



Traction cable

RADOX® RAILCAT CAT7 4X(2X24AWG) XM S

Product description:

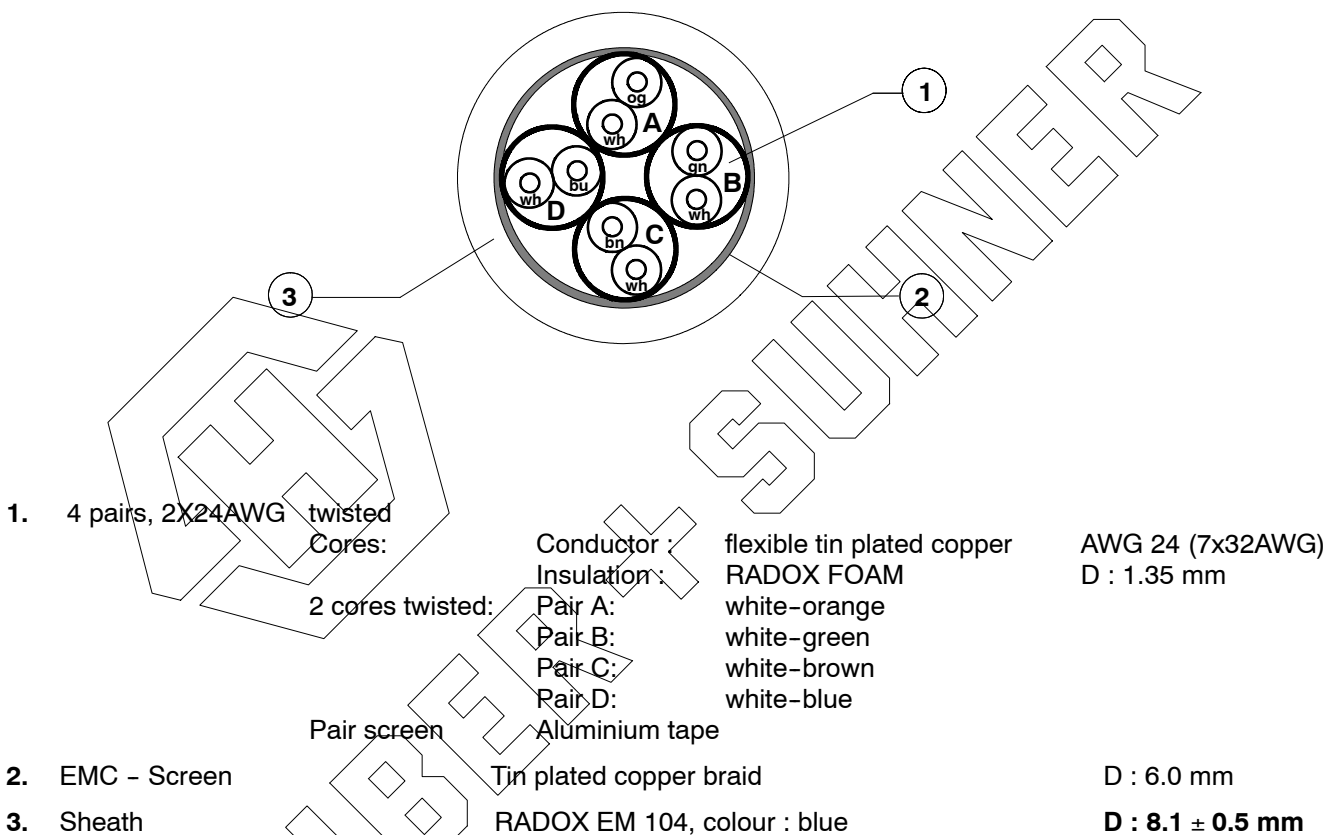
RADOX RAILCAT CAT7 Multicore cable with overall screen
 Impedance: 100 Ohm
 Hazard level: M (extra low temperature, extra oil and extra fuel resistant)

General features:

Halogen free electron-beam cross linked cable with improved behaviour in case of fire, easy to strip, soldering iron is resistant and flexible. Meet the electrical requirements of EN 50288-4-2 and IEC 61156-6 Cat. 7.
 The cable is especially suitable for Gigabit Ethernet and for transmission of digital data for applications up to 10 Gigabit according to IEEE 802.3.

Application:

The cable is intended for permanent installation in rail vehicles. Guidelines for selection and installation are described in the standard EN 50343.



Marking:

HUBER+SUHNER RADOX RAILCAT CAT7 100 OHM 4X(2X24AWG) XM S 84124806-[batch-No.] [date of manufacture]

Copyright 2013 Huber + Suhrner AG. This document may not be copied nor be passed on to third parties without our written permission.
 Uncontrolled copy when printed (will not be updated).

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

Low Frequency Division

CH-8330 Pfäffikon

+41 (0)44 952 22 11

+41 (0)44 952 26 40

www.hubersuhner.com



Traction cable

RADOX® RAILCAT CAT7 4X(2X24AWG) XM S

Technical data:

Frequency [Mhz]	Attenuation max. [dB/100m]	NEXT min. [dB]	PS NEXT min. [dB]	FEXT min. [dB]	PS FEXT min. [dB]	RL min. [dB]
1	2.9	80	77	80	77	-
4	5.5	80	77	80	77	23.1
10	8.5	80	77	74	71	25
16	10.8	80	77	69.9	66.9	25
31.25	15.2	80	77	64.1	61.1	23.6
62.5	21.7	75.1	72.5	58.1	55.1	21.5
100	27.8	72.4	69.4	54	51	20.1
300	50	65.3	62.3	44.5	41.5	17.3
600	73.3	60.8	57.8	38.4	35.4	17.3

Databus:

Characteristic Impedance	f=100MHz	100 ± 5	Ω
Capacitance	core / core	≤ 50	pF / m
	core / screen	≤ 80	pF / m
Velocity of propagation		~70	%
Conductor resistance at 20 °C		≤ 95	Ω / km
Voltage rating		125	VAC
Test voltage		1000	VAC
Temperature range		- 50 ... + 70	°C
Min. bending radius	fixed	4 x cable dia	
Cable weight per 100 m	approx.	8.8	kg
Fire load	approx.	705	kJ/m

Conditions:

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 according to GOST 20.57.406-81, method 204-1 and GOST 17491-80. (fixed installation)

The specified bending radii require a careful and proper handling using proven fastening technologies.



Traction cable

RADOX® RAILCAT CAT7 4X(2X24AWG) XM S

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)
Smoke density	T ≥ 70 %	EN 61034-2
Toxicity	ITC ≤ 6	EN 50305, 9.2
Fire protection on railway vehicles, level of protection .	1 - 4	DIN 5510
Vertical flame spread	50 < L ≤ 540 mm	EN 60332-1-2
Vertical flame spread, bunched, 6 < D < 12 mm	L ≤ 2.5 m	EN 60332-3-25
Smoke density	T ≥ 60 %	EN 61034-2
Corrosivity of combustion gases	pH ≥ 4.3, C ≤ 10 μS/mm	EN 50267-2-2
Amount of halogen acid gas	HCl + HBr ≤ 0.5 %	EN 50267-2-1
Content of fluorine	HF ≤ 0.1 %	EN 60684-2, 45.2
Toxicity	ITC ≤ 3	EN 50305, 9.2
Fire protection on railway vehicles, category	A1, A2, B	NF F16-101
Fire protection on railway vehicles, class	C / F0	NF F16-101
Vertical flame spread	50 < L ≤ 540 mm	NF C32-070, 2.1
Vertical flame spread, bunched	L ≤ 300 mm	NF C32-070, 2.2
Smoke index	I.F. ≤ 5	X10-702-2, NF X70-100-1
Fire protection on railway vehicles, hazard level	LR1 - LR4	UNI CEI 11170
Vertical flame spread	50 < L ≤ 540 mm	EN 60332-1-2
Vertical flame spread, bunched, 6 < D < 12 mm	L ≤ 2.5 m	EN 60332-3-25
Smoke density	T ≥ 70 %	EN 61034-2
Corrosivity of combustion gases	pH ≥ 4.3, C ≤ 10 μS/mm	EN 50267-2-2
Amount of halogen acid gas	HCl + HBr ≤ 0.5 %	EN 50267-2-1
Toxicity	ITC ≤ 3	EN 50305, 9.2
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	(acc. to EN50264-1 or EN50306-1)	
Extra low temperature	- 40°C	
Extra oil resistance	IRM 902, 72h, 100°C	
Extra fuel resistance	IRM 903, 168h, 70°C	