

product description



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

Industrial Ethernet FC TP Marine Cable, TP installation cable for connection to FC outlet RJ45, shipbuilding certified, 4-core, shielded, Cat5e, sold by the meter, delivery unit max. 1000 m, minimum order quantity 20 m.

suitability for use

For marine and offshore use

cable designation

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

wire length

sold by the meter

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  $\Omega$

relative symmetrical tolerance

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

5 %

near-end crosstalk per length

- at 1 MHz ... 100 MHz

0.5 dB/m

transfer impedance per length / at 10 MHz

10 m $\Omega$ /m

loop resistance per length / maximum

120 m $\Omega$ /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"> <li>• with single bend / minimum permissible</li> </ul>                | 39 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <ul style="list-style-type: none"> <li>• with multiple bends / minimum permissible</li> </ul>             | 97.5 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| tensile load / maximum                                                                                    | 150 N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| weight per length                                                                                         | 68 kg/km                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>ambient conditions</b>                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| ambient temperature                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• during operation</li> </ul>                                      | -25 ... +70 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• during storage</li> </ul>                                        | -40 ... +85 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• during transport</li> </ul>                                      | -40 ... +85 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• during installation</li> </ul>                                   | 0 ... 50 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <ul style="list-style-type: none"> <li>• note</li> </ul>                                                  | Electrical properties measured at 20 °C, tests according to DIN VDE 0472                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| ambient condition / for operation                                                                         | Temperature range for permanent installation -40 °C to 85 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| fire behavior                                                                                             | flame resistant according to IEC 60332-3-22 (Category A/F), smoke density according to IEC 61034-1/2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| class of burning behaviour / according to EN 13501-6                                                      | Eca                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| chemical resistance                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• to mineral oil</li> </ul>                                        | conditional resistance, IEC 60811-2-1 (4 hours / 70 °C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <ul style="list-style-type: none"> <li>• to grease</li> </ul>                                             | Conditional resistance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <ul style="list-style-type: none"> <li>• to water</li> </ul>                                              | conditional resistance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| radiological resistance / to UV radiation                                                                 | resistant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>product features, product functions, product components / general</b>                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| product feature                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• halogen-free</li> </ul>                                          | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>• silicon-free</li> </ul>                                          | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| wire length / for Industrial Ethernet                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• with 100BaseTX</li> </ul>                                        | 85 m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>standards, specifications, approvals</b>                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| UL/ETL listing / 300 V Rating                                                                             | Yes; cULus / CMG / PLTC / Sun Res                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| UL/ETL style / 600 V Rating                                                                               | No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| certificate of suitability                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• EAC approval</li> </ul>                                          | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>• CE marking</li> </ul>                                            | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>• RoHS conformity</li> </ul>                                       | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| standard for structured cabling                                                                           | Cat5e                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Marine classification association                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• American Bureau of Shipping Europe Ltd. (ABS)</li> </ul>         | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>• French marine classification society (BV)</li> </ul>             | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>• Det Norske Veritas (DNV)</li> </ul>                              | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>• Germanische Lloyd (GL)</li> </ul>                                | No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <ul style="list-style-type: none"> <li>• Lloyds Register of Shipping (LRS)</li> </ul>                     | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>• Nippon Kaiji Kyokai (NK)</li> </ul>                              | No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <ul style="list-style-type: none"> <li>• Polski Rejestr Statkow (PRS)</li> </ul>                          | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>• Royal Institution of Naval Architects (RINA)</li> </ul>          | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| reference code                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• according to IEC 81346-2</li> </ul>                              | WG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <ul style="list-style-type: none"> <li>• according to IEC 81346-2:2019</li> </ul>                         | WGB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>further information / internet links</b>                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| internet link                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• to website: Selection guide for cables and connectors</li> </ul> | <a href="https://support.industry.siemens.com/cs/ww/en/view/109766358">https://support.industry.siemens.com/cs/ww/en/view/109766358</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <ul style="list-style-type: none"> <li>• to web page: selection aid TIA Selection Tool</li> </ul>         | <a href="https://www.siemens.com/tstcloud">https://www.siemens.com/tstcloud</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• to web page: SiePortal</li> </ul>                                | <a href="https://sieportal.siemens.com/">https://sieportal.siemens.com/</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <ul style="list-style-type: none"> <li>• to website: Image database</li> </ul>                            | <a href="https://www.automation.siemens.com/bilddb">https://www.automation.siemens.com/bilddb</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <ul style="list-style-type: none"> <li>• to website: CAx-Download-Manager</li> </ul>                      | <a href="https://www.siemens.com/cax">https://www.siemens.com/cax</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <ul style="list-style-type: none"> <li>• to website: Industry Online Support</li> </ul>                   | <a href="https://support.industry.siemens.com">https://support.industry.siemens.com</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>security information</b>                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 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 |

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Approvals / Certificates

| General Product Approval | Test Certificates |
|--------------------------|-------------------|
|--------------------------|-------------------|

[Manufacturer Declaration](#)

  
EG-Konf.

[Declaration of Conformity](#)



  
CCC

[Special Test Certificate](#)

Maritime application

  
ABS

  
BUREAU  
VERITAS

  
DNV

  
LRS

  
PRS

  
RINA

| Environment | Industrial Communication |
|-------------|--------------------------|
|-------------|--------------------------|

[Confirmation](#)

[Environmental Confirmations](#)

[PROFINET](#)

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