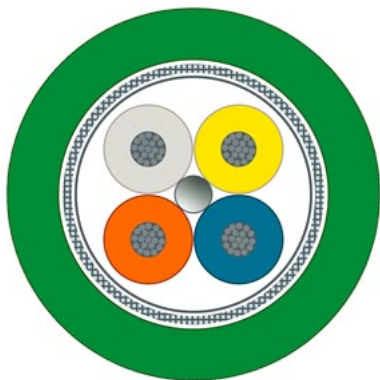


product description



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.

|                                                                                                                                                         |                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| suitability for use                                                                                                                                     | Continuous motion control when using robots                                            |
| cable designation                                                                                                                                       | 02YS C11Y 1x4x0,75/1,5-100 LI VZN FRNC GN SF/UTP                                       |
| wire length                                                                                                                                             | sold by the meter                                                                      |
| <b>electrical data</b>                                                                                                                                  |                                                                                        |
| attenuation factor per length <ul style="list-style-type: none"><li>at 10 MHz / maximum</li><li>at 100 MHz / maximum</li></ul>                          | 0.081 dB/m<br>0.41 dB/m                                                                |
| impedance <ul style="list-style-type: none"><li>at 1 MHz ... 100 MHz</li></ul>                                                                          | 100 Ω                                                                                  |
| relative symmetrical tolerance <ul style="list-style-type: none"><li>of the characteristic impedance at 1 MHz ... 100 MHz</li></ul>                     | 5 %                                                                                    |
| near-end crosstalk per length <ul style="list-style-type: none"><li>at 1 MHz ... 100 MHz</li></ul>                                                      | 0.5 dB/m                                                                               |
| transfer impedance per length / at 10 MHz                                                                                                               | 100 mΩ/m                                                                               |
| loop resistance per length / maximum                                                                                                                    | 120 mΩ/m                                                                               |
| operating voltage <ul style="list-style-type: none"><li>RMS value</li></ul>                                                                             | 80 V                                                                                   |
| NVP value in percent                                                                                                                                    | 77 %                                                                                   |
| <b>mechanical data</b>                                                                                                                                  |                                                                                        |
| 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                                                                                                             | No                                                                                     |
| core diameter <ul style="list-style-type: none"><li>of AWG22 insulated conductor</li></ul>                                                              | 0.76 mm                                                                                |
| outer diameter <ul style="list-style-type: none"><li>of inner conductor</li><li>of the wire insulation</li><li>of cable sheath</li></ul>                | 0.76 mm<br>1.5 mm<br>6.5 mm                                                            |
| symmetrical tolerance of the outer diameter / of cable sheath                                                                                           | 0.2 mm                                                                                 |
| material <ul style="list-style-type: none"><li>of the wire insulation</li><li>of cable sheath</li></ul>                                                 | polyethylene (PE)<br>PUR (TPE-U)                                                       |
| color <ul style="list-style-type: none"><li>of the insulation of data wires</li><li>of cable sheath</li></ul>                                           | white/yellow/blue/orange<br>green                                                      |
| bending radius <ul style="list-style-type: none"><li>with single bend / minimum permissible</li><li>with multiple bends / minimum permissible</li></ul> | 32.5 mm<br>65 mm                                                                       |

|                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| • during operation                                                             | -40 ... +80 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| • during storage                                                               | -40 ... +80 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| • during transport                                                             | -40 ... +80 °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                                                                    | Conditional resistance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| • to water                                                                     | conditional resistance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| radiological resistance / to UV radiation                                      | resistant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>product features, product functions, product components / general</b>       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| product feature                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| • halogen-free                                                                 | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| • silicon-free                                                                 | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| wire length / for Industrial Ethernet                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| • with 100BaseTX                                                               | 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                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| • 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](https://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 | Test Certificates |
|--------------------------|-------------------|
|--------------------------|-------------------|

[Manufacturer Declaration](#)



[Declaration of Conformity](#)





[Special Test Certificate](#)

| Environment | Industrial Communication |
|-------------|--------------------------|
|-------------|--------------------------|

[Confirmation](#)

[Environmental Conformations](#)

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8/8/2024 