



Traction cable

RADOX DATABUS 100 OHM nX2X0.14 XM S

Product description:

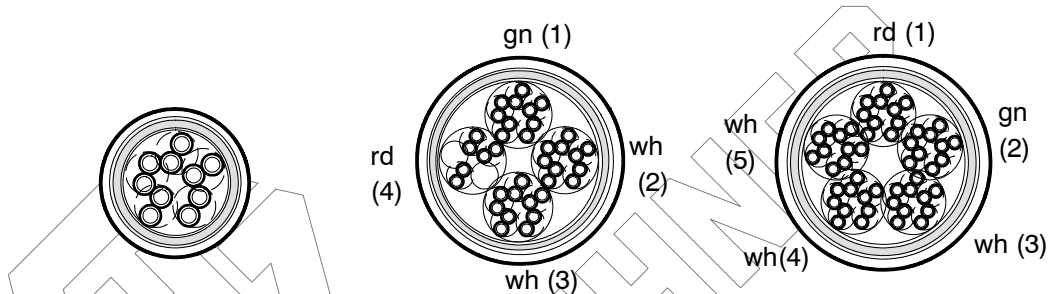
RADOX DATABUS Multicore cables with overall screen
 Impedance: 100 Ohm
 Hazard level: M (extra low temperature, extra oil and extra fuel resistant)

General features:

Halogen free electron- beam cross linked cables with improved behaviour in case of fire, easy to strip, soldering iron resistant and flexible.

Application:

The cables are intended for permanent installation in rail vehicles
 Guidelines for selection and installation are described in the standard EN 50343.



| H+S part no | 12555982 | 12555984 | 12555983 |
|-----------------------------|--------------------------------------|--|--|
| Construction | 5X2X0.14 XM S | 18X2X0.14 XM S | 25X2X0.14 XM S |
| Conductor construction | Tin plated copper 19x0.1mm | Tin plated copper 19x0.1mm | Tin plated copper 19x0.1mm |
| Core insulation Diameter | RADOX COM 0.85 mm | RADOX COM 0.85 mm | RADOX COM 0.85 mm |
| Colour of cores | wh/bn, ye/gn, gy/pk, bu/rd, bk/vt | Bundle 1- 3: wh/bn, ye/gn, gy/pk, bu/rd, bk/vi Bundle 4: wh/bn, ye/gn, gy/pk | Bundle: 1- 5 wh/bn, ye/gn, gy/pk, bu/rd, bk/vi |
| Tape | yes | Identification thread Bundle 1: gn Bundle 2- 3: wh Bundle 4: rd | Identification thread Bundle 1: rd Bundle 2: gn Bundle 3- 5: wh |
| EMC- screen Diameter (nom) | Tin plated copper braid 4.4 mm | Tin plated copper braid 7.8 mm | Tin plated copper braid 9.0 mm |
| Wrapping | Tape | Tape | Tape |
| Cable sheath | RADOX EM 104 | RADOX EM 104 | RADOX EM 104 |
| Sheath colour | grey | grey | grey |
| Cable diameter | 5.4±0.2 mm | 9.2±0.3 mm | 10.6±0.3 mm |
| Type of installation | fixed | fixed | fixed |
| Fire load | 340 kJ/m | 960 kJ/m | 1300 kJ/m |
| Cable weight appr. | 4.4 kg/100m | 14.3 kg/100m | 19.3 kg/100m |

Cable- marking: HUBER+SUHNER RADOX DATABUS 100 OHM nX2X0.14 XM S [Part no.] [batch- no.]

Designation legend

X : Core insulation material is not defined in the standard EN 50264- 1
 M : Sheet material EM 104 according to EN 50264- 1
 S : Overall screen

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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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Traction cable

RADOX DATABUS 100 OHM nX2X0.14 XM S

General technical data:

| | | | | |
|-------------------------------|-------|-------------|-------|---------------|
| Conductor resistance at 20 °C | ..... | ≤ 140 | ..... | Ω / km |
| Voltage rating | ..... | 300 | ..... | VAC |
| Test voltage. | ..... | Core-core | ..... | 2000 |
| Test voltage. | ..... | Core-screen | ..... | 2000 |
| Insulation resistance | ..... | 20 °C | ..... | ≥ 150 |
| Capacitance | ..... | core / core | ..... | ≤ 75 |
| Characteristic Impedance | ..... | f = 100 kHz | ..... | 100 ± 12 |
| ..... | ..... | f = 1 MHz | ..... | 90 ± 10 |
| Attenuation | ..... | f = 500 kHz | ..... | ≤ 2.5 |
| ..... | ..... | f = 1 MHz | ..... | ≤ 3.5 |
| Capacitive coupling | ..... | k | ..... | f = 800 Hz |
| ..... | ..... | e | ..... | f = 800 Hz |
| Transferimpedance | ..... | f ≤ 10 MHz | ..... | 60 |
| Temperature range | ..... |  | ..... | - 40 ... + 90 |
| Min. bending radius | ..... |  | ..... |  |
| fixed installation | ..... |  | ..... | all D |
|  | ..... |  | ..... | 5 x D |

Conditions:

The upper temperature limit is determined by long term ageing according to EN 50305 Par. 7 and extrapolation to 20,000 hours.

The lower temperature limit is determined by bending and elongation tests according to EN 60811- 1- 4 Par. 8.

The specified bending radii require a careful and proper handling using proven fastening technologies.

The cables are in conformity with:

| | | | | |
|--|-------|------------------|-------|-----------------------------------|
| Fire protection on railway vehicles, hazard level | ..... | HL1 - HL3 | ..... | EN 45545 |
| Vertical flame spread | ..... | 50 < L ≤ 540 mm | ..... | EN 60332- 1- 2 |
| Vertical flame spread, bunched, D ≤ 6 mm | ..... | L ≤ 1.5 m | ..... | EN 50305, 9.1.2 |
| Vertical flame spread, bunched, 6 < D < 12 mm | ..... | L ≤ 2.5 m | ..... | EN 50305, 9.1.1 (EN 60332- 3- 25) |
| Vertical flame spread, bunched, D ≥ 12 mm | ..... | L ≤ 2.5 m | ..... | EN 60332- 3- 24 |
| Smoke density | ..... | T ≥ 70 % | ..... | EN 61034- 2 |
| Toxicity | ..... | ITC ≤ 6 | ..... | EN 50305, 9.2 |

| | | | | |
|---|-------|------------------------|-------|-------------------|
| Fire protection on railway vehicles, level of protection | ..... | 1 - 4 | ..... | DIN 5510 |
| Vertical flame spread | ..... | 50 < L ≤ 540 mm | ..... | EN 60332- 1- 2 |
| Smoke density | ..... | T ≥ 60 % | ..... | EN 61034- 2 |
| Corrosivity of combustion gases | ..... | pH ≥ 4.3, C ≤ 10 μS/mm | ..... | EN 50267- 2- 2 |
| Amount of halogen acid gas | ..... | HCl + HBr ≤ 0.5 % | ..... | EN 50267- 2- 1 |
| Content of fluorine | ..... | HF ≤ 0.1 % | ..... | EN 60684- 2, 45.2 |
| Toxicity | ..... | ITC ≤ 3 | ..... | EN 50305, 9.2 |

| | | | | |
|--|-------|------------------------|-------|----------------------------------|
| Fire protection on railway vehicles, hazard level | ..... | LR1 - LR4 | ..... | UNI CEI 11170 |
| Vertical flame spread | ..... | 50 < L ≤ 540 mm | ..... | EN 60332- 1- 2 |
| Vertical flame spread, bunched, D ≤ 6 mm | ..... | L ≤ 1.5 m | ..... | EN 50305, 9.1.2 |
| Vertical flame spread, bunched, 6 < D < 12 mm | ..... | L ≤ 2.5 m | ..... | EN 50266- 2- 5 (EN 50305, 9.1.1) |
| Vertical flame spread, bunched, D ≥ 12 mm | ..... | L ≤ 2.5 m | ..... | EN 50266- 2- 4 |
| Smoke density | ..... | T ≥ 70 % | ..... | EN 61034- 2 |
| Corrosivity of combustion gases | ..... | pH ≥ 4.3, C ≤ 10 μS/mm | ..... | EN 50267- 2- 2 |
| Amount of halogen acid gas | ..... | HCl + HBr ≤ 0.5 % | ..... | EN 50267- 2- 1 |
| Toxicity | ..... | ITC ≤ 6 | ..... | EN 50305, 9.2 |
| Toxicity | ..... | ITC ≤ 3 | ..... | EN 50305, 9.2 |

Requirement of hazard level code M: (according to EN 50264-1 or EN 50306-1)

| | | |
|-----------------------|-------|---------------------|
| Extra low temperature | ..... | - 40°C |
| Extra oil resistance | ..... | IRM 902, 72h, 100°C |
| Extra fuel resistance | ..... | IRM 903, 168h, 70°C |