



Traction Cable

DATABUS 120 Ohm 2X0.5 XM SS

Product description:

RADOX DATABUS 120 OHM Cable with 0.5 mm² - cores, double screened
 Impedance: 120 Ohm
 Hazard level: M (extra low temperature resistant, extra oil and fuel resistant)

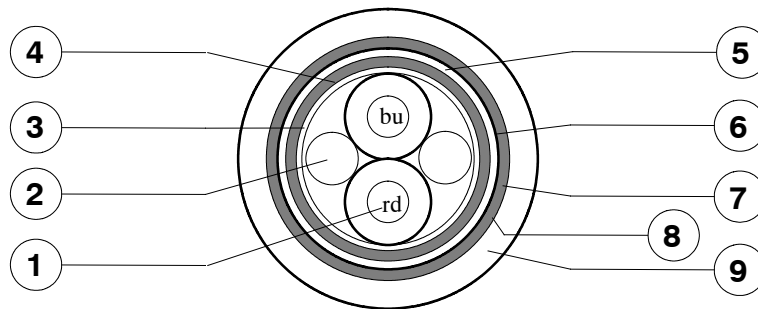
General features:

Halogen-free, electron-beam cross-linked cable with improved behaviour in case of fire, easy to strip, soldering resistant and flexible. Cable for symmetrical data transmission with impedance of 120 Ohm with very good transmission properties at high frequencies.

Application:

The cable is intended for fixed installation inside railway vehicles or for installation in applications where limited alternating bending stresses occur during operation.

Guidelines for selection and installation are described in standard EN 50343.



1.	2 cores 0.5 mm ²	Conductor : flexible tin plated copper Insulation : RADOX foam Colours : blue, red	D : 0.88 mm D : 2.3 mm
2.	Filler		
3.	Wrapping	Tape	
4.	EMC - Screen	Tin plated copper braid	D : 5.6 mm
5.	Skin	RADOX S2, colour : white	D : 6.1 mm
6.	Wrapping	Tape	
7.	EMC - Screen	Tin plated copper braid	D : 6.8 mm
8.	Wrapping	Tape	
9.	Sheath	RADOX EM 104, colour : black	D : 8.4 ± 0.3 mm

Marking: HUBER+SUHNER RADOX DATABUS 120 OHM 2X0.5 XM SS 12560864- [prod.- no.] [date of manufacture]

Designation legend

X : Core insulation material is not defined in EN 50264- 1
 M : Sheet material EM 104 according to EN 50264- 1
 SS : double screened

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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 :

Conductor resistance at 20°C	≤ 40.1	Ω / km
Voltage rating	300	V
Test voltage 50 Hz, 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 = 1.0 MHz	.....	≤ 12.8	..... dB / km
	..... f = 2.0 MHz	.....	≤ 18.6	..... dB / km
	..... f = 3.0 MHz	.....	≤ 22.8	..... dB / km
Transferimpedance	..... f ≤ 20 MHz	.....	≤ 100	..... mΩ / m
Temperature range	.....	- 40 ... + 90	.....	°C
Min. bending radius	..... fixed installed	.....	3 x cable dia.	.....
	..... flexing installed	.....	5 x cable dia.	.....
Cable weight	.....	approx. 15.3	.....	kg/100m

NB:

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, respectively low temperature behaviour tests for static conditions, e.g. for fixed installation according to GOST 20.57.406-81 - method 204-1 and GOST 17491-80.

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, 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

The fire safety certifications are not available yet. Once the products are manufactured for the first time, the product will be tested in accredited laboratories against the railway vehicle fire safety standards which have to be agreed with the customer.