



# Traction cable

## RADOX SYST 1DB+10X0.75 XM S

### General Properties :

RADOX JUMPER SYST :	Multicore cable, screened
Databus impedance :	90 Ohm
Control cable nominal voltage :	300V / 500 V AC
Hazard level :	M (extra low temperature, extra oil and extra fuel resistant)

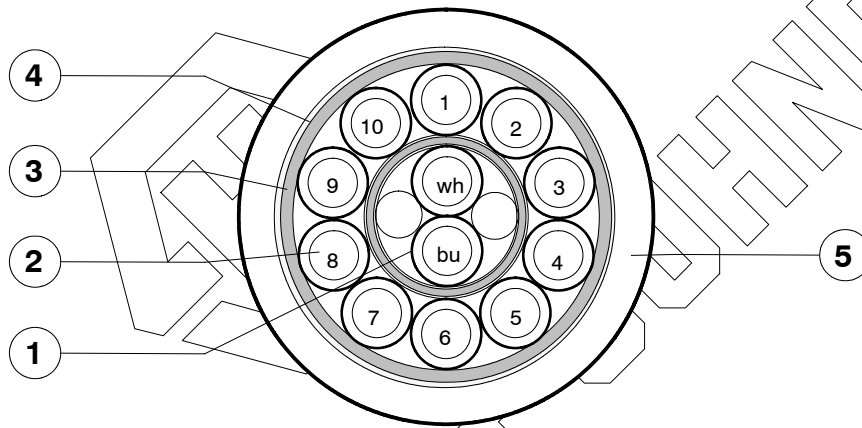
### General Features:

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

### Application:

The cable are intended for permanent installation in rail vehicles or for applications in which a limited alternating bending occur during service.

Guidelines for the installation are described in the standard EN 50343.



1.	1 Databus 90 Ohm 2x0.75 mm <sup>2</sup>	Conductor : Insulation : Colours : Two cores with two fillers twisted Wrapping : EMC- screen : Wrapping :	tin plated copper wire RADOX COM blue, white D : 2.7 mm D : 5.4 mm Tape Tin plated copper braid D : 6.2 mm Tape
2.	10 Cores 0.75 mm <sup>2</sup>	Conductor : Insulation : Colours :	tin plated copper wire RADOX COM white black numbered D : 2.7 mm 1...10
3.	EMC- screen	Tin plated copper braid Covering	D : 12.4 mm ≥ 85 %
4.	Wrapping	Tape	
5.	Sheath	RADOX EM 104, colour : black	D : 15.5 ± 0.5 mm

Printing on sheath : HUBER+SUHNER RADOX SYST 1DB+10X0.75 XM S 12557801- [batch. No.]

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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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### Technical Data :

Conductor resistance at 20 °C	≤ 26.7	Ω / km
Voltage rating $U_0 / U$	300 / 500	V AC
Test voltage, 5 min.	2 000	V AC
Mutual capacitance	1 kHz 60	nF / km
Inductance	1 kHz 0.7	mH / km

### Temperature range

fixed	- 40 ... + 90	°C
flexing	- 25 ... + 90	°C

### Min. bending radius

fixed	60	mm
flexing	95	mm

Cable weight ..... approx. 34.5 ..... kg / 100m

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

### The cables are in conformity with:

<b>Fire protection on railway vehicles, hazard level</b>	<b>HL1 - HL3</b>	<b>EN 45545</b>
Vertical flame spread	$50 < L \leq 540$ mm	EN 60332- 1- 2
Vertical flame spread, bunched, $D \geq 12$ mm	$L \leq 2.5$ m	EN 60332- 3- 24
Smoke density	$T \geq 70$ %	EN 61034- 2
Toxicity	$ITC \leq 6$	EN 50305, 9.2

<b>Fire protection on railway vehicles, level of protection</b>	<b>1 - 4</b>	<b>DIN 5510</b>
Vertical flame spread	$50 < L \leq 540$ mm	EN 60332- 1- 2
Vertical flame spread, bunched, $D \geq 12$ mm	$L \leq 2.5$ m	EN 60332- 3- 24
Smoke density	$T \geq 60$ %	EN 61034- 2
Corrosivity of combustion gases	$pH \geq 4.3, C \leq 10$ $\mu$ S/mm	EN 50267- 2- 2
Amount of halogen acid gas	$HCl + HBr \leq 0.5$ %	EN 50267- 2- 1
Content of fluorine	$HF \leq 0.1$ %	EN 60684- 2, 45.2
Toxicity	$ITC \leq 3$	EN 50305, 9.2

### Requirements of hazard level code M:

(according to EN 50264- 1 or EN 50306- 1)

Extra low temperature	- 40°C
Extra oil resistant:	IRM 902, 72h, 100°C
Extra fuel resistant:	IRM 903, 168h, 70°C