SIEMENS

Data sheet 6XV1878-2F

product type designation	**IE FC TP FRNC Cable GP 4x2, CAT6A**
product description	shielded, halogen-free TP installation cable according to IEC 60754-1/2 (8-core), sold by the meter, unassembled

IE FC TP FRNC Cable GP 4x2; halogen-free TP cable for fixed routing; for connection to FC RJ45 plug 4x2; 8-core, shielded; CAT 6A, sold by the meter; delivery unit max. 4000 m, minimum order quantity 20 m .



product brand name	SIMATIC NET
Technical Product Detail Page	https://i.siemens.com/1P6XV1878-2F
suitability for use	Standard cable with rigid cores for fast, permanent installation
cable designation	SF/UTP, 2YH (ST)CH 4x2x0,5/1,0-100 GN
wire length	sold by the meter
electrical data	
attenuation factor per length	
● at 10 MHz / maximum	0.058 dB/m
● at 100 MHz / maximum	0.191 dB/m
● at 250 MHz / maximum	0.311 dB/m
● at 300 MHz / maximum	0.343 dB/m
● at 500 MHz / maximum	0.453 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
coupling loss / at 30 MHz … 100 MHz / minimum	80 dB
transfer impedance per length / at 10 MHz	80 mΩ/m
loop resistance per length / maximum	190 mΩ/m
operating voltage	
● RMS value	80 V
● maximum	80 V
NVP value in percent	67 %
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	0.51 mm
● of the wire insulation	1 mm
● of the inner sheath of the cable	6.1 mm

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● 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	FRNC
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	40 mm
● with multiple bends / minimum permissible	80 mm
tensile load / maximum	100 N
weight per length	86 kg/km
ambient conditions	
ambient temperature	
● during operation	-50 ... +70 °C
● during storage	-50 ... +70 °C
● during transport	-50 ... +70 °C
● during installation	-40 ... +70 °C
fire behavior	flame resistant according to IEC 60332-1-2
class of burning behaviour / according to EN 13501-6	Cca (S1a d1 a1)
chemical resistance	
● to mineral oil	oil resistant according to EN 50290-2-22 (VDE 0819), compound (4h/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	Yes; halogen-free according to IEC 61754-1/2
● PoE capability	Yes
● PoE+ capability	Yes
● PoE++ capability	Yes
● silicon-free	Yes
● low-emission according to IEC 61034-2	Yes
wire length / for Industrial Ethernet	
● with 100BaseTX	100 m
● with 1000BaseT	100 m
● for 10GBase T	90 m
test voltage	
● at AC / core-to-core	2000 V
● at AC / core shield	2000 V
standards, specifications, approvals	
UL/ETL listing / 300 V Rating	Yes; c(ETL)us 3047254 CMG 75°C
UL/ETL style / 600 V Rating	Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2
certificate of suitability	
● EAC approval	Yes
● 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
standard for structured cabling	Cat6A
● resistance to air pollution / conformity according to ANSI/ISA-71.04	Yes; G3
Marine classification association	
● American Bureau of Shipping Europe Ltd. (ABS)	No
● French marine classification society (BV)	No

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● 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
● 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				other	
Manufacturer Declaration	Fire safety / Physical security	CE EG-Konf.	CE EG-Konf.	Declaration of Conformity	Miscellaneous

Environment

Environmental Confirmations	Environmental Confirmations

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