

Traction cable

RADOX RAILDAT 120 OHM nX0.75 XM S WTB

General properties:

Halogen-free, electron-beam cross-linked cables with improved behaviour in case of fire, easy to strip and flexible.
Meets the requirements of IEC 61375-2-1 standard.

Databus cables with 0.75 mm² - cores and overall screen

Impedance: 120 Ohm

Hazard level: XM (extra low temperature resistant, extra oil and fuel resistant)

Fire safety: fulfil EN 45545-2

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 standard EN 50343.



Construction [mm ²]	2X0.75	2X2X0.75
Part-No. Turquoise	85114510	85141958
Cores of Databus cable		
Conductor	stranded tin plated copper, acc. to EN 60228 cl. 5, D _{nom.} : 1.09mm	stranded tin plated copper, acc. to EN 60228 cl. 5, D _{nom.} : 1.09mm
Insulation	RADOX FOAM	RADOX FOAM
Core Diameter _{nom.} [mm]	2.65 ± 0.04	2.65 ± 0.04
Colours of Pairs	WH- BK	WH- BK, numbered 1 WH- BK, numbered 2
Additional Core [mm²]		
Conductor	-	-
Insulation	-	-
Core Diameter _{nom.} [mm]	-	-
Colours of Insulation	-	-
Construction of Cable		
Twists of Cores	pairs	pairs
Fillers	yes	yes
Tape	yes	yes
Laminated Al- tape	yes	yes
EMC - Screen	Tin plated copper braid	Tin plated copper braid
Braiding- Diameter _{nom.} [mm]	6.75	10.7
Tape	yes	yes
Sheath	RADOX EM 104	RADOX EM 104
Diameter [mm]	8.5 ± 0.3	12.8 ± 0.4
Fireload [kJ/m]	1000	2150
Cable weight [kg/100 m]	9.9	19.3
Applications: WTB	X	X
UIC	X	X

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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.

HUBER+SUHNER AG

Low Frequency Division

CH- 8330 Pfäffikon



+41 (0)44 952 22 11



+41 (0)44 952 26 40

www.hubersuhner.com

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

		example:
[a]	Meter marking (in m)	= 001234 = m
[b]	Construction	2X0.75
[c]	Part number	12345678
[d]	Batch number	1234567
[e]	Production week and year	03- 2017
[f]	Production place (only if China)	CN

Technical data:

Conductor resistance at 20°C	0.75 mm ²	≤ 26.7	Ω / km
Mutual capacitance (wire / wire)	f = 1.0 MHz	≤ 65	pF / m
Capacitive unbalance to shield	f = 1.0 MHz	≤ 1.5	pF / m
Impedance	f = 0.5 ... 2 MHz	120 ± 12	Ω
Attenuation	f = 1.0 MHz	≤ 10	dB / km
	f = 2.0 MHz	≤ 14	dB / km
NEXT	f = 0.5 ... 2 MHz	≥ 55	dB
Transferimpedance	f ≤ 20 MHz	≤ 20	mΩ/m
Voltage rating		300	VAC
Test voltage		2000	VAC
Temperature range	fixed installation	- 50 ... + 90	°C
Min. bending radius	fixed installation	3 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 60811-504/505, 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 45545-2
Vertical flame spread	50 mm < L ≤ 540 mm	EN 60332-1-2
Vertical flame spread, bunched, 6 < D < 12 mm	L ≤ 2.5 m	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
Corrosivity of combustion gases	pH ≥ 4.3, C ≤ 10 µS/mm	EN 60754-2
Amount of halogen acid gas	HCl + HBr ≤ 0.5 %	EN 60754-1
Content of fluorine	HF ≤ 0.1 %	EN 60684-2, 45.2
Toxicity	ITC ≤ 6	EN 50305, 9.2
Fire safety, class	O1.8.1.2.1 (single)	GOST 31565
	P1b.8.1.2.1 (bundle)	
Vertical flame spread	50 mm < L ≤ 540 mm	EN 60332-1-2
Vertical flame spread, bunched	L ≤ 2.5 m	EN 60332-3-22
Corrosivity of combustion gases	pH ≥ 4.3, C ≤ 10 µS/mm	EN 60754-2
Amount of halogen acid gas	HCl + HBr ≤ 0.5 %	EN 60754-1
Toxicity	40 < Tx ≤ 120 g/m ³	GOST 12.1.044-89
Smoke density	T ≥ 60 %	EN 61034-2
Fire protection on railway vehicles	Fulfilled	NFPA 130
Vertical flame spread, bunched	L ≤ 1.5 m	UL 1685, 12 (FT4 exp.)
Smoke density	TSR ≤ 150 m ² , PSRR ≤ 0.40 m ² /s	UL 1685, 12 (FT4 exp.)
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, 72 h, 100°C	
Extra fuel resistance	IRM 903, 168 h, 70°C	