

Traction cable

RADOX 3 GKW EN 50264-3-2 600V MM

Product description:

RADOX 3 GKW EN 50264-3-2 600V MM

Nominal voltage:

Multicore cables with reduced dimensions

600 / 1000 V AC

Hazard level:

MM (extra low temperature, extra oil and extra fuel resistant)

General features:

Halogen free, electron-beam crosslinked cables with improved behaviour in case of fire, easy to strip, soldering iron resistant and flexible. Meet the requirements of EN 50264-3-2.

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.

General composition of cable:



- | | |
|---------------------------|---|
| 1. Filler (optional) | RADOX 125 REC |
| 2. Conductor: | stranded tin plated copper, acc. to EN 60228 cl. 5 |
| 3. Insulation inner layer | RADOX EI 110, colour: white |
| Insulation outer layer | RADOX EI 109, colour: black, unless otherwise specified |
| 4. Separator | Tape |
| 5. Sheath | RADOX EM 104, colour: black |

Marking:

[a] HUBER+SUHNER RADOX 3 GKW EN 50264-3-2 600V [b] MM [c]-[d] [e] [f] [g]

	example:
[a] Meter marking (in m)	= 001234 = m
[b] Cross section (in mm ²)	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

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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 cond.-earth	U ₀	600	V AC
Voltage rating cond.-cond.	U	1000	V AC
maximum permissible Voltage rating AC cond.-earth		720	V AC
maximum permissible Voltage rating AC cond.-cond.	U _m	1200	V AC
maximum permissible Voltage rating DC cond.-earth	V ₀	900	V DC
maximum permissible Voltage rating DC cond.-cond.		1500	V DC
Test Voltage.		3500	V AC
Temperature range		- 50 ... + 125	°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

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 60811-504/505 respectively low temperature behaviour tests 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.

The cables are in conformity with:

Fire protection on railway vehicles, hazard level	HL1 - HL3	EN 45545-2
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 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

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:

- 586 556 Current rating for multi core cables

Traction cable

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Table 1: Standard Types RADOX 3 GKW EN 50264-3-2 600V MM

Cable ¹⁾ Type [n x mm ²]	Conductor ²⁾		Core ²⁾		Cable		Fire	Combustible	Cable	H+S Part No.
	Ø nom. [mm]	R ₂₀ max. [Ω/km]	Ø nom. [mm]	Colours	Ø [mm]	Colour	Load nom. [kJ/m]	Material nom. [kg/100m]	Weight nom. [kg/100m]	
2X1.5	1.45	13.7	2.85	BK	7.5±0.3	BK	820	6.2	8.7	85171174
2X1.5	1.52	13.7	3.00	BK	7.6±0.3	BK	810	6.2	8.9	12586174
3X1.5	1.45	13.7	2.85	BK	8.0±0.3	BK	915	7	11	85171175
3G1.5				BK-GN-YE						85171176
3V1.5				BK-BU-GN-YE						85207890
3X1.5	1.52	13.7	3.00	BK	8.1±0.3	BK	880	6.8	11	12585380
3G1.5				BK-GN-YE						12586176
4X1.5	1.45	13.7	2.85	BK	8.8±0.3	BK	1080	8	13	85171178
4G1.5				BK-GN-YE						85171179
4X1.5	1.52	13.7	3.00	BK	9.0±0.3	BK	1070	8.3	14	12586177
4G1.5				BK-GN-YE						12586178
2X2.5	1.94	8.21	3.35	BK	8.3±0.3	BK	930	7	11	12586179
3X2.5	1.94	8.21	3.30	BK	8.8±0.3	BK	1015	7.3	14	85171200
3G2.5				BK-GN-YE						85171201
3X2.5	1.94	8.21	3.35	BK	8.9±0.3	BK	1010	8.3	15	12586180
3G2.5				BK-GN-YE						85063958
4X2.5	1.94	8.21	3.30	BK	9.7±0.3	BK	1230	9.1	18	85171202
4G2.5				BK-GN-YE						85171203
4X2.5	1.94	8.21	3.35	BK	10.1±0.3	BK	1290	9.1	18	12586181
4G2.5				BK-GN-YE						12586182
2X4	2.35	5.09	3.90	BK	9.4±0.3	BK	1515	10.2	17	85171221
3X4	2.35	5.09	3.90	BK	10.0±0.3	BK	1320	10	20	85171222
3G4				BK-GN-YE						85171223
3X4	2.40	5.09	4.25	BK	11.1±0.4	BK	1695	12	22	12586184
4X4	2.35	5.09	3.90	BK	11.3±0.4	BK	1670	12	26	85171224
4G4				BK-GN-YE						85171225
4V4				BK-BN-BU-GN-YE						85207891
4X4	2.40	5.09	4.25	BK	12.6±0.4	BK	2065	15	29	12586186
4G4				BK-GN-YE						12586187
2X6	2.85	3.39	4.30	BK	10.5±0.4	BK	1485	11	21	85171231
3X6	2.85	3.39	4.30	BK	11.1±0.4	BK	1551	12	27	85171233
3X6	2.93	3.39	4.85	BK	12.5±0.4	BK	2040	14	30	12586189
4X6	2.85	3.39	4.30	BK	12.7±0.4	BK	2013	15	36	85171234
4G6				BK-GN-YE		BK				85171235
4G6	2.93	3.39	4.85	BK-GN-YE	14.3±0.4	BK	2730	19	40	12586191
2X10	3.78	1.95	5.20	BK	12.9±0.4	BK	2170	16	33	85171239
2X10	3.89	1.95	5.75	BK	13.8±0.4	BK	2510	18	36	12586192
3X10	3.78	1.95	5.20	BK	13.7±0.4	BK	2263	17	43	85207284
4X10	3.78	1.95	5.20	BK	15.2±0.5	BK	2734	20	55	85171240
4G10				BK-GN-YE		BK				85171241
4X10	3.89	1.95	5.75	BK	16.8±0.5	BK	3405	25	61	12586195
3X16	5.30	1.24	6.75	BK	16.7±0.5	BK	3260	23	62	85171244
4X16	5.30	1.24	6.75	BK	19.1±0.5	BK	4220	30	82	85105965
4G16				BK-GN-YE		BK				85171246
4V16						BK				85207892

Traction cable

RADOX 3 GKW EN 50264-3-2 600V MM

Cable ¹⁾ Type [n x mm ²]	Conductor ²⁾		Core ²⁾		Cable		Fire	Combustible	Cable	H+S
	Ø nom. [mm]	R ₂₀ max. [Ω/km]	Ø nom. [mm]	Colours	Ø [mm]	Colour	Load nom. [kJ/m]	Material nom. [kg/100m]	Weight nom. [kg/100m]	Part No.
				BK-BK-BN-BU						
1G25+3X50	6.55+9.20	0.795+0.393	8.30+11.2	BK-GNYE	30.6±0.6	BK	9470	64	207	85171255
1G25+3X50	6.60+9.30	0.795+0.393	8.60+11.6	BK-GNYE	31.9±0.6	BK	13480	87	237	12586209
3X25	6.55	0.795	8.30	BK	20.5±0.5	BK	4940	35	96	85171252
4X25	6.55	0.795	8.30	BK	23.1±0.5	BK	6227	44	126	85171253
4X25	6.60	0.795	8.60	BK	24.4±0.5	BK	6840	44	128	12586203
2X50	9.20	0.393	11.2	BK	25.7±0.6	BK	8295	59	141	85171254
2X50	9.30	0.393	11.6	BK	26.7±0.6	BK	8690	60	146	12586207

¹⁾ X: one colour, numbered

G: one green-yellow core, others one colour, numbered

V: various colours

²⁾ Construction details of the core is according Technical Datasheet 586781

Table 1A: Customized Types RADOX 3 GKW (EN 50264-3-2) 600V MM

Cable ¹⁾ Type [n x mm ²]	Conductor ²⁾		Core ²⁾		Cable		Fire	Combustible	Cable	H+S
	Ø nom. [mm]	R ₂₀ max. [Ω/km]	Ø nom. [mm]	Colours	Ø [mm]	Colour	Load nom. [kJ/m]	Material nom. [kg/100m]	Weight nom. [kg/100m]	Part No.
2X0.5	0.84	40.1	1.95	BK	5.3±0.3	BK	416	3.2	4.1	85171131
4X0.5	0.84	40.1	1.95	BK	6.15±0.3	BK	540	4.1	5.8	85171133
5X0.5	0.84	40.1	1.95	BK	6.7±0.3	BK	656	4.8	7.0	85171134
6X0.5	0.84	40.1	1.95	BK	7.3±0.3	BK	785	5.8	8.3	85171135
2X0.75	1.10	26.7	2.20	BK	5.8±0.3	BK	487	3.8	5.2	85171138
3X0.75	1.10	26.7	2.20	BK	6.15±0.3	BK	536	4.1	6.2	85171139
3G0.75				BK-GNYE		BK				85171140
4X0.75	1.10	26.7	2.20	BK	6.75±0.3	BK	630	4.7	7.6	85171141
4G0.75				BK-GNYE		BK				85171142
5G0.75	1.10	26.7	2.20	BK-GNYE	7.4±0.3	BK	776	5.7	9.3	85171143
6G0.75	1.10	26.7	2.20	BK-GNYE	8.05±0.3	BK	928	6.7	11	85171144
7G0.75	1.10	26.7	2.20	BK-GNYE	8.0±0.3	BK	894	6.5	11.5	85171145
8X0.75	1.10	26.7	2.20	BK	9.8±0.3	BK	1401	10	15.7	85207893
9G0.75	1.10	26.7	2.20	BK-GNYE	11.0±0.3	BK	1815	13	19.4	85207894
2X1	1.22	20.0	2.45	BK	6.3±0.3	BK	575	4.4	6.2	85171149
2X1	1.22	20.0	2.50	BK	6.6±0.3	BK	625	4.6	6.4	84090647
3X1	1.22	20.0	2.45	BK	6.7±0.3	BK	636	4.7	7.4	85171150
4X1	1.22	20.0	2.45	BK	7.35±0.3	BK	747	5.5	9.1	85171152
4G1				BK-GNYE		BK				85171153
4X1	1.22	20.0	2.50	BK	7.9±0.3	BK	830	6.3	9.9	84090705
4G1				BK-GNYE		BK				84126778
7G1	1.22	20.0	2.45	BK-GNYE	8.75±0.3	BK	1071	7.8	14	85171155
7G1	1.22	20.0	2.50	BK-GNYE	9.4±0.3	BK	1180	8.8	15	84126780
9G1	1.22	20.0	2.45	BK-GNYE	11.6±0.4	BK	2001	14.2	22.2	85171157
9G1	1.22	20.0	2.50	BK-GNYE	12.1±0.4	BK	2095	14.9	23	84090707
5X1.5	1.45	13.7	2.85	BK	9.4±0.3	BK	1252	9	15.3	85171180

Traction cable

RADOX 3 GKW EN 50264-3-2 600V MM

Cable ¹⁾ Type [n x mm ²]	Conductor ²⁾		Core ²⁾		Cable		Fire Load nom. [kJ/m]	Combustible Material nom. [kg/100m]	Cable Weight nom. [kg/100m]	H+S Part No.
	Ø nom. [mm]	R ₂₀ max. [Ω/km]	Ø nom. [mm]	Colours	Ø [mm]	Colour				
5G1.5				BK-GNYYE		BK				85171181
5X1.5	1.52	13.7	3.00	BK	9.9±0.3	BK	1295	9.8	17	85003500
5G1.5				BK-GNYYE		BK				85003501
6X1.5	1.45	13.7	2.85	BK	10.4±0.4	BK	1552	11	18.6	85171182
6G1.5				BK-GNYYE		BK				85171183
7X1.5	1.45	13.7	2.85	BK	10.1±0.4	BK	1434	10.2	19	85171184
7G1.5				BK-GNYYE		BK				85171185
9G1.5	1.45	13.7	2.85	BK-GNYYE	14.1±0.4	BK	2963	21	32	85171187
10X1.5	1.45	13.7	2.85	BK	13.5±0.4	BK	2297	17	29	85171188
12G1.5	1.45	13.7	2.85	BK-GNYYE	13.9±0.4	BK	2514	18	33.1	85171191
12G1.5	1.52	13.7	3.00	BK-GNYYE	15.0±0.4	BK	2655	20	37	12586240
16X1.5	1.45	13.7	2.85	BK	15.8±0.5	BK	3281	23.3	43.4	85171192
19X1.5	1.45	13.7	2.85	BK	16.4±0.5	BK	3570	25	49	85171193
25X1.5	1.45	13.7	2.85	BK	19.6±0.5	BK	4756	33.5	65	85171194
5G2.5	1.94	8.21	3.30	BK-GNYYE	10.8±0.4	BK	1668	12	23.2	85171204
6X2.5	1.94	8.21	3.30	BK	11.9±0.4	BK	1880	13.7	27.2	85171206
6X2.5	1.94	8.21	3.35	BK	12.4±0.4	BK	2150	16	29	85108607
7X2.5	1.94	8.21	3.30	BK	11.6±0.4	BK	1714	12.5	28.2	85171207
7G2.5				BK-GNYYE		BK				85171208
12X2.5	1.94	8.21	3.30	BK	15.8±0.4	BK	2969	21.6	48.6	85207895
12X2.5	1.94	8.21	3.35	BK	16.1±0.5	BK	3110	23	50	85160833
12X2.5+ 4X6	1.94+ 2.85	8.21+ 3.39	3.30+ 4.30	BK	19.5±0.5	BK	4326	31.4	79.1	85207896
24X2.5	1.94	8.21	3.30	BK	22.3±0.5	BK	5873	41.9	96	85171210
25X2.5	1.94	8.21	3.30	BK	22.3±0.5	BK	5903	42.2	98.5	85171211
42G2.5	1.94	8.21	3.30	BK	28.7±0.6	BK	9679	69.3	164	85171213
5X4	2.35	5.09	3.90	BK	12.3±0.4	BK	2001	14.4	31.5	85171226
5G4				BK-GNYYE						85171227
6X4	2.35	5.09	3.90	BK	13.9±0.4	BK	2606	18.8	39.3	85171229
10X4	2.35	5.09	3.90	BK	18.1±0.5	BK	4303	30.5	64.8	85171230
5X6	2.85	3.39	4.30	BK	13.8±0.4	BK	2387	17.5	43.3	85171236
5G6				BK-GNYYE						85171237
5G6	2.93	3.39	4.85	BK-GNYYE	15.3±0.4	BK	3155	22	48	85126657
7X6	2.85	3.39	4.30	BK	15.0±0.4	BK	2696	19.6	55.8	85171238
5G10	3.78	1.95	5.20	BK-GNYYE	16.6±0.5	BK	3220	23.1	66.4	85171242
5X16	5.30	1.24	6.75	BK	21.0±0.5	BK	5843	39	104.5	85171247
6G16	5.30	1.24	6.75	BK-GNYYE	23.1±0.5	BK	6287	43	121.8	85171250

¹⁾ X: one colour, numbered

G: one green-yellow core, others one colour, numbered

V: various colours

²⁾ Construction details of the core is according Technical Datasheet 586781