

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 2.0 m.



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).

cable designation

2YY(ST)CY6Y 2X2X0.75/1.55 LI VZN

wire length

2 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

Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated 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

<ul style="list-style-type: none"> <li>of cable sheath</li> </ul>	PVC/FEP; FEP transparent
color	
<ul style="list-style-type: none"> <li>of the insulation of data wires</li> </ul>	white/yellow/blue/orange
<ul style="list-style-type: none"> <li>of cable sheath</li> </ul>	green
bending radius	
<ul style="list-style-type: none"> <li>with single bend / minimum permissible</li> </ul>	26 mm
<ul style="list-style-type: none"> <li>with multiple bends / minimum permissible</li> </ul>	52 mm
<ul style="list-style-type: none"> <li>with continuous bending</li> </ul>	100 mm
number of bending cycles	1000000; Acceleration 4 m/s <sup>2</sup>
number of torsion cycles / with torsion by ± 180° on 1 m cable length	1000000
tensile load / maximum	150 N
weight per length	72 kg/km

<b>plug</b>	
type of plug interlock	screwed
design of plug-in connection	M12-180
connector coding	M12
<ul style="list-style-type: none"> <li>of the M12 circular connector</li> </ul>	D-coded

<b>ambient conditions</b>	
ambient temperature	
<ul style="list-style-type: none"> <li>during operation</li> </ul>	-40 ... +80 °C
<ul style="list-style-type: none"> <li>during storage</li> </ul>	-40 ... +80 °C
<ul style="list-style-type: none"> <li>during transport</li> </ul>	-40 ... +80 °C
<ul style="list-style-type: none"> <li>during installation</li> </ul>	-40 ... +80 °C
<ul style="list-style-type: none"> <li>note</li> </ul>	Electrical properties measured at 20 °C, tests according to DIN VDE 0472
fire behavior	flame resistant according to IEC 60332-1-2
chemical resistance	
<ul style="list-style-type: none"> <li>to mineral oil</li> </ul>	oil resistant according to IEC 60811-404 (7x24h/90°C)
<ul style="list-style-type: none"> <li>to grease</li> </ul>	Conditional resistance
<ul style="list-style-type: none"> <li>to water</li> </ul>	resistant
radiological resistance / to UV radiation	resistant
protection class IP	IP65/67/69

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

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

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

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

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

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

**security information**

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General Product Approval

Environment



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[Manufacturer Declaration](#)

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**Industrial Communication**

[PROFINET](#)

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