SIEMENS

Data sheet 6XV1840-2AH10

product description



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

Industrial Ethernet FC TP Standard cable, GP 2x2 (PROFINET Type A), TP installation cable for connection to IE FC RJ45 2x2, for universal use, 4-core, shielded CAT 5E, sold by the meter, delivery unit max. 4000 m minimum order quantity 20 m.

cable designation clectrical data attenuation factor per length at 1 0 MHz / maximum at 10 MHz / maximum ol.195 dB/m at 1 0 MHz / maximum ol.195 dB/m impedance at 1 MHz 100 MHz relative symmetrical tolerance of the characteristic impedance at 1 MHz 100 MHz transfer impedance per length ol.1 MHz transfer impedance per length / at 10 MHz transfer impedance per length / maximum operating voltage are 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 core diameter of AM/G22 Insulated conductor of the wire insulation of the inner sheath of the cable of the wire insulation of the inner sheath of the dable of the wire insulation of the inner sheath of the dable of the wire insulation of the inner sheath of the dable of the wire insulation of the inner sheath of the dable of the wire insulation of the inner sheath of the dable of the wire insulation of the inner sheath of the dable of the liner sheath of the dable of	suitability for use	Standard cable with rigid cores for fast installation
atteruation factor per length at 10 MHz / maximum at 100 MHz / maximum 0.195 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	cable designation	2YY (ST) CY 2x2x0,64/1,5-100 GN SF/UTP
at 10 MHz / maximum at 100 MHz / maximum 0.195 dB/m Impedance at 11 MHz 100 MHz 100 Ω relative symmetrical tolerance of the characteristic impedance at 1 MHz 100 MHz 15 % near-end crosstalk per length at 1 MHz 100 MHz 15 % near-end crosstalk per length at 1 MHz 100 MHz 10 mD/m loop resistance per length / at 10 MHz 10 mD/m operating voltage RMS value 80 V NVP value in percent 69 % 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 NWC22 insulated conductor 0.64 mm of the wire insulation 1.5 mm of the wire insulation 1.5 mm of the wire insulation 1.5 mm of the inner sheath of the cable ymmetrical tolerance of the outer diameter / of cable sheath pype of the inner sheath of the cable of cable sheath PVC 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 PVC of cable sheath PVC of cable sheath bending radius	electrical data	
e at 1 100 MHz / maximum 0.195 dB/m impedance e at 1 MHz 100 MHz relative symmetrical tolerance e of the characteristic impedance at 1 MHz 100 MHz near-end crosstalk per length e 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 e 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 wires type of electrical connection / FastConnect ves core diameter of AWG22 insulated conductor 0.64 mm outer diameter of the wire insulation 1.5 mm 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 wire insulation of the hiner sheath of the cable of cable sheath symmetrical tolerance of the outer diameter / of cable sheath polyethylene (PE) of cable sheath of the inner sheath of the cable of cable sheath PVC olor of the inner sheath of the cable of cable sheath white/yellow/blue/orange of cable sheath bending radius	attenuation factor per length	
Impedance	• at 10 MHz / maximum	0.052 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 outer diameter • of inner conductor • of the wire insulation • of the biner sheath of the cable • of cable sheath symmetrical tolerance of the outer diameter / of cable sheath polyethylene (PE) • of cable sheath bending radius	• at 100 MHz / maximum	0.195 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 10 mΩ/m 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 type of electrical connection / FastConnect outer diameter • of AWG22 insulated conductor outer diameter • of the wire insulation • of the inner sheath of the cable • of cable sheath pVC • of cable sheath bending radius	relative symmetrical tolerance	
• at 1 MHz 100 MHz 0.5 dB/m transfer impedance per length / at 10 MHz 10 mC/m loop resistance per length / maximum 115 mΩ/m operating voltage 80 V • 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 0.64 mm outer diameter • of inner conductor 0.64 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 • of cable sheath white/yellow/blue/orange bending radius white/yellow/blue/orange green	• of the characteristic impedance at 1 MHz 100 MHz	15 %
transfer impedance per length / at 10 MHz 10 m \(\text{D/m} \) loop resistance per length / maximum 115 m \(\text{D/m} \) operating voltage 80 V NVP value in percent 69 % mechanical data number of electrical cores 4 Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires of aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires of AWG22 insulated conductor Ves core diameter 0 f AWG22 insulated conductor 0.64 mm outer diameter 0 finner conductor 0.64 mm of the wire insulation 1.5 mm of of the wire insulation 1.5 mm symmetrical tolerance of the outer diameter / of cable sheath 0.2 mm symmetrical tolerance of the outer diameter / of cable sheath 0.2 mm material 0 finer sheath of the cable PVC of cable sheath PVC of the inner sheath of data wires white/yellow/blue/orange of cable sheath green white/yellow/blue/orange white/yellow/blue/orange green bending radius	near-end crosstalk per length	
loop resistance per length / maximum 115 mΩ/m operating voltage 80 V NVP value in percent 69 % mechanical data	• at 1 MHz 100 MHz	0.5 dB/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 outer diameter • of inner conductor • 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 polyethylene (PE) • of cable sheath PVC color • of the insulation of data wires • of cable sheath bending radius	transfer impedance per length / at 10 MHz	10 mΩ/m
RMS value RWP 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 type of electrical connection / FastConnect of AWG22 insulated conductor of haw ire 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 polyethylene (PE) of cable sheath polyethylene (PE) of cable sheath polyethylene (PE) of cable sheath price white/yellow/blue/orange green	loop resistance per length / maximum	115 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 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 of cable sheath polyethylene (PE) of cable sheath polyethylene (PE) of cable sheath proc of the insulation of data wires of cable sheath proc of cable sheath proc of cable sheath proc of cable sheath 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 type of electrical connection / FastConnect of inmeter of AWG22 insulated 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 inner sheath of the cable of cable sheath pVC color of the insulation of data wires 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 core diameter of AWG22 insulated conductor other 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 polyethylene (PE) PVC color of the insulation of data wires of cable sheath process white/yellow/blue/orange green 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 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 symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of the wire insulation 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 preen	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 of the wire insulation polyethylene (PE) of the inner sheath of the cable of cable sheath for the wire insulation 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 cable sheath PVC • of cable sheath PVC color • of the insulation of data wires • of cable sheath bending radius	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 of the wire insulation of the outer diameter / of cable sheath of the wire insulation of the wire insulation of the inner sheath of the cable of the inner sheath of the cable of cable sheath PVC of cable sheath of the insulation of data wires of cable sheath polyethylene (PE) of the insulation of data wires of cable sheath polyethylene (PE) 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 symmetrical tolerance of the outer diameter / of cable sheath 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	core diameter	
of inner conductor of the wire insulation 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 color of the insulation of data wires of cable sheath bending radius	 of AWG22 insulated conductor 	0.64 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 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	outer diameter	
of the inner sheath of the cable of cable sheath 6.5 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 of cable sheath color of the insulation of data wires of cable sheath bending radius 3.9 mm 6.5 mm 7.2 mm PVC PVC PVC PVC white/yellow/blue/orange green	 of inner conductor 	0.64 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 color of the insulation of data wires of cable sheath bending radius 6.5 mm 0.2 mm polyethylene (PE) PVC 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 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 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 19.5 mm	bending radius	
	with single bend / minimum permissible	19.5 mm

with multiple bends / minimum permissible	49 mm
tensile load / maximum	150 N
weight per length	61 kg/km
ambient conditions	
ambient temperature	
during operation	-40 +75 °C
during storage	-40 +75 °C
during transport	-40 +75 °C
during installation	-40 +60 °C
• note	Electrical properties measured at 20 °C, tests according to DIN VDE 0472
fire behavior	flame resistant according to IEC 60332-3-24 (Category C) and 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 60811-2-1 (4 h / 70°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	
halogen-free	No
• silicon-free	Yes
wire length / for Industrial Ethernet	
• with 100BaseTX	100 m
standards, specifications, approvals	
UL/ETL listing / 300 V Rating	Yes; c(ETL)us / CMG / (ETL)us PLTC/ ITC / Sun Res
UL/ETL style / 600 V Rating	Yes; cRUus AWM 21694 AWM I A/B 60°C 600V FT2
certificate of suitability	Vee
EAC approval	Yes
• CE marking	Yes
RoHS conformity And and for structured publics.	Yes
standard for structured cabling	Cat5e
Marine classification association	No
 American Bureau of Shipping Europe Ltd. (ABS) 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 web page: selection aid TIA Selection Tool	https://www.siemens.com/tstcloud
to website: Industrial communication	https://www.siemens.com/simatic-net
to web page: SiePortal	https://sieportal.siemens.com/
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• 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

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Approvals / Certificates

General Product Approval

Test Certificates

Manufacturer Declaration



Declaration of Conformity





Special Test Certificate

Environment

Industrial Communication

Confirmation



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last modified:

8/8/2024