SIEMENS

Data sheet 6XV1870-8AN20

product type designation	**IE Connecting Cable M12-180/M12-180**
product description	Flexible plug-in cable (4-wire), preferred length, prefabricated with two 4-pole M12 connectors (D-coded, 180° cable outlet)
	Industrial Ethernet connecting Cable M12-180/M12-180, pre-assembled IE FC Trailing cable GP, with 2 M12 plugs (D-coded) length 20.0 m.



product brand name	SIMATIC NET
Technical Product Detail Page	https://i.siemens.com/1P6XV1870-8AN20
suitability for use	For connecting Industrial Ethernet stations (e.g. SIMATIC ET200 and SCALANCE XP-200) in IP 65/67 degree of protection
cable designation	SF/UTP, 2YY (ST) CY 2x2x0,75/1,5-100 LI GN
wire length	20 m
electrical data	
number of electrical connections	2
attenuation factor per length	
● at 10 MHz / maximum	0.063 dB/m
● at 100 MHz / maximum	0.213 dB/m
impedance	
● at 1 MHz ... 100 MHz	100 Ω
relative symmetrical tolerance	
● of the characteristic impedance at 1 MHz … 100 MHz	5 %
near-end crosstalk per length	
● at 1 MHz ... 100 MHz	0.5 dB/m
transfer impedance per length / at 10 MHz	20 mΩ/m
loop resistance per length / maximum	120 mΩ/m
operating voltage	
● RMS value	80 V
NVP value in percent	66 %
mechanical data	
number of electrical cores	4
design of the shield	SF/UTP, overlapped aluminum-clad foil, sheathed in a protective braided shield of tinned copper wires
core diameter	
● of AWG22 insulated conductor	0.75 mm
outer diameter	
● of inner conductor	0.75 mm
● of the wire insulation	1.5 mm
● of the inner sheath of the cable	3.9 mm
● of cable sheath	6.5 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	PVC

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● of cable sheath	PVC
color	
● of the insulation of data wires	white/yellow/blue/orange
● of cable sheath	green
bending radius	
● with single bend / minimum permissible	33 mm
● with multiple bends / minimum permissible	55 mm
● with continuous bending	100 mm
number of bending cycles	3000000; Drag chain suitable for 3 million bending cycles at a bending radius of 100 mm, a speed of 4 m/s and an acceleration of 4 m/s²
tensile load / maximum	120 N
weight per length	68 kg/km
plug	
type of plug interlock	screwed
design of plug-in connection	M12-180
tightening torque / for M12 round connector / maximum	0.6 N·m
connector coding	M12
● of the M12 circular connector	D-coded
ambient conditions	
ambient temperature	
● during operation	-25 ... +75 °C
● during storage	-25 ... +75 °C
● during transport	-25 ... +75 °C
● during installation	-10 ... +60 °C
● note	electrical properties measured at 20 °C
fire behavior	flame resistant according to UL 1685 (CSA FT 4)
chemical resistance	
● to mineral oil	conditional resistance
● to grease	Conditional resistance
radiological resistance / to UV radiation	resistant
protection class IP	IP65, IP67
product features, product functions, product components / general	
product feature	
● halogen-free	No
● PoE capability	Yes
● PoE+ capability	Yes
● silicon-free	Yes
test voltage	
● at AC / core shield	1500 V
standards, specifications, approvals	
UL/ETL listing / 300 V Rating	Yes; c(ETL)us, CMG FT4 / (ETL)us PLTC / Sun Res / OIL RES
UL/ETL style / 600 V Rating	Yes; cRUus AWM 21694 AWM I A/B 60°C 600V FT2
certificate of suitability	wiring harness
● EAC approval	Yes
● CE marking	Yes
● RoHS conformity	Yes
standard for structured cabling	Cat5e
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)	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

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● 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

Declaration of Conformity

Manufacturer Declaration

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