SIEMENS

Data sheet 6XV1881-5AH20

product type designation	**IE Robust Connecting Cable M12-180/M12-180, IP69**
product description	Robust, flexible connection cable (4-core), preferred length, preassembled with two 4-pole M12 connectors (D-coded)
	IE Robust Connecting Cable M12-180/M12-180, IP69, pre-assembled IE FC Robust Food cable GP 2x2, with 2 M12 plugs (D-coded) length 2.0 m.



product brand name	SIMATIC NET
Technical Product Detail Page	https://i.siemens.com/1P6XV1881-5AH20
suitability for use	For connecting Industrial Ethernet stations with degree of protection IP65/67/69. Cable with FEP jacket (fluorinated plastic, perfluoroethylene propylene) for use in the food, beverages and tobacco industries (IP69 resistant). Line is water-repellent, weather-proof, resistant to microbes, and extremely resistant to many cleaning agents and disinfectants (such as hypochlorite, chlorine dioxide, peroxyacetic acid, and quaternary ammonium cations).
cable designation	SF/UTP, 2YY(ST)CY6Y 2X2X0.75/1.55 LI VZN
wire length	2 m
electrical data	
number of electrical connections	2
attenuation factor per length	
● at 10 MHz / maximum	0.095 dB/m
● at 100 MHz / maximum	0.32 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	0.353 dB/m
transfer impedance per length / at 10 MHz	80 mΩ/m
loop resistance per length / maximum	120 mΩ/m
operating voltage	
● RMS value	80 V
NVP value in percent	69 %
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
type of electrical connection / FastConnect	Yes
core diameter	
● of AWG22 insulated conductor	0.75 mm
outer diameter	
● of inner conductor	0.75 mm
● of the wire insulation	1.56 mm
● of the inner sheath of the cable	4 mm

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● 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
● of cable sheath	PVC/FEP; FEP transparent
color	
● of the insulation of data wires	white/yellow/blue/orange
● of cable sheath	green
bending radius	
● with single bend / minimum permissible	26 mm
● with multiple bends / minimum permissible	52 mm
● with continuous bending	100 mm
number of bending cycles	1000000; Acceleration 4 m/s²
number of torsion cycles / with torsion by ± 180° on 1 m cable length	1000000
tensile load / maximum	150 N
weight per length	72 kg/km
plug	
type of plug interlock	screwed
design of plug-in connection	M12-180
connector coding	M12
● of the M12 circular connector	D-coded
ambient conditions	
ambient temperature	
● during operation	-40 ... +80 °C
● during storage	-40 ... +80 °C
● during transport	-40 ... +80 °C
● during installation	-40 ... +80 °C
● note	Electrical properties measured at 20 °C, tests according to DIN VDE 0472
fire behavior	flame resistant according to IEC 60332-1-2
chemical resistance	
● to mineral oil	oil resistant according to IEC 60811-404 (7x24h/90°C)
● to grease	Conditional resistance
● to water	resistant
radiological resistance / to UV radiation	resistant
protection class IP	IP65/67/69
product features, product functions, product components / general	
product feature	
● halogen-free	No
● PoE capability	Yes
● PoE+ capability	Yes
● silicon-free	Yes
standards, specifications, approvals	
UL/ETL listing / 300 V Rating	Yes; c(ETL)us 3047254 CMG FT4 75°C
UL/ETL style / 600 V Rating	Yes; AWM 22162 AWM I A/B 80°C 600V FT2
certificate of suitability	UL 2238
● 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

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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

CE EG-Konf.	UKCA	Declaration of Conformity	Manufacturer Declaration	China RoHS	UL

General Product Approval	Industrial Communication
CE EG-Konf.	PROFINET

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