



SIMATIC NET, PROFIBUS TORSION CABLE,  
FOR USE IN HIGHLY FLEXIBLE  
APPLICATIONS(TORSION),  
MAX. LENGTH ORDERED: 1000M,  
MIN. LENGTH ORDERED: 20 M SOLD BY THE METER

Acceptability for application

For use in moving machine components

### Electrical data

Damping ratio per length

|                         |             |
|-------------------------|-------------|
| • at 9.6 kHz / maximum  | 0.0025 dB/m |
| • at 38.4 kHz / maximum | 0.0030 dB/m |
| • at 4 MHz / maximum    | 0.025 dB/m  |
| • at 16 MHz / maximum   | 0.049 dB/m  |

Impedance

|  |       |
|--|-------|
| • Nominal value                        | 150 Ω |
| • at 9.6 kHz                           | 270 Ω |
| • at 38.4 kHz                          | 185 Ω |
| • for frequency range 3 MHz ... 20 MHz | 150 Ω |

Relative symmetrical tolerance

|  |      |
|--|------|
| • of the surge impedance at 9.6 kHz          | 10 % |
| • of the surge impedance at 38.4 kHz         | 10 % |
| • of the surge impedance at 3 MHz ... 20 MHz | 10 % |

Loop resistance per length / maximum

98 Ω/km

Shield resistance per length / maximum

14 Ω/km

Insulation resistance coefficient

16000 GΩ·m

Capacity per length / at 1 kHz

29 pF/m

Operating voltage

|  |   |
|--|---|
| • RMS value  | 100 V   |
| <b>Mechanical data</b>   |   |
| Number of electrical wires   | 2   |
| Design of shield   | Overlapped aluminum-clad foil, sheathed in a braided screen of tinned copper wires                |
| Design of the electrical connection / FastConnect                              | No  |
| Outer diameter   |   |
| • of the inner conductor   | 0.8 mm  |
| • of the wire insulation   | 2.56 mm   |
| • of the inner sheath of the cable   | 6 mm  |
| • of the cable sheath  | 8 mm  |
| Symmetrical tolerance of outer diameter / of cable sheath                      | 0.4 mm  |
| Material   |   |
| • of the wire insulation   | PE  |
| • of the cable sheath  | PUR (TPE-U)   |
| Color  |   |
| • of the insulation of data wires  | red / green   |
| • of the cable sheath  | Violet  |
| Bending radius   |   |
| • with single bend / minimum permissible                                       | 30 mm   |
| • with continuous bending  | 60 mm   |
| Number of bending cycles   |   |
| • Note   | Not suitable for installation in festoons   |
| Number of torsion cycles / with torsion by $\pm 180^\circ$ on 1 m cable length | 5000000   |
| Traction stress / maximum  | 100 N   |
| Weight per length  | 65 kg/km  |
| <b>Permitted ambient conditions</b>  |   |
| Ambient temperature  |   |
| • during operating   | -25 ... +75 °C  |
| • during storage   | -40 ... +80 °C  |
| • during transport   | -40 ... +80 °C  |
| • during installation  | -25 ... +75 °C  |
| • Comment  | Electrical characteristics measured at 20 °C, tests according to DIN 47250 Part 4 or DIN VDE 0472 |
| Burning behaviour  | flame resistant according to IEC 60332-1-2  |
| Chemical resistance  |   |
| • to mineral oil   | oil resistant according to IEC 60811-2-1 (7x24h/90°C)   |
| • to grease  | Resistant   |
| • to water   | Conditional resistance  |
| Radiological resistance / to UV radiation                                      | Resistant   |

## Product properties, functions, components / general

### Product feature

- |                |     |
|----------------|-----|
| • halogen-free | Yes |
| • silicon-free | Yes |

## Standards, specifications, approvals

|                                    |          |
|------------------------------------|----------|
| UL/ETL listing / with 300 V rating | Yes: CMX |
|------------------------------------|----------|

|                                  |    |
|----------------------------------|----|
| UL/ETL style / with 600 V rating | No |
|----------------------------------|----|

### Verification of suitability

- |                   |     |
|-------------------|-----|
| • CE mark         | Yes |
| • RoHS conformity | Yes |

### Marine classification association

- |   |    |
|---|----|
| • American Bureau of Shipping Europe Ltd. (ABS) | No |
| • Bureau Veritas (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 |

**letzte Änderung:**

Jun 28, 2014