

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 5.0 m.



product brand name

SIMATIC NET

Technical Product Detail Page

<https://l.siemens.com/1P6XV1870-8GH50>

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

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	
• of the insulation of data wires • of cable sheath	white/yellow/blue/orange green
bending radius	
• with single bend / minimum permissible • with multiple bends / minimum permissible • with continuous bending	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 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
• of the M12 circular connector	D-coded
ambient conditions	
ambient temperature	
• during operation • during storage • during transport • during installation • note	-25 ... +75 °C -25 ... +75 °C -25 ... +75 °C -10 ... +60 °C electrical properties measured at 20 °C
fire behavior	flame resistant according to UL 1685 (CSA FT 4)
chemical resistance	
• to mineral oil • to grease	conditional resistance Conditional resistance
radiological resistance / to UV radiation	resistant
protection class IP	IP65, IP67
product features, product functions, product components / general	
product feature	
• halogen-free • PoE capability • PoE+ capability • silicon-free	No Yes Yes 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
• EAC approval • CE marking • RoHS conformity	Yes Yes Yes
standard for structured cabling	Cat5e
Marine classification association	
• American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • Det Norske Veritas (DNV) • Germanische Lloyd (GL) • Lloyds Register of Shipping (LRS) • Nippon Kaiji Kyokai (NK) • Polski Rejestr Statkow (PRS)	No No No No No No No
further information / internet links	
internet link	
• to website: Selection guide for cables and connectors • to web page: selection aid TIA Selection Tool • to web page: SiePortal • to website: Image database	https://support.industry.siemens.com/cs/ww/en/view/109766358 https://www.siemens.com/tstcloud https://sieportal.siemens.com/ https://www.automation.siemens.com/bilddb

- to website: CAX-Download-Manager
- to website: Industry Online Support

<https://www.siemens.com/cax>

<https://support.industry.siemens.com>

security information

security information

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Approvals / Certificates

General Product Approval



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formity](#)

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Industrial Communication

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