## **SIEMENS**

Data sheet 6XV1841-2A

product description



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

Industrial Ethernet FastConnect TP robust Standard GP cable 2x2 (PROFINET Type A), TPE protective jacket, fixed installation for connection to FC RJ45 plug and FC outlet RJ45, for universal use, 4-core, shielded Cat5e, sold by the meter, delivery unit max. 2000 m minimum order quantity 20 m.

cable designation         2YH (ST) C99Y 2x2x0,64/1,5-100 GN SF/UTP           clockford data         att 10 MHz / maximum           • att 10 MHz / maximum         0.065 dB/m           • att 10 MHz / maximum         0.22 dB/m           impedance         •           • att 1 MHz 100 MHz         100 Ω           relative symmetrical tolerance         • of the characteristic impedance at 1 MHz 100 MHz         15 %           near-end crosstalk per length         • of the characteristic impedance per length         0.5 dB/m           • att 1 MHz 100 MHz         10 mC/m           loop resistance per length / at 10 MHz         10 mC/m           loop resistance per length / maximum         115 mC/m           operating voltage         80 V           • RNS value         80 V           NVP value in percent         69 %           mechanical data         0vertapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires           type of electrical connection / FastConnect         Yes           core dameter         of AWG22 insulated conductor         0.64 mm           outer diameter         of finer conductor         0.64 mm           of the wire insulation         1.5 mm           of the wire insulation         0.5 mm           of the liner sheath o	suitability for use	Standard cable with rigid cores for fast installation
atternuation factor per length at 10 MHz / maximum 10 0.065 dB/m at 10 0 MHz / maximum 20 22 dB/m  impedance at 1 MHz 100 MHz relative symmetrical tolerance of the characteristic impedance at 1 MHz 100 MHz 15 % near-end crosstalk per length at 1 MHz 100 MHz 10 maximum 115 mΩ/m 116 mα 116 m		2YH (ST) C99Y 2x2x0,64/1,5-100 GN SF/UTP
• at 10 MHz / maximum • at 100 MHz / maximum 0.22 dB/m  Impedance • at 1 MHz 100 MHz 100 \ \text{00} \text{00} \ \text{00}	electrical data	
e at 1 100 MHz / maximum   0.22 dB/m	attenuation factor per length	
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 100 MHz 100 mear-end crosstalk per length         • at 1 MHz 100 MHz 100 mear-end crosstalk per length / at 10 MHz 100 mear-end crosstalk per length / at 10 MHz 100 mear-end crosstalk per length / at 10 MHz 100 mear-end crosstalk per length / at 10 MHz 100 mear-end crosstalk per length / at 10 MHz 100 mear-end crosstalk per length / at 10 MHz 100 mear-end crosstalk per length / at 10 MHz 100 mear-end crosstalk per length / at 10 MHz 100 mear-end crosstalk per length / at 10 MHz 100 mear-end crosstalk per length 115 mΩ/m 115 mΩ/m 115 mΩ/m 115 mΩ/m 115 mΩ/m 116 mear-end crosstalk per length / at 10 MHz 115 mp 116 mear-end crosstalk per length / at 10 MHz 115 mp 116 mear-end crosstalk per length / at 10 MHz 115 mm 116 mear-end crosstalk per length / at 10 MHz 115 mm 116 mear-end crosstalk per length / at 10 MHz 115 mm 117 mear-end crosstalk per length / at 10 MHz 115 mm 116 mear-end crosstalk per length / at 10 MHz 115 mm 116 mear-end crosstalk per length / at 10 MHz 115 mm 116 mear-end crosstalk per length / at 10 MHz 115 mm 116 mear-end crosstalk per length / at 10 MHz 115 mm 116 mear-end crosstalk per length / at 10 MHz 115 mm 116 mear-end crosstalk per length / at 10 MHz 115 mm 116 mear-end crosstalk per length / at 10 MHz 115 mear-end crosstalk per length / at 10 mp/m 116 mear-end crosstalk per length / at 10 mp/m 117 mear-end crosstalk per length / at 10 mp/m 118 mear-end crosstalk per length / at 10 mp/m 118 mear-end crosstalk per length / at 10 mp/m 118 mear-end crosstalk per length / at 10 mp/m 118 mear-end crosstalk per length / at 10 mp/m 118 mear-end crosstalk per length / at 10 mp/m 118 mear-end crosstalk per length / at 10 mp/m 118 mear-end crosstalk per length / at 10 mp/m 118 mear-end crosstalk per length / at 10 mp/m 118 mear-end crosstalk per length / at 10 mp/m 118 mear-end crosstalk per length /	• at 10 MHz / maximum	0.065 dB/m
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 15 %  near-end crosstalk per length • at 1 MHz 100 MHz 10 mΩ/m loop resistance per length / 10 mΩ/m 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 Yes core diameter • of AWG22 insulated conductor 0.64 mm 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 cable sheath TPE (FR-TPE)  color • of the insulation of data wires • of cable sheath green  white/yellow/blue/orange • of cable sheath  pending radius	• at 100 MHz / maximum	0.22 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  toop resistance per length / at 10 MHz  115 mQ/m  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  ver diameter  • of AWG22 insulated conductor  outer diameter  • of inner conductor  • of the wire insulation  • of the inner sheath of the cable  • of cable sheath  of the wire insulation  • of the inner sheath of the cable  • of cable sheath  Depletifyellow/blue/orange  • of cable sheath  bending radius	impedance	
of the characteristic impedance at 1 MHz 100 MHz ear-end crosstalk per length	● at 1 MHz 100 MHz	100 Ω
near-end crosstalk per length	relative symmetrical tolerance	
• at 1 MHz 100 MHz       0.5 dB/m         transfer impedance per length / at 10 MHz       10 mΩ/m         loop resistance per length / maximum       115 mΩ/m         operating voltage       • KMS value         • KMS value       80 V         NVP value in percent       69 %         mochanical data       4         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 tinner conductor       0.64 mm         • of the wire insulation       1.5 mm         • of the wire insulation       1.5 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       FRNC         • of cable sheath       TPE (FR-TPE)         color       • of the insulation of data wires       white/yellow/blue/orange         • of cable sheath       white/yellow/blue/orange         bending radius </td <td>• of the characteristic impedance at 1 MHz 100 MHz</td> <td>15 %</td>	• of the characteristic impedance at 1 MHz 100 MHz	15 %
transfer impedance per length / at 10 MHz 10 mΩ/m  loop resistance per length / maximum 115 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 0.64 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 0.2 mm  material  • of the wire insulation polyethylene (PE)  • of the wire insulation polyethylene (PE)  • of cable sheath TPE (FR-TPE)  color  • of the insulation of data wires  • of cable sheath  bending radius	near-end crosstalk per length	
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  or of AWG22 insulated conductor  outer diameter  of inner conductor  of the wire insulation  of the wire insulation  of cable sheath  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 wire insulation  of the inner sheath of the cable  of cable sheath  TPE (FR-TPE)  color  of the inner sheath of data wires  white/yellow/blue/orange  green	● 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)  FRNC  of the inner sheath  of the inner sheath  of the cable  of cable sheath  TPE (FR-TPE)  color  of the insulation of data wires  of cable sheath  predictions of the singulation of data wires  of cable sheath  predictions of the singulation of data wires  of cable sheath  predictions of the cable  of cable sheath  polyethylene (PE)  FRNC  of cable sheath  TPE (FR-TPE)  color  white/yellow/blue/orange  green	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  Yes  core diameter  of AWG22 insulated conductor  outer diameter  of inner conductor  of the wire insulation  of the wire hasth 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)  FRNC  TPE (FR-TPE)  color  of the insulation of data wires  of cable sheath  bending radius	loop resistance per length / maximum	115 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 0.64 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  of cable sheath TPE (FR-TPE)  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-ctad 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 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)  FRNC  of cable sheath  TPE (FR-TPE)  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  other diameter  of inner conductor  of the wire insulation  of the wire sheath of the cable  of cable sheath  of the wire insulation  polyethylene (PE)  FRNC  TPE (FR-TPE)  color  of table 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  of AWG22 insulated conductor  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  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  TPE (FR-TPE)  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  of the wire insulation  polyethylene (PE)  frnC  of cable sheath  color  of the insulation of data wires  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  polyethylene (PE)  FRNC  of cable sheath  ref (FR-TPE)  color  of the insulation of data wires  of cable sheath  preen  white/yellow/blue/orange  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     of the wire insulation     of the inner sheath of the cable     of cable sheath     bending radius	type of electrical connection / FastConnect	Yes
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 inner sheath of the cable  • of cable sheath  TPE (FR-TPE)  color  • of the insulation of data wires  • of cable sheath  bending radius	core diameter	
<ul> <li>of inner conductor</li> <li>of the wire insulation</li> <li>of the inner sheath of the cable</li> <li>of cable sheath</li> <li>of cable sheath</li> <li>of the wire insulation</li> <li>of the wire insulation</li> <li>of the wire insulation</li> <li>of the inner sheath of the cable</li> <li>of cable sheath</li> <li>green</li> </ul>	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     TPE (FR-TPE)  color     of the insulation of data wires     of cable sheath     polyethylene (PE)     FRNC     TPE (FR-TPE)  color     of the insulation of data wires     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     of the wire insulation     of the inner sheath of the cable     of cable sheath     TPE (FR-TPE)  color     of the insulation of data wires     of cable sheath     bending radius      sum of the inner sheath of the cable     of the insulation of data wires     of cable sheath  bending radius	<ul> <li>of inner conductor</li> </ul>	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     TPE (FR-TPE)  color     of the insulation of data wires     of cable sheath     bending radius  6.5 mm  6.2 mm  FRNC  FRNC  FRNC  TPE (FR-TPE)  color  of the insulation of data wires     white/yellow/blue/orange green	<ul> <li>of the wire insulation</li> </ul>	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  TPE (FR-TPE)  color of the insulation of data wires of cable sheath  bending radius	<ul> <li>of the inner sheath of the cable</li> </ul>	3.9 mm
material  of the wire insulation polyethylene (PE) frace of the inner sheath of the cable frace of cable sheath TPE (FR-TPE)  color of the insulation of data wires of cable sheath green  bending radius	of cable sheath	6.5 mm
<ul> <li>of the wire insulation</li> <li>of the inner sheath of the cable</li> <li>of cable sheath</li> <li>of cable sheath</li> <li>of the insulation of data wires</li> <li>of cable sheath</li> <li>of cable sheath</li> <li>green</li> </ul>	symmetrical tolerance of the outer diameter / of cable sheath	0.2 mm
of the inner sheath of the cable     of cable sheath     TPE (FR-TPE)  color     of the insulation of data wires     of cable sheath  bending radius  FRNC  TPE (FR-TPE)  white/yellow/blue/orange green	material	
of cable sheath  Color      of the insulation of data wires     of cable sheath  bending radius  TPE (FR-TPE)  white/yellow/blue/orange green	<ul> <li>of the wire insulation</li> </ul>	polyethylene (PE)
color  • of the insulation of data wires white/yellow/blue/orange • of cable sheath green  bending radius	<ul> <li>of the inner sheath of the cable</li> </ul>	FRNC
<ul> <li>of the insulation of data wires</li> <li>of cable sheath</li> <li>bending radius</li> </ul> white/yellow/blue/orange green	of cable sheath	TPE (FR-TPE)
of cable sheath     green  bending radius	color	
bending radius	<ul> <li>of the insulation of data wires</li> </ul>	white/yellow/blue/orange
	of cable sheath	green
with single bend / minimum permissible     26 mm	bending radius	
	<ul> <li>with single bend / minimum permissible</li> </ul>	26 mm

<ul> <li>with multiple bends / minimum permissible</li> </ul>	52 mm
tensile load / maximum	150 N
weight per length	59 kg/km
ambient conditions	
ambient temperature	
during operation	-40 +75 °C
during storage	-40 +75 °C
during transport	-40 +75 °C
during installation	-20 +60 °C
• note	Electrical properties measured at 20 °C, tests according to DIN VDE 0472
fire behavior	flame resistant according to IEC 60332-1-2
class of burning behaviour / according to EN 13501-6	Eca
chemical resistance	
• to mineral oil	oil resistant according to DIN EN 50290-2-22 (VDE 0819), (7x24h/90°C), UL13 Sec.40 (96h/100°C)
• to grease	Conditional resistance
• to water	conditional resistance
radiological resistance / to UV radiation	resistant
product features, product functions, product components / ger	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, CM, PLTC, SUN RES
UL/ETL style / 600 V Rating	No
certificate of suitability	
EAC approval	Yes
CE marking	Yes
RoHS conformity	Yes
standard for structured cabling	Cat5e
Marine classification association	
<ul> <li>American Bureau of Shipping Europe Ltd. (ABS)</li> </ul>	No
<ul> <li>French marine classification society (BV)</li> </ul>	No
<ul> <li>Det Norske Veritas (DNV)</li> </ul>	No
Germanische Lloyd (GL)	No
Lloyds Register of Shipping (LRS)	No 
Nippon Kaiji Kyokai (NK)	No 
Polski Rejestr Statkow (PRS)	No
reference code	we
according to IEC 81346-2	WG
according to IEC 81346-2:2019	WGB
further information / internet links	
internet link	
to web page: selection aid TIA Selection Tool	http://www.siemens.com/tia-selection-tool
to website: Industrial communication	http://www.siemens.com/simatic-net
to website: Industry Mall	https://mall.industry.siemens.com
to website: Information and Download Center	http://www.siemens.com/industry/infocenter
to website: Selection guide for cables and connectors	https://sie.ag/2QdlxcP
to website: Image database     to website: CAy Download Manager	http://automation.siemens.com/bilddb
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to website: Industry Online Support	https://support.industry.siemens.com

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