



Traction cable

RADOX EN 50264-3-1 1800V M

Product description:

RADOX EN 50264-3-1 1800V M Single core cables with reduced wall insulation dimensions
 Nominal voltage: 1800 / 3000 V AC
 Hazard level: M (extra low temperature, extra oil and extra fuel resistant)

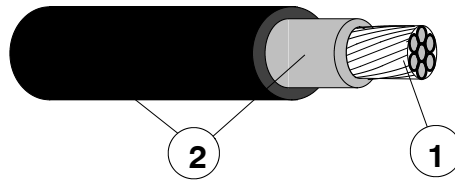
General features:

Halogen free, electron-beam cross linked cores with improved behaviour in case of fire, easy to strip, soldering iron resistant and flexible. Meet the requirements of EN 50264-3-1

Application:

The cables 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.
 For unscreened cables the guidelines of EN 50153 shall be followed.

General composition of cable:



1. Conductor: stranded tin plated copper, acc. to EN 60228 cl. 5
2. Insulation: inner layer RADOX EI 110, colour: white
outer layer RADOX EI 109, colour: black or greenyellow

Marking:

[a] HUBER+SUHNER RADOX EN 50264-3-1 1800V [b] M [c]-[d] [e] [f] [g]

		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
[g]	CRCC certification (only if available)	CRCC10218P11529R1M-2

Technical Data :

Voltage rating cond.-earth	..... U ₀	1800	.....	V AC
Voltage rating cond.-cond.	..... U	3000	.....	V AC
maximum permissible Voltage rating AC cond.-earth	.....	2100	.....	V AC
maximum permissible Voltage rating AC cond.-cond.	..... U _m	3600	.....	V AC
maximum permissible Voltage rating DC cond.-earth	..... V ₀	2700	.....	V DC
maximum permissible Voltage rating DC cond.-cond.	.....	4500	.....	V DC
Test voltage	.....	6500	.....	V AC
Temperature range	.....	- 50 ... + 120	.....	°C
Min. bending radius				
fixed installation	..... cable diameter ≤ 12 mm	.....	3 x D	
 cable diameter > 12 mm	4 x D	
sporadic movement cable diameter ≤ 12 mm	4 x D	
 cable diameter > 12 mm	5 x D	



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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.

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

The cables are in conformity with:

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 ≤ 6 mm	L ≤ 1.5 m	EN 50305, 9.1.2
Vertical flame spread, bunched, 6 < D < 12 mm	L ≤ 2.5 m	EN 50305, 9.1.1 (EN 60332-3-25)
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, level of protection	1 - 4	DIN 5510
Vertical flame spread	50 < L ≤ 540 mm	EN 60332-1-2
Vertical flame spread, bunched, D ≤ 6 mm	L ≤ 1.5 m	EN 50305, 9.1.2
Vertical flame spread, bunched, 6 < D < 12 mm	L ≤ 2.5 m	EN 50266-2-5 (EN 50305, 9.1.1)
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

1.5 - 185 mm²

Fire protection on railway vehicles, category	A1	NF F16-101
Fire protection on railway vehicles, class	C / F1	NF F16-101
Vertical flame spread	50 < L ≤ 540 mm	NF C32-070, 2.1
Vertical flame spread, bunched	L ≤ 300 mm	NF C32-070, 2.2
Smoke index	I.F. ≤ 5	X10-702-2, NF X70-100-1

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

Applicable documents:

- 586 554 Current rating for single core cables

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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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Core size mm ²	Conductor ^{nom.}		Core dia. ¹⁾ mm	R ₂₀ ²⁾ max. Ω/km	C _{H2O} nom. pF/m	Fireload nom. kJ/m	Weight ^{nom.}		Colour	H+S Part No.
	Construction n x mm	Dia. mm					Copper kg / 100m	Cable		
1.5	37x0.23	1.5	5.50±0.15	13.7	171	515	1.3	4.9	BK GNYE	12 584 866 12 584 867
2.5	61x0.23	1.9	6.05±0.15	8.21	198	590	2.2	6.2	BK GNYE	12 584 868 12 584 869
4	61x0.29	2.4	6.65±0.15	5.09	227	690	3.5	8.2	BK GNYE	12 584 870 12 584 871
6	84x0.30	2.9	7.15±0.15	3.39	256	770	5.1	10	BK GNYE	12 584 872 12 584 873
10	80x0.40	3.9	8.15±0.20	1.95	312	935	9.1	15	BK GNYE	12 584 874 12 584 875
16	119x0.40	5.3	9.60±0.20	1.24	392	1220	14	22	BK GNYE	12 584 876 12 584 877
25	182x0.40	6.6	11.0±0.2	0.795	466	1590	21	31	BK GNYE	12 584 878 12 584 879
35	266x0.40	7.8	12.2±0.2	0.565	534	1825	30	42	BK GNYE	12 584 880 12 584 881
50	378x0.40	9.3	13.7±0.2	0.393	619	2155	43	57	BK GNYE	12 584 882 12 584 883
70	348x0.50	11.4	16.2±0.3	0.277	684	2785	59	76	BK GNYE	12 584 884 12 584 885
95	444x0.50	12.9	17.6±0.3	0.210	780	3050	77	96	BK GNYE	12 584 886 12 584 887
120	570x0.50	14.9	19.7±0.3	0.164	865	3540	98	121	BK GNYE	12 584 888 12 584 889
150	722x0.50	16.8	21.6±0.3	0.132	962	4010	122	150	BK GNYE	12 584 890 12 584 891
185	874x0.50	18.3	23.5±0.3	0.108	967	4710	150	181	BK GNYE	12 584 892 12 584 893
240	1147x0.50	21.1	26.4±0.4	0.0817	1086	5285	196	231	BK GNYE	12 584 894 12 584 895
300	1443x0.50	23.7	29.0±0.4	0.0654	1208	5965	244	285	BK GNYE	12 584 896 12 584 897

1) R₂₀: Conductor resistance according to EN 60228

2) C_{H2O}: Capacity in water