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



Suitability for use	For connecting Industrial Ethernet stations with an RJ45 interface (10/100/1000/10000Mbps)
Wire length	20 m
Electrical data	
Damping ratio 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

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• 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	Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires
Type of electrical connection / FastConnect	Yes
Core diameter	
• of the AWG24 core	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

Ambient conditions

Ambient temperature	
• during operation	-40 ... +80 °C
• during storage	-40 ... +80 °C
• during transport	-40 ... +80 °C
• during installation	-40 ... +80 °C
Burning behavior	flame resistant according to IEC 60332-3-24 (Category C)
Chemical resistance	

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• 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
• silicon-free	Yes
Wire length / for Industrial Ethernet	
• with 100BaseTX	80 m
• with 1000BaseT	80 m
• for 10GBase T	70 m

Standards, specifications, approvals

UL/ETL listing / 300 V Rating	Yes; c(ETL)us, CMG
UL/ETL style / 600 V Rating	No
Certificate of suitability	
• CE marking	Yes
• RoHS conformity	Yes
Product conformity	
• ANSI/TIA-EIA 568-B.2 Cat.5e	Yes
• IEC 61784-5-2-CP 2/2 (Ethernet/IP)	Yes
Marine classification association	
• American Bureau of Shipping Europe Ltd. (ABS)	No
• Bureau Veritas (BV)	No
• Det Norske Veritas (DNV)	No
• Germanische Lloyd (GL)	No
• Lloyds Register of Shipping (LRS)	No
• Nippon Kaiji Kyokai (NK)	No
• Polski Rejestr Statkow (PRS)	No

Further information / Internet-Links

Internet-Link	
• to website: Selector SIMATIC NET SELECTION TOOL	http://www.siemens.com/snst
• to website: Industrial communication	http://www.siemens.com/simatic-net
• to website: Industry Mall	https://mall.industry.siemens.com
• to website: Information and Download Center	http://www.siemens.com/industry/infocenter
• to website: Image database	http://automation.siemens.com/bilddb
• to website: CAx Download Manager	http://www.siemens.com/cax
• to website: Industry Online Support	https://support.industry.siemens.com

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