



Traction cable

RADOX 3 GWK 300V M FR RW

Product description:

RADOX 3 GWK 300V M FR RW : thin wall cores with flame barrier
Nominal voltage: 300 / 500 V AC

General Properties:

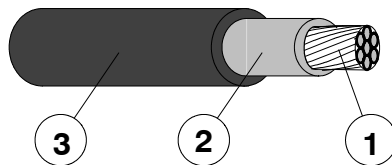
Halogen free, electron-beam cross-linked cores with improved behaviour in case of fire and maintains circuit integrity, easy to strip, soldering resistant and flexible.

Application:

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

Guidelines for selection and installation are described in the standards EN 50355 and EN 50343.

General composition of cable:



1. Conductor : stranded tin plated copper, acc. to EN 60228 cl. 5
2. Flame barrier: MICA-tape
3. Insulation: RADOX EI 201
Colour : grey, marking black

Marking:

[a] HUBER+SUHNER RADOX 3 GWK 300V [b] M FR RW [c]-[d] [e] [f]

	example:
[a] Meter marking (in m)	= 1234 = m
[b] Construction	1X150
[c] Part number	12345678
[d] Batch number	1234567
[e] Production week and year	03-2017
[f] Production place (only if China)	CN

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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:

Voltage rating	U_0	300	V AC
Voltage rating cond.- cond.	U	500	V AC
maximum permissible Voltage rating AC cond.- earth	.....		.....	360	.....	V AC
maximum permissible Voltage rating AC cond.- cond.	.....	U_m	.....	600	.....	V AC
maximum permissible Voltage rating DC cond.- earth	.....	V_0	.....	450	.....	V DC
maximum permissible Voltage rating DC cond.- cond.	.....		.....	750	.....	V DC
Test voltage	.....		.....	2000	.....	V AC
Temperature range	.....		.....	- 50 ... + 120	.....	°C
Min. bending radius *)						
fixed installation	.....		.....	3 x D		
sporadic movement	.....		.....	5 x D		

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, respectively low temperature behaviour tests for 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 cores are in conformity with:

Isolation receipt in the case of fire

Resistance to fire with mechanical shock, $D \leq 20$ mm 30 Min. EN 50200

Fire protection on railway vehicles, hazard level HL1 - HL3 EN 45545

Vertical flame spread $50 < L \leq 540$ mm EN 60332-1-2
 Vertical flame spread, bunched, $D \leq 6$ mm $L \leq 1.5$ m EN 50305, 9.1.2
 Vertical flame spread, bunched, $6 < D < 12$ mm $L \leq 2.5$ m EN 50305, 9.1.1 (EN 60332-3-25)
 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

Fire protection on railway vehicles, level of protection . 1 - 4 DIN 5510

Vertical flame spread $50 < L \leq 540$ mm EN 60332-1-2
 Vertical flame spread, bunched, $D \leq 6$ mm $L \leq 1.5$ m EN 50305, 9.1.2
 Smoke density $T \geq 60$ % EN 61034-2
 Corrosivity of combustion gases $pH \geq 4.3$, $C \leq 10$ μ 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, insulation $ITC \leq 6$ EN 50305, 9.2

Fire protection on railway vehicles, hazard level LR1 - LR4 UNI CEI 11170

Vertical flame spread $50 < L \leq 540$ mm EN 60332-1-2
 Vertical flame spread, bunched, $D \leq 6$ mm $L \leq 1.5$ m EN 50305, 9.1.2
 Smoke density $T \geq 70$ % EN 61034-2
 Corrosivity of combustion gases $pH \geq 4.3$, $C \leq 10$ μ S/mm EN 50267-2-2
 Amount of halogen acid gas $HCl + HBr \leq 0.5$ % EN 50267-2-1
 Toxicity $ITC \leq 3$ EN 50305, 9.2

Applicable documents:

EN 50355 Guide to use
 EN 50343 Installation rules

Core type mm ²	Conductor nom.		Core-Dia mm	R ₂₀ ¹⁾ max. Ω / km	C _{H2O} ²⁾ nom. pF/m	fire load nom. kJ / m	Weight nom.		Colour	H+S Part No.
	Construction n x mm	Dia mm					Kupfer kg / 100m	Kabel		
0.75	24 x 0.21	1.1	2.25 ± 0.1	26.7	350	55	0.7	1.1	grey	12 564 622 ³⁾
1	37 x 0.18	1.22	2.5 ± 0.1	20.0	360	64	0.88	1.37	grey	12 564 873
1.5	30 x 0.25	1.49	2.8 ± 0.1	13.7	430	73	1.3	1.94	grey	12 564 623
2.5	50 x 0.25	1.94	3.2 ± 0.1	8.21	455	85	2.2	2.89	grey	12 564 625

1) R₂₀: Conductor resistance according to EN 60228

2) C_{H2O}: Capacity in water

3) not covered with existing fire safety certificates