



# RS 485 Industrial BUS SHF1

1, 2 or 4-pair quad, 22/7

Tinned conductors

120 Ω

DNV

## Application

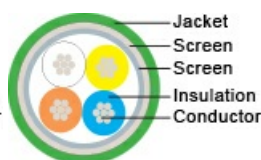
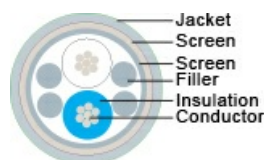
120 Ω BUS cable designed for industrial field bus systems of automation and communication, designed for ship and offshore use, designed for fixed applications, such as process control and automation.

22AWG/7 TC conductor, Foamed PE insulation, Filler, Al/Mylar and tinned copper braiding overall screen, SHF1 jacket.



## Construction

|                |  |
|----------------|--|
| Conductor      | 0.35 [mm <sup>2</sup> ] Stranded tinned Cu AWG 22/7 (7 x 0.254 mm)   |
| Insulation     | Foam PE Ø = 1.75 [mm]  |
| Filler         | 1 pair, yes: PP<br>2 pairs, none   |
| Colour code    | 1 Pair: White and blue<br>2 Pairs: White, yellow, blue and orange  |
| Screen         | Al/Mylar   |
| Screen 2       | Tinned Cu braid ≥85 [% optical coverage]   |
| Jacket         | Green, other if requested SHF1   |
| Jacket marking | 1Pair: NEK Kabel – RS485 – Marine – Cable – 1x2xAWG22/7 – SHF1 – DNV – IEC60332-3-22 – ****m – DD/MM/YY<br><br>2 Pairs: NEK Kabel – RS485 – Marine – Cable – 4xAWG22/7 – SHF1 – DNV – IEC60332-3-22 – ****m – DD/MM/YY |



## Specifications

|                                    |                      |
|------------------------------------|----------------------|
| Operating temperature normal       | -40 - +80 [°C]       |
| Temperature @ installation         | -20 - +60 [°C]       |
| Dielectric strength                | DC 2kV for 1min.     |
| Characteristic impedance           | 120±15 [Ω @ 1MHz]    |
| Conductor resistance               | ≤55 [Ω/km]           |
| Resistance unbalance               | ≤5 [%]               |
| Insulation resistance              | ≥1 [GΩ x km]         |
| Attenuation                        | ≤20,0 [dB/km @ 1MHz] |
| Min. bending radius installed      | 8 [x outer diam]     |
| Min. bending radius @ installation | 15 [x outer diam]    |



## Norms

|  |  |
|--|--|
| Halogenfree, max content corrosive and toxic gases | IEC 60754-1 & IEC 60754-2                      |
| Material properties, insulation and sheath         | IEC 60092-360                                  |
| Design and testing standards                       | IEC 61158-2                                    |
| Flame resistance                                   | IEC 60332-3-22 Cat.A                           |
| Flame retardant                                    | IEC 60332-1-2                                  |
| Smoke emission                                     | IEC 61034-2                                    |
| Oil and fuel resistant                             | IEC 60811-2-1 IRM 902 23°C / 7 days, 70°C / 4h |
| UV-resistant                                       | UL 1581 (300H)                                 |
| Certification                                      | DNV  |



| Pairs         | Outer diam. [mm] | Weight [kg/km] | Art. no. |
|---------------|------------------|----------------|----------|
| 1-pair Grey   | 6.50 ± 0.40      | 54             | 2040007  |
| 2-pairs Black | 8.30 ± 0.40      | 80             | 2040000  |
| 2-pairs Green | 8.30 ± 0.40      | 80             | 2040004  |
| 4-pairs Grey  | 9.30 ± 0.50      | 107            | 2040008  |
| 4-Cores Green | 6.50 ± 0.40      | 64             | 2040009  |

## Updated

| Date       | Rev. | Description            |
|------------|------|------------------------|
| 5.4.2019   | 1    | DNV Approved           |
| 15.4.2019  | 2    | Additional information |
| 25.09.2023 | 3    | Added 1-pair           |