

product description	Robust, flexible connection cable (4-core), preferred length, preassembled with two 4-pole M12 connectors (D-coded) IE Robust Connecting Cable M12-180/M12-180, IP69, pre-assembled IE FC Robust Food cable GP 2x2, with 2 M12 plugs (D-coded) length 1 m.
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suitability for use	For connecting Industrial Ethernet stations with degree of protection IP65/67/69. Cable with FEP jacket (fluorinated plastic, perfluoroethylene propylene) for use in the food, beverages and tobacco industries (IP69 resistant). Line is water-repellent, weather-proof, resistant to microbes, and extremely resistant to many cleaning agents and disinfectants (such as hypochlorite, chlorine dioxide, peroxyacetic acid, and quaternary ammonium cations).
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cable designation	SF/UTP, 2YY(ST)CY6Y 2X2X0.75/1.55 LI VZN
wire length	1 m

electrical data	
number of electrical connections	2
attenuation factor per length - at 10 MHz / maximum - at 100 MHz / maximum	0.095 dB/m 0.32 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	0.353 dB/m
transfer impedance per length / at 10 MHz	80 mΩ/m
loop resistance per length / maximum	120 mΩ/m
operating voltage RMS value	80 V
NVP value in percent	69 %

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
type of electrical connection / FastConnect	Yes
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 1.56 mm 4 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

• of cable sheath	PVC/FEP; FEP transparent
color	
• of the insulation of data wires	white/yellow/blue/orange
• of cable sheath	green
bending radius	
• with single bend / minimum permissible	26 mm
• with multiple bends / minimum permissible	52 mm
• with continuous bending	100 mm
number of bending cycles	1000000; Acceleration 4 m/s ²
number of torsion cycles / with torsion by $\pm 180^\circ$ on 1 m cable length	1000000
tensile load / maximum	150 N
weight per length	72 kg/km
plug	
type of plug interlock	screwed
design of plug-in connection	M12-180
connector coding	M12
• of the M12 circular connector	D-coded
ambient conditions	
ambient temperature	
• during operation	-40 ... +80 °C
• during storage	-40 ... +80 °C
• during transport	-40 ... +80 °C
• during installation	-40 ... +80 °C
• note	Electrical properties measured at 20 °C, tests according to DIN VDE 0472
fire behavior	flame resistant according to IEC 60332-1-2
chemical resistance	
• to mineral oil	oil resistant according to IEC 60811-404 (7x24h/90°C)
• to grease	Conditional resistance
• to water	resistant
radiological resistance / to UV radiation	resistant
protection class IP	IP65/67/69
product features, product functions, product components / general	
product feature	
• halogen-free	No
• PoE capability	Yes
• PoE+ capability	Yes
• silicon-free	Yes
standards, specifications, approvals	
UL/ETL listing / 300 V Rating	Yes; c(ETL)us 3047254 CMG FT4 75°C
UL/ETL style / 600 V Rating	Yes; AWM 22162 AWM I A/B 80°C 600V FT2
certificate of suitability	UL 2238
• EAC approval	Yes
• CE marking	Yes
• RoHS conformity	Yes
standard for structured cabling	Cat5e
Marine classification association	
• American Bureau of Shipping Europe Ltd. (ABS)	No
• French marine classification society (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
reference code	
• according to IEC 81346-2	WG
• according to IEC 81346-2:2019	WGB
further information / internet links	
internet link	
• to website: Selection guide for cables and connectors	https://support.industry.siemens.com/cs/ww/en/view/109766358
• to web page: selection aid TIA Selection Tool	https://www.siemens.com/tstcloud

- to web page: SiePortal
- to website: Image database
- to website: CAX-Download-Manager
- to website: Industry Online Support

<https://sieportal.siemens.com/>
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security information

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General Product Approval



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