#### Data sheet

#### 6XV1870-2E

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  |   |
| mechanical data<br>number of electrical cores  | 8   |
|  | 8<br>Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated<br>copper wires  |
| number of electrical cores   | Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated   |
| number of electrical cores<br>design of the shield   | Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires  |
| number of electrical cores<br>design of the shield<br>type of electrical connection / FastConnect  | Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires  |
| number of electrical cores<br>design of the shield<br>type of electrical connection / FastConnect<br>core diameter   | Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires Yes  |
| number of electrical cores<br>design of the shield<br>type of electrical connection / FastConnect<br>core diameter<br>• of AWG22 insulated conductor   | Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated copper wires Yes  |
| number of electrical cores<br>design of the shield<br>type of electrical connection / FastConnect<br>core diameter<br>• of AWG22 insulated conductor<br>outer diameter   | Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated<br>copper wires<br>Yes<br>0.64 mm   |
| number of electrical cores<br>design of the shield<br>type of electrical connection / FastConnect<br>core diameter<br>• of AWG22 insulated conductor<br>outer diameter<br>• of inner conductor   | Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated<br>copper wires<br>Yes<br>0.64 mm<br>0.64 mm  |
| number of electrical cores<br>design of the shield<br>type of electrical connection / FastConnect<br>core diameter<br>• of AWG22 insulated conductor<br>outer diameter<br>• of inner conductor<br>• of the wire insulation   | Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated<br>copper wires<br>Yes<br>0.64 mm<br>0.64 mm<br>1.25 mm   |
| number of electrical cores<br>design of the shield<br>type of electrical connection / FastConnect<br>core diameter<br>• of AWG22 insulated conductor<br>outer diameter<br>• of inner conductor<br>• of the wire insulation<br>• of the inner sheath of the cable   | Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated<br>copper wires<br>Yes<br>0.64 mm<br>0.64 mm<br>1.25 mm<br>7.6 mm   |
| number of electrical cores<br>design of the shield<br>type of electrical connection / FastConnect<br>core diameter<br>• of AWG22 insulated conductor<br>outer diameter<br>• of inner conductor<br>• of the wire insulation<br>• of the inner sheath of the cable<br>• of cable sheath  | Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated<br>copper wires<br>Yes<br>0.64 mm<br>0.64 mm<br>1.25 mm<br>7.6 mm<br>9.6 mm                                       |
| number of electrical cores<br>design of the shield<br>type of electrical connection / FastConnect<br>core diameter<br>• of AWG22 insulated conductor<br>outer diameter<br>• of inner conductor<br>• of the wire insulation<br>• of the inner sheath of the cable<br>• of cable sheath<br>symmetrical tolerance of the outer diameter / of cable sheath   | Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated<br>copper wires<br>Yes<br>0.64 mm<br>0.64 mm<br>1.25 mm<br>7.6 mm<br>9.6 mm                                       |
| number of electrical cores<br>design of the shield<br>type of electrical connection / FastConnect<br>core diameter<br>• of AWG22 insulated conductor<br>outer diameter<br>• of inner conductor<br>• of the wire insulation<br>• of the inner sheath of the cable<br>• of cable sheath<br>symmetrical tolerance of the outer diameter / of cable sheath<br>material   | Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated<br>copper wires<br>Yes<br>0.64 mm<br>0.64 mm<br>1.25 mm<br>7.6 mm<br>9.6 mm<br>0.3 mm                             |
| number of electrical cores<br>design of the shield<br>type of electrical connection / FastConnect<br>core diameter<br>• of AWG22 insulated conductor<br>outer diameter<br>• of inner conductor<br>• of the wire insulation<br>• of the inner sheath of the cable<br>• of cable sheath<br>symmetrical tolerance of the outer diameter / of cable sheath<br>material<br>• of the wire insulation   | Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated<br>copper wires<br>Yes<br>0.64 mm<br>0.64 mm<br>1.25 mm<br>7.6 mm<br>9.6 mm<br>0.3 mm<br>polyethylene (PE)        |
| number of electrical cores<br>design of the shield<br>type of electrical connection / FastConnect<br>core diameter<br>• of AWG22 insulated conductor<br>outer diameter<br>• of inner conductor<br>• of the wire insulation<br>• of the wire insulation<br>• of the inner sheath of the cable<br>• of cable sheath<br>symmetrical tolerance of the outer diameter / of cable sheath<br>material<br>• of the wire insulation<br>• of the wire insulation<br>• of the inner sheath of the cable | Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated<br>copper wires<br>Yes<br>0.64 mm<br>0.64 mm<br>1.25 mm<br>7.6 mm<br>9.6 mm<br>0.3 mm<br>polyethylene (PE)<br>PVC |

| of cable sheath  | green  |
|--|--|
| bending radius   | 9.001  |
| with single bend / minimum permissible   | 38 mm  |
| with single bends / minimum permissible  | 80 mm  |
| tensile load / maximum   | 180 N  |
| weight per length  | 117 kg/km  |
| ambient conditions   |  |
| ambient temperature  |  |
| during operation   | -40 +80 °C   |
| during storage   | -40 +80 °C   |
| during transport   | -40 +80 °C   |
| 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  |  |
| • to mineral oil   | oil resistant according to IEC 60811-2-1 (4 h / 70°C)  |
| • to grease  | Conditional resistance   |
| • to water   | conditional resistance   |
| radiological resistance / to UV radiation  | resistant  |
| product features, product functions, product components / gene   | eral   |
| product feature  |  |
| halogen-free   | No   |
| silicon-free   | Yes  |
| wire length / for Industrial Ethernet  |  |
| <ul> <li>with 100BaseTX</li> </ul>   | 90 m   |
| ● 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   |  |
| EAC approval   | Yes  |
| • CE marking   | Yes  |
| RoHS conformity  | Yes  |
| standard for structured cabling  | Cat6A  |
| Marine classification association  |  |
| American Bureau of Shipping Europe Ltd. (ABS)  | No   |
| French marine classification society (BV)     Dat Naraka Variasa (DNV)   | No   |
| Det Norske Veritas (DNV)   | No   |
| Germanische Lloyd (GL)   | No   |
| Lloyds Register of Shipping (LRS)  | No   |
| Nippon Kaiji Kyokai (NK)     Dalaki Palasti Statkov (DDS)  | No   |
| Polski Rejestr Statkow (PRS)   | No   |
| reference code   | WG   |
| according to IEC 81346-2   | WG<br>WGB  |
| according to IEC 81346-2:2019 further information / internet links   |  |
| internet link  |  |
| <ul> <li>to website: Selection guide for cables and connectors</li> </ul>  | https://support.industry.siemens.com/cs/ww/en/view/109766358   |
| <ul> <li>to website. Selection guide for cables and connectors</li> <li>to web page: selection aid TIA Selection Tool</li> </ul> | https://www.siemens.com/tstcloud   |
| to web page: selection and TIA Selection 1001     to website: Industrial communication   | https://www.siemens.com/sinctic.net  |
| <ul> <li>to website. Industrial communication</li> <li>to web page: SiePortal</li> </ul>   | https://sieportal.siemens.com/   |
| to web page. See onal     to website: Image database   | https://www.automation.siemens.com/bilddb  |
| <ul> <li>to website: Image database</li> <li>to website: CAx-Download-Manager</li> </ul>   | https://www.automation.stemens.com/bilddb  |
| to website: Industry Online Support  | https://support.industry.siemens.com   |
| security information   |  |
| security information   | Siemens provides products and solutions with industrial cybersecurity functions  |
|  | stemens provides products and solutions with industrial cybersecurity functions<br>that support the secure operation of plants, systems, machines and networks.<br>In order to protect plants, systems, machines and networks against cyber<br>threats, it is necessary to implement – and continuously maintain – a holistic,<br>state-of-the-art industrial cybersecurity concept. Siemens' products and<br>solutions constitute one element of such a concept. Customers are responsible<br>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)



last modified:

#### Data sheet

#### 6XV1876-2B

| product type designation  | IE FC TP flexible cable GP 4x2, CAT7, sold by the meter  |  |  |
|---|--|--|--|
| product description   | 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   |  |  |
| lectrical 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 %   |  |  |
| nechanical data   |  |  |  |
| number of electrical cores  | 8  |  |  |
| design of the shield  | overlapped aluminum-laminated foil, sheathed in a protective braided shield of<br>tinned copper wires, central shielding wire of the line must be connected to the<br>shield contact during plug assembly (see assembly video)                   |  |  |
| type of electrical connection / FastConnect                                       | Yes  |  |  |
| core diameter   |  |  |  |
| <ul> <li>of AWG26 insulated conductor</li> </ul>                                  | 0.47 mm  |  |  |
| outer diameter  |  |  |  |
| of inner conductor  | 0.47 mm  |  |  |
|   | 1.15 mm  |  |  |
| <ul> <li>of the wire insulation</li> </ul>  |  |  |  |
| <ul><li> of the wire insulation</li><li> of cable sheath</li></ul>                | 8 mm   |  |  |
|   | 8 mm<br>0.2 mm   |  |  |
| • of cable sheath   |  |  |  |
| of cable sheath     symmetrical tolerance of the outer diameter / of cable sheath |  |  |  |

of the insulation of data wires

| of cable sheath   | dreen   |
|---|---|
|   | green   |
| bending radius  | 40 mm   |
| with single bend / minimum permissible  | 40 mm   |
| with multiple bends / minimum permissible   | 80 mm   |
| tensile load / maximum  | 100 N   |
| weight per length   | 65 kg/km  |
| ambient conditions  |   |
| ambient temperature   |   |
| <ul> <li>during operation</li> </ul>  | -30 +70 °C  |
| during storage  | -40 +70 °C  |
| <ul> <li>during transport</li> </ul>  | -40 +70 °C  |
| 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   |   |
| • to mineral oil  | oil resistant according to EN 50290-2-22 (VDE 0819), compound type TM55 (7x24h/90 $^\circ\text{C})$   |
| • to grease   | Conditional resistance  |
| to water  | conditional resistance  |
| radiological resistance / to UV radiation   | resistant   |
| product features, product functions, product components / gen   | eral  |
| product feature   |   |
| halogen-free  | No  |
| <ul> <li>silicon-free</li> </ul>  | Yes   |
| wire length / for Industrial Ethernet   |   |
| • with 100BaseTX  | 90 m  |
| ● with 1000BaseT  | 90 m  |
| <ul> <li>for 10GBase T</li> </ul>   | 75 m  |
| • for 2.5GBaseT   | 100 m   |
| • for 5GBaseT   | 100 m   |
|   |   |
| standards, specifications, approvals  |   |
| standards, specifications, approvals<br>UL/ETL listing / 300 V Rating   | Yes: c(ETL)us 3047254 CM 75°C   |
| UL/ETL listing / 300 V Rating   | Yes; c(ETL)us 3047254 CM 75°C<br>Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2   |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating  | Yes; c(ETL)us 3047254 CM 75°C<br>Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2   |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability  | Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2  |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>• EAC approval  | Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2<br>Yes   |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>• EAC approval<br>• CE marking  | Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2<br>Yes<br>Yes  |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>• EAC approval<br>• CE marking<br>• RoHS conformity   | Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2<br>Yes   |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>• EAC approval<br>• CE marking<br>• RoHS conformity<br>product conformity   | Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2<br>Yes<br>Yes<br>Yes   |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>• EAC approval<br>• CE marking<br>• RoHS conformity<br>product conformity<br>• ANSI/TIA-EIA 568-B.2 Cat.5e  | Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2<br>Yes<br>Yes<br>Yes   |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>• EAC approval<br>• CE marking<br>• RoHS conformity<br>product conformity<br>• ANSI/TIA-EIA 568-B.2 Cat.5e<br>• IEC 61784-5-2-CP 2/2 (Ethernet/IP)  | Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes  |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>• EAC approval<br>• CE marking<br>• RoHS conformity<br>product conformity<br>• ANSI/TIA-EIA 568-B.2 Cat.5e<br>• IEC 61784-5-2-CP 2/2 (Ethernet/IP)<br>standard for structured cabling   | Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2<br>Yes<br>Yes<br>Yes   |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>• EAC approval<br>• CE marking<br>• RoHS conformity<br>product conformity<br>• ANSI/TIA-EIA 568-B.2 Cat.5e<br>• IEC 61784-5-2-CP 2/2 (Ethernet/IP)<br>standard for structured cabling<br>Marine classification association  | Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat7   |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>• EAC approval<br>• CE marking<br>• RoHS conformity<br>product conformity<br>• ANSI/TIA-EIA 568-B.2 Cat.5e<br>• IEC 61784-5-2-CP 2/2 (Ethernet/IP)<br>standard for structured cabling<br>Marine classification association<br>• American Bureau of Shipping Europe Ltd. (ABS)   | Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat7  |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>• EAC approval<br>• CE marking<br>• RoHS conformity<br>product conformity<br>• ANSI/TIA-EIA 568-B.2 Cat.5e<br>• IEC 61784-5-2-CP 2/2 (Ethernet/IP)<br>standard for structured cabling<br>Marine classification association<br>• American Bureau of Shipping Europe Ltd. (ABS)<br>• French marine classification society (BV)  | Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat7<br>No<br>No  |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>• EAC approval<br>• CE marking<br>• RoHS conformity<br>product conformity<br>• ANSI/TIA-EIA 568-B.2 Cat.5e<br>• IEC 61784-5-2-CP 2/2 (Ethernet/IP)<br>standard for structured cabling<br>Marine classification association<br>• American Bureau of Shipping Europe Ltd. (ABS)<br>• French marine classification society (BV)<br>• Det Norske Veritas (DNV)  | Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat7<br>No<br>No<br>No  |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>• EAC approval<br>• CE marking<br>• RoHS conformity<br>product conformity<br>• ANSI/TIA-EIA 568-B.2 Cat.5e<br>• IEC 61784-5-2-CP 2/2 (Ethernet/IP)<br>standard for structured cabling<br>Marine classification association<br>• American Bureau of Shipping Europe Ltd. (ABS)<br>• French marine classification society (BV)<br>• Det Norske Veritas (DNV)<br>• Germanische Lloyd (GL)  | Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat7<br>No<br>No<br>No<br>No  |
| UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)  | Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat7<br>No<br>No<br>No<br>No<br>No  |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>EAC approval<br>CE marking<br>RoHS conformity<br>ANSI/TIA-EIA 568-B.2 Cat.5e<br>IEC 61784-5-2-CP 2/2 (Ethernet/IP)<br>standard for structured cabling<br>Marine classification association<br>American Bureau of Shipping Europe Ltd. (ABS)<br>French marine classification society (BV)<br>Det Norske Veritas (DNV)<br>Germanische Lloyd (GL)<br>Lloyds Register of Shipping (LRS)<br>Nippon Kaiji Kyokai (NK)   | Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat7<br>No<br>No<br>No<br>No<br>No<br>No  |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>EAC approval<br>CE marking<br>RoHS conformity<br>product conformity<br>ANSI/TIA-EIA 568-B.2 Cat.5e<br>IEC 61784-5-2-CP 2/2 (Ethernet/IP)<br>standard for structured cabling<br>Marine classification association<br>American Bureau of Shipping Europe Ltd. (ABS)<br>French marine classification society (BV)<br>Det Norske Veritas (DNV)<br>Germanische Lloyd (GL)<br>Lloyds Register of Shipping (LRS)<br>Nippon Kaiji Kyokai (NK)<br>Polski Rejestr Statkow (PRS)   | Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat7<br>No<br>No<br>No<br>No<br>No  |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>EAC approval<br>CE marking<br>RoHS conformity<br>product conformity<br>ANSI/TIA-EIA 568-B.2 Cat.5e<br>IEC 61784-5-2-CP 2/2 (Ethernet/IP)<br>standard for structured cabling<br>Marine classification association<br>American Bureau of Shipping Europe Ltd. (ABS)<br>French marine classification society (BV)<br>Det Norske Veritas (DNV)<br>Germanische Lloyd (GL)<br>Lloyds Register of Shipping (LRS)<br>Nippon Kaiji Kyokai (NK)<br>Polski Rejestr Statkow (PRS)<br>reference code   | Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat7<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No  |
| UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2  | Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat7<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No  |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>EAC approval<br>CE marking<br>RoHS conformity<br>Product conformity<br>ANSI/TIA-EIA 568-B.2 Cat.5e<br>IEC 61784-5-2-CP 2/2 (Ethernet/IP)<br>standard for structured cabling<br>Marine classification association<br>American Bureau of Shipping Europe Ltd. (ABS)<br>French marine classification society (BV)<br>Det Norske Veritas (DNV)<br>Germanische Lloyd (GL)<br>Lloyds Register of Shipping (LRS)<br>Nippon Kaiji Kyokai (NK)<br>Polski Rejestr Statkow (PRS)<br>reference code<br>according to IEC 81346-2<br>according to IEC 81346-2:2019  | Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat7<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No  |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>EAC approval<br>CE marking<br>RoHS conformity<br>roduct conformity<br>ANSI/TIA-EIA 568-B.2 Cat.5e<br>IEC 61784-5-2-CP 2/2 (Ethernet/IP)<br>standard for structured cabling<br>Marine classification association<br>American Bureau of Shipping Europe Ltd. (ABS)<br>French marine classification society (BV)<br>Det Norske Veritas (DNV)<br>Germanische Lloyd (GL)<br>Lloyds Register of Shipping (LRS)<br>Nippon Kaiji Kyokai (NK)<br>Polski Rejestr Statkow (PRS)<br>reference code<br>according to IEC 81346-2<br>according to IEC 81346-2:2019<br>further information / internet links   | Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat7<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No  |
| UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2         • according to IEC 81346-2 <td>Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2         Yes         Cat7         No         WG         WGB</td> | Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2         Yes         Cat7         No         WG         WGB  |
| UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2         • according to IEC 81346-2         • according to IEC 81346-2         • to website: Selection guide for cables and connectors  | Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2         Yes         Cat7         No         WG         WGB   |
| UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2         • to website: Selection guide for cables and connectors         • to web page: selection aid TIA Selection Tool   | Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2         Yes         Yes         Yes         Yes         Yes         Yes         Yes         Cat7         No         No <td< td=""></td<>                                     |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>EAC approval<br>CE marking<br>RoHS conformity<br>product conformity<br>ANSI/TIA-EIA 568-B.2 Cat.5e<br>IEC 61784-5-2-CP 2/2 (Ethernet/IP)<br>standard for structured cabling<br>Marine classification association<br>American Bureau of Shipping Europe Ltd. (ABS)<br>French marine classification society (BV)<br>Det Norske Veritas (DNV)<br>Germanische Lloyd (GL)<br>Lloyds Register of Shipping (LRS)<br>Nippon Kaiji Kyokai (NK)<br>Polski Rejestr Statkow (PRS)<br>reference code<br>according to IEC 81346-2<br>according to IEC 81346-2<br>bitter information / internet links<br>internet link<br>to website: Selection guide for cables and connectors<br>to web page: selection aid TIA Selection Tool<br>to website: Industrial communication   | Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2         Yes         Cat7         No         Https://support.industry.siemens.com/cs/ww/en/view/109766358 |
| UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         EAC approval         CE marking         RoHS conformity         product conformity         ANSI/TIA-EIA 568-B.2 Cat.5e         IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         American Bureau of Shipping Europe Ltd. (ABS)         French marine classification society (BV)         Det Norske Veritas (DNV)         Germanische Lloyd (GL)         Lloyds Register of Shipping (LRS)         Nippon Kaiji Kyokai (NK)         Polski Rejestr Statkow (PRS)         reference code         according to IEC 81346-2         according to IEC 81346-2         according to IEC 81346-2         according to IEC 81346-2:2019         further information / internet links         internet link         • to website: Selection guide for cables and connectors         • to web page: selection aid TIA Selection Tool         • to web page: SiePortal  | Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2         Yes         Yes         Yes         Yes         Yes         Yes         Cat7         No         WG         WGB         Ittps://support.industry.siemens.com/cs/ww/en/view/109766358         https://www.siemens.com/simatic-net         https://sieportal.siemens.com/                        |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>EAC approval<br>CE marking<br>RoHS conformity<br>product conformity<br>ANSI/TIA-EIA 568-B.2 Cat.5e<br>IEC 61784-5-2-CP 2/2 (Ethernet/IP)<br>standard for structured cabling<br>Marine classification association<br>American Bureau of Shipping Europe Ltd. (ABS)<br>French marine classification society (BV)<br>Det Norske Veritas (DNV)<br>Germanische Lloyd (GL)<br>Lloyds Register of Shipping (LRS)<br>Nippon Kaiji Kyokai (NK)<br>Polski Rejestr Statkow (PRS)<br>reference code<br>according to IEC 81346-2<br>according to IEC 81346-2<br>bitter information / internet links<br>internet link<br>to website: Selection guide for cables and connectors<br>to web page: selection aid TIA Selection Tool<br>to website: Industrial communication   | Yes; E502506 cRUus AWM 21695 I A/B 80°C 600V FT2         Yes         Cat7         No         Https://support.industry.siemens.com/cs/ww/en/view/109766358 |

| 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                  |   |
| Manufacturer Declara-<br>tion Ge EG-Konf. |   |

#### Data sheet

product type designation product description

#### 6XV1878-2A

| 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<br>copper wires |
| type of electrical connection / FastConnect                   | Yes   |
| core diameter   |   |
| <ul> <li>of AWG24 insulated conductor</li> </ul>              | 0.51 mm   |
| outer diameter  |   |
| <ul> <li>of inner conductor</li> </ul>                        | 0.51 mm   |
| <ul> <li>of the wire insulation</li> </ul>                    | 1 mm  |
| <ul> <li>of the inner sheath of the cable</li> </ul>          | 6.1 mm  |
| <ul> <li>of cable sheath</li> </ul>                           | 8 mm  |
| symmetrical tolerance of the outer diameter / of cable sheath | 0.2 mm  |
| material  |   |

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.

| <ul> <li>of the wire insulation</li> </ul>   | polyethylene (PE)  |
|--|--|
| <ul> <li>of the inner sheath of the cable</li> </ul>   | FRNC   |
| <ul> <li>of cable sheath</li> </ul>  | PVC  |
| color  |  |
| <ul> <li>of the insulation of data wires</li> </ul>  | white-blue/blue, white-orange/orange, white-green/green, white-brown/brown   |
| of cable sheath  | green  |
| bending radius   |  |
| <ul> <li>with single bend / minimum permissible</li> </ul>   | 24 mm  |
| <ul> <li>with multiple bends / minimum permissible</li> </ul>  | 40 mm  |
| tensile load / maximum   | 100 N  |
| weight per length  | 74.5 kg/km   |
| ambient conditions   |  |
| ambient temperature  |  |
| during operation   | -40 +85 °C   |
| during storage   | -40 +80 °C   |
| during transport   | -40 +80 °C   |
| during installation  | -40 +80 °C   |
| 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  |  |
| • to mineral oil   | oil resistant according to IEC 60811-2-1 (4 h / 70°C)  |
| • to mineral of  | Conditional resistance   |
| • to grease  | conditional resistance   |
| radiological resistance / to UV radiation  | resistant  |
|  |  |
| product features, product functions, product components / gen  | leral  |
| product feature  | Na   |
| • halogen-free   | No   |
| • silicon-free   | Yes  |
| wire length / for Industrial Ethernet  |  |
| • with 100BaseTX   | 100 m  |
| <ul> <li>with 1000BaseT</li> </ul>   | 100 m  |
|  |  |
| ● for 10GBase T  | 90 m   |
| standards, specifications, approvals   |  |
| standards, specifications, approvals<br>UL/ETL listing / 300 V Rating  | 90 m<br>Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2  |
| standards, specifications, approvals<br>UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating   |  |
| standards, specifications, approvals<br>UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability   | Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2<br>No  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval   | Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2  |
| standards, specifications, approvals<br>UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability   | Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2<br>No  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval   | Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2<br>No<br>Yes   |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity   | Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2<br>No<br>Yes<br>Yes  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e   | Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2<br>No<br>Yes<br>Yes  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)  | Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2<br>No<br>Yes<br>Yes<br>Yes   |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e   | Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2<br>No<br>Yes<br>Yes<br>Yes<br>Yes  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)  | Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes   |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling  | Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes   |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association  | Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)  | Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)  | Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)   | Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)  | Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)  | Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)   | Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No   |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)  | Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No   |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code   | Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No   |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2   | Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2         • according to IEC 81346-2:2019   | Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2           No           Yes           No           No |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2         • according to IEC 81346-2:2019   | Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2           No           Yes           No           No |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2         • according to IEC 81346-2:2019         further information / internet links         internet link  | Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No   |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2         • according to IEC 81346-2         • according to IEC 81346-2:2019         further information / internet links         internet link         • to website: Selection guide for cables and connectors | Yes; c(UL)us, CMG, AWM-Style 21500, cRU AWM I A/B 60°C 300V FT2<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No   |

| <ul> <li>to web page: Si</li> </ul>   | ePortal             | h   | tps://sieportal.siemens.com   | ٦/   |   |
|---------------------------------------|---------------------|---|---|--|---|
| <ul> <li>to website: Image</li> </ul> |                     | <br>h:  | tps://www.automation.siem   | –<br>iens.com/bilddb   |   |
| <ul> <li>to website: CAx</li> </ul>   | -Download-Manager   | h   | tps://www.siemens.com/ca  | x  |   |
| <ul> <li>to website: Indu</li> </ul>  | stry Online Support | h   | tps://support.industry.siem   | ens.com  |   |
| security information                  |                     |   |   |  |   |
| security information                  | S                   | th<br>Ir<br>si<br>s<br>fc<br>n<br>t<br>t<br>n<br>t<br>c<br>y<br>w<br>u<br>u<br>r<br>f<br>c<br>s<br>s<br>s | at support the secure opera-<br>order to protect plants, sys-<br>reats, it is necessary to imp<br>ate-of-the-art industrial cyb-<br>plutions constitute one elem<br>r preventing unauthorized a<br>stworks. Such systems, ma<br>an enterprise network or tt<br>ecessary and only when ap<br>etwork segmentation) are in<br>bersecurity measures that<br>ww.siemens.com/cybersec<br>ndergo continuous develop<br>commends that product up<br>do that the latest product ve<br>longer supported, and fail<br>istomer's exposure to cybe | and solutions with industria<br>ation of plants, systems, m<br>stems, machines and netwo<br>blement – and continuously<br>ersecurity concept. Siemer<br>nent of such a concept. Cus<br>access to their plants, syste<br>ichines and components sh<br>ee internet if and to the ext<br>propriate security measure<br>n place. For additional infor<br>may be implemented, plea<br>urity-industry. Siemens' pro<br>ment to make them more s<br>dates are applied as soon<br>ersions are used. Use of pr<br>ure to apply the latest upda<br>r threats. To stay informed<br>Justrial Cybersecurity RSS<br>rt. (V4.7) | achines and networks.<br>orks against cyber<br>/ maintain – a holistic,<br>ns' products and<br>stomers are responsible<br>ems, machines and<br>hould only be connected<br>ent such a connection is<br>es (e.g. firewalls and/or<br>mation on industrial<br>use visit<br>oducts and solutions<br>secure. Siemens strongly<br>as they are available<br>oduct versions that are<br>ates may increase<br>about product updates, |
| General Product App                   | proval              |   |   |  | Test Certificates   |
| Manufacturer Declara-<br>tion         | CE<br>EG-Konf.      | <u>Declaration of Con</u><br>formity  | UK<br>CA  |  | Special Test Certific-<br>ate   |
| Environment                           | Industrial Commun   | ication   |   |  |   |
| <u>Confirmation</u>                   | <u>PROFINET</u>     |   |   |  |   |
|                                       |                     |   |   |  |   |

#### Data sheet

### 6XV1878-2AU10

| product type designation                         | IE FC TP Standard Cable GP 4x2 (AWG 24, Type C)   |
|--|---|
| product description                              | Shielded TP installation cable (8-wire), preferred length, unassembled  |
|  | IE FastConnect TP standard GP cable 4x 2 (Type C); TP Installation cable CATE<br>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  |
| lectrical 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  |
|  | 80 dB   |
| coupling loss / at 30 MHz 100 MHz / minimum      |   |
| 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 %  |
| echanical 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                                    |   |
| <ul> <li>of AWG24 insulated conductor</li> </ul> | 0.51 mm   |
| outer diameter                                   |   |
| <ul> <li>of inner conductor</li> </ul>           | 0.51 mm   |
|  |   |
| of the wire insulation                           | 1 mm  |
|  | 1 mm<br>6.1 mm  |

|   | _  |
|---|--|
| material  |  |
| <ul> <li>of the wire insulation</li> </ul>                        | polyethylene (PE)  |
| <ul> <li>of the inner sheath of the cable</li> </ul>              | FRNC   |
| of cable sheath   | PVC  |
| color   |  |
| <ul> <li>of the insulation of data wires</li> </ul>               | white-blue/blue, white-orange/orange, white-green/green, white-brown/brown                       |
| <ul> <li>of cable sheath</li> </ul>                               | green  |
| bending radius  |  |
| <ul> <li>with single bend / minimum permissible</li> </ul>        | 24 mm  |
| <ul> <li>with multiple bends / minimum permissible</li> </ul>     | 40 mm  |
| tensile load / maximum  | 100 N  |
| weight per length   | 76 kg/km   |
| ambient conditions  |  |
| ambient temperature   |  |
| <ul> <li>during operation</li> </ul>                              | -40 +85 °C   |
| during storage  | -40 +80 °C   |
| during transport  | -40 +80 °C   |
| during installation   | -40 +80 °C   |
| 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   |  |
| to mineral oil  | oil resistant according to IEC 60811-2-1 (4 h / 70°C)  |
| • to grease   | Conditional resistance   |
| • to water  | conditional resistance   |
| radiological resistance / to UV radiation                         | resistant  |
| product features, product functions, product components / get     |  |
|   |  |
| product feature   | No   |
| <ul> <li>halogen-free</li> <li>silicon-free</li> </ul>            | Yes  |
|   |  |
| wire length / for Industrial Ethernet                             | 400 -  |
| • with 100BaseTX  | 100 m  |
| • with 1000BaseT  | 100 m  |
| • for 10GBase T   | 90 m   |
| 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  |  |
| EAC approval  | Yes  |
| CE marking  | Yes  |
| RoHS conformity   | Yes  |
| product conformity  |  |
| ANSI/TIA-EIA 568-B.2 Cat.5e                                       | Yes  |
| • IEC 61784-5-2-CP 2/2 (Ethernet/IP)                              | Yes  |
| standard for structured cabling                                   | Cat6A  |
| Marine classification association                                 |  |
| <ul> <li>American Bureau of Shipping Europe Ltd. (ABS)</li> </ul> | No   |
| <ul> <li>French marine classification society (BV)</li> </ul>     | No   |
| <ul> <li>Det Norske Veritas (DNV)</li> </ul>                      | No   |
| Germanische Lloyd (GL)  | No   |
| <ul> <li>Lloyds Register of Shipping (LRS)</li> </ul>             | No   |
| <ul> <li>Nippon Kaiji Kyokai (NK)</li> </ul>                      | No   |
| <ul> <li>Polski Rejestr Statkow (PRS)</li> </ul>                  | No   |
| reference code  |  |
| according to IEC 81346-2  | WG   |
| • according to IEC 81346-2:2019                                   | WGB  |
| further information / internet links                              |  |
|   |  |
| internet link   |  |
|   | https://support.industry.siemens.com/cs/ww/en/view/109766358                                     |
| internet link   | https://support.industry.siemens.com/cs/ww/en/view/109766358<br>https://www.siemens.com/tstcloud |

| <ul> <li>to website: Industrial communication</li> </ul> | https://www.siemens.com/simatic-net   |
|--|---|
| <ul> <li>to web page: SiePortal</li> </ul>               | https://sieportal.siemens.com/  |
| <ul> <li>to website: Image database</li> </ul>           | https://www.automation.siemens.com/bilddb   |
| <ul> <li>to website: CAx-Download-Manager</li> </ul>     | https://www.siemens.com/cax   |
| <ul> <li>to website: Industry Online Support</li> </ul>  | https://support.industry.siemens.com  |
| security information                                     |   |
| security information                                     | Siemens provides products and solutions with industrial cybersecurity function 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 responsibl 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 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 strong recommends that 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                                 |   |

#### Data sheet

### 6XV1878-2B

| product type designation                                      | IE FC TP Flexible Cable GP 4x2 (AWG 24, Type C)   |
|---|---|
| product description   | 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   | 0.013 db/m  |
| • at 1 MHz 100 MHz  | 100 Ω   |
| near-end crosstalk per length                                 | 100 22  |
| 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  |
|   | 80 dB   |
| coupling loss / at 30 MHz 100 MHz / minimum                   |   |
| transfer impedance per length / at 10 MHz                     | 20 mΩ/m   |
| loop resistance per length / maximum                          | 180 mΩ/m  |
| insulation resistance coefficient                             | 5000 GΩ·m   |
| operating voltage   |   |
| RMS value   | 80 V  |
| NVP value in percent  | 68 %  |
| nechanical data   |   |
| number of electrical cores                                    | 8   |
| design of the shield  | Overlapped aluminum-clad foil, sheathed in a braided screen of tin-plated<br>copper wires   |
| type of electrical connection / FastConnect                   | Yes   |
| core diameter   |   |
| <ul> <li>of AWG24 insulated conductor</li> </ul>              | 0.6 mm  |
| outer diameter  |   |
| of inner conductor  | 0.6 mm  |
| of the wire insulation  | 1.05 mm   |
| <ul> <li>of the inner sheath of the cable</li> </ul>          | 6.4 mm  |
| of cable sheath   | 8 mm  |
| symmetrical tolerance of the outer diameter / of cable sheath | 0.2 mm  |
| material  |   |
|   |   |

|   | 52110   |
|---|---|
| of the inner sheath of the cable  | FRNC  |
| of cable sheath   | PVC   |
| color   |   |
| <ul> <li>of the insulation of data wires</li> </ul>   | white-blue/blue, white-orange/orange, white-green/green, white-brown/brown  |
| of cable sheath   | green   |
| bending radius  |   |
| <ul> <li>with single bend / minimum permissible</li> </ul>  | 24 mm   |
| <ul> <li>with multiple bends / minimum permissible</li> </ul>   | 40 mm   |
| tensile load / maximum  | 100 N   |
| weight per length   | 86 kg/km  |
| ambient conditions  |   |
| ambient temperature   |   |
| <ul> <li>during operation</li> </ul>  | -40 +80 °C  |
| <ul> <li>during storage</li> </ul>  | -40 +80 °C  |
| during transport  | -40 +80 °C  |
| during installation   | -40 +80 °C  |
| fire behavior   | flame resistant according to IEC 60332-3-24 (Category C)  |
| class of burning behaviour / according to EN 13501-6  | Eca   |
| chemical resistance   |   |
| • to mineral oil  | oil resistant according to IEC 60811-2-1 (4 h / 70°C)   |
| • to grease   | Conditional resistance  |
| • to water  | conditional resistance  |
| radiological resistance / to UV radiation   | resistant   |
|   |   |
| product features, product functions, product components / gene  |   |
| product feature   |   |
| halogen-free  | No  |
| • silicon-free  | Yes   |
| wire length / for Industrial Ethernet   |   |
| <ul> <li>with 100BaseTX</li> </ul>  | 80 m  |
| <ul> <li>with 1000BaseT</li> </ul>  | 80 m  |
|   |   |
| ● for 10GBase T   | 70 m  |
| for 10GBase T     standards, specifications, approvals  | 70 m  |
|   | 70 m<br>Yes; c(ETL)us, CMG  |
| standards, specifications, approvals  |   |
| standards, specifications, approvals<br>UL/ETL listing / 300 V Rating   | Yes; c(ETL)us, CMG  |
| standards, specifications, approvals<br>UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating  | Yes; c(ETL)us, CMG  |
| standards, specifications, approvals<br>UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability  | Yes; c(ETL)us, CMG<br>No  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval  | Yes; c(ETL)us, CMG<br>No<br>Yes   |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking   | Yes; c(ETL)us, CMG<br>No<br>Yes<br>Yes  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity   | Yes; c(ETL)us, CMG<br>No<br>Yes<br>Yes  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity   | Yes; c(ETL)us, CMG<br>No<br>Yes<br>Yes<br>Yes   |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e  | Yes; c(ETL)us, CMG<br>No<br>Yes<br>Yes<br>Yes<br>Yes  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)   | Yes; c(ETL)us, CMG<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes   |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling   | Yes; c(ETL)us, CMG<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes   |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association   | Yes; c(ETL)us, CMG<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)   | Yes; c(ETL)us, CMG<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)  | Yes; c(ETL)us, CMG<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)   | Yes; c(ETL)us, CMG<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No   |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)   | Yes; c(ETL)us, CMG<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)  | Yes; c(ETL)us, CMG<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)   | Yes; c(ETL)us, CMG<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No   |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)   | Yes; c(ETL)us, CMG<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2  | Yes; c(ETL)us, CMG<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2         • according to IEC 81346-2:2019   | Yes; c(ETL)us, CMG<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2         • according to IEC 81346-2:2019         further information / internet links  | Yes; c(ETL)us, CMG<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2         • according to IEC 81346-2:2019         further information / internet links  | Yes; c(ETL)us, CMG<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No   |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2         • according to IEC 81346-2:2019         further information / internet links         internet link         • to website: Selection guide for cables and connectors  | Yes; c(ETL)us, CMG<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No   |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2         • according to IEC 81346-2         • according to IEC 81346-2:2019         further information / internet links         internet link         • to website: Selection guide for cables and connectors         • to web page: selection aid TIA Selection Tool  | Yes; c(ETL)us, CMG<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No   |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         • RoHS conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2         • to website: Selection guide for cables and connectors         • to website: Selection aid TIA Selection Tool         • to website: Industrial communication | Yes; c(ETL)us, CMG         No         Yes         Yes         Yes         Yes         Yes         Yes         Cat6A         No         WGB         https://support.industry.siemens.com/cs/ww/en/view/109766358         https://www.siemens.com/simatic-net |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2         • according to IEC 81346-2         • according to IEC 81346-2:2019         further information / internet links         internet link         • to website: Selection guide for cables and connectors         • to web page: selection aid TIA Selection Tool  | Yes; c(ETL)us, CMG<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No   |

| e to wobsito: CAy I  | Download-Manager   | https://www.siemens.  |  |
|--|--------------------|---|--|
| <ul> <li>to website: CAX-I</li> <li>to website: Indus</li> </ul> | 0                  | https://www.siemens.  |  |
| security information   |                    | <u>intps://support.industr</u>  | sty.siemens.com  |
| Approvals / Certificates   |                    | that support the secur<br>In order to protect pla<br>threats, it is necessar<br>state-of-the-art indust<br>solutions constitute or<br>for preventing unauth<br>networks. Such syste<br>to an enterprise networ<br>necessary and only w<br>network segmentation<br>cybersecurity measur<br>www.siemens.com/cy<br>undergo continuous d<br>recommends that pro<br>and that the latest pro<br>no longer supported,<br>customer's exposure | roducts and solutions with industrial cybersecurity functions<br>ure operation of plants, systems, machines and networks.<br>lants, systems, machines and networks against cyber<br>ary to implement – and continuously maintain – a holistic,<br>strial cybersecurity concept. Siemens' products and<br>one element of such a concept. Customers are responsible<br>thorized access to their plants, systems, machines and<br>tems, machines and components should only be connected<br>work or the internet if and to the extent such a connection is<br>when appropriate security measures (e.g. firewalls and/or<br>on) are in place. For additional information on industrial<br>ures that may be implemented, please visit<br>cybersecurity-industry. Siemens' products and solutions<br>development to make them more secure. Siemens strongl<br>roduct updates are applied as soon as they are available<br>roduct versions are used. Use of product versions that are<br>d, and failure to apply the latest updates may increase<br>e to cyber threats. To stay informed about product updates,<br>mens Industrial Cybersecurity RSS Feed under<br>s.com/cert. (V4.7) |
| General Product App  |                    |   | Test Certificates  |
| <u>Manufacturer Declara-</u><br><u>tion</u>                      | CE<br>EG-Konf.     | Declaration of Con-<br>formity  | Special Test Certific<br>ate   |
| Environment  | Industrial Communi | cation  |  |
| <u>Confirmation</u>  | <u>PROFINET</u>    |   |  |

#### Data sheet

product type designation product description

#### 6XV1878-2C

|   | IE FC TP Trailing Cable GP 4x2 TP installation cable CAT6A AWG 24, for<br>connection to IE FC RJ45 plug 4x 2, AWG24, sold by the meter, delivery unit ma<br>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  |
| ectrical 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 %  |
| echanical 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   |   |
| <ul> <li>of AWG24 insulated conductor</li> </ul>              | 0.51 mm   |
| outer diameter  |   |
| of inner conductor  | 0.58 mm   |
| <ul> <li>of the wire insulation</li> </ul>                    | 1.04 mm   |
| <ul> <li>of the inner sheath of the cable</li> </ul>          | 6.5 mm  |
| of cable sheath   | 8 mm  |
| symmetrical tolerance of the outer diameter / of cable sheath | 0.2 mm  |

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

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

| <ul> <li>of the wire insulation</li> </ul>  | polyethylene (PE)   |
|---|---|
| <ul> <li>of the inner sheath of the cable</li> </ul>  | FRNC  |
| <ul> <li>of cable sheath</li> </ul>   | PUR   |
| color   |   |
| of the insulation of data wires   | white-blue/blue, white-orange/orange, white-green/green, white-brown/brown    |
| of cable sheath   | green   |
| bending radius  | green   |
| with single bend / minimum permissible  | 32 mm   |
| with single bends / minimum permissible   | 64 mm   |
| with multiple bends / minimum permissible     with continuous bending   | 120 mm  |
| number of bending cycles  | 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/s <sup>2</sup>                           |
| tensile load / maximum  | 100 N   |
| weight per length   | 102 kg/km   |
| ambient conditions  |   |
| ambient temperature   |   |
| <ul> <li>during operation</li> </ul>  | -30 +70 °C  |
| <ul> <li>during storage</li> </ul>  | -40 +80 °C  |
| <ul> <li>during transport</li> </ul>  | -40 +80 °C  |
| <ul> <li>during installation</li> </ul>   | -30 +70 °C  |
| • note  | 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   |   |
| • to mineral oil  | oil resistant according to IEC 60811-404 (7x24h/90°C)                         |
| • to grease   | Conditional resistance  |
| • to water  | conditional resistance  |
| radiological resistance / to UV radiation   | resistant   |
| product features, product functions, product components / g   | eneral  |
| product feature   |   |
| <ul> <li>halogen-free</li> </ul>  | Yes   |
| silicon-free  | Yes   |
| wire length / for Industrial Ethernet   |   |
| <ul> <li>with 100BaseTX</li> </ul>  | 100 m   |
| <ul> <li>with 1000BaseT</li> </ul>  | 100 m   |
| <ul> <li>for 10GBase T</li> </ul>   | 80 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  |   |
| EAC approval  | Yes   |
| CE marking  | Yes   |
| RoHS conformity   | Yes   |
| product conformity  |   |
| ANSI/TIA-EIA 568-B.2 Cat.5e   | No  |
| • IEC 61784-5-2-CP 2/2 (Ethernet/IP)  | Yes   |
| standard for structured cabling   | 0-404   |
|   | Cat6A   |
| Marine classification association   | CaloA   |
| •   | No  |
| Marine classification association   |   |
| Marine classification association <ul> <li>American Bureau of Shipping Europe Ltd. (ABS)</li> </ul>   | No  |
| Marine classification association <ul> <li>American Bureau of Shipping Europe Ltd. (ABS)</li> <li>French marine classification society (BV)</li> </ul>  | No  |
| Marine classification association <ul> <li>American Bureau of Shipping Europe Ltd. (ABS)</li> <li>French marine classification society (BV)</li> <li>Det Norske Veritas (DNV)</li> </ul>  | No<br>No  |
| Marine classification association<br>• American Bureau of Shipping Europe Ltd. (ABS)<br>• French marine classification society (BV)<br>• Det Norske Veritas (DNV)<br>• Germanische Lloyd (GL)<br>• Lloyds Register of Shipping (LRS)  | No<br>No<br>No  |
| Marine classification association<br>• American Bureau of Shipping Europe Ltd. (ABS)<br>• French marine classification society (BV)<br>• Det Norske Veritas (DNV)<br>• Germanische Lloyd (GL)<br>• Lloyds Register of Shipping (LRS)<br>• Nippon Kaiji Kyokai (NK)  | No<br>No<br>No<br>No  |
| Marine classification association<br>• American Bureau of Shipping Europe Ltd. (ABS)<br>• French marine classification society (BV)<br>• Det Norske Veritas (DNV)<br>• Germanische Lloyd (GL)<br>• Lloyds Register of Shipping (LRS)<br>• Nippon Kaiji Kyokai (NK)<br>• Polski Rejestr Statkow (PRS)  | No<br>No<br>No<br>No  |
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| Marine classification association<br>• American Bureau of Shipping Europe Ltd. (ABS)<br>• French marine classification society (BV)<br>• Det Norske Veritas (DNV)<br>• Germanische Lloyd (GL)<br>• Lloyds Register of Shipping (LRS)<br>• Nippon Kaiji Kyokai (NK)<br>• Polski Rejestr Statkow (PRS)<br>reference code<br>• according to IEC 81346-2  | No<br>No<br>No<br>No<br>No<br>No<br>WG  |
| Marine classification association<br>• American Bureau of Shipping Europe Ltd. (ABS)<br>• French marine classification society (BV)<br>• Det Norske Veritas (DNV)<br>• Germanische Lloyd (GL)<br>• Lloyds Register of Shipping (LRS)<br>• Nippon Kaiji Kyokai (NK)<br>• Polski Rejestr Statkow (PRS)<br>reference code<br>• according to IEC 81346-2<br>• according to IEC 81346-2:2019   | No<br>No<br>No<br>No<br>No  |
| Marine classification association<br>• American Bureau of Shipping Europe Ltd. (ABS)<br>• French marine classification society (BV)<br>• Det Norske Veritas (DNV)<br>• Germanische Lloyd (GL)<br>• Lloyds Register of Shipping (LRS)<br>• Nippon Kaiji Kyokai (NK)<br>• Polski Rejestr Statkow (PRS)<br>reference code<br>• according to IEC 81346-2<br>• according to IEC 81346-2:2019<br>further information / internet links | No<br>No<br>No<br>No<br>No<br>No<br>WG  |
| Marine classification association<br>• American Bureau of Shipping Europe Ltd. (ABS)<br>• French marine classification society (BV)<br>• Det Norske Veritas (DNV)<br>• Germanische Lloyd (GL)<br>• Lloyds Register of Shipping (LRS)<br>• Nippon Kaiji Kyokai (NK)<br>• Polski Rejestr Statkow (PRS)<br>reference code<br>• according to IEC 81346-2<br>• according to IEC 81346-2:2019   | No<br>No<br>No<br>No<br>No<br>No<br>WG  |

| <ul> <li>to web page: selection aid TIA Selection Tool</li> </ul> | https://www.siemens.com/tstcloud   |  |
|---|--|--|
| to website: Industrial communication                              | https://www.siemens.com/simatic-net  |  |
| <ul> <li>to web page: SiePortal</li> </ul>                        | https://sieportal.siemens.com/   |  |
| <ul> <li>to website: Image database</li> </ul>                    | https://www.automation.siemens.com/bilde   | dt   |
| <ul> <li>to website: CAx-Download-Manager</li> </ul>              | https://www.siemens.com/cax  |  |
| <ul> <li>to website: Industry Online Support</li> </ul>           | https://support.industry.siemens.com   |  |
| security information  |  |  |
| security information  | Siemens provides products and solutions that support the secure operation of plants<br>In order to protect plants, systems, machin<br>threats, it is necessary to implement – and<br>state-of-the-art industrial cybersecurity cor<br>solutions constitute one element of such a<br>for preventing unauthorized access to thei<br>networks. Such systems, machines and co<br>to an enterprise network or the internet if a<br>necessary and only when appropriate sec<br>network segmentation) are in place. For an<br>cybersecurity measures that may be imple<br>www.siemens.com/cybersecurity-industry.<br>undergo continuous development to make<br>recommends that product updates are app<br>and that the latest product versions are us<br>no longer supported, and failure to apply th<br>customer's exposure to cyber threats. To<br>subscribe to the Siemens Industrial Cybers<br>https://www.siemens.com/cert. (V4.7) | s, systems, machines and networks.<br>hes and networks against cyber<br>I continuously maintain – a holistic,<br>neept. Siemens' products and<br>concept. Customers are responsible<br>r plants, systems, machines and<br>omponents should only be connected<br>and to the extent such a connection is<br>urity measures (e.g. firewalls and/or<br>dditional information on industrial<br>mented, please visit<br>Siemens' products and solutions<br>them more secure. Siemens strongly<br>blied as soon as they are available<br>ed. Use of product versions that are<br>he latest updates may increase<br>stay informed about product updates, |
| Approvals / Certificates  |  |  |
| General Product Approval  |  | Environment  |
| Manufacturer Declara-<br>tion CE<br>EG-Konf.                      | JK Declaration of Con-<br>formity  | Confirmation   |
| Industrial Communication  |  |  |
| PROFINET  |  |  |
| last modified:  | 8/8/2024 🖸   |  |
|   |  |  |

### Data sheet

#### 6XV1878-2D

| 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-<br>core, for use in highly flexible applications (torsion), sold by the meter, max.<br>delivery unit 1000 m, minimum order quantity 20 m. |
| suitability for use   | Continuous motion control when using robots   |
|   | -   |
| cable designation<br>electrical data                          | 2YH(ST)D11Y 4X2X0.6/1.04-100 LI VZN GN  |
|   |   |
| attenuation factor per length                                 | 0.090 dP/m  |
| • 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   |   |
| <ul> <li>of AWG24 insulated conductor</li> </ul>              | 0.51 mm   |
| outer diameter  |   |
| of inner conductor  | 0.58 mm   |
| <ul> <li>of the wire insulation</li> </ul>                    | 1.04 mm   |
| <ul> <li>of the inner sheath of the cable</li> </ul>          | 6.4 mm  |
| of cable sheath   | 8 mm  |
| symmetrical tolerance of the outer diameter / of cable sheath | 0.2 mm  |
| material  |   |
| <ul> <li>of the wire insulation</li> </ul>                    | polyethylene (PE)   |
|   |   |

| a of the inner aboath of the cable  | EDNO   |
|---|--|
| <ul> <li>of the inner sheath of the cable</li> </ul>  | FRNC   |
| of cable sheath   | PUR  |
| color   |  |
| of the insulation of data wires   | white-blue/blue, white-orange/orange, white-green/green, white-brown/brown   |
| • of cable sheath   | green  |
| bending radius  |  |
| with single bend / minimum permissible  | 32 mm  |
| with multiple bends / minimum permissible   | 64 mm  |
| number of torsion cycles / with torsion by $\pm$ 180° on 1 m cable length   | 500000   |
| tensile load / maximum  | 100 N  |
| weight per length   | 77 kg/km   |
| ambient conditions  |  |
| ambient temperature   |  |
| during operation  | -30 +80 °C   |
| <ul> <li>during storage</li> </ul>  | -40 +80 °C   |
| during transport  | -40 +80 °C   |
| during installation   | -30 +80 °C   |
| • note  | 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   |  |
| to mineral oil  | oil resistant according to IEC 60811-404 (7x24h/90°C)  |
| • to grease   | Conditional resistance   |
| • to water  | conditional resistance   |
| radiological resistance / to UV radiation   | resistant  |
| product features, product functions, product components / gen   |  |
|   |  |
| product feature   | Very helenen fore energing to IEO 04754.4  |
| halogen-free  | Yes; halogen-free according to IEC 61754-1   |
| silicon-free  | Yes  |
|   |  |
| wire length / for Industrial Ethernet   | 400  |
| • with 100BaseTX  | 100 m  |
| <ul><li>with 100BaseTX</li><li>with 1000BaseT</li></ul>   | 100 m  |
| <ul><li>with 100BaseTX</li><li>with 1000BaseT</li><li>for 10GBase T</li></ul>   |  |
| <ul> <li>with 100BaseTX</li> <li>with 1000BaseT</li> <li>for 10GBase T</li> <li>standards, specifications, approvals</li> </ul>   | 100 m<br>90 m  |
| with 100BaseTX     with 100BaseT     for 10GBase T     standards, specifications, approvals     UL/ETL listing / 300 V Rating   | 100 m<br>90 m<br>Yes; c(ETL)us CMX, AWM-Style 21329  |
| with 100BaseTX     with 100BaseT     for 10GBase T      standards, specifications, approvals      UL/ETL listing / 300 V Rating      UL/ETL style / 600 V Rating  | 100 m<br>90 m  |
| with 100BaseTX     with 100BaseT     for 10GBase T      standards, specifications, approvals      UL/ETL listing / 300 V Rating      UL/ETL style / 600 V Rating      certificate of suitability  | 100 m<br>90 m<br>Yes; c(ETL)us CMX, AWM-Style 21329<br>Yes   |
| with 100BaseTX     with 100BaseT     ofor 10GBase T     standards, specifications, approvals     UL/ETL listing / 300 V Rating     UL/ETL style / 600 V Rating     certificate of suitability         e EAC approval  | 100 m<br>90 m<br>Yes; c(ETL)us CMX, AWM-Style 21329  |
| with 100BaseTX     with 100BaseT     for 10GBase T      standards, specifications, approvals      UL/ETL listing / 300 V Rating      UL/ETL style / 600 V Rating      certificate of suitability  | 100 m<br>90 m<br>Yes; c(ETL)us CMX, AWM-Style 21329<br>Yes   |
| with 100BaseTX     with 100BaseT     ofor 10GBase T     standards, specifications, approvals     UL/ETL listing / 300 V Rating     UL/ETL style / 600 V Rating     certificate of suitability         e EAC approval  | 100 m<br>90 m<br>Yes; c(ETL)us CMX, AWM-Style 21329<br>Yes<br>Yes  |
| with 100BaseTX     with 100BaseT     for 10GBase T      standards, specifications, approvals      UL/ETL listing / 300 V Rating      UL/ETL style / 600 V Rating      certificate of suitability         e EAC approval         e CE marking  | 100 m<br>90 m<br>Yes; c(ETL)us CMX, AWM-Style 21329<br>Yes<br>Yes  |
| with 100BaseTX     with 100BaseT     for 10GBase T      standards, specifications, approvals      UL/ETL listing / 300 V Rating      UL/ETL style / 600 V Rating      certificate of suitability         EAC approval         CE marking         RoHS conformity  | 100 m<br>90 m<br>Yes; c(ETL)us CMX, AWM-Style 21329<br>Yes<br>Yes  |
| with 100BaseTX     with 100BaseT     for 10GBase T      standards, specifications, approvals      UL/ETL listing / 300 V Rating      UL/ETL style / 600 V Rating      certificate of suitability         EAC approval         CE marking         RoHS conformity      product conformity  | 100 m<br>90 m<br>Yes; c(ETL)us CMX, AWM-Style 21329<br>Yes<br>Yes<br>Yes<br>Yes  |
| with 100BaseTX     with 100BaseTX     with 1000BaseT     for 10GBase T      standards, specifications, approvals      UL/ETL listing / 300 V Rating      UL/ETL style / 600 V Rating      Certificate of suitability         EAC approval         CE marking         RoHS conformity      product conformity         ANSI/TIA-EIA 568-B.2 Cat.5e  | 100 m<br>90 m<br>Yes; c(ETL)us CMX, AWM-Style 21329<br>Yes<br>Yes<br>Yes<br>Yes  |
| <ul> <li>with 100BaseTX</li> <li>with 100BaseT</li> <li>for 10GBase T</li> </ul> standards, specifications, approvals UL/ETL listing / 300 V Rating <ul> <li>UL/ETL style / 600 V Rating</li> <li>UL/ETL style / 600 V Rating</li> <li>certificate of suitability</li> <li>EAC approval</li> <li>CE marking</li> <li>RoHS conformity</li> <li>product conformity</li> <li>ANSI/TIA-EIA 568-B.2 Cat.5e</li> <li>IEC 61784-5-2-CP 2/2 (Ethernet/IP)</li> </ul>  | 100 m<br>90 m<br>Yes; c(ETL)us CMX, AWM-Style 21329<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes   |
| <ul> <li>with 100BaseTX</li> <li>with 1000BaseT</li> <li>for 10GBase T</li> </ul> standards, specifications, approvals UL/ETL listing / 300 V Rating <ul> <li>UL/ETL style / 600 V Rating</li> <li>certificate of suitability</li> <li>EAC approval</li> <li>CE marking</li> <li>RoHS conformity</li> <li>product conformity</li> <li>ANSI/TIA-EIA 568-B.2 Cat.5e</li> <li>IEC 61784-5-2-CP 2/2 (Ethernet/IP)</li> <li>standard for structured cabling</li> </ul>   | 100 m<br>90 m<br>Yes; c(ETL)us CMX, AWM-Style 21329<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes   |
| <ul> <li>with 100BaseTX</li> <li>with 100BaseT</li> <li>for 10GBase T</li> </ul> standards, specifications, approvals UL/ETL listing / 300 V Rating <ul> <li>UL/ETL style / 600 V Rating</li> <li>certificate of suitability</li> <li>EAC approval</li> <li>CE marking</li> <li>RoHS conformity</li> <li>product conformity</li> <li>ANSI/TIA-EIA 568-B.2 Cat.5e</li> <li>IEC 61784-5-2-CP 2/2 (Ethernet/IP)</li> <li>standard for structured cabling</li> <li>Marine classification association</li> </ul>   | 100 m<br>90 m<br>Yes; c(ETL)us CMX, AWM-Style 21329<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A   |
| <ul> <li>with 100BaseTX</li> <li>with 1000BaseT</li> <li>for 10GBase T</li> </ul> standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability <ul> <li>EAC approval</li> <li>CE marking</li> <li>RoHS conformity</li> </ul> product conformity <ul> <li>ANSI/TIA-EIA 568-B.2 Cat.5e</li> <li>IEC 61784-5-2-CP 2/2 (Ethernet/IP)</li> <li>standard for structured cabling</li> </ul> Marine classification association <ul> <li>American Bureau of Shipping Europe Ltd. (ABS)</li> </ul>   | 100 m<br>90 m<br>Yes; c(ETL)us CMX, AWM-Style 21329<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No   |
| <ul> <li>with 100BaseTX</li> <li>with 1000BaseT</li> <li>for 10GBase T</li> </ul> standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability <ul> <li>EAC approval</li> <li>CE marking</li> <li>RoHS conformity</li> </ul> product conformity <ul> <li>ANSI/TIA-EIA 568-B.2 Cat.5e</li> <li>IEC 61784-5-2-CP 2/2 (Ethernet/IP)</li> </ul> standard for structured cabling Marine classification association <ul> <li>American Bureau of Shipping Europe Ltd. (ABS)</li> <li>French marine classification society (BV)</li> </ul>   | 100 m<br>90 m<br>Yes; c(ETL)us CMX, AWM-Style 21329<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No  |
| <ul> <li>with 100BaseTX</li> <li>with 100BaseT</li> <li>for 10GBase T</li> </ul> standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating <ul> <li>certificate of suitability</li> <li>EAC approval</li> <li>CE marking</li> <li>RoHS conformity</li> <li>product conformity</li> <li>ANSI/TIA-EIA 568-B.2 Cat.5e</li> <li>IEC 61784-5-2-CP 2/2 (Ethernet/IP)</li> <li>standard for structured cabling</li> <li>Marine classification association</li> <li>American Bureau of Shipping Europe Ltd. (ABS)</li> <li>French marine classification society (BV)</li> <li>Det Norske Veritas (DNV)</li> </ul>  | 100 m<br>90 m<br>Yes; c(ETL)us CMX, AWM-Style 21329<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No  |
| <ul> <li>with 100BaseTX</li> <li>with 1000BaseT</li> <li>for 10GBase T</li> </ul> standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating <ul> <li>certificate of suitability</li> <li>EAC approval</li> <li>CE marking</li> <li>RoHS conformity</li> <li>product conformity</li> <li>ANSI/TIA-EIA 568-B.2 Cat.5e</li> <li>IEC 61784-5-2-CP 2/2 (Ethernet/IP)</li> <li>standard for structured cabling</li> <li>Marine classification association</li> <li>American Bureau of Shipping Europe Ltd. (ABS)</li> <li>French marine classification society (BV)</li> <li>Det Norske Veritas (DNV)</li> <li>Germanische Lloyd (GL)</li> </ul>   | 100 m<br>90 m<br>Yes; c(ETL)us CMX, AWM-Style 21329<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No   |
| <ul> <li>with 100BaseTX</li> <li>with 1000BaseT</li> <li>for 10GBase T</li> </ul> standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating <ul> <li>certificate of suitability</li> <li>EAC approval</li> <li>CE marking</li> <li>RoHS conformity</li> <li>product conformity</li> <li>ANSI/TIA-EIA 568-B.2 Cat.5e</li> <li>IEC 61784-5-2-CP 2/2 (Ethernet/IP)</li> <li>standard for structured cabling</li> <li>Marine classification association</li> <li>American Bureau of Shipping Europe Ltd. (ABS)</li> <li>French marine classification society (BV)</li> <li>Det Norske Veritas (DNV)</li> <li>Germanische Lloyd (GL)</li> <li>Lloyds Register of Shipping (LRS)</li> </ul>  | 100 m<br>90 m<br>Yes; c(ETL)us CMX, AWM-Style 21329<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No   |
| <ul> <li>with 100BaseTX</li> <li>with 1000BaseT</li> <li>for 10GBase T</li> </ul> standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability <ul> <li>EAC approval</li> <li>CE marking</li> <li>RoHS conformity</li> </ul> product conformity <ul> <li>ANSI/TIA-EIA 568-B.2 Cat.5e</li> <li>IEC 61784-5-2-CP 2/2 (Ethernet/IP)</li> </ul> standard for structured cabling Marine classification association <ul> <li>American Bureau of Shipping Europe Ltd. (ABS)</li> <li>French marine classification society (BV)</li> <li>Det Norske Veritas (DNV)</li> <li>Germanische Lloyd (GL)</li> <li>Lloyds Register of Shipping (LRS)</li> <li>Nippon Kaiji Kyokai (NK)</li> </ul>  | 100 m<br>90 m<br>Yes; c(ETL)us CMX, AWM-Style 21329<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No  |
| <ul> <li>with 100BaseTX</li> <li>with 1000BaseT</li> <li>for 10GBase T</li> </ul> standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability <ul> <li>EAC approval</li> <li>CE marking</li> <li>RoHS conformity</li> </ul> product conformity <ul> <li>ANSI/TIA-EIA 568-B.2 Cat.5e</li> <li>IEC 61784-5-2-CP 2/2 (Ethernet/IP)</li> </ul> standard for structured cabling Marine classification association <ul> <li>American Bureau of Shipping Europe Ltd. (ABS)</li> <li>French marine classification society (BV)</li> <li>Det Norske Veritas (DNV)</li> <li>Germanische Lloyd (GL)</li> <li>Lloyds Register of Shipping (LRS)</li> <li>Nippon Kaiji Kyokai (NK)</li> <li>Polski Rejestr Statkow (PRS)</li> </ul>  | 100 m<br>90 m<br>Yes; c(ETL)us CMX, AWM-Style 21329<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No  |
| <ul> <li>with 100BaseTX</li> <li>with 100BaseT</li> <li>for 10GBase T</li> </ul> Standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating <ul> <li>certificate of suitability</li> <li>EAC approval</li> <li>CE marking</li> <li>RoHS conformity</li> <li>product conformity</li> <li>ANSI/TIA-EIA 568-B.2 Cat.5e</li> <li>IEC 61784-5-2-CP 2/2 (Ethernet/IP)</li> <li>standard for structured cabling</li> <li>Marine classification association</li> <li>American Bureau of Shipping Europe Ltd. (ABS)</li> <li>French marine classification society (BV)</li> <li>Det Norske Veritas (DNV)</li> <li>Germanische Lloyd (GL)</li> <li>Lloyds Register of Shipping (LRS)</li> <li>Nippon Kaiji Kyokai (NK)</li> <li>Polski Rejestr Statkow (PRS)</li> </ul>   | 100 m<br>90 m<br>Yes; c(ETL)us CMX, AWM-Style 21329<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No                               |
| <ul> <li>with 100BaseTX</li> <li>with 1000BaseT</li> <li>for 10GBase T</li> </ul> Standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating <ul> <li>certificate of suitability</li> <li>EAC approval</li> <li>CE marking</li> <li>RoHS conformity</li> <li>product conformity</li> <li>ANSI/TIA-EIA 568-B.2 Cat.5e</li> <li>IEC 61784-5-2-CP 2/2 (Ethernet/IP)</li> <li>standard for structured cabling</li> <li>Marine classification association</li> <li>American Bureau of Shipping Europe Ltd. (ABS)</li> <li>French marine classification society (BV)</li> <li>Det Norske Veritas (DNV)</li> <li>Germanische Lloyd (GL)</li> <li>Lloyds Register of Shipping (LRS)</li> <li>Nippon Kaiji Kyokai (NK)</li> <li>Polski Rejestr Statkow (PRS)</li> <li>reference code</li> <li>according to IEC 81346-2:2019</li> </ul>   | 100 m<br>90 m<br>Yes; c(ETL)us CMX, AWM-Style 21329<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No                         |
| <ul> <li>with 100BaseTX</li> <li>with 100BaseT</li> <li>for 10GBase T</li> </ul> Standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating UL/ETL style / 600 V Rating <ul> <li>certificate of suitability</li> <li>EAC approval</li> <li>CE marking</li> <li>RoHS conformity</li> <li>Product conformity</li> <li>ANSI/TIA-EIA 568-B.2 Cat.5e</li> <li>IEC 61784-5-2-CP 2/2 (Ethernet/IP)</li> <li>standard for structured cabling</li> <li>Marine classification association</li> <li>American Bureau of Shipping Europe Ltd. (ABS)</li> <li>French marine classification society (BV)</li> <li>Det Norske Veritas (DNV)</li> <li>Germanische Lloyd (GL)</li> <li>Lloyds Register of Shipping (LRS)</li> <li>Nippon Kaiji Kyokai (NK)</li> <li>Polski Rejestr Statkow (PRS)</li> <li>reference code</li> <li>according to IEC 81346-2</li> <li>according to IEC 81346-2:2019</li> </ul>                                | 100 m<br>90 m<br>Yes; c(ETL)us CMX, AWM-Style 21329<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No                         |
| <ul> <li>with 100BaseTX</li> <li>with 100BaseT</li> <li>for 10GBase T</li> </ul> Standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating Certificate of suitability <ul> <li>EAC approval</li> <li>CE marking</li> <li>RoHS conformity</li> <li>ANSI/TIA-EIA 568-B.2 Cat.5e</li> <li>IEC 61784-5-2-CP 2/2 (Ethernet/IP)</li> </ul> standard for structured cabling Marine classification association <ul> <li>American Bureau of Shipping Europe Ltd. (ABS)</li> <li>French marine classification society (BV)</li> <li>Det Norske Veritas (DNV)</li> <li>Germanische Lloyd (GL)</li> <li>Lloyds Register of Shipping (LRS)</li> <li>Nippon Kaiji Kyokai (NK)</li> <li>Polski Rejestr Statkow (PRS)</li> </ul> reference code <ul> <li>according to IEC 81346-2</li> <li>according to IEC 81346-2:2019</li> </ul> further information / internet links <ul> <li>internet link</li> </ul>                               | 100 m<br>90 m<br>Yes; c(ETL)us CMX, AWM-Style 21329<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No |
| <ul> <li>with 100BaseTX</li> <li>with 1000BaseT</li> <li>for 10GBase T</li> </ul> standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating certificate of suitability <ul> <li>EAC approval</li> <li>CE marking</li> <li>RoHS conformity</li> <li>ANSI/TIA-EIA 568-B.2 Cat.5e</li> <li>IEC 61784-5-2-CP 2/2 (Ethernet/IP)</li> </ul> standard for structured cabling Marine classification association <ul> <li>American Bureau of Shipping Europe Ltd. (ABS)</li> <li>French marine classification society (BV)</li> <li>Det Norske Veritas (DNV)</li> <li>Germanische Lloyd (GL)</li> <li>Lloyds Register of Shipping (LRS)</li> <li>Nippon Kaiji Kyokai (NK)</li> <li>Polski Rejestr Statkow (PRS)</li> </ul> reference code <ul> <li>according to IEC 81346-2:2019</li> </ul> further information / internet links <ul> <li>internet link</li> <li>to website: Selection guide for cables and connectors</li> </ul> | 100 m<br>90 m<br>Yes; c(ETL)us CMX, AWM-Style 21329<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No                   |
| <ul> <li>with 100BaseTX</li> <li>with 100BaseT</li> <li>for 10GBase T</li> </ul> Standards, specifications, approvals UL/ETL listing / 300 V Rating UL/ETL style / 600 V Rating Certificate of suitability <ul> <li>EAC approval</li> <li>CE marking</li> <li>RoHS conformity</li> <li>ANSI/TIA-EIA 568-B.2 Cat.5e</li> <li>IEC 61784-5-2-CP 2/2 (Ethernet/IP)</li> </ul> standard for structured cabling Marine classification association <ul> <li>American Bureau of Shipping Europe Ltd. (ABS)</li> <li>French marine classification society (BV)</li> <li>Det Norske Veritas (DNV)</li> <li>Germanische Lloyd (GL)</li> <li>Lloyds Register of Shipping (LRS)</li> <li>Nippon Kaiji Kyokai (NK)</li> <li>Polski Rejestr Statkow (PRS)</li> </ul> reference code <ul> <li>according to IEC 81346-2</li> <li>according to IEC 81346-2:2019</li> </ul> further information / internet links <ul> <li>internet link</li> </ul>                               | 100 m<br>90 m<br>Yes; c(ETL)us CMX, AWM-Style 21329<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No                   |

| <ul> <li>to web page: SiePortal</li> </ul>              | https://sieportal.siemens.com/   |
|---|--|
| <ul> <li>to website: Image database</li> </ul>          | https://www.automation.siemens.com/bilddb  |
| <ul> <li>to website: CAx-Download-Manager</li> </ul>    | https://www.siemens.com/cax  |
| <ul> <li>to website: Industry Online Support</li> </ul> | https://support.industry.siemens.com   |
| ecurity 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 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.com/crt. (V4.7) |
| Approvals / Certificates                                |  |
| General Product Approval                                |  |
| CE Manufacturer Declara-<br>tion                        |  |

EG-Konf.

last modified:

#### Data sheet

### 6XV1878-2F

| 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  | 0.01100  |  |
|   | 0.51 mm  |  |
| 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> <li>of the wire insulation</li> </ul>                    | polyethylene (PE)  |  |
|   |  |  |

6XV18782F Page 1/3 FRNC

| of cable sheath  | FRNC   |
|--|--|
| color  |  |
| <ul> <li>of the insulation of data wires</li> </ul>  | white-blue/blue, white-orange/orange, white-green/green, white-brown/brown   |
| <ul> <li>of cable sheath</li> </ul>  | green  |
| bending radius   |  |
| <ul> <li>with single bend / minimum permissible</li> </ul>   | 40 mm  |
| <ul> <li>with multiple bends / minimum permissible</li> </ul>  | 80 mm  |
| tensile load / maximum   | 100 N  |
| weight per length  | 86 kg/km   |
| ambient conditions   |  |
| ambient temperature  |  |
| <ul> <li>during operation</li> </ul>   | -50 +70 °C   |
| during storage   | -50 +70 °C   |
| during transport   | -50 +70 °C   |
| during installation  | -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  |  |
| to mineral oil   | oil resistant according to EN 50290-2-22 (VDE 0819), compound (4h/70 °C)   |
| • to grease  | Conditional resistance   |
| • to water   | conditional resistance   |
| radiological resistance / to UV radiation  | resistant  |
| product features, product functions, product components / gen  |  |
| product feature  |  |
| halogen-free   | Yes; halogen-free according to IEC 61754-1/2   |
| silicon-free   | Yes  |
|  | Yes  |
| low-emission according to IEC 61034-2  | Tes  |
| wire length / for Industrial Ethernet  | 100  |
| • with 100BaseTX   | 100 m  |
| • with 1000BaseT   | 100 m  |
| • for 10GBase T  | 90 m   |
|  |  |
| standards, specifications, approvals   |  |
| UL/ETL listing / 300 V Rating  | Yes; c(ETL)us 3047254 CMG 75°C   |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating   | Yes; c(ETL)us 3047254 CMG 75°C<br>Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2   |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability   | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2   |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>• EAC approval   | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2<br>Yes  |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>• EAC approval<br>• CE marking   | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2<br>Yes<br>Yes   |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>• EAC approval<br>• CE marking<br>• RoHS conformity  | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2<br>Yes  |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>• EAC approval<br>• CE marking<br>• RoHS conformity<br>product conformity  | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2<br>Yes<br>Yes<br>Yes  |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>• EAC approval<br>• CE marking<br>• RoHS conformity<br>product conformity<br>• ANSI/TIA-EIA 568-B.2 Cat.5e   | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2<br>Yes<br>Yes<br>Yes  |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>• EAC approval<br>• CE marking<br>• RoHS conformity<br>product conformity  | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes   |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>• EAC approval<br>• CE marking<br>• RoHS conformity<br>product conformity<br>• ANSI/TIA-EIA 568-B.2 Cat.5e<br>• IEC 61784-5-2-CP 2/2 (Ethernet/IP)<br>standard for structured cabling  | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2<br>Yes<br>Yes<br>Yes  |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>• EAC approval<br>• CE marking<br>• RoHS conformity<br>product conformity<br>• ANSI/TIA-EIA 568-B.2 Cat.5e<br>• IEC 61784-5-2-CP 2/2 (Ethernet/IP)<br>standard for structured cabling<br>Marine classification association   | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A  |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>• EAC approval<br>• CE marking<br>• RoHS conformity<br>product conformity<br>• ANSI/TIA-EIA 568-B.2 Cat.5e<br>• IEC 61784-5-2-CP 2/2 (Ethernet/IP)<br>standard for structured cabling<br>Marine classification association<br>• American Bureau of Shipping Europe Ltd. (ABS)  | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes   |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>• EAC approval<br>• CE marking<br>• RoHS conformity<br>product conformity<br>• ANSI/TIA-EIA 568-B.2 Cat.5e<br>• IEC 61784-5-2-CP 2/2 (Ethernet/IP)<br>standard for structured cabling<br>Marine classification association<br>• American Bureau of Shipping Europe Ltd. (ABS)<br>• French marine classification society (BV)   | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No  |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>• EAC approval<br>• CE marking<br>• RoHS conformity<br>product conformity<br>• ANSI/TIA-EIA 568-B.2 Cat.5e<br>• IEC 61784-5-2-CP 2/2 (Ethernet/IP)<br>standard for structured cabling<br>Marine classification association<br>• American Bureau of Shipping Europe Ltd. (ABS)<br>• French marine classification society (BV)<br>• Det Norske Veritas (DNV)   | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A  |
| UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)   | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No  |
| UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)   | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No  |
| UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)  | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No  |
| UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)   | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No   |
| UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)  | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No  |
| UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating<br>certificate of suitability<br>• EAC approval<br>• CE marking<br>• RoHS conformity<br>product conformity<br>• ANSI/TIA-EIA 568-B.2 Cat.5e<br>• IEC 61784-5-2-CP 2/2 (Ethernet/IP)<br>standard for structured cabling<br>Marine classification association<br>• American Bureau of Shipping Europe Ltd. (ABS)<br>• French marine classification society (BV)<br>• Det Norske Veritas (DNV)<br>• Germanische Lloyd (GL)<br>• Lloyds Register of Shipping (LRS)<br>• Nippon Kaiji Kyokai (NK)<br>• Polski Rejestr Statkow (PRS)  | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No  |
| UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)   | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No<br>No  |
| UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2   | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No  |
| UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2         • according to IEC 81346-2:2019   | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No  |
| UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2         • according to IEC 81346-2:2019  | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No<br>No<br>No<br>No<br>No<br>No  |
| UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2         • according to IEC 81346-2:2019         further information / internet links  | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2         Yes         Cat6A         No         WG         WGB  |
| UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2         • according to IEC 81346-2:2019         further information / internet links         internet link         • to website: Selection guide for cables and connectors  | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2         Yes         Cat6A         No         WG         WGB         https://support.industry.siemens.com/cs/ww/en/view/109766358  |
| UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2         • according to IEC 81346-2:2019         further information / internet links         internet link         • to website: Selection guide for cables and connectors         • to web page: selection aid TIA Selection Tool  | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2 Yes Yes Yes Yes Cat6A No  |
| UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2         • to website: Selection guide for cables and connectors         • to website: Selection guide for cables and connectors         • to web page: selection aid TIA Selection Tool         • to website: Industrial communication | Yes; E502506-LFR cRUus AWM 22375 I A/B 60°C 600V FT2         Yes         Yes         Yes         Yes         Yes         Yes         Yes         Cat6A         No         No |

#### • to website: CAx-Download-Manager https://www.siemens.com/cax • 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**

Manufacturer Declaration

last modified:

#### Data sheet

#### 6XV1878-2G

| product type designation<br>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<br>copper wires     |
| type of electrical connection / FastConnect                   | Yes   |
| core diameter   |   |
| <ul> <li>of AWG24 insulated conductor</li> </ul>              | 0.51 mm   |
| outer diameter  |   |
| <ul> <li>of inner conductor</li> </ul>                        | 0.51 mm   |
| <ul> <li>of the wire insulation</li> </ul>                    | 1 mm  |
| <ul> <li>of the inner sheath of the cable</li> </ul>          | 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  |  |
|---|--|
| of the wire insulation  | polyethylene (PE)  |
| <ul> <li>of the inner sheath of the cable</li> </ul>  | FRNC   |
|   | PVC  |
| of cable sheath   | FVG  |
| color   |  |
| of the insulation of data wires   | white-blue/blue, white-orange/orange, white-green/green, white-brown/brown   |
| • of cable sheath   | green/black  |
| bending radius  |  |
| with single bend / minimum permissible  | 42 mm  |
| with multiple bends / minimum permissible   | 84 mm  |
| tensile load / maximum  | 100 N  |
| weight per length   | 107 kg/km  |
| ambient conditions  |  |
| ambient temperature   |  |
| during operation  | -40 +80 °C   |
| <ul> <li>during storage</li> </ul>  | -40 +80 °C   |
| <ul> <li>during transport</li> </ul>  | -40 +80 °C   |
| <ul> <li>during installation</li> </ul>   | -40 +80 °C   |
| • note  | In fixed installation -40 °C to 85 °C  |
| class of burning behaviour / according to EN 13501-6  | Fca  |
| chemical resistance   |  |
| • to water  | Resistant  |
| radiological resistance / to UV radiation   | resistant  |
| product features, product functions, product components / gen   | eral   |
| product feature   |  |
| <ul> <li>halogen-free</li> </ul>  | No   |
| • silicon-free  | Yes  |
| wire length / for Industrial Ethernet   |  |
| • with 100BaseTX  | 90 m   |
| • with 1000BaseT  | 90 m   |
|   | 70 m   |
| • for 10GBase 1   |  |
| for 10GBase T  standards, specifications, approvals   | 70 111   |
| standards, specifications, approvals  |  |
| standards, specifications, approvals<br>UL/ETL listing / 300 V Rating   | No   |
| standards, specifications, approvals<br>UL/ETL listing / 300 V Rating<br>UL/ETL style / 600 V Rating  |  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability   | No<br>No   |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval  | No<br>No<br>Yes  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking   | No<br>No<br>Yes<br>Yes   |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity   | No<br>No<br>Yes  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity  | No<br>No<br>Yes<br>Yes<br>Yes  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e  | No<br>No<br>Yes<br>Yes<br>Yes  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)   | No<br>No<br>Yes<br>Yes<br>Yes<br>Yes   |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling   | No<br>No<br>Yes<br>Yes<br>Yes  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association   | No<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)   | No<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)   | No<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)  | No<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)   | No<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)  | No<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)   | No<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Cat6A<br>No<br>No<br>No  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)   | No           No           No           Yes           Yes           Yes           Yes           Cat6A           No   |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)  | No           No           Yes           Yes           Yes           Yes           Yes           Yes           Yes           Yo           No   |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)   | No           No           Yes           Yes           Yes           Yes           Yes           Yes           Yes           Yo           No   |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)  | No           No           No           Yes           Yes           Yes           Yes           Cat6A           No           No |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2  | No         No         Yes         Yes         Yes         Yes         Cat6A         No  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2         • according to IEC 81346-2:2019   | No         No         Yes         Yes         Yes         Yes         Cat6A         No  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2         • according to IEC 81346-2:2019   | No         No         Yes         Yes         Yes         Yes         Cat6A         No  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         product conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2         • according to IEC 81346-2:2019         further information / internet links         internet link | No           No           Yes           Yes           Yes           Yes           Yes           Cat6A           No           WG           WGB  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2         • according to IEC 81346-2         • according to IEC 81346-2         • to website: Selection guide for cables and connectors         • to web page: selection aid TIA Selection Tool  | No         No         Yes         Yes         Yes         Yes         Yes         Cat6A         No         WGB            https://support.industry.siemens.com/tstcloud  |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2         • to website: Selection guide for cables and connectors         • to website: Selection add for cables and connectors         • to website: Industrial communication                                | No         No         Yes         Yes         Yes         Yes         Yes         Yes         Cat6A         No         WG         WGB         Ittps://support.industry.siemens.com/tstcloud         https://www.siemens.com/simatic-net   |
| standards, specifications, approvals         UL/ETL listing / 300 V Rating         UL/ETL style / 600 V Rating         certificate of suitability         • EAC approval         • CE marking         • RoHS conformity         • ANSI/TIA-EIA 568-B.2 Cat.5e         • IEC 61784-5-2-CP 2/2 (Ethernet/IP)         standard for structured cabling         Marine classification association         • American Bureau of Shipping Europe Ltd. (ABS)         • French marine classification society (BV)         • Det Norske Veritas (DNV)         • Germanische Lloyd (GL)         • Lloyds Register of Shipping (LRS)         • Nippon Kaiji Kyokai (NK)         • Polski Rejestr Statkow (PRS)         reference code         • according to IEC 81346-2         • according to IEC 81346-2         • according to IEC 81346-2         • to website: Selection guide for cables and connectors         • to web page: selection aid TIA Selection Tool  | No         No         Yes         Yes         Yes         Yes         Yes         Yes         Cat6A         No         WGB         https://support.industry.siemens.com/cs/ww/en/view/109766358         https://www.siemens.com/tstcloud   |

| • to website: CAx-Download-Manager                      | https://www.siemens.com/cax   |
|---|---|
| <ul> <li>to website: Industry Online Support</li> </ul> | 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 concection 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 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 Declara-<br>tion <b>CEE</b><br>EG-Konf.    |   |
| last modified.  | 8/0/DD24  |

#### Data sheet

#### 6XV1878-2T

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                                 |  |
| • at 10 MHz / maximum   | 0.063 dB/m   |
| • at 100 MHz / maximum  | 0.207 dB/m   |
| • at 250 MHz / maximum  | 0.343 dB/m   |
| impedance   |  |
| • 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   |  |
| 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 tin-<br>plated copper wires with additional pair shielding |
| type of electrical connection / FastConnect                   | No   |
| core diameter   |  |
| <ul> <li>of AWG24 insulated conductor</li> </ul>              | 0.51 mm  |
| outer diameter  |  |
| of the wire insulation  | 1.45 mm  |
| of cable sheath   | 8.1 mm   |
| symmetrical tolerance of the outer diameter / of cable sheath | 0.4 mm   |
| material  |  |
| of the wire insulation  | polyethylene (PE)  |
| of cable sheath   | Elastomer meshed electron beam   |
| color   |  |
| <ul> <li>of the insulation of data wires</li> </ul>           | white/blue, white/green, white/brown, white/orange   |
| of cable sheath   | Black  |
| bending radius  |  |
| <ul> <li>with single bend / minimum permissible</li> </ul>    | 53 mm  |
| <ul> <li>with multiple bends / minimum permissible</li> </ul> | 53 mm  |
| tensile load / maximum  | 60 N   |
| weight per length   | 79 kg/km   |
| ambient conditions  |  |
| ambient temperature   |  |

| -40 +80 °C  |
|---|
| -40 +80 °C  |
| -40 +80 °C  |
| -20 +60 °C  |
| BS 6853, DIN5510-2 Brandschutzstufe 1-4, prEN 45545-2 Hazard Level HL 1-<br>HL 3, EN 50306-4, NF F 16-101, NFPA130  |
|   |
| EN 50306-4 (72h/100 °C, IRM 902, 168h/70 °C, IRM 903)   |
| Conditional resistance  |
| conditional resistance  |
| resistant   |
| eral  |
|   |
| Yes   |
| Yes   |
|   |
| 100 m   |
| 100 m   |
|   |
| No  |
| No  |
|   |
| Yes   |
| Yes   |
| Cat7  |
|   |
| No  |
|   |
| WG  |
| WGB   |
|   |
|   |
| 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   |
| https://www.siemens.com/cax   |
| https://support.industry.siemens.com  |
|   |
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| that support the secure operation of plants, systems, machines and networks.<br>In order to protect plants, systems, machines and networks against cyber<br>threats, it is necessary to implement – and continuously maintain – a holistic,<br>state-of-the-art industrial cybersecurity concept. Siemens' products and<br>solutions constitute one element of such a concept. Customers are responsible<br>for preventing unauthorized access to their plants, systems, machines and<br>networks. Such systems, machines and components should only be connected<br>to an enterprise network or the internet if and to the extent such a connection is<br>necessary and only when appropriate security measures (e.g. firewalls and/or<br>network segmentation) are in place. For additional information on industrial<br>cybersecurity measures that may be implemented, please visit<br>www.siemens.com/cybersecurity-industry. Siemens' products and solutions<br>undergo continuous development to make them more secure. Siemens strongly<br>recommends that product updates are applied as soon as they are available<br>and that the latest product versions are used. Use of product versions that are<br>no longer supported, and failure to apply the latest updates may increase<br>customer's exposure to cyber threats. To stay informed about product updates, |
|   |

