SIEMENS

6XV1870-2D **Data sheet**

product description



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

Industrial Ethernet FC TP trailing cable GP 2x2 (PROFINET Type C), TP installation cable for cable carrier applications, 4-core, shielded Cat5e, sold by the meter (3 million bending cycles), delivery unit max. 1000 m, minimum order quantity 20 m.

cable designation 2YY (ST) CY 2∠2x0,75/1,5-100 LI GN SF/UTP **at 10 MHz / maximum	suitability for use	Continuous motion control in a cable carrier
attenuation factor per length at 10 MHz / maximum at 100 MHz / maximum 0.213 dB/m impedance at 1 MHz 100 MHz relative symmetrical tolerance of the characteristic impedance at 1 MHz 100 MHz transfer impedance per length / at 10 MHz transfer impedance per length / at 10 MHz 20 mG/m loop resistance per length / maximum operating voltage RMS value 80 V NPV abue in percent design of the shield Overtapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires type of electrical connection / FastConnect very an electrical connection / FastConnect of NWG22 insulated conductor 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 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 inner sheath of the cable of cable sheath ymmetrical tolerance of the outer diameter / of cable sheath polyethylene (PE) pVC color of the inner sheath of the cable of cable sheath of the insulation of data wires 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 at 100 MHz / maximum 0.213 dB/m impedance at 1 MHz 100 MHz 100 Q relative symmetrical tolerance of the characteristic impedance at 1 MHz 100 MHz for fire crosstalk per length at 1 MHz 100 MHz 20 mG/m operating voltage RMS value NVP value in percent 100 MVP value in value i	electrical data	
e at 1 100 MHz / maximum o at 1 MHz 100 MHz relative symmetrical tolerance o of the characteristic impedance at 1 MHz 100 MHz near-end crosstalk per length o at 1 MHz 100 MHz transfer impedance per length / at 10 MHz toop resistance per length / at 10 MHz toop resistance per length / maximum operating voltage or NWP 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 type of electrical conductor 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 prevent white/yellow/blue/orange of cable sheath bending radius	attenuation factor per length	
impedance	• at 10 MHz / maximum	0.063 dB/m
eat 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 voltage • RMS value 80 V 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 • of AWG22 insulated conductor out of dinner conductor • of inner conductor • of the wire insulation • of the inner sheath of the cable • of cable sheath polycethylene (PE) • of cable sheath bending radius	• at 100 MHz / maximum	0.213 dB/m
relative symmetrical tolerance	impedance	
of the characteristic impedance at 1 MHz 100 MHz near-end crosstalk per length	● 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 80 V NVP value in percent 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 ves core diameter • of AWG22 insulated conductor outer diameter • of inner conductor • 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 inner sheath of the cable • of cable sheath color • of the inner sheath of data wires • of cable sheath pvC of the inner sheath of data wires • of cable sheath price white/yellow/blue/orange green	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 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 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 cable sheath PVC color • of cable sheath PVC • of cable sheath green bending radius	• of the characteristic impedance at 1 MHz 100 MHz	5 %
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 inner sheath of the cable 3.9 mm • of cable sheath 0.2 mm material • of the wire insulation polyethylene (PE) • of the wire insulation polyethylene (PE) • of cable sheath PVC • of cable sheath PVC • of cable sheath pwice insulation of data wires white/yellow/blue/orange • of cable sheath green	near-end crosstalk per length	
loop resistance per length / maximum 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 ves of AWG22 insulated conductor of inner conductor of the wire insulation of 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 inner sheath of data wires of cable sheath PVC volte (able sheath PVC color of the inner sheath of data wires of cable sheath PVC toolor of the inner sheath of data wires of cable sheath pending radius	● at 1 MHz 100 MHz	0.5 dB/m
operating voltage RMS value RMS value RMS value Rechanical 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 the wire insulation of the wire insulation of the inner sheath of the cable of cable sheath polyethylene (PE) of cable sheath PVC color of the inner sheath of the inner sheath of the cable of cable sheath polyethylene (PE) of cable sheath of the inner sheath of the inner sheath of the inner sheath of the cable of cable sheath polyethylene (PE) of cable sheath pvC of cable sheath pvC of able sheath preen	transfer impedance per length / at 10 MHz	20 mΩ/m
RMS value RVP 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 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 polyethylene (PE) of cable sheath color of the inner sheath of the cable of cable sheath pVC of cable sheath pVC of cable sheath bending radius	loop resistance per length / maximum	120 mΩ/m
NVP value in percent 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 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 of cable sheath PVC color of the insulation of data wires white/yellow/blue/orange of cable sheath bending radius	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 type of electrical connection / FastConnect of AWG22 insulated conductor outer diameter of inner conductor 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 bending radius	• 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 core diameter of AWG22 insulated conductor of inner conductor of the wire insulation of the wire insulation of the inner sheath of the cable of cable sheath of the wire insulation polyethylene (PE) of cable sheath polyethylene (PE) of cable sheath polyethylene (PE) of cable sheath polyethylene of cable sheath	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 of inner conductor 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 inner sheath of the cable of cable sheath PVC of cable sheath polyethylene (PE) of the insulation of data wires of cable sheath pvc of cable sheath pvc color of the insulation of data wires of cable sheath preen	mechanical data	
type of electrical connection / FastConnect 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 polyethylene (PE) of the inner sheath of the cable of cable sheath for the wire insulation 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 cable sheath pvc vortical vortical tolerance of the outer diameter / of cable sheath polyethylene (PE) of the inner sheath of the cable of cable sheath pvc vortical vorti	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 polyethylene (PE) of the wire insulation of the inner sheath of the cable of the inner sheath of the cable of the inner sheath pvc of cable sheath Pvc color of the insulation of data wires of cable sheath green	design of the shield	
of AWG22 insulated conductor 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 of the wire insulation of the wire insulation of the inner sheath of the cable of cable sheath of the inner sheath of the cable of cable sheath of cable sheath pvc of cable sheath pvc of the insulation of data wires of cable sheath preen	type of electrical connection / FastConnect	Yes
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	
 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 of the wire insulation 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 of cable sheath green 	 of AWG22 insulated conductor 	0.75 mm
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 inner sheath of the cable of cable sheath PVC of cable sheath roll of the insulation of data wires of cable sheath polyethylene (PE) PVC white/yellow/blue/orange of cable sheath process of cable sheath process of cable sheath green	outer diameter	
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 inner sheath of the cable of cable sheath PVC of cable sheath color of the insulation of data wires of cable sheath bending radius	• 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 color of the insulation of data wires of cable sheath bending radius of cable sheath polyethylene (PE) PVC white/yellow/blue/orange green	• 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 bending radius	 of the inner sheath of the cable 	3.9 mm
material of the wire insulation polyethylene (PE) 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 of the inner sheath of the cable of cable sheath color of the insulation of data wires of cable sheath bending radius polyethylene (PE) PVC White/yellow/blue/orange 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 bending radius PVC white/yellow/blue/orange green	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 white/yellow/blue/orange • of cable sheath green bending radius	 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 green bending radius	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	49 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/s ²
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 / gene	eral
product feature	N.
• halogen-free	No
• silicon-free	Yes
wire length / for Industrial Ethernet	
• with 100BaseTX	85 m
standards, specifications, approvals	V (571) 010 571 (571) 8170 (8 B (61) 850
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	V
EAC approval	Yes
CE marking Pal IS conformity	Yes Yes
RoHS conformity standard for structured cabling	
standard for structured cabling Marine classification association	Cat5e
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: Selection guide for cables and connectors	https://support.industry.siemens.com/cs/ww/en/view/109766358
to website: Selection guide for easies and connectors to web page: selection aid TIA Selection Tool	https://www.siemens.com/tstcloud
• to web page: SiePortal	https://sieportal.siemens.com/
to web page. Giel ettal to website: Image database	https://www.automation.siemens.com/bilddb
to website: Mage database to website: CAx-Download-Manager	https://www.siemens.com/cax
to website: One political manager 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

Environment

Manufacturer Declaration





Declaration of Conformity



Confirmation

Industrial Communication

PROFINET

last modified:

8/8/2024