

product type designation

product description



IE TP Robust Ground Cable 2x2 (Type C)

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
- at 100 MHz / maximum

0.065 dB/m  
0.22 dB/m

impedance

- at 1 MHz ... 100 MHz

100  $\Omega$

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 m $\Omega$ /m

loop resistance per length / maximum

115 m $\Omega$ /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
- of the wire insulation
- of the inner sheath of the cable
- of cable sheath
- of cable sheath / note

0.64 mm  
1.5 mm  
3.9 mm  
9.4 mm

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
- of the inner sheath of the cable

polyethylene (PE)  
PVC

|   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• of cable sheath</li> </ul>                                       | PE/PVC   |
| color   |  |
| <ul style="list-style-type: none"> <li>• of the insulation of data wires</li> </ul>                       | white/yellow/blue/orange   |
| <ul style="list-style-type: none"> <li>• of cable sheath</li> </ul>                                       | Black  |
| bending radius  |  |
| <ul style="list-style-type: none"> <li>• with single bend / minimum permissible</li> </ul>                | 94 mm  |
| <ul style="list-style-type: none"> <li>• with multiple bends / minimum permissible</li> </ul>             | 141 mm   |
| tensile load / maximum  | 3000 N   |
| weight per length   | 129 kg/km  |
| <b>ambient conditions</b>   |  |
| ambient temperature   |  |
| <ul style="list-style-type: none"> <li>• during operation</li> </ul>                                      | -40 ... +80 °C   |
| <ul style="list-style-type: none"> <li>• during storage</li> </ul>  | -40 ... +80 °C   |
| <ul style="list-style-type: none"> <li>• during transport</li> </ul>                                      | -40 ... +80 °C   |
| <ul style="list-style-type: none"> <li>• during installation</li> </ul>                                   | -30 ... +70 °C   |
| <ul style="list-style-type: none"> <li>• note</li> </ul>  | 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   |  |
| <ul style="list-style-type: none"> <li>• to mineral oil</li> </ul>  | conditional resistance   |
| <ul style="list-style-type: none"> <li>• to grease</li> </ul>   | Conditional resistance   |
| <ul style="list-style-type: none"> <li>• to water</li> </ul>  | Resistant  |
| radiological resistance / to UV radiation   | resistant  |
| <b>product features, product functions, product components / general</b>                                  |  |
| product feature   |  |
| <ul style="list-style-type: none"> <li>• halogen-free</li> </ul>  | No   |
| <ul style="list-style-type: none"> <li>• PoE capability</li> </ul>  | Yes  |
| <ul style="list-style-type: none"> <li>• PoE+ capability</li> </ul>                                       | Yes  |
| <ul style="list-style-type: none"> <li>• silicon-free</li> </ul>  | Yes  |
| wire length / for Industrial Ethernet   |  |
| <ul style="list-style-type: none"> <li>• with 100BaseTX</li> </ul>  | 100 m  |
| <b>standards, specifications, approvals</b>   |  |
| UL/ETL listing / 300 V Rating   | No   |
| UL/ETL style / 600 V Rating   | No   |
| certificate of suitability  |  |
| <ul style="list-style-type: none"> <li>• EAC approval</li> </ul>  | Yes  |
| <ul style="list-style-type: none"> <li>• CE marking</li> </ul>  | Yes  |
| <ul style="list-style-type: none"> <li>• RoHS conformity</li> </ul>                                       | Yes  |
| standard for structured cabling   | Cat5e  |
| Marine classification association   |  |
| <ul style="list-style-type: none"> <li>• American Bureau of Shipping Europe Ltd. (ABS)</li> </ul>         | No   |
| <ul style="list-style-type: none"> <li>• French marine classification society (BV)</li> </ul>             | No   |
| <ul style="list-style-type: none"> <li>• Det Norske Veritas (DNV)</li> </ul>                              | No   |
| <ul style="list-style-type: none"> <li>• Germanische Lloyd (GL)</li> </ul>                                | No   |
| <ul style="list-style-type: none"> <li>• Lloyds Register of Shipping (LRS)</li> </ul>                     | No   |
| <ul style="list-style-type: none"> <li>• Nippon Kaiji Kyokai (NK)</li> </ul>                              | No   |
| <ul style="list-style-type: none"> <li>• Polski Rejestr Statkow (PRS)</li> </ul>                          | No   |
| reference code  |  |
| <ul style="list-style-type: none"> <li>• according to IEC 81346-2</li> </ul>                              | WG   |
| <ul style="list-style-type: none"> <li>• according to IEC 81346-2:2019</li> </ul>                         | WGB  |
| <b>further information / internet links</b>   |  |
| internet link   |  |
| <ul style="list-style-type: none"> <li>• to website: Selection guide for cables and connectors</li> </ul> | <a href="https://support.industry.siemens.com/cs/ww/en/view/109766358">https://support.industry.siemens.com/cs/ww/en/view/109766358</a>                      |
| <ul style="list-style-type: none"> <li>• to web page: selection aid TIA Selection Tool</li> </ul>         | <a href="https://www.siemens.com/tstcloud">https://www.siemens.com/tstcloud</a>  |
| <ul style="list-style-type: none"> <li>• to web page: SiePortal</li> </ul>                                | <a href="https://sieportal.siemens.com/">https://sieportal.siemens.com/</a>  |
| <ul style="list-style-type: none"> <li>• to website: Image database</li> </ul>                            | <a href="https://www.automation.siemens.com/bilddb">https://www.automation.siemens.com/bilddb</a>  |
| <ul style="list-style-type: none"> <li>• to website: CAX-Download-Manager</li> </ul>                      | <a href="https://www.siemens.com/cax">https://www.siemens.com/cax</a>  |
| <ul style="list-style-type: none"> <li>• to website: Industry Online Support</li> </ul>                   | <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. |

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#### Approvals / Certificates

##### General Product Approval



[Manufacturer Declaration](#)

##### Industrial Communication

[PROFINET](#)

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