

### product type designation

product description

### ITP FRNC Cable GP for Industrial Ethernet

Halogen-free industrial twisted pair cable (4-core), sold by the meter, unassembled

ITP FRNC cable for industrial Ethernet CAT5; 2x2-wire, halogen-free  
Installation instructions for on-site assembly of connector, non-assembled, sold by the meter minimum order quantity 20 m max. 1000 m.



suitability for use

Used in the construction of Industrial Twisted Pair (ITP) networks

cable designation

J-02YSCH 2x2x0,64/1,5 PIMF F GN FRNC

### electrical data

attenuation factor per length

- at 10 MHz / maximum
- at 100 MHz / maximum
- at 300 MHz / maximum

0.057 dB/m  
0.18 dB/m  
0.31 dB/m

impedance

- at 1 MHz ... 100 MHz
- at 100 MHz ... 300 MHz

100 Ω  
100 Ω

relative symmetrical tolerance

- of the characteristic impedance at 1 MHz ... 100 MHz
- of the characteristic impedance at 100 MHz ... 300 MHz

15 %  
45 %

transfer impedance per length / at 10 MHz

2 mΩ/m

loop resistance per length / maximum

124 mΩ/m

insulation resistance coefficient

5000 GΩ·m

operating voltage

- RMS value

165 V

### mechanical data

number of electrical cores

4

design of the shield

Overlapped aluminum-clad foil (for each core), sheathed in an overall braided shield of tin-plated copper wires

core diameter

- of AWG22 insulated conductor

0.64 mm

outer diameter

- of inner conductor
- of the wire insulation

0.64 mm  
1.5 mm

width / of cable sheath

9.4 mm

symmetrical tolerance of width / of cable sheath

0.5 mm

thickness / of cable sheath

6 mm

symmetrical tolerance of thickness / of cable sheath

0.5 mm

material

- of the wire insulation
- of cable sheath

polyethylene (PE)  
FRNC

color

<ul style="list-style-type: none"> <li>• of the insulation of data wires</li> <li>• of cable sheath</li> </ul>	white/blue, white/orange green
bending radius	
<ul style="list-style-type: none"> <li>• with single bend / minimum permissible</li> <li>• with multiple bends / minimum permissible</li> </ul>	60 mm 90 mm
tensile load / maximum	80 N
weight per length	98 kg/km
<b>ambient conditions</b>	
ambient temperature	
<ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> <li>• during transport</li> <li>• during installation</li> </ul>	-40 ... +80 °C -40 ... +80 °C -40 ... +80 °C -25 ... +80 °C
fire behavior	flame resistant according to IEC 60332-3-23 (Category B) and IEC 60332-3-24 (Category C)
chemical resistance	
<ul style="list-style-type: none"> <li>• to mineral oil</li> <li>• to grease</li> </ul>	oil resistant according to IEC 60811-2-1 (4 h / 70°C) Conditional resistance
radiological resistance / to UV radiation	conditional resistance
<b>product features, product functions, product components / general</b>	
product feature	
<ul style="list-style-type: none"> <li>• halogen-free</li> <li>• silicon-free</li> </ul>	Yes Yes
<b>standards, specifications, approvals</b>	
UL/ETL listing / 300 V Rating	Yes; CMG / CL3 / Sun Res
UL/ETL style / 600 V Rating	No
certificate of suitability	
<ul style="list-style-type: none"> <li>• EAC approval</li> <li>• CE marking</li> </ul>	Yes Yes
Marine classification association	
<ul style="list-style-type: none"> <li>• American Bureau of Shipping Europe Ltd. (ABS)</li> <li>• French marine classification society (BV)</li> <li>• Det Norske Veritas (DNV)</li> <li>• Germanische Lloyd (GL)</li> <li>• Lloyds Register of Shipping (LRS)</li> <li>• Nippon Kaiji Kyokai (NK)</li> <li>• Polski Rejestr Statkow (PRS)</li> </ul>	No No No No No No No
reference code	
<ul style="list-style-type: none"> <li>• according to IEC 81346-2</li> <li>• according to IEC 81346-2:2019</li> </ul>	WG WGB
<b>further information / internet-Links</b>	
Internet-Link	
<ul style="list-style-type: none"> <li>• to web page: selection aid TIA Selection Tool</li> <li>• to website: Industrial communication</li> <li>• to website: Industry Mall</li> <li>• to website: Information and Download Center</li> <li>• to website: Selection guide for cables and connectors</li> <li>• to website: Image database</li> <li>• to website: CAx-Download-Manager</li> <li>• to website: Industry Online Support</li> </ul>	<a href="http://www.siemens.com/tia-selection-tool">http://www.siemens.com/tia-selection-tool</a> <a href="http://www.siemens.com/simatic-net">http://www.siemens.com/simatic-net</a> <a href="https://mall.industry.siemens.com">https://mall.industry.siemens.com</a> <a href="http://www.siemens.com/industry/infocenter">http://www.siemens.com/industry/infocenter</a> <a href="https://sie.ag/2QdlxcP">https://sie.ag/2QdlxcP</a>  <a href="http://automation.siemens.com/bilddb">http://automation.siemens.com/bilddb</a> <a href="http://www.siemens.com/cax">http://www.siemens.com/cax</a> <a href="https://support.industry.siemens.com">https://support.industry.siemens.com</a>
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