



# Databus 120Ω Marine

## /Radox foam/Radox Elastomer SFH

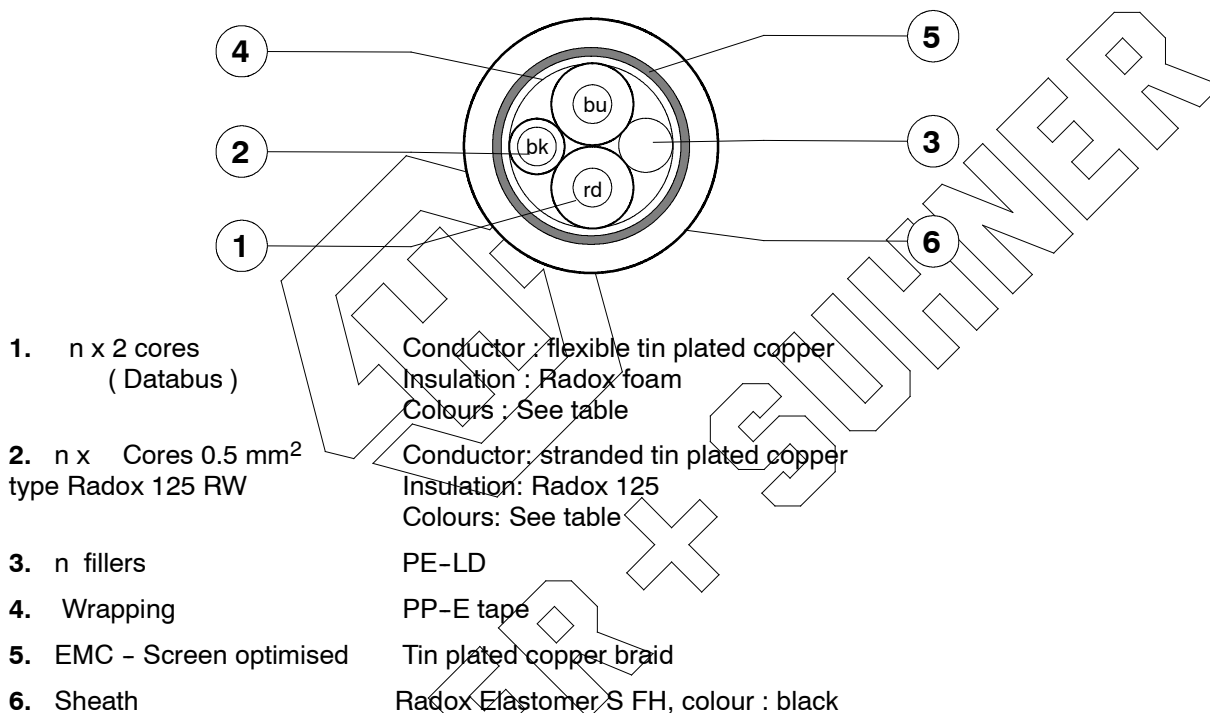
### General Properties :

Limited fire hazard electrical installation cable, zero halogen, flame retardant; high temperature, low temperature and ozone resistance, solder iron resistant, easily strippable, flexible, excellent screening properties.

Cable for symetrical data transmission with impedance of 120 Ω with very good transmission properties at high frequencies.

### Application :

For permanent installation inside of ships to connect fixed parts.



Marking : H + S Art. Nr. -zzzzzz DATABUS 120OHM n x 2X0.5 + n x 0.5MM2  
Production lot number

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The product fulfils the test and specification requirements described in this document for the stated areas of application and operating conditions. HUBER+SUHNER AG does not expressly or implicitly guarantee performance under additional or changed conditions. Deviations are to be agreed upon in writing.

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## Technical Data :

### Data bus pair n x 2x0.5 mm<sup>2</sup> :

|                                          |             |           |
|------------------------------------------|-------------|-----------|
| Conductor resistance at 20°C             | ≤ see table | Ω / km    |
| Voltage rating                           | 300         | V         |
| Test voltage DC, 1 min.                  | 2 000       | V         |
| Insulation resistance at 20°C            | > 100       | MΩ · km   |
| Mutual capacitance wire / wire f = 1 MHz | ≤ 45        | pF / m    |
| Capacitive unbalance to shield f = 1 MHz | < 1.5       | pF / m    |
| Impedance f = 0.75 ... 3 MHz             | 120 ± 12    | Ω         |
| Attenuation f = 0.25 MHz                 | ≤ 0.67      | dB / 100m |
| f = 1.0 MHz                              | ≤ 1.35      | dB / 100m |
| f = 2.0 MHz                              | ≤ 1.80      | dB / 100m |
| f = 3.0 MHz                              | ≤ 2.30      | dB / 100m |

### Core 0.5 mm<sup>2</sup> :

|                              |             |        |
|------------------------------|-------------|--------|
| Conductor resistance at 20°C | ≤ see table | Ω / km |
| Voltage rating               | 300         | V      |
| Test voltage, DC 1 min.      | 2 000       | V      |

### Cable :

|                               |                |        |
|-------------------------------|----------------|--------|
| Transfer impedance f ≤ 20 MHz | ≤ 20           | mΩ / m |
| Temperature range fixed       | 40 ... + 90    | °C     |
| flexing                       | 25 ... + 90    | °C     |
| Min. bending radius fixed     | 3 x cable dia. |        |
| flexing                       | 5 x cable dia. |        |
| Cable weight per 100m         | see table      |        |

## The cables are in conformity with:

|                                                       |                        |                             |
|-------------------------------------------------------|------------------------|-----------------------------|
| Fire protection on railway vehicles, protection level | 1, 2, 3, 4             | DIN 5510-2                  |
| Vertical flame spread                                 | 50 < l ≤ 540mm         | EN 60332-1-2, IEC60332-1-2  |
| Vertical flame spread, bunched, cat A                 | l ≤ 2.5m               | EN 50266-2-2, IEC60332-3-22 |
| Smoke density                                         | T ≥ 60%                | EN 61034-2, IEC 61034-2     |
| Amount of halogen acid gas                            | HCL + HBr ≤ 0.5%       | EN 50267-2-1, IEC 60754-1   |
| Amount of halogen acid gas                            | HF ≤ 0.1%              | EN 60684-2 # 45.2           |
| Corrosivity of combustion gases                       | pH ≥ 4.3, s ≤ 10 μS/mm | EN 50267-2-2, IEC 60754-2   |
| Toxicity                                              | ITC ≤ 5                | EN 50305 # 9.2              |

## Approvals :

|            |                           |                                                   |
|------------|---------------------------|---------------------------------------------------|
| Data cable | Databus 120 Ohm<br>Marine | Germanischer Lloyd<br>Certificate No. 44506-07 HH |
|------------|---------------------------|---------------------------------------------------|



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| n x mm <sup>2</sup>               |                              | Databus (pairs and quads)                    |         |                                   |                 | R125 (singles)                         |         |                                   |            | Cable assembly                               |               |                 |                            |                   |
|-----------------------------------|------------------------------|----------------------------------------------|---------|-----------------------------------|-----------------|----------------------------------------|---------|-----------------------------------|------------|----------------------------------------------|---------------|-----------------|----------------------------|-------------------|
| no. of cores x csa <sup>(1)</sup> |                              | Insulation: Radox foam<br>Colours: blue, red |         |                                   |                 | Insulation: Radox 125<br>Colour: black |         |                                   |            | Sheat: Radox Elastomer S FH<br>Colour: black |               |                 |                            |                   |
| 2 cores                           | 1 core                       | Conductor                                    | Core    | R <sub>20</sub><br>max.<br>Ω / km | Core Color      | Conductor                              | Core    | R <sub>20</sub><br>max.<br>Ω / km | Core Color | Bundle                                       | EMC<br>Screen | Cable<br>outerØ | Weight<br>Cable<br>kg/100m | H + S<br>Part no. |
| Databus<br>n x mm <sup>2</sup>    | R 125<br>n x mm <sup>2</sup> | Ø<br>mmD                                     | Ø<br>mm |                                   |                 | Ø<br>mmD                               | Ø<br>mm |                                   |            | Ø<br>mm                                      | Ø<br>mm       | mm              |                            |                   |
| 2 x 0.5                           | -                            | 19 x 0.18                                    | 2.30    | 40.1                              | rd-bu           | -                                      | -       | 40.1                              | -          | 4.9                                          | 5.5           | 7.9 ± 0.3       | 8.3                        | 12582660          |
| 2 x 0.5                           | 1 x 0.5                      | 19 x 0.18                                    | 2.30    | 40.1                              | rd-bu           | 19 x 0.18                              | 1.40    | 40.1                              | bk         | 4.9                                          | 5.5           | 7.9 ± 0.3       | 8.7                        | 12582724          |
| 2 x 2 x 0.5                       | -                            | 19 x 0.18                                    | 2.30    | 40.1                              | rd-bu;<br>bn-gy | -                                      | -       | 40.1                              | -          | 8.6                                          | 9.4           | 12.2 ± 0.4      | 17.4                       | 12584413          |
| 2 x 2 x 0.5                       | 2 x 0.5                      | 19 x 0.18                                    | 2.30    | 40.1                              | rd-bu;<br>bn-gy | 19 x 0.18                              | 1.40    | 40.1                              | bk, ye     | 8.6                                          | 9.4           | 12.2 ± 0.4      | 17.9                       | 12584414          |
| 4 x 0.5                           | -                            | 19 x 0.18                                    | 2.30    |                                   | -               | -                                      | -       |                                   |            | -                                            |               | approx. 9       | -                          | -                 |

1) csa = cross-sectional area