SIEMENS

Data sheet 6XV1870-2B

product description



Flexible bus cable (4-core), sold by the meter, unassembled

Industrial Ethernet FC TP flexible cable, GP 2x2 (PROFINET Type B), TP installation cable with flexible cores, PROFINET type B, 4-core, shielded, CAT 5e, sold by the meter, delivery unit max. 2500 m minimum order quantity 20 m.

cable designation olectrical data attenuation factor per length • at 10 MHz / maximum • at 11 MHz 100 MHz relative symmetrical tolerance • of the characteristic impedance at 1 MHz 100 MHz near-end crosstalk per length • at 1 MHz 100 MHz transfer impedance per length / at 10 MHz 20 mΩ/m loop resistance per length / at 10 MHz loop resistance per length	suitability for use	For occasionally moved machine parts
attenuation factor per length at 1 10 MHz / maximum at 1 100 MHz / maximum 0.21 dB/m impedance at 1 MHz 100 MHz relative symmetrical tolerance at 1 MHz 100 MHz transfer impedance per length / at 10 MHz transfer impedance per length / maximum operating voltage a RMS value NVP value in percent design of the shield Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires type of electrical cores design of the shield Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires of AWG22 insulated conductor outer diameter of inner conductor of the wire insulation of the hire insulation of the hire sheath of the cable of cable sheath symmetrical tolerance of the outer diameter / of cable sheath pluce of cable sheath of the insulation of data wires of cable sheath of the insulation of data wires of cable sheath bending radius		2YY (ST) CY 2x2x0,75/1,5-100 LI GN SF/UTP
■ at 10 MHz / maximum ■ 0.21 dB/m ■ at 100 MHz / maximum □ 0.21 dB/m Impedance ■ at 1 MHz 100 MHz relative symmetrical tolerance ■ of the characteristic impedance at 1 MHz 100 MHz near-end crosstalk per length ■ at 1 MHz 100 MHz transfer impedance per length / at 10 MHz □ 0.5 dB/m 12 0 mΩ/m loop resistance per length / at 10 MHz □ 120 mΩ/m operating voltage ■ • RMS value ■ 80 V NVP value in percent □ 69 % mechanical data number of electrical cores design of the shield ○ Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wites type of electrical cornection / FastConnect yes core diameter ■ of AWG22 insulated conductor	electrical data	
impedance • at 1 MHz 100 MHz relative symmetrical tolerance • of the characteristic impedance at 1 MHz 100 MHz near-end crosstalit per length • at 1 tHz 100 MHz transfer impedance per length / 1 th 10 MHz transfer impedance per length / 1 th 10 MHz toop resistance per length / maximum operating voltage • RMS value NVP value in percent mechanical data number of electrical cores design of the shield Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires type of electrical connection / FastConnect vec diameter • of AWG22 insulated conductor of the wire insulation • of the wire insulation • of the wire insulation • of the wire insulation of the biner sheath of the cable • of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material • of the wire insulation • of the inner sheath of the cable • of cable sheath pVC color • of cable sheath pVC color • of cable sheath pending radius	attenuation factor per length	
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e at 1 MHz 100 MHz relative symmetrical tolerance • of the characteristic impedance at 1 MHz 100 MHz near-end crosstalk per length • at 1 MHz 100 MHz transfer impedance per length / at 10 MHz loop resistance per length / maximum operating voitage • RMS value NVP value in percent 69 % mechanical data number of electrical cores design of the shield Coverlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires type of electrical connection / FastConnect of AWG22 insulated conductor outer diameter • of inner conductor • of the wire insulation • of the inner sheath of the cable • of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material • of the inner sheath of the cable • of cable sheath of the inner sheath of data wires • of cable sheath polyethylene (PE) • of cable sheath polyethylene (PE) • of cable sheath polyethylene (PE) • of cable sheath polyethylene or green white/yellow/blue/orange • of cable sheath ponding radius	• at 100 MHz / maximum	0.21 dB/m
relative symmetrical tolerance ● of the characteristic impedance at 1 MHz 100 MHz near-end crosstalk per length ● at 1 MHz 100 MHz transfer impedance per length / at 10 MHz loop resistance per length / maximum operating voltage ● RMS value NVP value in percent feesing of the shield Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires type of electrical connection / FastConnect ver diameter ● of AWG22 insulated conductor of the wire insulation of the inner sheath of the cable ● of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material • of the wire insulation • of the inner sheath of the cable • of cable sheath pVC • of cable sheath • of cable sheath • of the inner sheath of data wires • of cable sheath • of cable sheath • of the inner sheath of data wires • of cable sheath • of the inner sheath of data wires • of cable sheath • of cable sheath • of the inner sheath of data wires • of cable sheath pVC • of cable sheath • of cable sheath • of cable sheath processors • of cable sheath processors • of cable sheath	impedance	
of the characteristic impedance at 1 MHz 100 MHz near-end crosstalk per length • at 1 MHz 100 MHz transfer impedance per length / at 10 MHz loop resistance per length / maximum operating voltage • RMS value NVP value in percent number of electrical cores design of the shield Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires type of electrical connection / FastConnect ver of AWG22 insulated conductor outer diameter • of inner conductor • of the wire insulation • of the wire insulation of the wire insulation • of the wire insulation • of the wire insulation • of the inner sheath of the cable • of cable sheath naterial • of cable sheath of the inner sheath of data wires • of cable sheath ending radius 15 % 15 % 15 % 15 % 15 % 10 0.5 dB/m 20 mΩ/m 80 V NP/m 80 V Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires 10 0verlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires 10 0verlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires 10 0verlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires 10 0verlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires 10 0verlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires 10 0verlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires 10 0verlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires 10 0verlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires 10 0verlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires 10 0verlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires 10 0verlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires 10 0verlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires 10 0verlapped aluminum-clad foil, sheath	• at 1 MHz 100 MHz	100 Ω
near-end crosstalk per length • at 1 MHz 100 MHz transfer impedance per length / at 10 MHz loop resistance per length / maximum operating voltage • RMS value NVP value in percent mechanical data number of electrical cores design of the shield Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires type of electrical connection / FastConnect ves core diameter • of AWG22 insulated conductor outer diameter • of inner conductor of the wire insulation • of the wire insulation of the wire insulation of the outer diameter / of cable sheath symmetrical tolerance of the outer diameter / of cable sheath naterial • of the wire insulation • of the wire insulation of the inner sheath of the cable of the wire insulation of the inner sheath of the cable of the wire insulation of the inner sheath of the cable of the wire insulation of the wire insulation of the inner sheath of the cable of the wire insulation of the inner sheath of the cable of the inner sheath of the cable of the wire insulation of the inner sheath of the cable of cable sheath white/yellow/blue/orange of cable sheath bending radius	relative symmetrical tolerance	
• 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 69 % mechanical data ————————————————————————————————————	• of the characteristic impedance at 1 MHz 100 MHz	15 %
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 69 % mechanical data number of electrical cores 4 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 AWG22 insulated conductor 0.75 mm outer diameter • of inner conductor 0.75 mm of the wire insulation 1.5 mm • of the wire insulation 1.5 mm symmetrical tolerance of the outer diameter / of cable sheath 6.5 mm symmetrical tolerance of the outer diameter / of cable sheath 7 polyethylene (PE) • of the wire insulation polyethylene (PE) • of the inner sheath of the cable PVC • of cable sheath PVC color • of the insulation of data wires white/yellow/blue/orange • of cable sheath green	near-end crosstalk per length	
loop resistance per length / maximum 120 mΩ/m operating voltage 80 V NVP value in percent 69 % mechanical data number of electrical cores 4 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 0.75 mm outer diameter 0.75 mm 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 0.2 mm material of the wire insulation of the wire insulation polyethylene (PE) of the inner sheath of the cable PVC color of cable sheath PVC color of the inner sheath of data wires white/yellow/blue/orange of cable sheath green bending radius	• at 1 MHz 100 MHz	0.5 dB/m
operating voltage • RMS value NVP value in percent mechanical data number of electrical cores 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 AWG22 insulated conductor outer diameter • of inner conductor • of the wire insulation • of the inner sheath of the cable • of cable sheath material • of the wire insulation of the wire insulation polyethylene (PE) • of cable sheath of the inner sheath of the cable of cable sheath PVC volume volume in sulation of data wires of the inner sheath of the cable of the inner sheath of the cable of the wire insulation volume in the wire insulation polyethylene (PE) volume in the wire insulation volume in the wire insulation polyethylene (PE) volume in the wire insulation of data wires volume in the wire insulation of	transfer impedance per length / at 10 MHz	20 mΩ/m
RMS value NVP value in percent 69 % mechanical data number of electrical cores 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 AWG22 insulated conductor of inner conductor of the wire insulation of the wire insulation symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of the inner sheath of the cable of cable sheath PVC of cable sheath of the inner sheath of data wires of the insulation of data wires white/yellow/blue/orange green bending radius	loop resistance per length / maximum	120 mΩ/m
NVP value in percent mechanical data number of electrical cores 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 AWG22 insulated conductor outer diameter of inner conductor of the wire insulation of the wire sheath of the cable of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of the inner sheath of the cable of the wire insulation of the inner sheath of the cable of cable sheath PVC color of the insulation of data wires white/yellow/blue/orange green	operating voltage	
number of electrical cores 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 AWG22 insulated conductor outer diameter of the wire insulation of the wire insulation of the inner sheath of the cable of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of the wire insulation of the wire insulation of the inner sheath of the cable of cable sheath PVC color of the insulation of data wires of cable sheath price white/yellow/blue/orange green	RMS value	80 V
number of electrical cores design of the shield Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires type of electrical connection / FastConnect Yes ore diameter of AWG22 insulated conductor outer diameter of inner conductor of the wire insulation of the einner sheath of the cable of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of the inner sheath of the cable of the wire insulation of the inner sheath of the cable of cable sheath PVC color of the insulation of data wires white/yellow/blue/orange of cable sheath bending radius	NVP value in percent	69 %
design of the shield Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires type of electrical connection / FastConnect Yes Ore diameter of AWG22 insulated conductor outer diameter of inner conductor of the wire insulation of the inner sheath of the cable of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of the inner sheath of the cable of the wire insulation of the wire insulation of the inner sheath of the cable of cable sheath PVC color of the insulation of data wires of cable sheath bending radius	mechanical data	
type of electrical connection / FastConnect Yes core diameter of AWG22 insulated conductor outer diameter of inner conductor of the wire insulation of the inner sheath of the cable of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation polyethylene (PE) of the inner sheath of the cable of cable sheath of the wire insulation of the inner sheath of the cable of the inner sheath of the cable of the inner sheath of the cable of the inner sheath white/yellow/blue/orange of cable sheath bending radius	number of electrical cores	4
core diameter of AWG22 insulated conductor outer diameter of inner conductor of the wire insulation of the inner sheath of the cable of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of the wire insulation of the inner sheath of the cable of the wire insulation of the inner sheath of the cable of the inner sheath PVC of cable sheath polyethylene (PE) of the insulation of data wires white/yellow/blue/orange of cable sheath bending radius	design of the shield	
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outer diameter • of inner conductor • of the wire insulation • of the inner sheath of the cable • of cable sheath • of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material • of the wire insulation • of the wire insulation • of the inner sheath of the cable • of cable sheath PVC color • of the insulation of data wires • of cable sheath bending radius	core diameter	
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of the wire insulation of the inner sheath of the cable of cable sheath of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of the wire insulation of the inner sheath of the cable of cable sheath PVC of the insulation of data wires of cable sheath polyethylene (PE) PVC white/yellow/blue/orange of cable sheath preen	outer diameter	
 of the inner sheath of the cable of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of the inner sheath of the cable of cable sheath of cable sheath of the insulation of data wires of cable sheath green 	• of inner conductor	0.75 mm
of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of the inner sheath of the cable of cable sheath PVC of cable sheath polyethylene (PE) PVC of cable sheath PVC color of the insulation of data wires of cable sheath polyethylene (PE) pvc pvc color of the insulation of data wires of cable sheath green bending radius	of the wire insulation	1.5 mm
symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of the inner sheath of the cable of cable sheath PVC color of the insulation of data wires of cable sheath polyethylene (PE) PVC white/yellow/blue/orange green bending radius	 of the inner sheath of the cable 	3.9 mm
material of the wire insulation of the inner sheath of the cable of cable sheath PVC color of the insulation of data wires of cable sheath green bending radius	of cable sheath	6.5 mm
 of the wire insulation polyethylene (PE) of the inner sheath of the cable of cable sheath of color of the insulation of data wires of cable sheath white/yellow/blue/orange of cable sheath green 	symmetrical tolerance of the outer diameter / of cable sheath	0.2 mm
of the inner sheath of the cable of cable sheath PVC color of the insulation of data wires of cable sheath pvc white/yellow/blue/orange green bending radius	material	
of cable sheath color of the insulation of data wires of cable sheath bending radius PVC white/yellow/blue/orange green	 of the wire insulation 	polyethylene (PE)
color • of the insulation of data wires • of cable sheath bending radius white/yellow/blue/orange green	 of the inner sheath of the cable 	PVC
 of the insulation of data wires of cable sheath bending radius white/yellow/blue/orange green	of cable sheath	PVC
of cable sheath bending radius green	color	
bending radius	 of the insulation of data wires 	white/yellow/blue/orange
	of cable sheath	green
with single bend / minimum permissible 32.5 mm	bending radius	
	 with single bend / minimum permissible 	32.5 mm

 with multiple bends / minimum permissible 	52 mm
tensile load / maximum	150 N
weight per length	68 kg/km
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, tests according to DIN VDE 0472
fire behavior	flame resistant according to UL 1685 (CSA FT 4)
class of burning behaviour / according to EN 13501-6	Eca
chemical resistance	
• to mineral oil	oil resistant according to IEC 60811-404 (7x24h/90°C)
• to grease	Conditional resistance
• to water	conditional resistance
radiological resistance / to UV radiation	resistant
product features, product functions, product components / gen	eral
product feature	
• halogen-free	No
• silicon-free	Yes
wire length / for Industrial Ethernet	
• with 100BaseTX	85 m
standards, specifications, approvals	
UL/ETL listing / 300 V Rating	Yes; c(ETL)us, CMG / (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	
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
reference code	
according to IEC 81346-2	WG
• according to IEC 81346-2:2019	WGB
further information / internet links	
internet link	
• to website: Image database	https://www.automation.siemens.com/bilddb
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

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Other

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Declaration of Conformity

formity

Declaration of Conformation

formity

Industrial Communication

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