

Instrumentation Cables

PROFIBUS M-02Y(ST)CHX 100V (TEMA-PROFIBUS)



Design

- > **Conductor**
Bare copper, round stranded R-Cu 58 according to DIN 40500 Part 4, 0,35 mm²
- > **Insulation**
Polyethylene foam (cellular HDPE)
- > **Multilayered shield**
Laminated aluminium foil, overlapped
Braided screen of tinned copper wires
- > **Inner Sheath**
Halogen-free polymer HM4 acc. to DIN VDE 0207 Part 24
- > **Outer Sheath**
SHF1 compound according to IEC 60092-359
- > **Identification**
 - a core red
 - b core green

Standards

- > **Ozone**
DIN VDE 0472 Part 805, Test B
- > **Fire retardance**
IEC 60332-3 (cat C)
- > **Corrosivity of combustion gasses**
IEC 60754-2
- > **Smoke density**
IEC 61034
- > **Resistance to chemicals (Test to VG 95218 Part 2):**
 - diesel fuel to DIN 51601
 - ASTM oil number 2 to DIN 53521
 - Nato code oils 0-278, BW-TL 9150-0031/2 to VG 95214 Part 4
 - Hydraulic fluids, NATO code H-515, BW-TL 9150-0020 to VG 95214 Part 4
 - Solvent cleaning agents, BW-TL 6850-0017 to 95214 Part4
 - DE-ionozed water to VG 95214 Part4
 - DE-ionized water with 3,5 % NaCl
- > **Maximum conductor temperature +80 °C**

Marine Cables

Bus-Cable

Transmission characteristics

- > **Voltage**
100 V
- > **Conductor resistance 1 km loop at 20 °C**
max. 110 Ω/km
- > **Characteristic impedance**

at 3 to 20 MHz	150 ± 15 Ω
at 38,4 kHz	185 ± 18,5 Ω
at 9,6 kHz	250 ± 25 Ω
- > **Wave attenuation**

at 16 MHz	max. 45 dB/km
at 4 MHz	max. 22 dB/km
at 38,4 kHz	max. 5 dB/km
at 9,6 kHz	max. 3 dB/km
- > **Mutual capacitance at 800 Hz**
max. 30 nF/km
- > **Insulation resistance at 20 °C**
min. 16 000 MΩkm
- > **Outer sheath surface resistance min 10⁹ Ω**

Other properties

- > **Ambient temperatures**

During operations as bus cable fixed intallation	-35 to 80 °C
During installation	-10 to 50 °C
Conductor temperature in operation	max. 80 °C
- > **Tensile load during installation**
max. 100 N
- > **Bending radius** **(D = overall diameter)**

Single bending	min 10 x D
Flexing	min 20 x D
- > **Weight**
appr. 110 kg/1000 m
- > **Outer diameter**
max 9,8 mm

