



# Traction cable

## RADOX GWK-LW 600V M

### Product description:

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

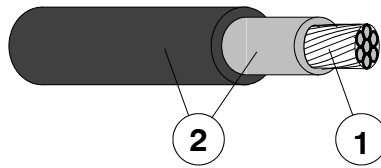
### General features:

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.

### Application:

The cores are intended for fixed installation in railway vehicles  
 Guide lines 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  
Colors: white, black marked

### Marking:

[a] HUBER+SUHNER RADOX GWK-LW 600V [b] M [c]- [d] [e] [f]

		example:
[a]	Meter marking (in m)	=001234= m
[b]	Construction	1X1.5
[c]	Part number	12345678
[d]	Batch number	1234567
[e]	Production week and year	03-2017
[f]	Production place (only if China)	CN

### Technical Data:

Voltage rating cond.- earth	U <sub>0</sub>	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 <sub>m</sub>	1200	V AC
maximum permissible Voltage rating DC cond.- earth	V <sub>0</sub>	900	V DC
maximum permissible Voltage rating DC cond.- cond.		1500	V DC
Test voltage		3500	V AC

Temperature range - 50 ... + 120 °C

Min. bending radius  
 fixed installation 3 x D

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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](http://www.hubersuhner.com)



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### 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 60811-504/505.

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, category</b> .....	<b>Ia, Ib, II</b> .....	<b>BS 6853, GM/RT 2130</b>
Vertical flame spread .....	$50 < L \leq 540$ mm .....	EN 60332-1-2
Vertical flame spread, bunched .....	$L \leq 2.5$ m .....	EN 50266, BS 6853 An. D.8.7
Smoke density .....	$A_0 \leq$ BS 6853 .....	BS 6853 An. D.8.7
Toxicity .....	$R \leq 1.0$ .....	BS 6853 An. B.1
<b>Fire protection on railway vehicles, hazard level</b> ...	<b>HL1 - HL3</b> .....	<b>EN 45545-2</b>
Vertical flame spread .....	$50 \text{ mm} < L \leq 540$ 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 .....	$\text{pH} \geq 4.3, C \leq 10$ $\mu\text{S}/\text{mm}$ .....	EN 60754-2
Amount of halogen acid gas .....	$\text{HCl} + \text{HBr} \leq 0.5$ % .....	EN 60754-1
Content of fluorine .....	$\text{HF} \leq 0.1$ % .....	EN 60684-2, 45.2
Toxicity .....	$\text{ITC} \leq 6$ .....	EN 50305, 9.2
<b>Fire protection on railway vehicles</b> .....	<b>Fulfilled</b> .....	<b>NFPA 130</b>
Vertical flame spread, bunched .....	$L \leq 1.5$ m .....	UL 1685, 12 (FT4 exp.)
Smoke density .....	$\text{TSR} \leq 150$ $\text{m}^2, \text{PSRR} \leq 0.40$ $\text{m}^2/\text{s}$ .....	UL 1685,12 (FT4 exp.)
<b>Hazard level code M</b> .....	(according to EN 50264-1 or EN50306-1)	
Extra low temperature .....	- 40°C	
Extra oil resistance .....	IRM 902, 24h, 100°C	
Extra fuel resistance .....	IRM 903, 168h, 70°C	

### Applicable standards:

H+S : 563077 (e) : Current rating for single core cables



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Cross section		Conductor nom.		Core-D mm	R <sub>20</sub> <sup>2)</sup> max. Ω/km	C <sub>H2O</sub> <sup>3)</sup> nom. PF/m	Fire load nom. kJ/m	Weight nom.		H+S	
nom. mm <sup>2</sup>	AWG	Constr. <sup>1)</sup> n x mm	D mm					copper kg/100m	Cable kg/100m	Part. No.	Colour: white
0.5		19x0.18	0.9	1.30±0.05	40.1	384	25	0.45	0.54	12 556 113	
0.6	20	19x0.20	1	1.39±0.05	33.4	416	27	0.56	0.65	12 556 114	
0.75		19x0.23	1.1	1.52±0.05	26.7	467	30	0.69	0.80	12 556 115	
1.0	18	19x0.26	1.2	1.67±0.05	20.0	494	35	0.88	1.0	12 556 335	
										12 585 888	4)
1.2	16	19x0.29	1.4	1.83±0.05	16.3	519	40	1.1	1.2	12 556 117	
1.5		19x0.31	1.5	2.04±0.05	13.7	474	53	1.3	1.5	12 554 494	
2.0	14	37x0.25	1.7	2.29±0.10	11.2	503	65	1.6	1.9	12 556 119	
2.5		19x0.40	1.9	2.54±0.10	8.21	577	85	2.0	2.4	12 554 495	
										12 585 889	4)
3.0	12	37x0.32	2.18	2.78±0.10	6.56	619	82	2.6	2.9	12 556 121	5)
4.0		56x0.30	2.46	3.21±0.10	5.09	562	116	3.4	3.9	12 566 623	5)

- 1) typical value x nom. single wire diameter
- 2) conductor resistance at 20 °C according to IEC 60228
- 3) capacity in water typical value
- 4) Color: grey
- 5) not covered with existing fire safety certificates