IEC 81346-2:2019 	WGB

further information / internet links	
internet link	
<ul style="list-style-type: none"> to website: Selection guide for cables and connectors 	https://support.industry.siemens.com/cs/ww/en/view/109766358
<ul style="list-style-type: none"> to web page: selection aid TIA Selection Tool 	https://www.siemens.com/tstcloud
<ul style="list-style-type: none"> to web page: SiePortal 	https://sieportal.siemens.com/
<ul style="list-style-type: none"> to website: Image database 	https://www.automation.siemens.com/bilddb
<ul style="list-style-type: none"> to website: CAx-Download-Manager 	https://www.siemens.com/cax
<ul style="list-style-type: none"> to website: Industry Online Support 	https://support.industry.siemens.com

security information

security information

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Approvals / Certificates

General Product Approval



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Industrial Communication

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