

product type designation

product description

IE FC TP Standard Cable GP 4x2 (AWG 22)

Standard bus cable (8-core), sold by the meter, unassembled

Industrial Ethernet FC TP standard cable 4x 2, TP installation cable CAT6A for connection to FC RJ45 Modular outlet, AWG22, sold by the meter, delivery unit max. 1000 m minimum order quantity 20 m.



suitability for use

Standard cable with rigid cores for fast, permanent installation

cable designation

2YH (ST) C 4X2X0.64/1.25-100 GN 4x2xAWG22

electrical data

attenuation factor per length

- at 10 MHz / maximum 0.06 dB/m
- at 100 MHz / maximum 0.19 dB/m
- at 250 MHz / maximum 0.33 dB/m

impedance

- at 1 MHz ... 100 MHz 100 Ω

relative symmetrical tolerance

- of the characteristic impedance at 1 MHz ... 100 MHz 5 %

near-end crosstalk per length

- at 1 MHz ... 250 MHz 0.383 dB/m

transfer impedance per length / at 10 MHz

10 mΩ/m

loop resistance per length / maximum

118 mΩ/m

insulation resistance coefficient

5000 GΩ·m

operating voltage

- RMS value 80 V

NVP value in percent

63 %

mechanical 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 AWG22 insulated conductor 0.64 mm

outer diameter

- of inner conductor 0.64 mm
- of the wire insulation 1.25 mm
- of the inner sheath of the cable 7.6 mm
- of cable sheath 9.6 mm

symmetrical tolerance of the outer diameter / of cable sheath

0.3 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/blue, white/orange, white/green, white/brown

<ul style="list-style-type: none"> • of cable sheath 	green
bending radius	
<ul style="list-style-type: none"> • with single bend / minimum permissible 	38 mm
<ul style="list-style-type: none"> • with multiple bends / minimum permissible 	80 mm
tensile load / maximum	180 N
weight per length	117 kg/km
ambient conditions	
ambient temperature	
<ul style="list-style-type: none"> • during operation 	-40 ... +80 °C
<ul style="list-style-type: none"> • during storage 	-40 ... +80 °C
<ul style="list-style-type: none"> • during transport 	-40 ... +80 °C
<ul style="list-style-type: none"> • during installation 	-40 ... +80 °C
fire behavior	flame resistant according to IEC 60332-1
class of burning behaviour / according to EN 13501-6	Eca
chemical resistance	
<ul style="list-style-type: none"> • to mineral oil 	oil resistant according to IEC 60811-2-1 (4 h / 70°C)
<ul style="list-style-type: none"> • to grease 	Conditional resistance
<ul style="list-style-type: none"> • to water 	conditional resistance
radiological resistance / to UV radiation	resistant
product features, product functions, product components / general	
product feature	
<ul style="list-style-type: none"> • halogen-free 	No
<ul style="list-style-type: none"> • silicon-free 	Yes
wire length / for Industrial Ethernet	
<ul style="list-style-type: none"> • with 100BaseTX 	90 m
<ul style="list-style-type: none"> • with 1000BaseT 	90 m
standards, specifications, approvals	
UL/ETL listing / 300 V Rating	Yes; c(UL)us / CMG / cRU AWM I A/B 60°C 300V FT2 / Sun Res
UL/ETL style / 600 V Rating	No
certificate of suitability	
<ul style="list-style-type: none"> • EAC approval 	Yes
<ul style="list-style-type: none"> • CE marking 	Yes
<ul style="list-style-type: none"> • RoHS conformity 	Yes
standard for structured cabling	Cat6A
Marine classification association	
<ul style="list-style-type: none"> • American Bureau of Shipping Europe Ltd. (ABS) 	No
<ul style="list-style-type: none"> • French marine classification society (BV) 	No
<ul style="list-style-type: none"> • Det Norske Veritas (DNV) 	No
<ul style="list-style-type: none"> • Germanische Lloyd (GL) 	No
<ul style="list-style-type: none"> • Lloyds Register of Shipping (LRS) 	No
<ul style="list-style-type: none"> • Nippon Kaiji Kyokai (NK) 	No
<ul style="list-style-type: none"> • Polski Rejestr Statkow (PRS) 	No
reference code	
<ul style="list-style-type: none"> • according to IEC 81346-2 	WG
<ul style="list-style-type: none"> • according to IEC 81346-2:2019 	WGB
further information / internet links	
internet link	
<ul style="list-style-type: none"> • to website: Selection guide for cables and connectors 	https://support.industry.siemens.com/cs/ww/en/view/109766358
<ul style="list-style-type: none"> • to web page: selection aid TIA Selection Tool 	https://www.siemens.com/tstcloud
<ul style="list-style-type: none"> • to website: Industrial communication 	https://www.siemens.com/simatic-net
<ul style="list-style-type: none"> • to web page: SiePortal 	https://sieportal.siemens.com/
<ul style="list-style-type: none"> • to website: Image database 	https://www.automation.siemens.com/bilddb
<ul style="list-style-type: none"> • to website: CAX-Download-Manager 	https://www.siemens.com/cax
<ul style="list-style-type: none"> • 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](#)



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[Confirmation](#)

Industrial Communication

[PROFINET](#)

last modified:

8/8/2024

product type designation

product description



IE FC TP flexible cable GP 4x2, CAT7, sold by the meter

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

IE FC TP Flexible Cable GP 4x2 FastConnect Flexible Cable GP 4x 2, TP installation CAT7 cable for connection to IE FC RJ45 plug 4x 2 and IE FC M12 plug PRO 4x2, AWG26, sold by the meter, delivery unit max. 3000 m minimum order quantity 20 m

suitability for use

Flexible cable for quick assembly, for occasionally moving machine parts

cable designation

02YSCY 4X2X0.5/1.15-100 LI PIMF GN

electrical data

attenuation factor per length

• at 10 MHz / maximum	0.088 dB/m
• at 100 MHz / maximum	0.285 dB/m
• at 300 MHz / maximum	0.513 dB/m
• at 600 MHz / maximum	0.751 dB/m

impedance

• at 1 MHz ... 100 MHz	100 Ω
------------------------	-------

near-end crosstalk per length

• at 10 MHz	0.78 dB/m
• at 100 MHz	0.724 dB/m
• at 300 MHz	0.653 dB/m
• at 600 MHz	0.608 dB/m

loop resistance per length / maximum

290 mΩ/m

operating voltage

• RMS value	100 V
• maximum	100 V

NVP value in percent

69 %

mechanical data

number of electrical cores

8

design of the shield

overlapped aluminum-laminated foil, sheathed in a protective braided shield of tinned copper wires, central shielding wire of the line must be connected to the shield contact during plug assembly (see assembly video)

type of electrical connection / FastConnect

Yes

core diameter

• of AWG26 insulated conductor	0.47 mm
--------------------------------	---------

outer diameter

• of inner conductor	0.47 mm
• of the wire insulation	1.15 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 cable sheath	PVC

color

• of the insulation of data wires	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
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<ul style="list-style-type: none"> of cable sheath 	green
bending radius	
<ul style="list-style-type: none"> with single bend / minimum permissible 	40 mm
<ul style="list-style-type: none"> with multiple bends / minimum permissible 	80 mm
tensile load / maximum	100 N
weight per length	65 kg/km

ambient conditions

ambient temperature	
<ul style="list-style-type: none"> during operation 	-30 ... +70 °C
<ul style="list-style-type: none"> during storage 	-40 ... +70 °C
<ul style="list-style-type: none"> during transport 	-40 ... +70 °C
<ul style="list-style-type: none"> during installation 	-30 ... +70 °C
ambient condition / for operation	temperature range for permanent installation -40 °C to +70 °C
fire behavior	flame resistant according to IEC 60332-1-2
class of burning behaviour / according to EN 13501-6	Eca
chemical resistance	
<ul style="list-style-type: none"> to mineral oil 	oil resistant according to EN 50290-2-22 (VDE 0819), compound type TM55 (7x24h/90 °C)
<ul style="list-style-type: none"> to grease 	Conditional resistance
<ul style="list-style-type: none"> to water 	conditional resistance
radiological resistance / to UV radiation	resistant

product features, product functions, product components / general

product feature	
<ul style="list-style-type: none"> halogen-free 	No
<ul style="list-style-type: none"> silicon-free 	Yes
wire length / for Industrial Ethernet	
<ul style="list-style-type: none"> with 100BaseTX 	90 m
<ul style="list-style-type: none"> with 1000BaseT 	90 m
<ul style="list-style-type: none"> for 10GBase T 	75 m
<ul style="list-style-type: none"> for 2.5GBaseT 	100 m
<ul style="list-style-type: none"> for 5GBaseT 	100 m

standards, specifications, approvals

UL/ETL listing / 300 V Rating	Yes; c(ETL)us 3047254 CM 75°C
UL/ETL style / 600 V Rating	Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2
certificate of suitability	
<ul style="list-style-type: none"> EAC approval 	Yes
<ul style="list-style-type: none"> CE marking 	Yes
<ul style="list-style-type: none"> RoHS conformity 	Yes
product conformity	
<ul style="list-style-type: none"> ANSI/TIA-EIA 568-B.2 Cat.5e 	Yes
<ul style="list-style-type: none"> IEC 61784-5-2-CP 2/2 (Ethernet/IP) 	Yes
standard for structured cabling	Cat7
Marine classification association	
<ul style="list-style-type: none"> American Bureau of Shipping Europe Ltd. (ABS) 	No
<ul style="list-style-type: none"> French marine classification society (BV) 	No
<ul style="list-style-type: none"> Det Norske Veritas (DNV) 	No
<ul style="list-style-type: none"> Germanische Lloyd (GL) 	No
<ul style="list-style-type: none"> Lloyds Register of Shipping (LRS) 	No
<ul style="list-style-type: none"> Nippon Kaiji Kyokai (NK) 	No
<ul style="list-style-type: none"> Polski Rejestr Statkow (PRS) 	No
reference code	
<ul style="list-style-type: none"> according to IEC 81346-2 	WG
<ul style="list-style-type: none"> according to IEC 81346-2:2019 	WGB

further information / internet links

internet link	
<ul style="list-style-type: none"> to website: Selection guide for cables and connectors 	https://support.industry.siemens.com/cs/ww/en/view/109766358
<ul style="list-style-type: none"> to web page: selection aid TIA Selection Tool 	https://www.siemens.com/tstcloud
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<ul style="list-style-type: none"> to website: Image database 	https://www.automation.siemens.com/bilddb
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security information

security information

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Approvals / Certificates

General Product Approval

[Manufacturer Declaration](#)



last modified:

8/8/2024 

product type designation

product description



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

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

Industrial Ethernet FastConnect TP standard 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. 2000 m minimum order quantity 20 m.

suitability for use

Standard cable with rigid cores for fast, permanent installation

cable designation

2YH (ST) CY 4x2x0,5/1,0 GN

electrical data

attenuation factor per length

• at 10 MHz / maximum	0.058 dB/m
• at 100 MHz / maximum	0.191 dB/m
• at 250 MHz / maximum	0.311 dB/m
• at 300 MHz / maximum	0.343 dB/m
• at 500 MHz / maximum	0.453 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

190 mΩ/m

insulation resistance coefficient

5000 GΩ·m

operating voltage

• RMS value	80 V
• maximum	80 V

NVP value in percent

67 %

mechanical 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	0.51 mm
--------------------------------	---------

outer diameter

• of inner conductor	0.51 mm
• of the wire insulation	1 mm
• of the inner sheath of the cable	6.1 mm
• of cable sheath	8 mm

symmetrical tolerance of the outer diameter / of cable sheath

0.2 mm

material

<ul style="list-style-type: none"> • of the wire insulation • of the inner sheath of the cable • of cable sheath 	<p>polyethylene (PE) FRNC PVC</p>
<p>color</p> <ul style="list-style-type: none"> • of the insulation of data wires • of cable sheath 	<p>white-blue/blue, white-orange/orange, white-green/green, white-brown/brown green</p>
<p>bending radius</p> <ul style="list-style-type: none"> • with single bend / minimum permissible • with multiple bends / minimum permissible 	<p>24 mm 40 mm</p>
<p>tensile load / maximum</p>	<p>100 N</p>
<p>weight per length</p>	<p>74.5 kg/km</p>
<p>ambient conditions</p>	
<p>ambient temperature</p> <ul style="list-style-type: none"> • during operation • during storage • during transport • during installation 	<p>-40 ... +85 °C -40 ... +80 °C -40 ... +80 °C -40 ... +80 °C</p>
<p>ambient condition / for operation</p>	<p>Temperature range for permanent installation -40 °C to +85 °C</p>
<p>fire behavior</p>	<p>flame resistant according to IEC 60332-3-24 (Category C)</p>
<p>class of burning behaviour / according to EN 13501-6</p>	<p>Eca</p>
<p>chemical resistance</p> <ul style="list-style-type: none"> • to mineral oil • to grease • to water 	<p>oil resistant according to IEC 60811-2-1 (4 h / 70°C) Conditional resistance conditional resistance</p>
<p>radiological resistance / to UV radiation</p>	<p>resistant</p>
<p>product features, product functions, product components / general</p>	
<p>product feature</p> <ul style="list-style-type: none"> • halogen-free • silicon-free 	<p>No Yes</p>
<p>wire length / for Industrial Ethernet</p> <ul style="list-style-type: none"> • with 100BaseTX • with 1000BaseT • for 10GBase T 	<p>100 m 100 m 90 m</p>
<p>standards, specifications, approvals</p>	
<p>UL/ETL listing / 300 V Rating</p>	<p>Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2</p>
<p>UL/ETL style / 600 V Rating</p>	<p>No</p>
<p>certificate of suitability</p> <ul style="list-style-type: none"> • EAC approval • CE marking • RoHS conformity 	<p>Yes Yes Yes</p>
<p>product conformity</p> <ul style="list-style-type: none"> • ANSI/TIA-EIA 568-B.2 Cat.5e • IEC 61784-5-2-CP 2/2 (Ethernet/IP) 	<p>Yes Yes</p>
<p>standard for structured cabling</p>	<p>Cat6A</p>
<p>Marine classification association</p> <ul style="list-style-type: none"> • 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) 	<p>No No No No No No No</p>
<p>reference code</p> <ul style="list-style-type: none"> • according to IEC 81346-2 • according to IEC 81346-2:2019 	<p>WG WGB</p>
<p>further information / internet links</p>	
<p>internet link</p> <ul style="list-style-type: none"> • to website: Selection guide for cables and connectors • to web page: selection aid TIA Selection Tool • to website: Industrial communication 	<p>https://support.industry.siemens.com/cs/ww/en/view/109766358 https://www.siemens.com/tstcloud https://www.siemens.com/simatic-net</p>

- to web page: SiePortal
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security information

security information

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Approvals / Certificates

General Product Approval

Test Certificates

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[Declaration of Conformity](#)



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Environment

Industrial Communication

[Confirmation](#)

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last modified:

8/8/2024

product type designation

product description



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

Shielded TP installation cable (8-wire), preferred length, unassembled

IE FastConnect TP standard GP cable 4x 2 (Type C); TP Installation cable CAT6A for connection to IE FC RJ45 Plug 4x 2; AWG24; delivery unit 1000 m.

suitability for use	Standard cable with rigid cores for fast, permanent installation
cable designation	2YH (ST) CY 4x2x0,5/1,0 GN
wire length	1000 m
electrical data	
attenuation factor per length	
• at 10 MHz / maximum	0.058 dB/m
• at 100 MHz / maximum	0.191 dB/m
• at 250 MHz / maximum	0.311 dB/m
• at 300 MHz / maximum	0.343 dB/m
• at 500 MHz / maximum	0.453 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	190 mΩ/m
insulation resistance coefficient	5000 GΩ·m
operating voltage	
• RMS value	80 V
• maximum	80 V
NVP value in percent	67 %
mechanical 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	0.51 mm
outer diameter	
• of inner conductor	0.51 mm
• of the wire insulation	1 mm
• of the inner sheath of the cable	6.1 mm
• of cable sheath	8 mm
symmetrical tolerance of the outer diameter / of cable sheath	0.2 mm

material	<ul style="list-style-type: none"> of the wire insulation of the inner sheath of the cable of cable sheath 	<p>polyethylene (PE)</p> <p>FRNC</p> <p>PVC</p>
color	<ul style="list-style-type: none"> of the insulation of data wires of cable sheath 	<p>white-blue/blue, white-orange/orange, white-green/green, white-brown/brown</p> <p>green</p>
bending radius	<ul style="list-style-type: none"> with single bend / minimum permissible with multiple bends / minimum permissible 	<p>24 mm</p> <p>40 mm</p>
tensile load / maximum		100 N
weight per length		76 kg/km
ambient conditions		
ambient temperature	<ul style="list-style-type: none"> during operation during storage during transport during installation 	<p>-40 ... +85 °C</p> <p>-40 ... +80 °C</p> <p>-40 ... +80 °C</p> <p>-40 ... +80 °C</p>
ambient condition / for operation		Temperature range for permanent installation -40 °C to +85 °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	<ul style="list-style-type: none"> to mineral oil to grease to water 	<p>oil resistant according to IEC 60811-2-1 (4 h / 70°C)</p> <p>Conditional resistance</p> <p>conditional resistance</p>
radiological resistance / to UV radiation		resistant
product features, product functions, product components / general		
product feature	<ul style="list-style-type: none"> halogen-free silicon-free 	<p>No</p> <p>Yes</p>
wire length / for Industrial Ethernet	<ul style="list-style-type: none"> with 100BaseTX with 1000BaseT for 10GBase T 	<p>100 m</p> <p>100 m</p> <p>90 m</p>
standards, specifications, approvals		
UL/ETL listing / 300 V Rating		Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2
UL/ETL style / 600 V Rating		No
certificate of suitability	<ul style="list-style-type: none"> EAC approval CE marking RoHS conformity 	<p>Yes</p> <p>Yes</p> <p>Yes</p>
product conformity	<ul style="list-style-type: none"> ANSI/TIA-EIA 568-B.2 Cat.5e IEC 61784-5-2-CP 2/2 (Ethernet/IP) 	<p>Yes</p> <p>Yes</p>
standard for structured cabling		Cat6A
Marine classification association	<ul style="list-style-type: none"> 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) 	<p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p>
reference code	<ul style="list-style-type: none"> according to IEC 81346-2 according to IEC 81346-2:2019 	<p>WG</p> <p>WGB</p>
further information / internet links		
internet link	<ul style="list-style-type: none"> to website: Selection guide for cables and connectors to web page: selection aid TIA Selection Tool 	<p>https://support.industry.siemens.com/cs/ww/en/view/109766358</p> <p>https://www.siemens.com/tstcloud</p>

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- to web page: SiePortal
- to website: Image database
- to website: CAx-Download-Manager
- to website: Industry Online Support

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- <https://sieportal.siemens.com/>
- <https://www.automation.siemens.com/bilddb>
- <https://www.siemens.com/cax>
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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

[Manufacturer Declaration](#)

last modified:

8/8/2024 

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

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 %

mechanical 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)
--------------------------	-------------------

<ul style="list-style-type: none"> of the inner sheath of the cable of cable sheath 	FRNC PVC
color <ul style="list-style-type: none"> of the insulation of data wires of cable sheath 	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown green
bending radius <ul style="list-style-type: none"> with single bend / minimum permissible with multiple bends / minimum permissible 	24 mm 40 mm
tensile load / maximum	100 N
weight per length	86 kg/km
ambient conditions	
ambient temperature <ul style="list-style-type: none"> during operation during storage during transport during installation 	-40 ... +80 °C -40 ... +80 °C -40 ... +80 °C -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 <ul style="list-style-type: none"> to mineral oil to grease to water 	oil resistant according to IEC 60811-2-1 (4 h / 70°C) Conditional resistance conditional resistance
radiological resistance / to UV radiation	resistant
product features, product functions, product components / general	
product feature <ul style="list-style-type: none"> halogen-free silicon-free 	No Yes
wire length / for Industrial Ethernet <ul style="list-style-type: none"> with 100BaseTX with 1000BaseT for 10GBase T 	80 m 80 m 70 m
standards, specifications, approvals	
UL/ETL listing / 300 V Rating	Yes; c(ETL)us, CMG
UL/ETL style / 600 V Rating	No
certificate of suitability <ul style="list-style-type: none"> EAC approval CE marking RoHS conformity 	Yes Yes Yes
product conformity <ul style="list-style-type: none"> ANSI/TIA-EIA 568-B.2 Cat.5e IEC 61784-5-2-CP 2/2 (Ethernet/IP) 	Yes Yes
standard for structured cabling	Cat6A
Marine classification association <ul style="list-style-type: none"> 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 No No No No No No
reference code <ul style="list-style-type: none"> according to IEC 81346-2 according to IEC 81346-2:2019 	WG WGB
further information / internet links	
internet link <ul style="list-style-type: none"> to website: Selection guide for cables and connectors to web page: selection aid TIA Selection Tool to website: Industrial communication to web page: SiePortal to website: Image database 	https://support.industry.siemens.com/cs/ww/en/view/109766358 https://www.siemens.com/tstcloud https://www.siemens.com/simatic-net https://sieportal.siemens.com/ https://www.automation.siemens.com/bilddb

- to website: CAx-Download-Manager
- to website: Industry Online Support

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security information

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Approvals / Certificates

General Product Approval

Test Certificates

[Manufacturer Declaration](#)



[Declaration of Conformity](#)



[Special Test Certificate](#)

Environment

Industrial Communication

[Confirmation](#)

[PROFINET](#)

last modified:

8/8/2024

product type designation

product description



IE FC TP Trailing Cable GP 4X2 (AWG 24, Type C)

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

IE FC TP Trailing Cable GP 4x2 TP installation cable CAT6A AWG 24, 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 fast installation, for installation in trailing cables

cable designation

2YH(ST)C11Y 4X2X0.6/1.04-100 LI 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

80 mΩ/m

loop resistance per length / maximum

180 mΩ/m

insulation resistance coefficient

5000 GΩ·m

operating voltage

• RMS value	80 V
• maximum	80 V

NVP value in percent

69 %

mechanical 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	0.51 mm
--------------------------------	---------

outer diameter

• of inner conductor	0.58 mm
• of the wire insulation	1.04 mm
• of the inner sheath of the cable	6.5 mm
• of cable sheath	8 mm

symmetrical tolerance of the outer diameter / of cable sheath

0.2 mm

material

<ul style="list-style-type: none"> of the wire insulation of the inner sheath of the cable of cable sheath 	<p>polyethylene (PE) FRNC PUR</p>
<p>color</p> <ul style="list-style-type: none"> of the insulation of data wires of cable sheath 	<p>white-blue/blue, white-orange/orange, white-green/green, white-brown/brown green</p>
<p>bending radius</p> <ul style="list-style-type: none"> with single bend / minimum permissible with multiple bends / minimum permissible with continuous bending 	<p>32 mm 64 mm 120 mm</p>
<p>number of bending cycles</p>	<p>1000000; For use in trailing cables, with a bending radius of 120 mm, a speed of 4 m/s, and an acceleration of 4 m/s²</p>
<p>tensile load / maximum</p>	<p>100 N</p>
<p>weight per length</p>	<p>102 kg/km</p>

ambient conditions

<p>ambient temperature</p> <ul style="list-style-type: none"> during operation during storage during transport during installation note 	<p>-30 ... +70 °C -40 ... +80 °C -40 ... +80 °C -30 ... +70 °C In fixed installation -40 °C to 80 °C</p>
<p>fire behavior</p>	<p>flame resistant according to IEC 60332-1-2</p>
<p>class of burning behaviour / according to EN 13501-6</p>	<p>Eca</p>
<p>chemical resistance</p> <ul style="list-style-type: none"> to mineral oil to grease to water 	<p>oil resistant according to IEC 60811-404 (7x24h/90°C) Conditional resistance conditional resistance</p>
<p>radiological resistance / to UV radiation</p>	<p>resistant</p>

product features, product functions, product components / general

<p>product feature</p> <ul style="list-style-type: none"> halogen-free silicon-free 	<p>Yes Yes</p>
<p>wire length / for Industrial Ethernet</p> <ul style="list-style-type: none"> with 100BaseTX with 1000BaseT for 10GBase T 	<p>100 m 100 m 80 m</p>

standards, specifications, approvals

<p>UL/ETL listing / 300 V Rating</p>	<p>Yes; c(ETL)us CMX, AWM-Style 21329</p>
<p>UL/ETL style / 600 V Rating</p>	<p>Yes</p>
<p>certificate of suitability</p> <ul style="list-style-type: none"> EAC approval CE marking RoHS conformity 	<p>Yes Yes Yes</p>
<p>product conformity</p> <ul style="list-style-type: none"> ANSI/TIA-EIA 568-B.2 Cat.5e IEC 61784-5-2-CP 2/2 (Ethernet/IP) 	<p>No Yes</p>
<p>standard for structured cabling</p>	<p>Cat6A</p>
<p>Marine classification association</p> <ul style="list-style-type: none"> 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) 	<p>No No No No No No No</p>
<p>reference code</p> <ul style="list-style-type: none"> according to IEC 81346-2 according to IEC 81346-2:2019 	<p>WG WGB</p>

further information / internet links

<p>internet link</p> <ul style="list-style-type: none"> to website: Selection guide for cables and connectors 	<p>https://support.industry.siemens.com/cs/ww/en/view/109766358</p>
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- to web page: selection aid TIA Selection Tool
- to website: Industrial communication
- to web page: SiePortal
- to website: Image database
- to website: CAx-Download-Manager
- to website: Industry Online Support

- <https://www.siemens.com/tstcloud>
- <https://www.siemens.com/simatic-net>
- <https://sieportal.siemens.com/>
- <https://www.automation.siemens.com/bilddb>
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security information

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Approvals / Certificates

General Product Approval

Environment

[Manufacturer Declaration](#)



[Declaration of Conformity](#)



[Confirmation](#)

Industrial Communication

[PROFINET](#)

last modified:

8/8/2024

product description

highly flexible bus cable (8-wire), sold by the meter, unassembled

IE FC TP torsion cable 4x2; (PROFINET type C), Cat6A; TP installation cable, 8-core, for use in highly flexible applications (torsion), sold by the meter, max. delivery unit 1000 m, minimum order quantity 20 m.



suitability for use	Continuous motion control when using robots
cable designation	2YH(ST)D11Y 4X2X0.6/1.04-100 LI VZN 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	80 mΩ/m
loop resistance per length / maximum	180 mΩ/m
insulation resistance coefficient	5000 GΩ·m
operating voltage	
• RMS value	80 V
• maximum	80 V
NVP value in percent	69 %
mechanical 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	0.51 mm
outer diameter	
• of inner conductor	0.58 mm
• of the wire insulation	1.04 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)

<ul style="list-style-type: none"> of the inner sheath of the cable of cable sheath 	FRNC PUR
color <ul style="list-style-type: none"> of the insulation of data wires of cable sheath 	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown green
bending radius <ul style="list-style-type: none"> with single bend / minimum permissible with multiple bends / minimum permissible 	32 mm 64 mm
number of torsion cycles / with torsion by $\pm 180^\circ$ on 1 m cable length	5000000
tensile load / maximum	100 N
weight per length	77 kg/km

ambient conditions

ambient temperature <ul style="list-style-type: none"> during operation during storage during transport during installation note 	-30 ... +80 °C -40 ... +80 °C -40 ... +80 °C -30 ... +80 °C In fixed installation -40 °C to 80 °C
fire behavior	flame resistant according to IEC 60332-1-2
class of burning behaviour / according to EN 13501-6	Eca
chemical resistance <ul style="list-style-type: none"> to mineral oil to grease to water 	oil resistant according to IEC 60811-404 (7x24h/90°C) Conditional resistance conditional resistance
radiological resistance / to UV radiation	resistant

product features, product functions, product components / general

product feature <ul style="list-style-type: none"> halogen-free silicon-free 	Yes; halogen-free according to IEC 61754-1 Yes
wire length / for Industrial Ethernet <ul style="list-style-type: none"> with 100BaseTX with 1000BaseT for 10GBase T 	100 m 100 m 90 m

standards, specifications, approvals

UL/ETL listing / 300 V Rating	Yes; c(ETL)us CMX, AWM-Style 21329
UL/ETL style / 600 V Rating	Yes
certificate of suitability <ul style="list-style-type: none"> EAC approval CE marking RoHS conformity 	Yes Yes Yes
product conformity <ul style="list-style-type: none"> ANSI/TIA-EIA 568-B.2 Cat.5e IEC 61784-5-2-CP 2/2 (Ethernet/IP) 	Yes Yes
standard for structured cabling	Cat6A
Marine classification association <ul style="list-style-type: none"> 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 No No No No No No
reference code <ul style="list-style-type: none"> according to IEC 81346-2 according to IEC 81346-2:2019 	WG WGB

further information / internet links

internet link <ul style="list-style-type: none"> to website: Selection guide for cables and connectors to web page: selection aid TIA Selection Tool to website: Industrial communication 	https://support.industry.siemens.com/cs/ww/en/view/109766358 https://www.siemens.com/tstcloud https://www.siemens.com/simatic-net
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- to web page: SiePortal
- to website: Image database
- to website: CAx-Download-Manager
- to website: Industry Online Support

- <https://sieportal.siemens.com/>
- <https://www.automation.siemens.com/bilddb>
- <https://www.siemens.com/cax>
- <https://support.industry.siemens.com>

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Approvals / Certificates

General Product Approval



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last modified:

8/8/2024

product description



shielded, halogen-free TP installation cable according to IEC 60754-1/2 (8-core), sold by the meter, unassembled

IE FC TP FRNC Cable GP 4x2; halogen-free TP cable for fixed routing; for connection to FC RJ45 plug 4x2; 8-core, shielded; CAT 6A, sold by the meter; delivery unit max. 4000 m, minimum order quantity 20 m .

suitability for use	Standard cable with rigid cores for fast, permanent installation
cable designation	2YH (ST)CH 4x2x0,5/1,0-100 GN
electrical data	
attenuation factor per length	
• at 10 MHz / maximum	0.058 dB/m
• at 100 MHz / maximum	0.191 dB/m
• at 250 MHz / maximum	0.311 dB/m
• at 300 MHz / maximum	0.343 dB/m
• at 500 MHz / maximum	0.453 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	80 mΩ/m
loop resistance per length / maximum	190 mΩ/m
operating voltage	
• RMS value	80 V
• maximum	80 V
NVP value in percent	67 %
mechanical 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	0.51 mm
outer diameter	
• of inner conductor	0.51 mm
• of the wire insulation	1 mm
• of the inner sheath of the cable	6.1 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

<ul style="list-style-type: none"> of cable sheath 	FRNC
color	
<ul style="list-style-type: none"> of the insulation of data wires of cable sheath 	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown green
bending radius	
<ul style="list-style-type: none"> with single bend / minimum permissible with multiple bends / minimum permissible 	40 mm 80 mm
tensile load / maximum	100 N
weight per length	86 kg/km
ambient conditions	
ambient temperature	
<ul style="list-style-type: none"> during operation during storage during transport during installation 	-50 ... +70 °C -50 ... +70 °C -50 ... +70 °C -40 ... +70 °C
fire behavior	flame resistant according to IEC 60332-1-2
class of burning behaviour / according to EN 13501-6	Cca
chemical resistance	
<ul style="list-style-type: none"> to mineral oil to grease to water 	oil resistant according to EN 50290-2-22 (VDE 0819), compound (4h/70 °C) Conditional resistance conditional resistance
radiological resistance / to UV radiation	resistant
product features, product functions, product components / general	
product feature	
<ul style="list-style-type: none"> halogen-free silicon-free low-emission according to IEC 61034-2 	Yes; halogen-free according to IEC 61754-1/2 Yes Yes
wire length / for Industrial Ethernet	
<ul style="list-style-type: none"> with 100BaseTX with 1000BaseT for 10GBase T 	100 m 100 m 90 m
standards, specifications, approvals	
UL/ETL listing / 300 V Rating	Yes; c(ETL)us 3047254 CMG 75°C
UL/ETL style / 600 V Rating	Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2
certificate of suitability	
<ul style="list-style-type: none"> EAC approval CE marking RoHS conformity 	Yes Yes Yes
product conformity	
<ul style="list-style-type: none"> ANSI/TIA-EIA 568-B.2 Cat.5e IEC 61784-5-2-CP 2/2 (Ethernet/IP) 	Yes Yes
standard for structured cabling	Cat6A
Marine classification association	
<ul style="list-style-type: none"> 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 No No No No No No
reference code	
<ul style="list-style-type: none"> according to IEC 81346-2 according to IEC 81346-2:2019 	WG WGB
further information / internet links	
internet link	
<ul style="list-style-type: none"> to website: Selection guide for cables and connectors to web page: selection aid TIA Selection Tool to website: Industrial communication to web page: SiePortal to website: Image database 	https://support.industry.siemens.com/cs/ww/en/view/109766358 https://www.siemens.com/tstcloud https://www.siemens.com/simatic-net https://sieportal.siemens.com/ https://www.automation.siemens.com/bilddb

- to website: CAx-Download-Manager
- to website: Industry Online Support

<https://www.siemens.com/cax>

<https://support.industry.siemens.com>

security information

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Approvals / Certificates

General Product Approval

[Manufacturer Declaration](#)

last modified:

8/8/2024 

product type designation

product description



IE TP Ground Cable 4x2 (AWG 24, Type C)

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

IE TP ground cable 4x2 underground cable, CAT6A, 8-core, shielded, cable for Connection to IE FC RJ45 plug 4x2, AWG24, Sold by the meter delivery unit max. 1000 m minimum order quantity 20 m.

suitability for use

Standard cable with rigid cores for fast, permanent installation outdoors and in the ground

cable designation

2YH(ST)CY2Y 4X2X0.5/1.0 BK

electrical data

attenuation factor per length

• at 10 MHz / maximum	0.058 dB/m
• at 100 MHz / maximum	0.191 dB/m
• at 250 MHz / maximum	0.311 dB/m
• at 300 MHz / maximum	0.343 dB/m
• at 500 MHz / maximum	0.453 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

190 mΩ/m

insulation resistance coefficient

5000 GΩ·m

operating voltage

• RMS value	80 V
-------------	------

NVP value in percent

67 %

mechanical 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	0.51 mm
--------------------------------	---------

outer diameter

• of inner conductor	0.51 mm
• of the wire insulation	1 mm
• of the inner sheath of the cable	6.1 mm
• of cable sheath	10.5 mm
• of cable sheath / note	IE FC standard cable GP 4x2 (diameter 8 mm) with additional PE outer cover (diameter 10.5 mm)

symmetrical tolerance of the outer diameter / of cable sheath

0.5 mm

material	
<ul style="list-style-type: none"> of the wire insulation of the inner sheath of the cable of cable sheath 	<p>polyethylene (PE)</p> <p>FRNC</p> <p>PVC</p>
color	
<ul style="list-style-type: none"> of the insulation of data wires of cable sheath 	<p>white-blue/blue, white-orange/orange, white-green/green, white-brown/brown</p> <p>green/black</p>
bending radius	
<ul style="list-style-type: none"> with single bend / minimum permissible with multiple bends / minimum permissible 	<p>42 mm</p> <p>84 mm</p>
tensile load / maximum	100 N
weight per length	107 kg/km
ambient conditions	
ambient temperature	
<ul style="list-style-type: none"> during operation during storage during transport during installation note 	<p>-40 ... +80 °C</p> <p>-40 ... +80 °C</p> <p>-40 ... +80 °C</p> <p>-40 ... +80 °C</p> <p>In fixed installation -40 °C to 85 °C</p>
class of burning behaviour / according to EN 13501-6	Fca
chemical resistance	
<ul style="list-style-type: none"> to water 	Resistant
radiological resistance / to UV radiation	resistant
product features, product functions, product components / general	
product feature	
<ul style="list-style-type: none"> halogen-free silicon-free 	<p>No</p> <p>Yes</p>
wire length / for Industrial Ethernet	
<ul style="list-style-type: none"> with 100BaseTX with 1000BaseT for 10GBase T 	<p>90 m</p> <p>90 m</p> <p>70 m</p>
standards, specifications, approvals	
UL/ETL listing / 300 V Rating	No
UL/ETL style / 600 V Rating	No
certificate of suitability	
<ul style="list-style-type: none"> EAC approval CE marking RoHS conformity 	<p>Yes</p> <p>Yes</p> <p>Yes</p>
product conformity	
<ul style="list-style-type: none"> ANSI/TIA-EIA 568-B.2 Cat.5e IEC 61784-5-2-CP 2/2 (Ethernet/IP) 	<p>Yes</p> <p>Yes</p>
standard for structured cabling	Cat6A
Marine classification association	
<ul style="list-style-type: none"> 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) 	<p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p>
reference code	
<ul style="list-style-type: none"> according to IEC 81346-2 according to IEC 81346-2:2019 	<p>WG</p> <p>WGB</p>
further information / internet links	
internet link	
<ul style="list-style-type: none"> to website: Selection guide for cables and connectors to web page: selection aid TIA Selection Tool to website: Industrial communication to web page: SiePortal to website: Image database 	<p>https://support.industry.siemens.com/cs/ww/en/view/109766358</p> <p>https://www.siemens.com/tstcloud</p> <p>https://www.siemens.com/simatic-net</p> <p>https://sieportal.siemens.com/</p> <p>https://www.automation.siemens.com/bilddb</p>

- to website: CAx-Download-Manager
- to website: Industry Online Support

<https://www.siemens.com/cax>

<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

Industrial Communication

[Manufacturer Declaration](#)



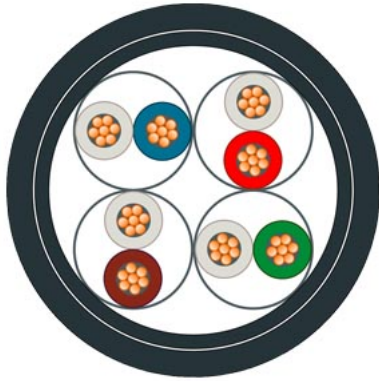
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product type designation

product description



IE TP Train Cable 4x2 (AWG24/7)

Flexible, shielded bus cable with tinned copper leads (8-core) for rail applications, sold by the meter, unassembled

IE TP TRAIN Cable 4x 2; CAT7 TP installation cable for Rail applications for connection to FC M12 Plug PRO 4x 2, Railway-certified, 8-core, shielded, sold by the meter, max. delivery unit 1000 m, minimum order quantity 20 m.

suitability for use

For laying in rail vehicles and buses

electrical data

attenuation factor per length	
<ul style="list-style-type: none"> at 10 MHz / maximum at 100 MHz / maximum at 250 MHz / maximum 	<p>0.063 dB/m</p> <p>0.207 dB/m</p> <p>0.343 dB/m</p>
impedance	
<ul style="list-style-type: none"> at 1 MHz ... 100 MHz 	100 Ω
coupling loss / at 30 MHz ... 100 MHz / minimum	60 dB
transfer impedance per length / at 10 MHz	5 mΩ/m
loop resistance per length / maximum	124 mΩ/m
insulation resistance coefficient	5000 GΩ·m
operating voltage	
<ul style="list-style-type: none"> RMS value 	125 V

mechanical data

number of electrical cores	8
design of the shield	Overlapped aluminum-clad foil, sheathed in a protective braided shield of tinned copper wires with additional pair shielding
type of electrical connection / FastConnect	No
core diameter	
<ul style="list-style-type: none"> of AWG24 insulated conductor 	0.51 mm
outer diameter	
<ul style="list-style-type: none"> of the wire insulation of cable sheath 	<p>1.45 mm</p> <p>8.1 mm</p>
symmetrical tolerance of the outer diameter / of cable sheath	0.4 mm
material	
<ul style="list-style-type: none"> of the wire insulation of cable sheath 	<p>polyethylene (PE)</p> <p>Elastomer meshed electron beam</p>
color	
<ul style="list-style-type: none"> of the insulation of data wires of cable sheath 	<p>white/blue, white/green, white/brown, white/orange</p> <p>Black</p>
bending radius	
<ul style="list-style-type: none"> with single bend / minimum permissible with multiple bends / minimum permissible 	<p>53 mm</p> <p>53 mm</p>
tensile load / maximum	60 N
weight per length	79 kg/km

ambient conditions

ambient temperature

<ul style="list-style-type: none"> during operation during storage during transport during installation 	<p>-40 ... +80 °C</p> <p>-40 ... +80 °C</p> <p>-40 ... +80 °C</p> <p>-20 ... +60 °C</p>
fire behavior	BS 6853, DIN5510-2 Brandschutzstufe 1-4, prEN 45545-2 Hazard Level HL 1-HL 3, EN 50306-4, NF F 16-101, NFPA130
chemical resistance <ul style="list-style-type: none"> to mineral oil to grease to water 	EN 50306-4 (72h/100 °C, IRM 902, 168h/70 °C, IRM 903) Conditional resistance conditional resistance
radiological resistance / to UV radiation	resistant
product features, product functions, product components / general	
product feature	
<ul style="list-style-type: none"> halogen-free silicon-free 	<p>Yes</p> <p>Yes</p>
wire length / for Industrial Ethernet	
<ul style="list-style-type: none"> with 100BaseTX with 1000BaseT 	<p>100 m</p> <p>100 m</p>
standards, specifications, approvals	
UL/ETL listing / 300 V Rating	No
UL/ETL style / 600 V Rating	No
certificate of suitability	
<ul style="list-style-type: none"> CE marking RoHS conformity 	<p>Yes</p> <p>Yes</p>
standard for structured cabling	Cat7
Marine classification association	
<ul style="list-style-type: none"> 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) 	<p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p>
reference code	
<ul style="list-style-type: none"> according to IEC 81346-2 according to IEC 81346-2:2019 	<p>WG</p> <p>WGB</p>
further information / internet links	
internet link	
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security information	
security information	<p>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)</p>



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