

## SIENOPYR FR PROFIBUS M-02Y(ST)CHX

Bus cables for ships and offshore units



### Application

As a bus cable for fixed installation on ships and off-shore units in all locations and on open decks. The cables are not suitable for continuous use in water.

### Global data

|                  |                      |
|------------------|----------------------|
| Brand            | SIENOPYR FR PROFIBUS |
| Type designation | M-02Y(ST)CHX         |
| Standard         | IEC 61784            |
| Standard         | IEC 61158            |

### Design features

|                     |   |
|---------------------|---|
| Conductor           | 7 bare copper wires E-Cu58 F21 to DIN 40500 part 4<br>Cross section: 0.35 mm <sup>2</sup> (AWG 22 = 0.325 mm <sup>2</sup> ) |
| Insulation          | Polyethylene foam (cellular HDPE)   |
| Core identification | a core: red<br>b core: green  |
| Core arrangement    | Laying of the both copper cores with two blind cores. Nonwoven plastic textile band around the laid-up cores                |
| Screen              | 1. layer: laminated aluminium foil<br>2. layer: tinned copper wire braid  |
| Inner sheath        | Polyolefine compound, type SHF-1, according to IEC 60092-360.<br>Diameter: 8 mm   |
| Outer sheath        | Halogen free, cross-linked polymer based on VG 95218<br>Colour: black   |

### Electrical parameters

|  |  |
|--|--|
| Rated voltage                                  | 100/100V   |
| Insulation resistance at 20°C                  | 16000 MΩxkm  |
| Surface resistance of the outer sheath at 20°C | 10 <sup>9</sup> Ω  |
| Mutual capacitance                             | max. 30 nF/km (at 800 Hz)  |
| Wave attenuation                               | at 16 MHz: max. 45 dB/km<br>at 4 MHz: max. 22 dB/km<br>at 38.4 kHz: max. 5 dB/km<br>at 9.6 kHz: max. 3 dB/km |
| Characteristic impedance                       | 3 MHz to 20 MHz: 150 +/- 15 Ω<br>at 38.4 kHz 185 +/- 18.5 Ω<br>at 9.6 kHz 250 +/- 25 Ω                       |
| Max. conductor loop resistance at 20°C         | 110 Ω/km   |

### Chemical parameters

|                         |   |
|-------------------------|---|
| Smoke emission          | according to IEC 61034  |
| Acidity of fire gases   | according to IEC 60754-2  |
| Flame propagation       | according to IEC 60332-3-24   |
| Ozone resistance        | according to EN 50396 clause 8.1.3  |
| Resistance to chemicals | Diesel fuel, Oils, Hydraulic fluids, Solvent cleansing agents, De-ionized water and De-ionized water with 3,5% NaCl<br>(tests based on VG 95218 part 2) |

### Thermal parameters

|   |        |
|---|--------|
| Max. permissible temperature at conductor     | 80 °C  |
| Ambient temperature for fix installation min. | -35 °C |
| Laying temperature min.                       | -15 °C |

### Mechanical parameters

|                     |   |
|---------------------|---|
| Max. tensile load   | 100 N   |
| Min. bending radius | 10 x D (single bending), 20 x D (several times bending) |

| Number of cores x cross section | Part number | MLFB Number | Outer diameter max. mm | Bending radii min. mm | Weight (ca.) kg/km |
|---------------------------------|-------------|-------------|------------------------|-----------------------|--------------------|
| 1x2x0.35                        | 20001922    | 5BG6 951    | 10.8                   | 108                   | 110                |