# SIEMENS

**Data sheet** **6XV1871-2N**

| product type designation | IE TP Robust Ground Cable 2x2 (Type C) |
|---|---|
| product description | Standard bus cable (4-core), for laying underground with metal rodent protection, sold by the meter, unassembled |
| | IE robust ground cable 2x2; Cat5e; PROFINET Type C; underground cable; 4-core shielded, Cat5e, with rodent protection; sold by the meter; delivery unit max. 1000 m; minimum order quantity 20 m. |



| suitability for use | Standard cable with rigid cores for fast installation |
|---|---|
| cable designation | 2YH(ST)CY(Z)2Y 2X2X0.64/1.45-100 BK |
| wire length | sold by the meter |
| **electrical data** | |
| attenuation factor per length | |
| ● at 10 MHz / maximum | 0.065 dB/m |
| ● at 100 MHz / maximum | 0.22 dB/m |
| impedance | |
| ● at 1 MHz ... 100 MHz | 100 Ω |
| relative symmetrical tolerance | |
| ● of the characteristic impedance at 1 MHz … 100 MHz | 15 % |
| near-end crosstalk per length | |
| ● at 1 MHz ... 100 MHz | 0.5 dB/m |
| coupling loss / at 30 MHz … 100 MHz / minimum | 80 dB |
| transfer impedance per length / at 10 MHz | 10 mΩ/m |
| loop resistance per length / maximum | 115 mΩ/m |
| operating voltage | |
| ● RMS value | 80 V |
| NVP value in percent | 65 % |
| **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 | Yes |
| core diameter | |
| ● of AWG22 insulated conductor | 0.64 mm |
| outer diameter | |
| ● of inner conductor | 0.64 mm |
| ● of the wire insulation | 1.5 mm |
| ● of the inner sheath of the cable | 3.9 mm |
| ● of cable sheath | 9.4 mm |
| ● of cable sheath / note | Cable diameter > 6.5 mm due to additional PE protective sheath and metal rodent protection. Cable can only be connected in the IE FC RJ45 Plug / IE FC M12 Plug PRO connector after stripping the protective sheath and the rodent protection. |
| symmetrical tolerance of the outer diameter / of cable sheath | 0.4 mm |
| material | |
| ● of the wire insulation | polyethylene (PE) |
| ● of the inner sheath of the cable | PVC |

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| | |
|---|---|
| ● of cable sheath | PE/PVC |
| color | |
| ● of the insulation of data wires | white/yellow/blue/orange |
| ● of cable sheath | Black |
| bending radius | |
| ● with single bend / minimum permissible | 94 mm |
| ● with multiple bends / minimum permissible | 141 mm |
| tensile load / maximum | 3000 N |
| weight per length | 129 kg/km |

**ambient conditions**

| | |
|---|---|
| ambient temperature | |
| ● during operation | -40 ... +80 °C |
| ● during storage | -40 ... +80 °C |
| ● during transport | -40 ... +80 °C |
| ● during installation | -30 ... +70 °C |
| ● note | Electrical properties measured at 20 °C, tests according to EN50288-2-1 |
| fire behavior | inflammable |
| class of burning behaviour / according to EN 13501-6 | Fca |
| chemical resistance | |
| ● to mineral oil | conditional resistance |
| ● to grease | Conditional resistance |
| ● to water | Resistant |
| radiological resistance / to UV radiation | resistant |

**product features, product functions, product components / general**

| | |
|---|---|
| product feature | |
| ● halogen-free | No |
| ● silicon-free | Yes |
| wire length / for Industrial Ethernet | |
| ● with 100BaseTX | 100 m |

**standards, specifications, approvals**

| | |
|---|---|
| UL/ETL listing / 300 V Rating | No |
| 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**

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|---|---|
| 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**

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|---|---|
| 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 | | Industrial Communication |
| --- | --- | --- |
| **CE** EG-Konf. | Manufacturer Declaration | PROFINET |

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