



Traction cable

RADOX DATABUS 120 OHM XM S EN

Product description:

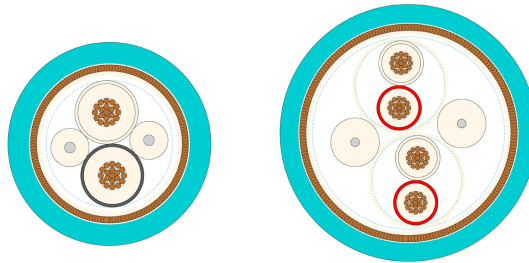
RADOX DATABUS 120 OHM XM S Cables with 0.75 mm² – cores, overall screen
 Impedance: 120 Ohm
 Hazard level: XM (extra low temperature resistant, extra oil and fuel resistant)
 Fire safety: fulfil EN 45545-2

General features:

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

Application:

The cores are 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 the standart EN 50343.



Marking:

[a] HUBER+SUHNER RADOX DATABUS 120 OHM [b] XM S EN [c]-[d] [e] [f]

		example:
[a]	Meter marking (in m)	= 1234 = m
[b]	Construction	2X0.5
[c]	Part number	12345678
[d]	Batch number	1234567
[e]	Production week and year	03-2017
[f]	Production place (only if China)	CN

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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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Construction [mm ²]	2x0.75	2x2x0.75
Part-No.	84 138 532	85 001 288
Cores of Databus cable		
Conductor	stranded tin plated copper, acc. to EN 50306-2, 19x0.23mm	
Insulation	RADOX FOAM	
Core Diameter nom. [mm]	2.65	2.3
Colours of Pairs	WH-BK	WH-RD, num 1 WH-RD, num 2
Construction of Cable		
Twists of Cores	pairs	pairs
Fillers	PE-LD	PE-LD
Wrapping	Tape	
EMC - Screen	Tin plated copper braid	
Braiding-Diameter nom. [mm]	6.6	10.8
Wrapping	Tape	
Sheath	RADOX EM 104 Colour: turquoise	
Diameter [mm]	8.5 ± 0.3	12.8 ± 0.4
Fireload [kJ/m]	860	2318
Cable weight [kg/100 m]	9.4	20.0
Applications:		
WTB	X	X
UIC	X	X

Technical data:

Conductor resistance at 20°C	0.75 mm ²	≤ 26.7	Ω / km
Insulation resistance at 20°C		> 100	MΩ · km
Mutual capacitance	wire / wire	≤ 46	pF / m
Capacitive unbalance to shield	f = 1.0 MHz	≤ 1.5	pF / m
Impedance	f = 0.5 ... 2 MHz	120 ± 12	Ω
Attenuation nom.	f = 1.0 MHz	10	dB / km
	f = 2.0 MHz	14	dB / km
NEXT	f = 0.5 ... 2 MHz	≥ 55	dB
Transferimpedance	WTB f ≤ 20 MHz	≤ 20	mΩ/m
	UIC f ≤ 30 MHz	≤ 30	mΩ/m
Voltage rating		300	V
Test voltage		2000	V
Temperature range	fixed installation	- 50 ... + 90	°C
Min. bending radius	fixed installation	4 x D	
	sporadic movement	5 x D	

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.



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The cables are in conformity with:

Fire protection on railway vehicles, hazard level	HL1 - HL3	EN 45545
Vertical flame spread	$50 < L \leq 540$ mm	EN 60332-1-2
Vertical flame spread, bunched, $6 < D < 12$ mm	$L \leq 2.5$ m	EN 50305, 9.1.1 (EN 60332-3-25)
Vertical flame spread, bunched, $D \geq 12$ mm	$L \leq 2.5$ m	EN 60332-3-24
Smoke density	$T \geq 70$ %	EN 61034-2
Toxicity	$ITC \leq 6$	EN 50305, 9.2
Fire protection on railway vehicles, hazard level	1 - 4	DIN 5510
Vertical flame spread	$50 < L \leq 540$ mm	EN 60332-1-2
Vertical flame spread, bunched, $6 < D < 12$ mm	$L \leq 2.5$ m	EN 50332-3-25
Vertical flame spread, bunched, $D \geq 12$ mm	$L \leq 2.5$ m	EN 60332-3-24
Smoke density	$T \geq 60$ %	EN 61034-2
Corrosivity of combustion gases	$pH \geq 4.3, C \leq 10$ μ S/mm	EN 50267-2-2
Amount of halogen acid gas	$HCl + HBr \leq 0.5$ %	EN 50267-2-1
Content of fluorine	$HF \leq 0.1$ %	EN 60684-2, 45.2
Toxicity	$ITC \leq 3$	EN 50305, 9.2
Fire protection on railway vehicles, hazard level	LR1 - LR4	UNI CEI 11170
Vertical flame spread	$50 < L \leq 540$ mm	EN 60332-1-2
Vertical flame spread, bunched, $6 < D < 12$ mm	$L \leq 2.5$ m	EN 60332-3-25
Vertical flame spread, bunched, $D \geq 12$ mm	$L \leq 2.5$ m	EN 60332-3-24
Smoke density	$T \geq 70$ %	EN 61034-2
Corrosivity of combustion gases	$pH \geq 4.3, C \leq 10$ μ S/mm	EN 50267-2-2
Amount of halogen acid gas	$HCl + HBr \leq 0.5$ %	EN 50267-2-1
Toxicity	$ITC \leq 3$	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	