SIEMENS

Data sheet 6XV1878-5BN20

product type designation	**IE Connecting Cable IE FC RJ45-180 / IE FC RJ45-180**
product description	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 Pre-assembled with 2x IE FC RJ45 plug 180 4 x 2; Length 20 m.



product brand name	SIMATIC NET
Technical Product Detail Page	https://i.siemens.com/1P6XV1878-5BN20
suitability for use	For connecting Industrial Ethernet stations with an RJ45 interface (10/100/1000/10000Mbps)
cable designation	SF/UTP
wire length	20 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

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● 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

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

further information / internet links

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

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					Industrial Communication
CE EG-Konf.	UKCA	Declaration of Conformity	Manufacturer Declaration	CE EG-Konf.	PROFINET

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