SIEMENS

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.

| clectrical data attenuation factor per length 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 transfer impedance per length / at 10 MHz 5 mΩ/m loop resistance per length / maximum 124 mΩ/m insulation resistance cefficient 5000 GΩ·m operating voltage • RMS value number of electrical cores 8 design of the shield Overlapped aluminum-clad foil, sheathed in a protective braided shield of tin-plated copper wires with additional pair shielding type of electrical connection / FastConnect No core diameter • of AWG24 insulated conductor 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 8.1 mm • of the wire insulation polyethylene (PE) • of the wire insulation of data wires white/blue, white/green, white/brown, white/orange • of the insulation of data wires white insulation of data wires • of the insulation of data wires white insulation of data wires <tr< th=""><th>suitability for use</th><th>For laying in rail vehicles and buses</th></tr<> | suitability for use | For laying in rail vehicles and buses |
|--|--|--|
| e at 10 MHz / maximum e at 100 MHz / maximum 0.207 dB/m 0.343 dB/m impedance e at 1 MHz 100 MHz transfer impedance per length / at 10 MHz 5 mΩ/m loop resistance per length / maximum 124 mC/m insulation resistance coefficient operating voltage e RMS value mechanical data number of electrical cores design of the shield type of electrical connection / FastConnect of tin-plated copper wires with additional pair shielding type of electrical connection / FastConnect of the wire insulation e of able sheath symmetrical tolerance of the outer diameter / of cable sheath material e of the wire insulation of the insulation of data wires of the insulation of data wires of the insulation of data wires of the line insulation of data wires of the insulation of data wires of the binding radius with multiple bend / minimum permissible with single bend / minimum permissible with multiple bend / minimum permissible of N weight per length e on N weight per length 79 kg/km | electrical data | |
| at 100 MHz / maximum at 250 MHz / maximum bimpedance at 1 MHz 100 MHz transfer impedance per length / at 10 MHz transfer impedance per length / maximum loop resistance per length / maximum 124 mΩ/m loop resistance per length / maximum 124 mΩ/m insulation resistance coefficient operating voltage RMS value 125 V mechanical data number of electrical cores design of the shield Overlapped aluminum-clad foil, sheathed in a protective braided shield of tin-plated copper wires with additional pair shielding type of electrical connection / FastConnect outer diameter of AWG24 insulated conductor outer diameter of the wire insulation for cable sheath symmetrical tolerance of the outer diameter / of cable sheath sheath material of the wire insulation of cable sheath Elastomer meshed electron beam color of cable sheath Elastomer meshed electron beam color of cable sheath Black bending radius with multiple bends / minimum permissible with single bend / minimum permissible with multiple bends / minimum permissible so N | attenuation factor per length | |
| • at 250 MHz / maximum 0.343 dB/m impedance • at 1 MHz 100 MHz transfer impedance per length / at 10 MHz 5 mC/m loop resistance per length / maximum 124 mΩ/m insulation resistance coefficient 5000 GΩ·m operating voltage • RMS value • RMS value 125 V mechanical data Veriapped aluminum-clad foil, sheathed in a protective braided shield of tin-plated copper wires with additional pair shielding type of electrical connection / FastConnect No core diameter • of AWC324 insulated conductor 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 8.1 mm material O.4 mm • of cable sheath Elastomer meshed electron beam color • of cable sheath Elastomer meshed electron beam color • of cable sheath Black bending radius • with single bend / minimum permissible 53 mm • with single bends / minimum 60 N weight per length 79 kg/km | at 10 MHz / maximum | 0.063 dB/m |
| impedance • at 1 MHz 100 MHz transfer impedance per length / at 10 MHz loop resistance per length / maximum insulation resistance coefficient operating voltage • RMS value mechanical data number of electrical cores design of the shield type of electrical connection / FastConnect of AWG24 insulated conductor outer diameter • of AWG24 insulated conductor of the wire insulation • of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material • of the wire insulation • of cable sheath color • of the insulation of data wires • of cable sheath Elastomer meshed electron beam color • of the insulation of data wires • of cable sheath Black bending radius • with single bend / minimum permissible • with single bend / minimum permissible • with miltiple bends / minimum permissible • of N | • at 100 MHz / maximum | 0.207 dB/m |
| • at 1 MHz 100 MHz transfer impedance per length / at 10 MHz loop resistance per length / maximum insulation resistance coefficient operating voltage • RMS value 125 V mechanical data number of electrical cores design of the shield of tin-plated copper wires with additional pair shielding type of electrical connection / FastConnect core diameter • of AWG24 insulated conductor of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material • of the wire insulation • of cable sheath | • at 250 MHz / maximum | 0.343 dB/m |
| transfer impedance per length / at 10 MHz loop resistance per length / maximum insulation resistance coefficient operating voltage • RMS value 125 V mechanical data number of electrical cores design of the shield of tin-plated copper wires with additional pair shielding type of electrical connection / FastConnect core diameter • of AWG24 insulated conductor outer diameter • of the wire insulation • of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material • of the wire insulation • of cable sheath color • of the insulation of data wires • of cable sheath bending radius • with single bends / minimum permissible • with single bends / minimum permissible • with multiple bends / minimum permissible • with multiple bends / minimum permissible e with multiple bends / minimum permissible tensile load / maximum weight per length | impedance | |
| loop resistance per length / maximum 124 mΩ/m insulation resistance coefficient 5000 GΩ·m operating voltage 125 V • RMS value 125 V mechanical data | • at 1 MHz 100 MHz | 100 Ω |
| insulation resistance coefficient operating voltage • RMS value mechanical data number of electrical cores design of the shield Overlapped aluminum-clad foil, sheathed in a protective braided shield of tin-plated copper wires with additional pair shielding type of electrical connection / FastConnect core diameter • of AWG24 insulated conductor outer diameter • of the wire insulation • of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material • of the wire insulation • of cable sheath color • of the insulation of data wires • of the insulation of data wires • of cable sheath bending radius • with single bend / minimum permissible • with multiple bends / minimum permissible • with multiple pends / minimum permissible | transfer impedance per length / at 10 MHz | 5 mΩ/m |
| operating voltage • RMS value 125 V mechanical data number of electrical cores design of the shield Vype of electrical connection / FastConnect core diameter • of AWG24 insulated conductor outer diameter • of the wire insulation • of cable sheath material • of the wire insulation • of the wire insulation • of the insulation of data wires • of cable sheath color • of the insulation of data wires • of cable sheath bending radius • with single bend / minimum permissible • with multiple bends / minimum permissible • with multiple bends / minimum permissible • with multiple bends / minimum permissible • with fingle pength 79 kg/km | loop resistance per length / maximum | 124 mΩ/m |
| e RMS value mechanical data number of electrical cores design of the shield type of electrical connection / FastConnect of tin-plated copper wires with additional pair shielding type of electrical connection / FastConnect ore diameter of AWG24 insulated conductor outer diameter of the wire insulation of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of cable sheath Elastomer meshed electron beam color of the insulation of data wires of cable sheath bending radius with single bend / minimum permissible with single bend / minimum permissible with single bend / minimum permissible with multiple bends / minimum permissible tensile load / maximum 60 N weight per length 79 kg/km | insulation resistance coefficient | 5000 GΩ·m |
| number of electrical cores design of the shield Overlapped aluminum-clad foil, sheathed in a protective braided shield of tin-plated copper wires with additional pair shielding type of electrical connection / FastConnect No core diameter of AWG24 insulated conductor outer diameter of the wire insulation of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of cable sheath Elastomer meshed electron beam color of the insulation of data wires of cable sheath bending radius with single bend / minimum permissible with multiple bends / minimum permissible wielght per length 79 kg/km | operating voltage | |
| number of electrical cores design of the shield Overlapped aluminum-clad foil, sheathed in a protective braided shield of tin-plated copper wires with additional pair shielding type of electrical connection / FastConnect No ore diameter of AWG24 insulated conductor outer diameter of the wire insulation of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of cable sheath Elastomer meshed electron beam color of the insulation of data wires of the insulation of data wires white/blue, white/green, white/brown, white/orange Black bending radius with single bend / minimum permissible with multiple bends / minimum permissible with multiple bends / minimum permissible symmetrical tolerance of the outer diameter / of cable sheath Elastomer meshed electron beam color white/blue, white/green, white/brown, white/orange Black bending radius with single bend / minimum permissible of with multiple bends / minimum permissible with multiple bends / minimum permissible symmetrical tolerance of the outer diameter / of cable sheath bending radius of the insulation of data wires white/blue, white/green, white/brown, white/orange bending radius of the insulation of data wires of cable sheath bending radius of the insulation of data wires of cable sheath bending radius of the insulation of data wires of cable sheath bending radius of the insulation of data wires of cable sheath bending radius of the insulation of data wires of the wire insulation symmetrical tolerance of the outer diameter / of cable sheath bending the insulation of data wires of the wire insulation symmetrical tolerance of the outer diameter / of cable sheath symmetrical tolerance of the outer diameter / of cable sheath symmetrical tolerance of the outer diameter / of cable sheath symmetrical tolerance of the outer diameter / of cable sheath symmetrical t | RMS value | 125 V |
| design of the shield Overlapped aluminum-clad foil, sheathed in a protective braided shield of tin-plated copper wires with additional pair shielding type of electrical connection / FastConnect No ore diameter • of AWG24 insulated conductor outer diameter • of the wire insulation • of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material • of the wire insulation • of cable sheath color • of the insulation of data wires • of cable sheath bending radius • with single bend / minimum permissible • with multiple bends / minimum permissible • with multiple bends / minimum permissible • with multiple bends / minimum permissible tensile load / maximum overlapped aluminum-clad foil, sheathed in a protective braided shield of tin-plated copper wires with additional pair shielding No O.51 mm 9.44 mm 8.1 mm 9.44 mm 8.1 mm 9.44 mm 8.1 mm 9.44 mm 8.45 mm 8.45 mm 9.45 white/blue, white/green, white/brown, white/orange 8.45 mm 9.45 mm 9. | mechanical data | |
| type of electrical connection / FastConnect type of electrical connection / FastConnect of AWG24 insulated conductor outer diameter of the wire insulation of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of the insulation of the insulation of data wires of cable sheath bending radius with single bend / minimum permissible with multiple bends / minimum permissible with multiple bends / minimum permissible of the insulation of the insulation of data wires of cable sheath bending radius with multiple bends / minimum permissible of with multiple bends / minimum permissible of the insulation of data wires of cable sheath bending radius of the insulation of data wires of cable sheath bending radius of the insulation of data wires of cable sheath bending radius of the insulation of data wires of cable sheath bending radius of the insulation of data wires of cable sheath bending radius of the insulation of data wires of cable sheath bending radius of the insulation of data wires of cable sheath bending radius of the insulation of data wires of cable sheath bending radius of the insulation of data wires of cable sheath bending radius of the insulation of data wires of cable sheath bending radius of the insulation of data wires of the insulation of data wires of the insulation of the outer diameter / of cable sheath of the wire insulation of th | number of electrical cores | 8 |
| core diameter of AWG24 insulated conductor outer diameter of the wire insulation of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of cable sheath polyethylene (PE) Elastomer meshed electron beam color of the insulation of data wires of cable sheath bending radius with single bend / minimum permissible with multiple bends / minimum permissible with multiple bends / minimum permissible of N weight per length of the wire insulation of 0.51 mm 1.45 mm 0.4 mm Sharing Num Num Num Num Num Num Num Nu | design of the shield | |
| of AWG24 insulated conductor outer diameter of the wire insulation of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of cable sheath of the wire insulation of cable sheath color of the insulation of data wires of cable sheath bending radius with single bend / minimum permissible with multiple bends / minimum permissible of the with multiple bends / minimum permissible tensile load / maximum weight per length 1.45 mm 9.44 mm 9.44 mm 9.44 mm 9.45 mm 9.46 mm 9.46 mm 9.46 mm 9.47 mm 9.48 mm 9. | type of electrical connection / FastConnect | No |
| outer diameter • of the wire insulation • of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material • of the wire insulation • of cable sheath color • of the insulation of data wires • of cable sheath bending radius • with single bend / minimum permissible • with multiple bends / minimum permissible • with multiple bends / minimum permissible • with per length 1.45 mm 8.1 mm 0.4 mm Sharing Polyethylene (PE) Elastomer meshed electron beam white/blue, white/green, white/brown, white/orange Black 53 mm • owith multiple bends / minimum permissible 53 mm tensile load / maximum 60 N weight per length | core diameter | |
| of the wire insulation of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of cable sheath of cable sheath color of the insulation of data wires of cable sheath bending radius with single bend / minimum permissible with multiple bends / minimum permissible weight per length 1.45 mm 8.1 mm 9.4 mm 8.1 mm 9.4 mm 9.5 mm 9.5 mm 9.6 mm 9.6 mm 9.7 kg/km | of AWG24 insulated conductor | 0.51 mm |
| of cable sheath symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of cable sheath color of the insulation of data wires of cable sheath bending radius with single bend / minimum permissible with multiple bends / minimum permissible tensile load / maximum weight per length 8.1 mm 8.1 mm 8.4 mm 8.5 mm bolyethylene (PE) Elastomer meshed electron beam white/blue, white/green, white/brown, white/orange Black 53 mm 60 N Weight per length | outer diameter | |
| symmetrical tolerance of the outer diameter / of cable sheath material of the wire insulation of cable sheath color of the insulation of data wires of cable sheath bending radius with single bend / minimum permissible with multiple bends / minimum permissible tensile load / maximum weight per length of the outer diameter / of cable sheath polyethylene (PE) Elastomer meshed electron beam white/blue, white/green, white/brown, white/orange Black 53 mm 60 N 79 kg/km | of the wire insulation | 1.45 mm |
| sheath material of the wire insulation of cable sheath color of the insulation of data wires of cable sheath bending radius with single bend / minimum permissible with multiple bends / minimum permissible tensile load / maximum weight per length polyethylene (PE) Elastomer meshed electron beam white/blue, white/green, white/brown, white/orange Black 53 mm 60 N yeight per length | of cable sheath | 8.1 mm |
| of the wire insulation of cable sheath color of the insulation of data wires of cable sheath bending radius with single bend / minimum permissible with multiple bends / minimum permissible with multiple bends / minimum permissible for N weight per length polyethylene (PE) Blask white/blue, white/green, white/brown, white/orange Black 53 mm 60 N 60 N weight per length 79 kg/km | | 0.4 mm |
| of cable sheath color of the insulation of data wires of cable sheath bending radius with single bend / minimum permissible with multiple bends / minimum permissible tensile load / maximum weight per length Elastomer meshed electron beam white/blue, white/green, white/brown, white/orange Black 53 mm 60 N 79 kg/km | material | |
| color • of the insulation of data wires • of cable sheath bending radius • with single bend / minimum permissible • with multiple bends / minimum permissible tensile load / maximum weight per length white/blue, white/green, white/brown, white/orange Black 53 mm 60 N | of the wire insulation | polyethylene (PE) |
| of the insulation of data wires of cable sheath bending radius with single bend / minimum permissible with multiple bends / minimum permissible tensile load / maximum weight per length white/blue, white/green, white/brown, white/orange Black 53 mm 60 N 79 kg/km | of cable sheath | Elastomer meshed electron beam |
| ● of cable sheath bending radius ● with single bend / minimum permissible ● with multiple bends / minimum permissible 53 mm • with multiple bends / minimum permissible 53 mm tensile load / maximum 60 N weight per length 79 kg/km | color | |
| bending radius • with single bend / minimum permissible • with multiple bends / minimum permissible tensile load / maximum 60 N weight per length 79 kg/km | of the insulation of data wires | white/blue, white/green, white/brown, white/orange |
| with single bend / minimum permissible with multiple bends / minimum permissible tensile load / maximum weight per length 53 mm 60 N 79 kg/km | of cable sheath | Black |
| with multiple bends / minimum permissible tensile load / maximum weight per length 79 kg/km | bending radius | |
| tensile load / maximum 60 N weight per length 79 kg/km | with single bend / minimum permissible | 53 mm |
| weight per length 79 kg/km | with multiple bends / minimum permissible | 53 mm |
| | tensile load / maximum | 60 N |
| ambient conditions | weight per length | 79 kg/km |
| | | |

| ambient temperature | |
|---|--|
| during operation | -40 +80 °C |
| during storage | -40 +80 °C |
| during transport | -40 +80 °C |
| during installation | -20 +60 °C |
| fire behavior | BS 6853, DIN5510-2 Brandschutzstufe 1-4, prEN 45545-2 Hazard Level HL 1-HL 3, EN 50306-4, NF F 16-101, NFPA130 |
| chemical resistance | |
| to mineral oil | EN 50306-4 (72h/100 °C, IRM 902, 168h/70 °C, IRM 903) |
| • to grease | Conditional resistance |
| • to water | conditional resistance |
| radiological resistance / to UV radiation | resistant |
| product features, product functions, product components | g / general |
| product feature | |
| halogen-free | Yes |
| • silicon-free | Yes |
| wire length / for Industrial Ethernet | |
| with 100BaseTX | 100 m |
| with 1000BaseT | 100 m |
| standards, specifications, approvals | |
| UL/ETL listing / 300 V Rating | No |
| UL/ETL style / 600 V Rating | No |
| certificate of suitability | |
| CE marking | Yes |
| RoHS conformity | Yes |
| standard for structured cabling | Cat7 |
| Marine classification association | |
| American Bureau of Shipping Europe Ltd. (ABS) | No |
| French marine classification society (BV) | No |
| Det Norske Veritas (DNV) | No |
| Germanische Lloyd (GL) | No |
| Lloyds Register of Shipping (LRS) | No |
| Nippon Kaiji Kyokai (NK) | No |
| Polski Rejestr Statkow (PRS) | No |
| reference code | |
| according to IEC 81346-2 | WG |
| according to IEC 81346-2:2019 | WGB |
| further information / internet-Links | |
| Internet-Link | |
| to web page: selection aid TIA Selection Tool | http://www.siemens.com/tia-selection-tool |
| to website: Industrial communication | http://www.siemens.com/simatic-net |
| to website: Industry Mall | https://mall.industry.siemens.com |
| to website: Information and Download Center | http://www.siemens.com/industry/infocenter |
| to website: Selection guide for cables and connectors | https://sie.ag/2QdlxcP |
| to website: Image database | http://automation.siemens.com/bilddb |
| • to website: CAx-Download-Manager | http://www.siemens.com/cax |
| to website: Industry Online Support | https://support.industry.siemens.com |
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