

Databus

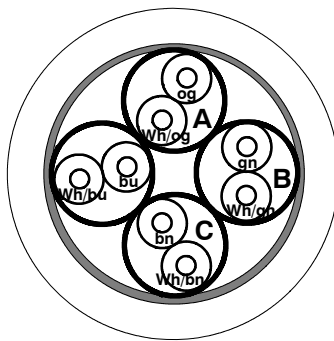
RADOX OFL CAT5 4x(2x24AWG) BK

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 5 communication cable on: ships, oil & gas platforms, refineries and other harsh environment. The cable can also be used as a CAT6 or CAT7 cable, depending on the installation parameters and cable length.



Size	4x(2x24AWG)
H+S part no	85188410
Construction	
Conductor	Tin plated copper, stranded 7x32AWG (7x0.24mm)
Core insulation	RADOX Foam
Core diameter	1.35 mm
Core colour, numbering, pair	og- wh/og, gn- wh/gn, bn- wh/bn, bu- wh/bu
Wrapping over pair	Aluminium tape
Filler	-
EMC- screen	Braid, tin plated copper
Screen diameter	6.0 mm
Wrapping	Tape
Cable sheath	RADOX Elastomer S FH (SHF2, SHF mud)
Sheath colour	black
Cable diameter	8.1 ± 0.5mm
Type of installation	fixed
Cable weight nom.	8.8 kg/100m
Pulling force	max. 50 N

Printing on sheath:

HUBER+SUHNER RADOX OFL CAT5e 4X(2X24AWG) SHF2 MUD
IEC 60332- 1- 2 85188410- [batch no] [date of manufacture] [prod- place]

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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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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**	2.1	-	-	-
4	4.1	53.3	79	23.0
10	6.5	47.3	71	25.0
31.25	12.0	39.9	61.1	23.6
62.5	17.1	35.4	55.1	21.5
100	22.1	32.3	51	20.1
300****	50	62.3	43.0	15.6
600****	73.3	57.8	35.4	15.6

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

* 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.

*** 5% deviations of attenuation are possible

**** data for frequencies above 100 Mhz reference the properties for CAT7 cable

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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
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