

### product type designation

### product description

### IE Connecting Cable IE FC RJ45-180 / IE FC RJ45-180

Flexible plug-in cable (8-wire), preferred length, prefabricated with two IE FC RJ45 connectors 4X2

IE connecting cable IE FC RJ45 Plug-180/IE FC RJ45 Plug-180; IE FC flexible GP 4x2 cable Pre-assembled with 2x IE FC RJ45 plug 180 4 x 2; Length 30 m.



### product brand name

SIMATIC NET

### Technical Product Detail Page

<https://i.siemens.com/1P6XV1878-5BN30>

### suitability for use

For connecting Industrial Ethernet stations with an RJ45 interface (10/100/1000/10000Mbps)

### cable designation

SF/UTP

### wire length

30 m

### electrical data

#### number of electrical connections

2

#### attenuation factor per length

|                        |            |
|------------------------|------------|
| • at 10 MHz / maximum  | 0.089 dB/m |
| • at 100 MHz / maximum | 0.287 dB/m |
| • at 250 MHz / maximum | 0.466 dB/m |
| • at 300 MHz / maximum | 0.514 dB/m |
| • at 500 MHz / maximum | 0.679 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 |

#### transfer impedance per length / at 10 MHz

20 mΩ/m

#### loop resistance per length / maximum

180 mΩ/m

#### insulation resistance coefficient

5000 GΩ·m

#### operating voltage

|             |      |
|-------------|------|
| • RMS value | 80 V |
|-------------|------|

#### NVP value in percent

68 %

### 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     | 0.6 mm  |
| • of the wire insulation | 1.05 mm |

|                                                                          |                                                                            |
|--------------------------------------------------------------------------|----------------------------------------------------------------------------|
| • of the inner sheath of the cable                                       | 6.4 mm                                                                     |
| • of cable sheath                                                        | 8 mm                                                                       |
| symmetrical tolerance of the outer diameter / of cable sheath            | 0.2 mm                                                                     |
| material                                                                 |                                                                            |
| • of the wire insulation                                                 | polyethylene (PE)                                                          |
| • of the inner sheath of the cable                                       | FRNC                                                                       |
| • of cable sheath                                                        | PVC                                                                        |
| color                                                                    |                                                                            |
| • of the insulation of data wires                                        | white-blue/blue, white-orange/orange, white-green/green, white-brown/brown |
| • of cable sheath                                                        | green                                                                      |
| bending radius                                                           |                                                                            |
| • with single bend / minimum permissible                                 | 24 mm                                                                      |
| • with multiple bends / minimum permissible                              | 40 mm                                                                      |
| tensile load / maximum                                                   | 100 N                                                                      |
| weight per length                                                        | 86 kg/km                                                                   |
| <b>plug</b>                                                              |                                                                            |
| design of plug-in connection                                             | RJ45-180                                                                   |
| <b>ambient conditions</b>                                                |                                                                            |
| ambient temperature                                                      |                                                                            |
| • during operation                                                       | -40 ... +80 °C                                                             |
| • during storage                                                         | -40 ... +80 °C                                                             |
| • during transport                                                       | -40 ... +80 °C                                                             |
| • during installation                                                    | -40 ... +80 °C                                                             |
| fire behavior                                                            | flame resistant according to IEC 60332-3-24 (Category C)                   |
| chemical resistance                                                      |                                                                            |
| • to mineral oil                                                         | oil resistant according to IEC 60811-2-1 (4 h / 70°C)                      |
| • to grease                                                              | Conditional resistance                                                     |
| • to water                                                               | conditional resistance                                                     |
| radiological resistance / to UV radiation                                | resistant                                                                  |
| <b>product features, product functions, product components / general</b> |                                                                            |
| product feature                                                          |                                                                            |
| • halogen-free                                                           | No                                                                         |
| • PoE capability                                                         | Yes                                                                        |
| • PoE+ capability                                                        | Yes                                                                        |
| • PoE++ capability                                                       | Yes                                                                        |
| • silicon-free                                                           | Yes                                                                        |
| wire length / for Industrial Ethernet                                    |                                                                            |
| • with 100BaseTX                                                         | 80 m                                                                       |
| • with 1000BaseT                                                         | 80 m                                                                       |
| • for 10GBase T                                                          | 70 m                                                                       |
| test voltage                                                             |                                                                            |
| • at AC / core-to-core                                                   | 500 V                                                                      |
| • at AC / core shield                                                    | 1500 V                                                                     |
| <b>standards, specifications, approvals</b>                              |                                                                            |
| UL/ETL listing / 300 V Rating                                            | Yes; c(ETL)us, CMG, wiring harness                                         |
| 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 A                                                     | Yes                                                                        |
| • IEC 61784-5-2-CP 2/2 (Ethernet/IP)                                     | Yes                                                                        |
| standard for structured cabling                                          | Cat6A, Class EA                                                            |
| 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)
- Nippon Kaiji Kyokai (NK)
- Polski Rejestr Statkow (PRS)

No  
No  
No

#### further information / internet links

##### 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



[Declaration of Con-  
formity](#)



[Manufacturer Declara-  
tion](#)



##### other

##### Industrial Communication

[Miscellaneous](#)

[PROFINET](#)

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