SIEMENS

## Data sheet 6XV1878-2G

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| **product type designation** | **IE TP Ground Cable 4x2 (AWG 24, Type C)** |
| product description | Shielded TP installation cable (8-core), sold by the meter, unassembled |

IE TP ground cable 4x2 underground cable, CAT6A, 8-core, shielded, cable for Connection to IE FC RJ45 plug 4x2, AWG24, Sold by the meter delivery unit max. 1000 m minimum order quantity 20 m.



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| product brand name | SIMATIC NET |
| Technical Product Detail Page | https://i.siemens.com/1P6XV1878-2G |
| suitability for use | Standard cable with rigid cores for fast, permanent installation outdoors and in the ground |
| cable designation | SF/UTP, 2YH(ST)CY2Y 4X2X0.5/1.0 BK |
| wire length | sold by the meter |
| **electrical data** | |
| attenuation factor per length | |
| ● at 10 MHz / maximum | 0.058 dB/m |
| ● at 100 MHz / maximum | 0.191 dB/m |
| ● at 250 MHz / maximum | 0.311 dB/m |
| ● at 300 MHz / maximum | 0.343 dB/m |
| ● at 500 MHz / maximum | 0.453 dB/m |
| impedance | |
| ● at 1 MHz ... 100 MHz | 100 Ω |
| near-end crosstalk per length | |
| ● at 1 MHz ... 100 MHz | 0.453 dB/m |
| ● at 1 MHz … 250 MHz | 0.393 dB/m |
| ● at 1 MHz ... 300 MHz | 0.381 dB/m |
| ● at 1 MHz ... 500 MHz | 0.348 dB/m |
| coupling loss / at 30 MHz … 100 MHz / minimum | 80 dB |
| transfer impedance per length / at 10 MHz | 20 mΩ/m |
| loop resistance per length / maximum | 190 mΩ/m |
| insulation resistance coefficient | 5000 GΩ·m |
| operating voltage | |
| ● RMS value | 80 V |
| NVP value in percent | 67 % |
| **mechanical data** | |
| number of electrical cores | 8 |
| design of the shield | SF/UTP, overlapped aluminum-clad foil, sheathed in a protective braided shield of tinned copper wires |
| type of electrical connection / FastConnect | Yes |
| core diameter | |
| ● of AWG24 insulated conductor | 0.51 mm |
| outer diameter | |
| ● of inner conductor | 0.51 mm |
| ● of the wire insulation | 1 mm |
| ● of the inner sheath of the cable | 6.1 mm |


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| ● of cable sheath | 10.5 mm |
| ● of cable sheath / note | IE FC standard cable GP 4x2 (diameter 8 mm) with additional PE outer cover (diameter 10.5 mm) |
| symmetrical tolerance of the outer diameter / of cable sheath | 0.5 mm |
| material | |
| ● of the wire insulation | polyethylene (PE) |
| ● of the inner sheath of the cable | FRNC |
| ● of cable sheath | PE/PVC |
| color | |
| ● of the insulation of data wires | white-blue/blue, white-orange/orange, white-green/green, white-brown/brown |
| ● of cable sheath | green/black |
| bending radius | |
| ● with single bend / minimum permissible | 42 mm |
| ● with multiple bends / minimum permissible | 84 mm |
| tensile load / maximum | 100 N |
| weight per length | 107 kg/km |
| **ambient conditions** | |
| ambient temperature | |
| ● during operation | -40 ... +80 °C |
| ● during storage | -40 ... +80 °C |
| ● during transport | -40 ... +80 °C |
| ● during installation | -40 ... +80 °C |
| ● note | In fixed installation -40 °C to 85 °C |
| class of burning behaviour / according to EN 13501-6 | Fca |
| chemical resistance | |
| ● to water | Resistant |
| radiological resistance / to UV radiation | resistant |
| **product features, product functions, product components / general** | |
| product feature | |
| ● halogen-free | No |
| ● PoE capability | Yes |
| ● PoE+ capability | Yes |
| ● PoE++ capability | Yes |
| ● silicon-free | Yes |
| wire length / for Industrial Ethernet | |
| ● with 100BaseTX | 100 m |
| ● with 1000BaseT | 90 m |
| ● for 10GBase T | 70 m |
| test voltage | |
| ● at AC / core-to-core | 2000 V |
| ● at AC / core shield | 2000 V |
| **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 |
| product conformity | |
| ● ANSI/TIA-EIA 568-B.2 Cat.5e | Yes |
| ● IEC 61784-5-2-CP 2/2 (Ethernet/IP) | Yes |
| standard for structured cabling | Cat6A |
| ● resistance to air pollution / conformity according to ANSI/ISA-71.04 | Yes; G3 |
| Marine classification association | |
| ● American Bureau of Shipping Europe Ltd. (ABS) | No |
| ● French marine classification society (BV) | No |
| ● Det Norske Veritas (DNV) | No |


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| ● Germanische Lloyd (GL) | No |
| ● Lloyds Register of Shipping (LRS) | No |
| ● Nippon Kaiji Kyokai (NK) | No |
| ● Polski Rejestr Statkow (PRS) | No |

**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**

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| Manufacturer Declaration | CE EG-Konf. | UKCA | Fire safety / Physical security | CE EG-Konf. | Declaration of Conformity |

| other | Environment | | Industrial Communication |
|---|---|---|---|
| Miscellaneous | Environmental Confirmations | Environmental Confirmations | PROFINET |

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