

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

Technical Product Detail Page

suitability for use

cable designation

wire length

SIMATIC NET

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

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

SF/UTP

30 m

electrical data

number of electrical connections

attenuation factor per length

- at 10 MHz / maximum
- at 100 MHz / maximum
- at 250 MHz / maximum
- at 300 MHz / maximum
- at 500 MHz / maximum

2

0.089 dB/m
0.287 dB/m
0.466 dB/m
0.514 dB/m
0.679 dB/m

impedance

- at 1 MHz ... 100 MHz

100 Ω

near-end crosstalk per length

- at 1 MHz ... 100 MHz
- at 1 MHz ... 250 MHz
- at 1 MHz ... 300 MHz
- at 1 MHz ... 500 MHz

0.453 dB/m
0.393 dB/m
0.381 dB/m
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
- of the wire insulation

0.6 mm
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
plug	
design of plug-in connection	RJ45-180
ambient conditions	
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
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	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
standards, specifications, approvals	
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

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

other



[Declaration of Con-
formity](#)

[Manufacturer Declara-
tion](#)



[Miscellaneous](#)

Industrial Communication

[PROFINET](#)

last modified:

4/18/2026