



**Databus**

# RADOX MARINE DATABUS 120 OHM

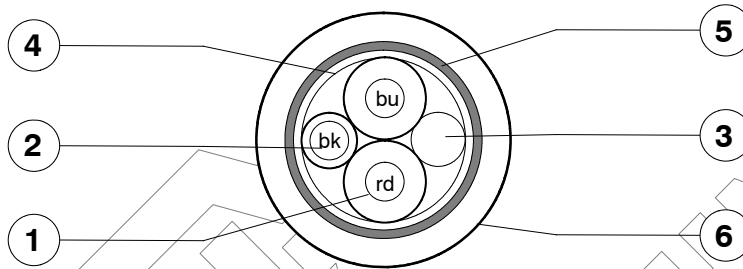
### General Properties :

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 symmetrical 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.



- |   |   |
|---|---|
| 1. n x 2 cores<br>( Databus )                         | Conductor: flexible tin plated copper<br>Insulation: RADOX foam<br>Colours: See table |
| 2. n x cores 0.5 mm <sup>2</sup><br>type Radox 125 RW | Conductor: stranded tin plated copper<br>Insulation: RADOX 125<br>Colours: See table  |
| 3. n fillers  | PE- LD  |
| 4. Wrapping   | PP- E tape  |
| 5. EMC - Screen optimised                             | Tin plated copper braid   |
| 6. Sheath   | RADOX Elastomer S FH, colour: black   |

Cable marking : HUBER+SUHNER RADOX MARINE 120OHM nx2x0.5+nx0.5MM2 SHF2 90C

IEC 60332- 1- 2 IEC 60332- 3- 22 [item no]- [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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**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 :

Transferimpedance .....	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, HL1, HL2, HL3 .....	EN 45545-2	
Vertical flame spread .....	50 < L ≤ 540mm .....	EN 60332- 1-2, IEC60332- 1-2
Vertical flame spread, bunched (6 < D < 12mm) L ≤ 2.5m .....	EN 60332- 3-25	
Vertical flame spread, bunched (D ≥ 12mm) ..	L ≤ 2.5m .....	EN 60332- 3-24
Vertical flame spread, cat A .....	L ≤ 2.5m .....	IEC 60332- 3-22
Smoke density .....	T ≥ 70% .....	EN 61034-2, IEC 61034-2
Amount of halogen acid gas .....	HCL + HBr ≤ 0.5% .....	EN 60754- 1, IEC 60754- 1
Corrosivity of combustion gases .....	pH ≥ 4.3, C ≤ 10 μS/mm ...	EN 60754-2, IEC 60754-2
Amount of halogen acid gas .....	HF ≤ 0.1% .....	EN 60684-2 # 45.2,
.....	.....	IEC 60684-2 # 45.2
Toxicity .....	ITC ≤ 6 .....	EN 50305 # 9.2

**Approvals :**

DNV GL ..... TAE00002HJ



# Databus RADOX MARINE DATABUS 120 OHM

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 Colours: blue, red				Insulation: Radox 125 Colour: black				Sheat: Radox Elastomer S FH Colour: black				
2 cores	1 core	Conductor	Core	R <sub>20</sub> max. Ω / km	Core Color	Conductor	Core	R <sub>20</sub> max. Ω / km	Core Color	Bundle	EMC Screen	Cable outerØ	Weight Cable kg/100m	H + S Part no.
n x mm <sup>2</sup>	n x mm <sup>2</sup>	Ø mmD	Ø mm	Ω / km		Ø mmD	Ø mm	Ω / km		Ø mm	Ø 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
4 x 0.5	-	19 x 0.18	2.30	40.1	rd-bu; bn-gy	-	-	40.1		5.7	6.4	8.2 ± 0.3	9.2	85069238
2 x 2 x 0.5	-	19 x 0.18	2.30	40.1	rd-bu; 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; bn-gy	19 x 0.18	1.40	40.1	bk, ye	8.6	9.4	12.2 ± 0.4	17.9	12584414

1) csa = cross-sectional area