

### product type designation

product description



### IE FC TP FRNC Cable GP 4x2, CAT6A

shielded, halogen-free TP installation cable according to IEC 60754-1/2 (8-core), sold by the meter, unassembled

IE FC TP FRNC Cable GP 4x2; halogen-free TP cable for fixed routing; for connection to FC RJ45 plug 4x2; 8-core, shielded; CAT 6A, sold by the meter; delivery unit max. 4000 m, minimum order quantity 20 m .

Technical Product Detail Page

<https://i.siemens.com/1P6XV1878-2F>

suitability for use

Standard cable with rigid cores for fast, permanent installation

cable designation

SF/UTP, 2YH (ST)CH 4x2x0,5/1,0-100 GN

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

80 mΩ/m

loop resistance per length / maximum

190 mΩ/m

operating voltage

|             |      |
|-------------|------|
| • RMS value | 80 V |
| • maximum   | 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  |
| • of cable sheath                  | 8 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 the inner sheath of the cable</li> <li>of cable sheath</li> </ul>   | <p>polyethylene (PE)</p> <p>FRNC</p> <p>FRNC</p>  |
| color   |   |
| <ul style="list-style-type: none"> <li>of the insulation of data wires</li> <li>of cable sheath</li> </ul>  | white-blue/blue, white-orange/orange, white-green/green, white-brown/brown green  |
| bending radius  |   |
| <ul style="list-style-type: none"> <li>with single bend / minimum permissible</li> <li>with multiple bends / minimum permissible</li> </ul>   | <p>40 mm</p> <p>80 mm</p>   |
| tensile load / maximum  | 100 N   |
| weight per length   | 86 kg/km  |
| <b>ambient conditions</b>   |   |
| ambient temperature   |   |
| <ul style="list-style-type: none"> <li>during operation</li> <li>during storage</li> <li>during transport</li> <li>during installation</li> </ul>   | <p>-50 ... +70 °C</p> <p>-50 ... +70 °C</p> <p>-50 ... +70 °C</p> <p>-40 ... +70 °C</p>   |
| fire behavior   | flame resistant according to IEC 60332-1-2  |
| class of burning behaviour / according to EN 13501-6  | Cca (S1a d1 a1)   |
| chemical resistance   |   |
| <ul style="list-style-type: none"> <li>to mineral oil</li> <li>to grease</li> <li>to water</li> </ul>   | <p>oil resistant according to EN 50290-2-22 (VDE 0819), compound (4h/70 °C)</p> <p>Conditional resistance</p> <p>conditional resistance</p> |
| 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> <li>PoE capability</li> <li>PoE+ capability</li> <li>PoE++ capability</li> <li>silicon-free</li> <li>low-emission according to IEC 61034-2</li> </ul>  | <p>Yes; halogen-free according to IEC 61754-1/2</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>                                  |
| wire length / for Industrial Ethernet   |   |
| <ul style="list-style-type: none"> <li>with 100BaseTX</li> <li>with 1000BaseT</li> <li>for 10GBase T</li> </ul>   | <p>100 m</p> <p>100 m</p> <p>90 m</p>   |
| <b>standards, specifications, approvals</b>   |   |
| UL/ETL listing / 300 V Rating   | Yes; c(ETL)us 3047254 CMG 75°C  |
| UL/ETL style / 600 V Rating   | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2  |
| certificate of suitability  |   |
| <ul style="list-style-type: none"> <li>EAC approval</li> <li>CE marking</li> <li>RoHS conformity</li> </ul>   | <p>Yes</p> <p>Yes</p> <p>Yes</p>  |
| product conformity  |   |
| <ul style="list-style-type: none"> <li>ANSI/TIA-EIA 568-B.2 Cat.5e</li> <li>IEC 61784-5-2-CP 2/2 (Ethernet/IP)</li> </ul>   | <p>Yes</p> <p>Yes</p>   |
| standard for structured cabling   | Cat6A   |
| Marine classification association   |   |
| <ul style="list-style-type: none"> <li>American Bureau of Shipping Europe Ltd. (ABS)</li> <li>French marine classification society (BV)</li> <li>Det Norske Veritas (DNV)</li> <li>Germanische Lloyd (GL)</li> <li>Lloyds Register of Shipping (LRS)</li> <li>Nippon Kaiji Kyokai (NK)</li> <li>Polski Rejestr Statkow (PRS)</li> </ul> | <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p>   |
| <b>further information / internet links</b>   |   |
| internet link   |   |

- to website: Selection guide for cables and connectors
- to web page: selection aid TIA Selection Tool
- to web page: SiePortal
- to website: Image database
- to website: CAx-Download-Manager
- to website: Industry Online Support

- <https://support.industry.siemens.com/cs/ww/en/view/109766358>
- <https://www.siemens.com/tstcloud>
- <https://sieportal.siemens.com/>
- <https://www.automation.siemens.com/bilddb>
- <https://www.siemens.com/cax>
- <https://support.industry.siemens.com>

### security information

security information

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### Approvals / Certificates

General Product Approval

other

Environment

[Manufacturer Declaration](#)

[Fire safety / Physical security](#)



[Miscellaneous](#)

[Environmental Conformations](#)

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