SIEMENS

Data sheet 6XV1878-2B

product type designation

product description



IE FC TP Flexible Cable GP 4x2 (AWG 24, Type C)

Shielded TP installation cable (8-core) with flexible cores, sold by the meter, unassembled

Flexible cable for quick assembly, for occasionally moving machine parts

Industrial Ethernet FastConnect TP flexible cable GP 4x 2, TP installation CAT6A cable for connection to IE FC RJ45 plug 4x 2, AWG24, sold by the meter, delivery unit max. 1000 m minimum order quantity 20 m.

suitability for use	Flexible cable for quick assembly, for occasionally moving machine parts
cable designation	LI02YSH (ST) CY 4x2x0.6/1.05- 100 GN
electrical data	
attenuation factor per length	
at 10 MHz / maximum	0.089 dB/m
at 100 MHz / maximum	0.287 dB/m
at 250 MHz / maximum	0.466 dB/m
at 300 MHz / maximum	0.514 dB/m
at 500 MHz / maximum	0.679 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	20 mΩ/m
loop resistance per length / maximum	180 mΩ/m
insulation resistance coefficient	5000 GΩ·m
operating voltage	
RMS value	80 V
NVP value in percent	68 %
nechanical data	
number of electrical cores	8
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 AWG24 insulated conductor 	0.6 mm
outer diameter	
of inner conductor	0.6 mm
 of the wire insulation 	1.05 mm
 of the inner sheath of the cable 	6.4 mm
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 	PVC
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	24 mm
with multiple bends / minimum permissible	40 mm
tensile load / maximum	100 N
weight per length	86 kg/km
ambient conditions	
ambient temperature	
during operation	-40 +80 °C
during operation during storage	-40 +80 °C
	-40 +80 °C
during transport during installation	
during installation	-40 +80 °C
fire behavior	flame resistant according to IEC 60332-3-24 (Category C)
class of burning behaviour / according to EN 13501-6	Eca
chemical resistance	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
• 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 / g	general
product feature	
halogen-free	No
• silicon-free	Yes
wire length / for Industrial Ethernet	
with 100BaseTX	80 m
● with 1000BaseT	80 m
• for 10GBase T	70 m
standards, specifications, approvals	
	Yes; c(ETL)us, CMG
standards, specifications, approvals UL/ETL listing / 300 V Rating	Yes; c(ETL)us, CMG
standards, specifications, approvals	
standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability	No
standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability • EAC approval	No Yes
standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking	No Yes Yes
standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity	No Yes
standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity product conformity	Yes Yes Yes
standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity product conformity • ANSI/TIA-EIA 568-B.2 Cat.5e	Yes Yes Yes Yes
standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity product conformity • ANSI/TIA-EIA 568-B.2 Cat.5e • IEC 61784-5-2-CP 2/2 (Ethernet/IP)	Yes Yes Yes Yes Yes
standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity product conformity • ANSI/TIA-EIA 568-B.2 Cat.5e • IEC 61784-5-2-CP 2/2 (Ethernet/IP) standard for structured cabling	Yes Yes Yes Yes
standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity product conformity • ANSI/TIA-EIA 568-B.2 Cat.5e • IEC 61784-5-2-CP 2/2 (Ethernet/IP) standard for structured cabling Marine classification association	Yes Yes Yes Yes Yes Cat6A
standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity product conformity • ANSI/TIA-EIA 568-B.2 Cat.5e • IEC 61784-5-2-CP 2/2 (Ethernet/IP) standard for structured cabling Marine classification association • American Bureau of Shipping Europe Ltd. (ABS)	Yes Yes Yes Yes Yes Cat6A No
standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity product conformity • ANSI/TIA-EIA 568-B.2 Cat.5e • IEC 61784-5-2-CP 2/2 (Ethernet/IP) standard for structured cabling Marine classification association • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV)	Yes Yes Yes Yes Yes Cat6A No No
standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity product conformity • ANSI/TIA-EIA 568-B.2 Cat.5e • IEC 61784-5-2-CP 2/2 (Ethernet/IP) standard for structured cabling Marine classification association • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • Det Norske Veritas (DNV)	Yes Yes Yes Yes Yes Cat6A No No
standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity product conformity • ANSI/TIA-EIA 568-B.2 Cat.5e • IEC 61784-5-2-CP 2/2 (Ethernet/IP) standard for structured cabling Marine classification association • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • Det Norske Veritas (DNV) • Germanische Lloyd (GL)	No Yes Yes Yes Yes Cat6A No No No No No
standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity product conformity • ANSI/TIA-EIA 568-B.2 Cat.5e • IEC 61784-5-2-CP 2/2 (Ethernet/IP) standard for structured cabling Marine classification association • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • Det Norske Veritas (DNV) • Germanische Lloyd (GL) • Lloyds Register of Shipping (LRS)	No Yes Yes Yes Yes Cat6A No No No No No No
standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity product conformity • ANSI/TIA-EIA 568-B.2 Cat.5e • IEC 61784-5-2-CP 2/2 (Ethernet/IP) standard for structured cabling Marine classification association • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • Det Norske Veritas (DNV) • Germanische Lloyd (GL) • Lloyds Register of Shipping (LRS) • Nippon Kaiji Kyokai (NK)	No Yes Yes Yes Yes Yes Cat6A No No No No No No No No
standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity product conformity • ANSI/TIA-EIA 568-B.2 Cat.5e • IEC 61784-5-2-CP 2/2 (Ethernet/IP) standard for structured cabling Marine classification association • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • Det Norske Veritas (DNV) • Germanische Lloyd (GL) • Lloyds Register of Shipping (LRS) • Nippon Kaiji Kyokai (NK) • Polski Rejestr Statkow (PRS)	No Yes Yes Yes Yes Cat6A No No No No No No
standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity product conformity • ANSI/TIA-EIA 568-B.2 Cat.5e • IEC 61784-5-2-CP 2/2 (Ethernet/IP) standard for structured cabling Marine classification association • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • Det Norske Veritas (DNV) • Germanische Lloyd (GL) • Lloyds Register of Shipping (LRS) • Nippon Kaiji Kyokai (NK) • Polski Rejestr Statkow (PRS) reference code	No Yes Yes Yes Yes Yes Cat6A No
standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity product conformity • ANSI/TIA-EIA 568-B.2 Cat.5e • IEC 61784-5-2-CP 2/2 (Ethernet/IP) standard for structured cabling Marine classification association • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • Det Norske Veritas (DNV) • Germanische Lloyd (GL) • Lloyds Register of Shipping (LRS) • Nippon Kaiji Kyokai (NK) • Polski Rejestr Statkow (PRS) reference code • according to IEC 81346-2	Yes Yes Yes Yes Yes Cat6A No
standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity product conformity • ANSI/TIA-EIA 568-B.2 Cat.5e • IEC 61784-5-2-CP 2/2 (Ethernet/IP) standard for structured cabling Marine classification association • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • Det Norske Veritas (DNV) • Germanische Lloyd (GL) • Lloyds Register of Shipping (LRS) • Nippon Kaiji Kyokai (NK) • Polski Rejestr Statkow (PRS) reference code • according to IEC 81346-2 • according to IEC 81346-2:2019	No Yes Yes Yes Yes Yes Cat6A No
standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity product conformity • ANSI/TIA-EIA 568-B.2 Cat.5e • IEC 61784-5-2-CP 2/2 (Ethernet/IP) standard for structured cabling Marine classification association • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • Det Norske Veritas (DNV) • Germanische Lloyd (GL) • Lloyds Register of Shipping (LRS) • Nippon Kaiji Kyokai (NK) • Polski Rejestr Statkow (PRS) reference code • according to IEC 81346-2	Yes Yes Yes Yes Yes Cat6A No
standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity product conformity • ANSI/TIA-EIA 568-B.2 Cat.5e • IEC 61784-5-2-CP 2/2 (Ethernet/IP) standard for structured cabling Marine classification association • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • Det Norske Veritas (DNV) • Germanische Lloyd (GL) • Lloyds Register of Shipping (LRS) • Nippon Kaiji Kyokai (NK) • Polski Rejestr Statkow (PRS) reference code • according to IEC 81346-2 • according to IEC 81346-2:2019	Yes Yes Yes Yes Yes Cat6A No
standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity product conformity • ANSI/TIA-EIA 568-B.2 Cat.5e • IEC 61784-5-2-CP 2/2 (Ethernet/IP) standard for structured cabling Marine classification association • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • Det Norske Veritas (DNV) • Germanische Lloyd (GL) • Lloyds Register of Shipping (LRS) • Nippon Kaiji Kyokai (NK) • Polski Rejestr Statkow (PRS) reference code • according to IEC 81346-2 • according to IEC 81346-2:2019 further information / internet links	No Yes Yes Yes Yes Yes Cat6A No
standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity product conformity • ANSI/TIA-EIA 568-B.2 Cat.5e • IEC 61784-5-2-CP 2/2 (Ethernet/IP) standard for structured cabling Marine classification association • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • Det Norske Veritas (DNV) • Germanische Lloyd (GL) • Lloyds Register of Shipping (LRS) • Nippon Kaiji Kyokai (NK) • Polski Rejestr Statkow (PRS) reference code • according to IEC 81346-2 • according to IEC 81346-2:2019 further information / internet links internet link	Yes Yes Yes Yes Yes Cat6A No No No No No No No Wo
standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity product conformity • ANSI/TIA-EIA 568-B.2 Cat.5e • IEC 61784-5-2-CP 2/2 (Ethernet/IP) standard for structured cabling Marine classification association • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • Det Norske Veritas (DNV) • Germanische Lloyd (GL) • Lloyds Register of Shipping (LRS) • Nippon Kaiji Kyokai (NK) • Polski Rejestr Statkow (PRS) reference code • according to IEC 81346-2 • according to IEC 81346-2:2019 further information / internet links internet link • to web page: selection aid TIA Selection Tool	No Yes Yes Yes Yes Cat6A No No No No No No WG WG WGB
standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity product conformity • ANSI/TIA-EIA 568-B.2 Cat.5e • IEC 61784-5-2-CP 2/2 (Ethernet/IP) standard for structured cabling Marine classification association • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • Det Norske Veritas (DNV) • Germanische Lloyd (GL) • Lloyds Register of Shipping (LRS) • Nippon Kaiji Kyokai (NK) • Polski Rejestr Statkow (PRS) reference code • according to IEC 81346-2 • according to IEC 81346-2:2019 further information / internet links internet link • to web page: selection aid TIA Selection Tool • to website: Industrial communication	Yes Yes Yes Yes Yes Yes Cat6A No No No No No No No WG WG WGB http://www.siemens.com/tia-selection-tool http://www.siemens.com/simatic-net
standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability • EAC approval • CE marking • RoHS conformity product conformity • ANSI/TIA-EIA 568-B.2 Cat.5e • IEC 61784-5-2-CP 2/2 (Ethernet/IP) standard for structured cabling Marine classification association • American Bureau of Shipping Europe Ltd. (ABS) • French marine classification society (BV) • Det Norske Veritas (DNV) • Germanische Lloyd (GL) • Lloyds Register of Shipping (LRS) • Nippon Kaiji Kyokai (NK) • Polski Rejestr Statkow (PRS) reference code • according to IEC 81346-2 • according to IEC 81346-2:2019 further information / internet links internet link • to web page: selection aid TIA Selection Tool • to website: Industrial communication • to website: Industry Mall	Yes Yes Yes Yes Yes Cat6A No

• to website: Image database

• to website: CAx-Download-Manager

• to website: Industry Online Support

http://automation.siemens.com/bilddb

http://www.siemens.com/cax

https://support.industry.siemens.com

last modified:

9/12/2023