SIEMENS

Data sheet 6XV1870-2F

product description

suitability for use



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

Continuous motion control when using robots

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 |
| electrical data | |
| attenuation factor per length | |
| • at 10 MHz / maximum | 0.081 dB/m |
| • at 100 MHz / maximum | 0.41 dB/m |
| impedance | |
| • at 1 MHz 100 MHz | 100 Ω |
| relative symmetrical tolerance | |
| • of the characteristic impedance at 1 MHz 100 MHz | 5 % |
| near-end crosstalk per length | |
| ● at 1 MHz 100 MHz | 0.5 dB/m |
| transfer impedance per length / at 10 MHz | 100 mΩ/m |
| loop resistance per length / maximum | 120 mΩ/m |
| operating voltage | |
| RMS value | 80 V |
| NVP value in percent | 77 % |
| mechanical data | |
| number of electrical cores | 4 |
| design of the shield | Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires |
| type of electrical connection / FastConnect | No |
| core diameter | |
| of AWG22 insulated conductor | 0.76 mm |
| outer diameter | |
| of inner conductor | 0.76 mm |
| of the wire insulation | 1.5 mm |
| of cable sheath | 6.5 mm |
| symmetrical tolerance of the outer diameter / of cable sheath | 0.2 mm |
| material | |
| of the wire insulation | polyethylene (PE) |
| of cable sheath | PUR (TPE-U) |
| color | |
| of the insulation of data wires | white/yellow/blue/orange |
| of cable sheath | green |
| bending radius | |
| with single bend / minimum permissible | 32.5 mm |
| with multiple bends / minimum permissible | 65 mm |
| number of bending cycles | Not suitable for garland usage |

| number of torsion cycles / with torsion by ± 180° on 1 m cable | 500000 |
|---|---|
| length | |
| tensile load / maximum | 130 N |
| weight per length | 54 kg/km |
| ambient conditions | |
| 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 |
| product features, product functions, product components / gen | eral |
| product feature | |
| • halogen-free | Yes |
| • silicon-free | Yes |
| wire length / for Industrial Ethernet | |
| • with 100BaseTX | 75 m |
| standards, specifications, approvals | |
| 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 |
| further information / internet links | |
| internet link | |
| • to website: Selection guide for cables and connectors | https://support.industry.siemens.com/cs/ww/en/view/109766358 |
| • to web page: selection aid TIA Selection Tool | https://www.siemens.com/tstcloud |
| • to web page: SiePortal | https://sieportal.siemens.com/ |
| • to website: Image database | https://www.automation.siemens.com/bilddb |
| • to website: CAx-Download-Manager | https://www.siemens.com/cax |
| • to website: Industry Online Support | https://support.industry.siemens.com |
| security information | |
| 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. 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 PROFINET

last modified: 8/8/2024 🖸