

### product description



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

Industrial Ethernet FC TP Trailing Cable, 2x2 (PROFINET type C), TP installation cable for connection to FC outlet RJ45, for cable carrier applications, 4-core, shielded, Cat5e, sold by the meter (4 million bending cycles), max. delivery unit 2000 m, minimum order quantity 20 m.

### suitability for use

Continuous motion control in a cable carrier

### wire length

sold by the meter

### electrical data

#### attenuation factor per length

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

0.06 dB/m  
0.22 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

10 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

#### 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  
1.5 mm  
3.9 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
- of cable sheath

polyethylene (PE)  
FRNC  
PUR (TPE-U)

#### 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

19.5 mm  
49 mm  
100 mm

|                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| number of bending cycles                                                 | 4000000; Drag chain suitable for 4 million bending cycles at a bending radius of 100 mm, a speed of 4 m/s and an acceleration of 4 m/s <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| tensile load / maximum                                                   | 150 N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| weight per length                                                        | 63 kg/km                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>ambient conditions</b>                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| ambient temperature                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • during operation                                                       | -40 ... +75 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| • during storage                                                         | -50 ... +75 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| • during transport                                                       | -50 ... +75 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| • during installation                                                    | -20 ... +60 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| • note                                                                   | Electrical properties measured at 20 °C, tests according to DIN VDE 0472                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| fire behavior                                                            | flame resistant according to IEC 60332-1-2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| class of burning behaviour / according to EN 13501-6                     | Eca                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| chemical resistance                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • to mineral oil                                                         | oil resistant according to IEC 60811-2-1 (7x24h/90°C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| • to grease                                                              | resistant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| • to water                                                               | resistant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| radiological resistance / to UV radiation                                | resistant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>product features, product functions, product components / general</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| product feature                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • halogen-free                                                           | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| • PoE capability                                                         | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| • PoE+ capability                                                        | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| • silicon-free                                                           | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| wire length / for Industrial Ethernet                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • with 100BaseTX                                                         | 85 m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>standards, specifications, approvals</b>                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| UL/ETL listing / 300 V Rating                                            | Yes; cULus / CMX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| UL/ETL style / 600 V Rating                                              | Yes; cRU AWM I A/B 80°C 600V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| certificate of suitability                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>further information / internet links</b>                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| internet link                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • to website: Selection guide for cables and connectors                  | <a href="https://support.industry.siemens.com/cs/ww/en/view/109766358">https://support.industry.siemens.com/cs/ww/en/view/109766358</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| • to web page: selection aid TIA Selection Tool                          | <a href="https://www.siemens.com/tstcloud">https://www.siemens.com/tstcloud</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| • to web page: SiePortal                                                 | <a href="https://sieportal.siemens.com/">https://sieportal.siemens.com/</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| • to website: Image database                                             | <a href="https://www.automation.siemens.com/bilddb">https://www.automation.siemens.com/bilddb</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| • to website: CAX-Download-Manager                                       | <a href="https://www.siemens.com/cax">https://www.siemens.com/cax</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| • to website: Industry Online Support                                    | <a href="https://support.industry.siemens.com">https://support.industry.siemens.com</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <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](#)

  
EG-Konf.



[Declaration of Conformity](#)

  
CCC

[China RoHS](#)

| General Product Approval | Test Certificates | Environment | Industrial Communication |
|--------------------------|-------------------|-------------|--------------------------|
|--------------------------|-------------------|-------------|--------------------------|

[Fire safety / Physical security](#)

[Special Test Certificate](#)

[Environmental Conformations](#)

[PROFINET](#)

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