



Traction cable

RADOX® RAILCAT CAT7 4X(2X24AWG) XM S

Product description:

RADOX RAILCAT CAT7

Impedance:

Multicore cable with overall screen

Hazard level:

100 Ohm

M (extra low temperature, extra oil and extra fuel resistant)

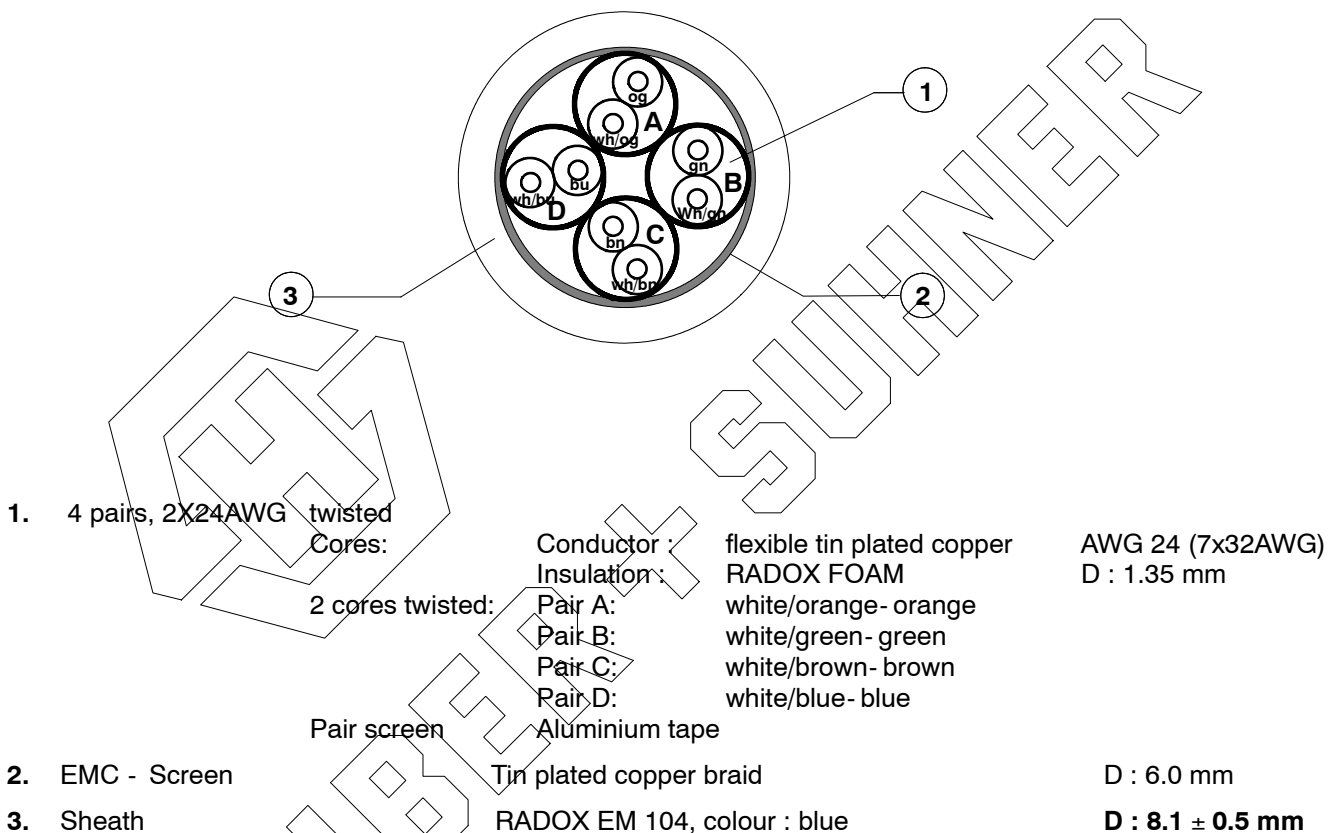
General features:

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]

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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:

Frequency [Mhz]	Attenuation max. [dB/100m]	NEXT min. [dB]	PS NEXT min. [dB]	ACR- F min. [dB]	PS ACR- F 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.



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The cables are in conformity with:

Fire protection on railway vehicles, hazard level	HL1 - HL3	EN 45545
Vertical flame spread	$50 < L \leq 540 \text{ mm}$	EN 60332- 1- 2
Vertical flame spread, bunched, $6 < D < 12 \text{ mm}$	$L \leq 2.5 \text{ m}$	EN 50305, 9.1.1 (EN 60332- 3- 25)
Smoke density	$T \geq 70 \%$	EN 61034- 2
Toxicity	$ITC \leq 6$	EN 50305, 9.2
Fire protection on railway vehicles, level of protection	1 - 4	DIN 5510
Vertical flame spread	$50 < L \leq 540 \text{ mm}$	EN 60332- 1- 2
Vertical flame spread, bunched, $6 < D < 12 \text{ mm}$	$L \leq 2.5 \text{ m}$	EN 60332- 3- 25
Smoke density	$T \geq 60 \%$	EN 61034- 2
Corrosivity of combustion gases	$\text{pH} \geq 4.3, C \leq 10 \mu\text{S/mm}$	EN 50267- 2- 2
Amount of halogen acid gas	$\text{HCl} + \text{HBr} \leq 0.5 \%$	EN 50267- 2- 1
Content of fluorine	$\text{HF} \leq 0.1 \%$	EN 60684- 2, 45.2
Toxicity	$ITC \leq 3$	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	$50 < L \leq 540 \text{ mm}$	NF C32- 070, 2.1
Vertical flame spread, bunched	$L \leq 300 \text{ mm}$	NF C32- 070, 2.2
Smoke index	$\text{I.F.} \leq 5$	X10- 702- 2, NF X70- 100- 1
Fire protection on railway vehicles, hazard level	LR1 - LR4	UNI CEI 11170
Vertical flame spread	$50 < L \leq 540 \text{ mm}$	EN 60332- 1- 2
Vertical flame spread, bunched, $6 < D < 12 \text{ mm}$	$L \leq 2.5 \text{ m}$	EN 60332- 3- 25
Smoke density	$T \geq 70 \%$	EN 61034- 2
Corrosivity of combustion gases	$\text{pH} \geq 4.3, C \leq 10 \mu\text{S/mm}$	EN 50267- 2- 2
Amount of halogen acid gas	$\text{HCl} + \text{HBr} \leq 0.5 \%$	EN 50267- 2- 1
Toxicity	$ITC \leq 3$	EN 50305, 9.2
Fire protection on railway vehicles	Fulfilled	NFPA 130
Vertical flame spread, bunched	$L \leq 1.5 \text{ m}$	UL 1685, 12 (FT4 exp.)
Smoke density exp.)	$\text{TSR} \leq 150 \text{ m}^2, \text{PSRR} \leq 0.40 \text{ m}^2/\text{s}$	UL 1685, 12 (FT4 exp.)
Fire protection on railway vehicles, category	Ia, Ib, II	BS 6853, GM/RT 2130
Vertical flame spread	$50 < L \leq 540 \text{ mm}$	EN 60332- 1- 2
Vertical flame spread, bunched	$L \leq 2.5 \text{ m}$	EN 50266, BS 6853 An. D.8.7
Smoke density	$A_0 \leq \text{BS 6853}$	BS 6853 An. D.8.7
Toxicity	$R \leq 1.0$	BS 6853 An. B.1
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	