Traction cable
RADOX SYST 1DB+4X4X1 XM S UIC 18C

Product description:

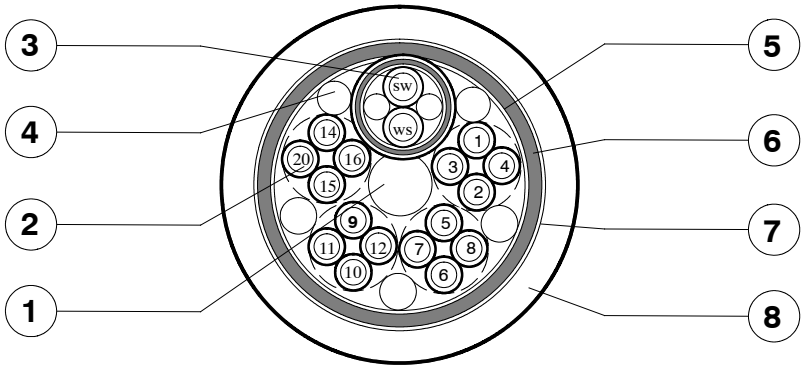
RADOX SYST 1DB+4X4X1	multicore cable, screened
Impedance:	120 Ohm
Hazard level:	M (extra low temperature resistant, extra oil and fuel resistant)

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 can be used as 18 core control cable according to UIC 558.



1.	Center	PP- yarn		
2.	4x quads 4x1 mm^2	Conductor :	flexible tin plated copper	
	RADOX TENUIS- TW 600V	Insulation :	RADOX EI 303	D : 1.77 mm
		Colours :	white, numbered	
		4 cores twisted		D : 4.30 mm
3.	1x DATABUS 120 Ohm 2x0.75 mm^2	Conductor :	flexible tin plated copper	
		Insulation :	RADOX FOAM	D : 2.65 mm
		Colours :	white, black	
		2 cores twisted with two fillers		D : 5.30 mm
		Wrapping :	Tape	
		EMC - Screen :	tin plated copper braid	
		Wrapping :	Tape	
		Jacket :	RADOX S2	D : 6.95 mm
		Colour :	white	
4.	Fillers	RADOX 125 REC		
5.	Wrapping	Tape		
6.	EMC - Screen	Tin plated copper braid		D : 14.8 mm
7.	Wrapping	Tape		
8.	Sheath	RADOX EM 104, colour : black		**D : 18.0 ± 0.5 mm**

Marking: HUBER+SUHNER RADOX SYST 1DB+4X4X1 XM S UIC 18C 12552547- [prod.- no.] [date of manufacture]

Designation legend

X : Core insulation material is not defined in EN 50264- 1
M : Sheet material EM 104 according to EN 50264- 1
S : Overall screen

HUBER+SUHNER
Low Frequency Division
CH- 8330 Pfäffikon
☎ +41 (0)44 952 22 11
FAX +41 (0)44 952 26 40
www.hubersuhner.com

Traction cable
RADOX SYST 1DB+4X4X1 XM S UIC 18C

Technical data:

DATABUS 120 Ohm 2x0.75 mm² :

Conductor resistance at 20°C		≤ 27.8	Ω / km
Voltage rating		300	V AC
Test voltage		2000	V AC
Capacitance $_{nom.}$	core / core	40	pF / m
Impedance $_{nom.}$	f = 0.5 ... 2 MHz	120	Ω
Attenuation $_{nom.}$	f = 1 MHz	1.0	dB / 100m
	f = 2 MHz	1.4	dB / 100m
Transferimpedance	f ≤ 30 MHz	≤ 30	mΩ/m

RADOX TENUIS- TW 600V 4x1.0 mm² :

Conductor resistance at 20°C		≤ 22.6	Ω / km
Voltage rating		600	V AC
Test voltage		3500	V AC

SYST cable :

Transferimpedance of total screen	f ≤ 30 MHz	≤ 10	mΩ/m
Temperature range	fixed installation	- 40 ... + 90	°C
Min. bending radius	fixed installation	6 x cable D.	
	sporadic movement	10 x cable D.	
Cable weight		approx. 48	kg / 100 m

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.

Traction cable
RADOX SYST 1DB+4X4X1 XM S UIC 18C

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 60332-3-24
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 ensity	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, insulation	ITC ≤ 6	EN 50305, 9.2
Toxicity, filler and sheath	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