Traction cable
RADOX GKW-LW (EN 50306-2) 600V M

HUBER+SUHNER

Product description:

RADOX GKW-LW (EN 50306-2) 600V M	Single cores with thin wall insulation
Nominal voltage:	600 / 1000 V AC
Hazard level:	M (extra low temperature, extra oil and extra fuel resistant)

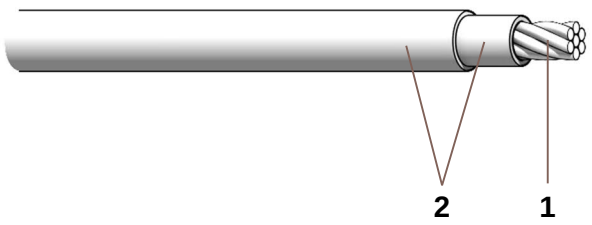
General features:

Halogen free dual-wall insulation of high-tech polymers with improved behaviour in case of fire, easy to strip, soldering iron and media resistant. Meets the requirements of the EN 50306-2 standard but significantly thinner.

Application:

The cores are intended for fixed installation in railway vehicles.
Guidelines for the 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 50306-2
2.	Insulation	RADOX TI 301, colour: white

Marking:

[a] **HUBER+SUHNER RADOX GKW-LW (EN 50306-2) 600V** [b] **M** [c]-[d] [e] [f] [g]

		example:
[a]	Meter marking (in m)	= 123456 = 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

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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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

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.

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 mm < 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

Fire protection on railway vehicles	**Fulfilled**	**NFPA 130**
Vertical flame spread, bunched	L ≤ 1.5 m	UL 1685, 12 (FT4 exp.)
Smoke density	TSR ≤ 150 m^2, PSRR ≤ 0.40 m^2/s	UL 1685, 12 (FT4 exp.)

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:

- 563077 Current rating for single core cables

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Table 1A: Customized Types RADOX GKW-LW (EN 50306-2) 600V M

Core	Conductor			Core		Fire	Combustible	Cable	H+S
Size	Type	Ø	R_{20}	Ø	Colours	Load	Material	Weight	Part No.
	nom.	nom.	max.	.		nom.	nom.	nom.	
[mm²]	[n x mm]	[mm]	[Ω/km]	[mm]		[kJ/m]	[kg/100m]	[kg/100m]	
1X0.4	19 x 0.16	0.76	52.1	1.18±0.02	WH	22	0.08	0.43	12556112 [2)]
1X0.5	19 x 0.18	0.90	40.1	1.30±0.05	WH	25	0.09	0.54	12556113 [1)]
1X0.6	19 x 0.20	1.00	33.4	1.39±0.05	WH	27	0.09	0.65	12556114
1X0.75	19 x 0.23	1.10	26.7	1.52±0.05	WH	30	0.11	0.8	12556115
1X1	19 x 0.26	1.20	20.0	1.67±0.05	WH	35	0.12	1.0	12556335
1X1.2	19 x 0.29	1.40	16.3	1.83±0.05	WH	40	0.1	1.2	12556117
1X1.5	19 x 0.31	1.50	13.7	2.04±0.05	WH	53	0.2	1.5	12554494
1X2	37 x 0.25	1.70	11.2	2.29±0.10	WH	65	0.3	1.9	12556119
1X2.5	19 x 0.40	1.90	8.21	2.54±0.10	WH	85	0.4	2.4	12554495
1X3	37 x 0.32	2.18	6.56	2.78±0.10	WH	82	0.3	2.9	12556121 [1) 2)]
1X4	56 x 0.30	2.46	5.09	3.21±0.10	WH	116	0.5	3.9	12566623 [1) 2)]

[1)] Conductor according to EN 60228

[2)] Not covered with existing fire safety certificates