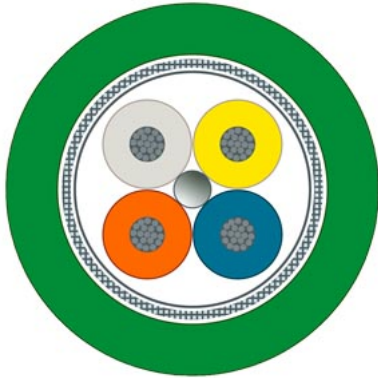


### product type designation

product description



### IE TP Torsion Cable 2x2 (Type C)

Highly flexible bus cable (4-core), sold by the meter, unassembled

Industrial Ethernet TP Torsion Cable, 2x2 (PROFINET Type C), TP installation cable, 4-core, shielded Cat5e, for use in highly flexible applications (torsion), sold by the meter, delivery length max. 1000 m, minimum order quantity 20 m.

Technical Product Detail Page

<https://l.siemens.com/1P6XV1870-2F>

suitability for use

Continuous motion control when using robots

cable designation

SF/UTP, 02YS C11Y 1x4x0,75/1,5-100 LI VZN FRNC GN

wire length

sold by the meter

### electrical data

attenuation factor per length

- at 10 MHz / maximum

0.081 dB/m

- at 100 MHz / maximum

0.41 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

100 mΩ/m

loop resistance per length / maximum

120 mΩ/m

operating voltage

- RMS value

80 V

NVP value in percent

77 %

### 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

No

core diameter

- of AWG22 insulated conductor

0.76 mm

outer diameter

- of inner conductor

0.76 mm

- of the wire insulation

1.5 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 cable sheath

PUR (TPE-U)

color

- of the insulation of data wires

white/yellow/blue/orange

- of cable sheath

green

bending radius	
<ul style="list-style-type: none"> <li>with single bend / minimum permissible</li> <li>with multiple bends / minimum permissible</li> </ul>	<p>32.5 mm</p> <p>65 mm</p>
number of bending cycles	Not suitable for garland usage
number of torsion cycles / with torsion by $\pm 180^\circ$ on 1 m cable length	5000000
tensile load / maximum	130 N
weight per length	54 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>	<p>-40 ... +80 °C</p> <p>-40 ... +80 °C</p> <p>-40 ... +80 °C</p> <p>-20 ... +60 °C</p>
fire behavior	flame resistant according to IEC 60332-1-2
class of burning behaviour / according to EN 13501-6	Eca
chemical resistance	
<ul style="list-style-type: none"> <li>to mineral oil</li> <li>to grease</li> <li>to water</li> </ul>	<p>oil resistant according to IEC 60811-2-1 (7x24h/90°C)</p> <p>Conditional resistance</p> <p>conditional resistance</p>
radiological resistance / to UV radiation	resistant
<b>product features, product functions, product components / general</b>	
product feature	
<ul style="list-style-type: none"> <li>halogen-free</li> <li>PoE capability</li> <li>PoE+ capability</li> <li>silicon-free</li> </ul>	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>
wire length / for Industrial Ethernet	
<ul style="list-style-type: none"> <li>with 100BaseTX</li> </ul>	75 m
<b>standards, specifications, approvals</b>	
UL/ETL listing / 300 V Rating	Yes; UL Style 21161
UL/ETL style / 600 V Rating	No
certificate of suitability	
<ul style="list-style-type: none"> <li>EAC approval</li> <li>CE marking</li> <li>RoHS conformity</li> </ul>	<p>Yes</p> <p>Yes</p> <p>Yes</p>
standard for structured cabling	Cat5e
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>	<p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p>
<b>further information / internet links</b>	
internet link	
<ul style="list-style-type: none"> <li>to website: Selection guide for cables and connectors</li> <li>to web page: selection aid TIA Selection Tool</li> <li>to web page: SiePortal</li> <li>to website: Image database</li> <li>to website: CAx-Download-Manager</li> <li>to website: Industry Online Support</li> </ul>	<p><a href="https://support.industry.siemens.com/cs/ww/en/view/109766358">https://support.industry.siemens.com/cs/ww/en/view/109766358</a></p> <p><a href="https://www.siemens.com/tstcloud">https://www.siemens.com/tstcloud</a></p> <p><a href="https://sieportal.siemens.com/">https://sieportal.siemens.com/</a></p> <p><a href="https://www.automation.siemens.com/bilddb">https://www.automation.siemens.com/bilddb</a></p> <p><a href="https://www.siemens.com/cax">https://www.siemens.com/cax</a></p> <p><a href="https://support.industry.siemens.com">https://support.industry.siemens.com</a></p>
<b>security information</b>	
security information	Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept. Customers are responsible for preventing unauthorized access to their plants, systems, machines and

networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. For additional information on industrial cybersecurity measures that may be implemented, please visit [www.siemens.com/cybersecurity-industry](http://www.siemens.com/cybersecurity-industry). Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats. To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under <https://www.siemens.com/cert>. (V4.7)

**Approvals / Certificates**

**General Product Approval**

[Manufacturer Declaration](#)



[Declaration of Conformity](#)



[China RoHS](#)

General Product Approval	Test Certificates	other	Environment	Industrial Communication
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[Fire safety / Physical security](#)

[Special Test Certificate](#)

[Miscellaneous](#)

[Environmental Confirmations](#)

[PROFINET](#)

last modified:

10/28/2025