

product type designation

product description



IE FC TP FRNC Cable GP 2x2 (Type B)

Flexible halogen-free bus cable acc. to IEC 60754-1/2 (4-core), sold by the meter, unassembled

Industrial Ethernet FC TP FRNC GP cable TP installation cable for connection to FC outlet RJ45, 4-core, shielded, Cat5e, sold by the meter, delivery unit max. 4000 m, minimum order quantity 20 m .

suitability for use

For occasionally moved machine parts

cable designation

L-9YH (ST) CH 2x2x0,34/1,5-100 GN VZN FRNC SF/UTP

electrical data

attenuation factor per length

- at 10 MHz / maximum
- at 100 MHz / maximum

0.06 dB/m
0.22 dB/m

impedance

- at 1 MHz ... 100 MHz

100 Ω

relative symmetrical tolerance

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

15 %

near-end crosstalk per length

- at 1 MHz ... 100 MHz

0.5 dB/m

transfer impedance per length / at 10 MHz

10 mΩ/m

loop resistance per length / maximum

120 mΩ/m

operating voltage

- RMS value

80 V

NVP value in percent

69 %

mechanical data

number of electrical cores

4

design of the shield

Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires

type of electrical connection / FastConnect

Yes

core diameter

- of AWG22 insulated conductor

0.75 mm

outer diameter

- of inner conductor
- of the wire insulation
- of the inner sheath of the cable
- of cable sheath

0.75 mm
1.5 mm
3.9 mm
6.5 mm

symmetrical tolerance of the outer diameter / of cable sheath

0.2 mm

material

- of the wire insulation
- of the inner sheath of the cable
- of cable sheath

PP
FRNC
FRNC

color

- of the insulation of data wires
- of cable sheath

white/yellow/blue/orange
green

bending radius

<ul style="list-style-type: none"> • with single bend / minimum permissible 	39 mm
<ul style="list-style-type: none"> • with multiple bends / minimum permissible 	97.5 mm
tensile load / maximum	150 N
weight per length	68 kg/km
ambient conditions	
ambient temperature	
<ul style="list-style-type: none"> • during operation 	-25 ... +70 °C
<ul style="list-style-type: none"> • during storage 	-40 ... +75 °C
<ul style="list-style-type: none"> • during transport 	-40 ... +75 °C
<ul style="list-style-type: none"> • during installation 	0 ... 50 °C
<ul style="list-style-type: none"> • note 	Electrical properties measured at 20 °C, tests according to DIN VDE 0472
fire behavior	flame resistant according to IEC 60332-3-22 (Category A/F), IEC 61034-2
class of burning behaviour / according to EN 13501-6	Cca S1a d0 a1
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 	Yes; halogen-free according to IEC 60754-1/2
<ul style="list-style-type: none"> • silicon-free 	Yes
<ul style="list-style-type: none"> • low-emission according to IEC 61034-2 	Yes
wire length / for Industrial Ethernet	
<ul style="list-style-type: none"> • with 100BaseTX 	100 m
standards, specifications, approvals	
UL/ETL listing / 300 V Rating	Yes; c(ETL)us, CMG / PLTC / Sun Res / OIL RES
UL/ETL style / 600 V Rating	Yes; cRUus AWM 22375 AWM I A/B 60°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
standard for structured cabling	Cat5e
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: Image database 	https://www.automation.siemens.com/bilddb
<ul style="list-style-type: none"> • to website: Industry Online Support 	https://support.industry.siemens.com
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</p>

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Approvals / Certificates

General Product Approval	Environment	Industrial Commu- nication
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