

Databus

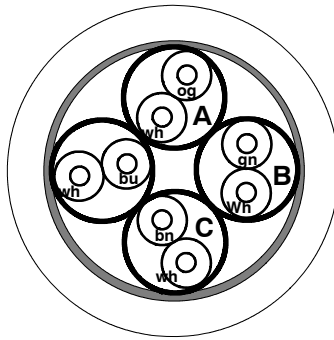
RADOX OFL CAT7 4x(2x23AWG) BK

General Properties:

Limited fire hazard databus cable, zero halogen, flame retardant; high temperature, low temperature and ozone resistance, solder iron resistant, easily strippable, flexible, excellent screening properties. Cable for symmetrical data transmission with impedance of 100 Ω with very good transmission properties at high frequencies.

Application:

For permanent installation as category 7 communication cable on: ships, oil & gas platforms, refineries and other harsh environment. The cable can also be used as a CAT5 or CAT6 cable, depending on the installation parameters and cable length.



| | |
|------------------------------|--|
| Size | 4x(2x23AWG) |
| H+S part no | 85188411 |
| Construction | |
| Conductor | bare copper, stranded 7x31AWG (7x0.23mm) |
| Core insulation | RADOX Foam |
| Core diameter | 1.6 mm |
| Core colour, numbering, pair | og- wh, gn- wh, bn- wh, bu- wh |
| Wrapping over pair | Aluminium tape |
| Filler | - |
| EMC- screen | Braid, tin plated copper |
| Screen diameter | 7.5 mm |
| Wrapping | Tape |
| Cable sheath | RADOX Elastomer S FH (SHF2, SHF mud) |
| Sheath colour | black |
| Cable diameter | 9.8 ± 0.5mm |
| Type of installation | fixed |
| Cable weight nom. | 10.3 kg/100m |
| Pulling force | max. 50 N |

Printing on sheath:

HUBER+SUHNER RADOX OFL CAT7 4X(2X23AWG) SHF2 MUD
 EC 60332- 1-2 85188411- [batch no] [date of manufacture] [prod- place]

Copyright 2024 HUBER+SUHNER AG. This document may not be amended and its content is confidential. It may not be passed on to third party which are not bound by confidentiality.

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.

HUBER+SUHNER AG Low Frequency Division

CH- 8330 Pfäffikon



+41 (0)44 952 22 11



+41 (0)44 952 26 40

www.hubersuhner.com

Databus

RADOX OFL CAT7 4x(2x23AWG) BK

General technical data:

Voltage rating 125 VAC
 Test voltage, 50 Hz, 5 min. 1000 VAC

Temperature index of sheath TI/20kh > 130 °C
 Max. Operating temperature fixed installation 85* °C
 Min. operating temperature fixed installation -40 °C
 Min. installation and handling temperature -20 °C

Max. storage temperature 40 °C
 Min. storage temperature -40 °C
 Min. bending radius fixed installation 8 x cable dia

Characteristic Impedance f = 100MHz 100 ± 5 Ω
 Resistance at 20 °C ≤ 95 Ω / km
 Capacitance core / core ≤ 65 pF / m
 core / screen ≤ 100 pF / m
 Transfer impedance f ≤ 30 MHz ≤ 30 mΩ/m

| Frequency (MHz) | Attenuation (dB/100m) | PS NEXT (dB) | PS ACR-F (dB) | Return loss (dB) |
|-----------------|-----------------------|--------------|---------------|------------------|
| | Max. | Min. | Min. | Min. |
| 1** | 2.0 | - | - | - |
| 4 | 3.7 | 75 | 79 | 23.0 |
| 10 | 5.9 | 75 | 71 | 25.0 |
| 31.25 | 10.4 | 75 | 60.8 | 23.5 |
| 62.5 | 14.9 | 72.5 | 55.1 | 21.5 |
| 100 | 19 | 69.4 | 51.0 | 20.1 |
| 300 | 34.2 | 62.2 | 41.5 | 17.3 |
| 600 | 50.1 | 57.7 | 35.4 | 17.3 |

Applications according to the following standards are possible

| EN61156-5 Horizontal floor wiring | | | EN61156-6 Work area wiring Flexible-application | | |
|--------------------------------------|------|------|---|------|------|
| CAT5 | CAT6 | CAT7 | CAT5 | CAT6 | CAT7 |
| X | X | X | X | X | X |

* According IEC60092-379 the max. operating temperature is +80 °C

** The cable performance between 1 MHz and 4 MHz is achieved by design only and it is therefore not necessary to test for this performance below 4 Mhz.

Databus

RADOX OFL CAT7 4x(2x23AWG) BK

The cable sheath passes the following fluid tests

| | | |
|---|------------------|-----------------------|
| Enhanced oil resistance | Fulfilled | NEK TS 606 |
| Mineral oil type IRM 902 | 7 d / 100 °C | NEK TS 606, table 1 |
| Mineral oil type IRM 903 | 7 d / 100 °C | NEK TS 606, table 1 |
| Mud resistance | Fulfilled | NEK TS 606 |
| Calcium bromide brine (45 % CaBr ₂ / H ₂ O) | 56 d / 70 °C | NEK TS 606, table 1 |
| Base oil EDC 95- 11 | 56 d / 70 °C | NEK TS 606, table 1 |
| Enhanced oil resistance | Fulfilled | IEC 60092- 360 |
| Mineral oil type IRM 902 | 7 d / 100 °C | IEC 60092- 360, An. C |
| Drilling fluid resistance | Fulfilled | IEC 60092- 360 |
| Mineral oil type IRM 903 | 7 d / 100 °C | IEC 60092- 360, An. C |
| Calcium bromide brine (45 % CaBr ₂ / H ₂ O) | 56 d / 70 °C | IEC 60092- 360, An. D |

The cable passes the following fire tests

| | | |
|---|------------------------|-------------------------|
| Fire protection in ships | Fulfilled | DNV GL- CP- 0403 |
| Vertical flame spread of a single cable | 50 < L ≤ 540 mm | IEC 60332- 1- 2 |
| Smoke density | T ≥ 60 % | IEC 61034- 2 |
| Corrosivity of combustion gases | pH ≥ 4.3, C ≤ 10 μS/mm | IEC 60754- 2 |
| Amount of halogen acid gas | HCl+HBr ≤ 0.5% | IEC 60754- 1 |
| Content of fluorine | HF ≤ 0.1 % | IEC 60684- 2, 45.2 |

Applicable standards :

| | |
|--------------|---|
| DNV CP- 0403 | Type approval - Data communication cables- category cables |
| IEC 61156- 5 | Multicore and symmetrical pair/quad cables for digital communications - Symmetrical pair/quad cables with transmission characteristics up to 600Mhz - Horizontal floor wiring |
| NEK TS 606 | Cables for offshore installation, halogenfree and/or mud resistant |

Approvals :

| | |
|--------|---------|
| DNV GL | pending |
|--------|---------|