



Traction cable

RADOX SYST 7C+1DB XM T

Product description:

RADOX system cable composed of:

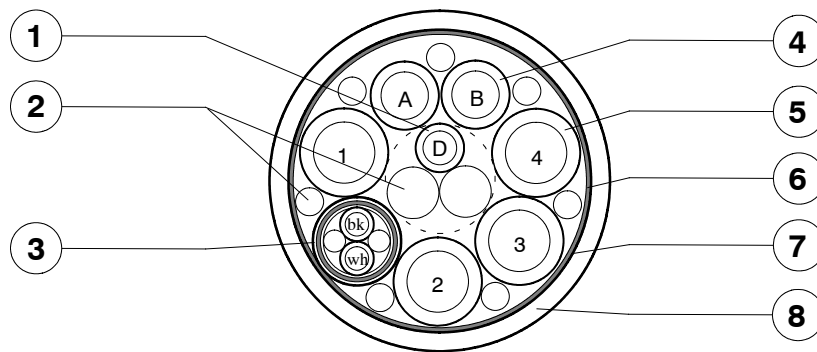
- 1 x 4 GWK- AX 1800V 1X2.5 M
- 2 x 4 GWK- AX 1800V 1X6 M
- 4 x 4 GWK- AX 1800V 1X10 M
- 1 x DB 120 Ohm 2X0.75 mm²

General features:

Halogen-free, electron-beam cross-linked cable with improved behaviour in case of fire, easy to strip, soldering resistant and flexible.

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 50355 and EN 50343. The cable is suitable for applications according to UIC 541-5.



1.	1x Core 2.5 mm ² of type RADOX 4 GWK- AX	Conductor : Tin plated copper wire Dual wall Insulation : RADOX EI 110 / EI 109 Colour : black, marked: D	D : 3.75 mm
2.	9x Fillers	RADOX 125 REC	
3.	1x Databus 2x0.75 mm ² 120 Ohm	Conductor : Tin plated copper wire Insulation : RADOX FOAM Core colours : black, white Two cores and two fillers twisted Wrapping : Tape EMC- screen : Tin plated copper braid Wrapping : Tape	D : 2.65 mm D : 5.3 mm
4.	2x Cores 6 mm ² of type RADOX 4 GWK- AX	Jacket : RADOX S2, Colour : white Conductor : Tin plated copper wire Dual wall Insulation : RADOX EI 110 / EI 109 Colour : black, marked: A, B	D : 7.25 mm D : 5.20 mm
5.	4x Cores 10 mm ² of type RADOX 4 GWK- AX	Conductor : Tin plated copper wire Dual wall Insulation : RADOX EI 110 / EI 109 Colour : black, numbered: 1 ... 4	D : 6.40 mm
6.	Wrapping	Tape	
7.	Covering	Textil yarn braiding	
8.	Sheath	RADOX EM 104, colour : black	D : 26.9 ± 0.6 mm

Marking: HUBER+SUHNER RADOX SYST 7C+1DB XM T 12552254- [prod.- 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:

Databus 120 Ohm 2x0.75 mm²:

Conductor resistance at 20°C	0.75 mm ²	≤ 27.8	Ω / km
Insulation resistance at 20°C		> 100	MΩ · km
Capacitance	core / core	≤ 40	pF / m
Impedance	f = 0.5 ... 2 MHz	120 ± 12	Ω
Attenuation _{nom.}	f = 1.0 MHz	1.0	dB / 100m
	f = 2.0 MHz	1.4	dB / 100m
Voltage rating		300	V AC
Test voltage		2 000	V AC
Transferimpedance	f ≤ 30 MHz	≤ 30	mΩ/m

Single cores :

Conductor resistance at 20°C	cores 2.5 mm ²	≤ 8.21	Ω / km
	cores 6.0 mm ²	≤ 3.39	Ω / km
	cores 10 mm ²	≤ 1.95	Ω / km
Voltage rating U ₀ / U		1800 / 3000	V
Test voltage		6500	V

Cable :

Temperature range	fixed installation	- 40 ... + 90	°C
	sporadic movement	- 25 ... + 90	°C
Min. bending radius	fixed installation	5 x D	
	sporadic movement	6 x D	
Cable weight		approx. 115	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.

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



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The cable is in conformity with:

Fire protection on railway vehicles, hazard level	1 - 4	DIN 5510
Vertical flame spread	50 < L ≤ 540 mm	EN 60332-1-2
Vertical flame spread, bunched, D ≥ 12 mm	L ≤ 2.5 m	EN 50266-2-4
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, hazard level	HL1 - HL3	EN 45545
Vertical flame spread	50 < L ≤ 540 mm	EN 60332-1-2
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
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, 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 50267-2-2
Amount of halogen acid gas	HCl + HBr ≤ 0.5 %	EN 50267-2-1
Toxicity	ITC ≤ 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