



# RADOX Solar Wire

## Solar cable

### General :

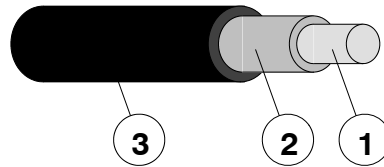
RADOX Solar cable is manufactured with an electron beam cross-linked insulation and jacket, provides excellent mechanical and environmental resistance to temperature extremes, oil, ozone, weathering and abrasion. In the case of fire flame retardant properties limit flame propagation, smoke and toxicity. RADOX Solar cable is extremely flexible with a reduced outer diameter for demanding space requirements, is easy to strip and possesses a long service life. The double insulated design, as a PV-wire in accordance to the european (CENELEC HD) standards, allows it to be used also in ungrounded PV installations. This provides the cost saving option of using RADOX Solar cable without a conduit

### Application :

The solar line is suitable for fixed installation in dry and damp rooms or outdoors to connect photovoltaics facilities. They are not suitable for connecting portable devices for permanent use in water or in the soil. They are considered as short circuit and earth connection secured.

Suitable for the installation methods reference no. 2, 3A, 4A, 5A, 11, 11A, 12, 13, 14, 15, 16, 21, 22A, 23A, 24A, 25, 31A, 32A, 33A, 41, 43, 51, 72, 73, 75 given in table 52H of HD 384.5.52 (SEV 1000 cl. 5.2, DIN VDE 0100-520, UNE 20.460-5-52)

### General composition of cable:



1. Conductor : stranded tin plated copper, EN 60228 class 5
2. Inner Insulation : RADOX 125
3. Outer Insulation : RADOX 125, colour: see table

#### Printing:

= 0000 = M >> H+S [ Article No. + Lot No. ] RADOX SOLARKABEL << PV1-F ... MM2 120C 0.6/1 KV

#### Printing (2.5 - 6 mm<sup>2</sup>):

= 0000 = M >> H+S [ Article No. + Lot No. ] RADOX SOLARKABEL << TUV.COM ID: 0811307400 - PV1-F ... MM2 120C 0.6/1 KV

### Technical Data:

Conductor resistance at 20 °C	.....	see table
TüV Nominal voltage line to ground	..... U <sub>0</sub>	600 V AC
.... Nominal voltage line to line	..... U	1000 V AC
.... Maximum voltage line to ground	.....	720 V AC
.... Maximum voltage line to line	..... U <sub>m</sub>	1200 V AC
.... Maximum voltage line to ground	..... V <sub>0</sub>	900 V DC
.... Maximum voltage line to line	.....	1800 V DC
.... Test voltage AC	.....	6.5 kV
.... Test voltage DC	.....	15 kV
.... Lower ambient temperature	.....	- 40°C
.... Upper ambient temperature	.....	+ 90°C
.... Max. conductor temperature	.....	+ 120°C
Min. bending radius	.....	4 x D
Maximal tensile strenght	..... during installations	50 N/ mm <sup>2</sup>
	..... static	15 N/ mm <sup>2</sup>

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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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**Table :**

Size mm <sup>2</sup>	Conductor construction* n x mm		Cable D mm	R <sub>20</sub> max Ω / km	Weight nom kg/100m	Colour (item. 3)	H + S Standard- Part. No.
	D mm						
1.5	30 x 0.25	1.52 ± 0.05	4.3 ± 0.15	13.7	3.2	black	12 558 072
2.5	48 x 0.25	2.01 ± 0.05	5.2 ± 0.15	8.21	4.6	red	12 529 712
2.5	48 x 0.25	2.01 ± 0.05	5.2 ± 0.15	8.21	4.6	blue	12 529 713
2.5	48 x 0.25	2.01 ± 0.05	5.2 ± 0.15	8.21	4.6	black	12 529 714
4	56 x 0.30	2.54 ± 0.05	5.8 ± 0.15	5.09	6.6	red	12 545 801
4	56 x 0.30	2.54 ± 0.05	5.8 ± 0.15	5.09	6.6	blue	12 537 896
4	56 x 0.30	2.54 ± 0.05	5.8 ± 0.15	5.09	6.6	black	12 545 802
6	81 x 0.30	3.30 ± 0.10	6.9 ± 0.20	3.39	9.2	red	12 568 182
6	81 x 0.30	3.30 ± 0.10	6.9 ± 0.20	3.39	9.2	blue	12 568 183
6	81 x 0.30	3.30 ± 0.10	6.9 ± 0.20	3.39	9.2	black	12 552 756
10	78 x 0.40	4.30 ± 0.10	8.1 ± 0.15	1.95	14.4	black	12 537 897
16	119 x 0.40	5.30 ± 0.10	9.5 ± 0.20	1.24	21.0	black	12 567 377
25	182 x 0.40	6.60 ± 0.10	11.1 ± 0.20	0.779	29.6	black	12 567 378
35	266 x 0.40	7.80 ± 0.10	12.8 ± 0.25	0.565	41.7	black	12 567 379
50	378 x 0.40	9.30 ± 0.10	15.0 ± 0.25	0.393	60.2	black	12 567 380
70	348 x 0.50	11.40 ± 0.10	17.5 ± 0.30	0.277	80.8	black	12 567 381
95	444 x 0.50	12.86 ± 0.10	19.3 ± 0.30	0.210	103.1	black	12 567 382
120	551 x 0.50	14.60 ± 0.10	21.8 ± 0.30	0.164	126.0	black	12 567 383
150	722 x 0.50	16.80 ± 0.10	24.4 ± 0.30	0.132	161.7	black	12 567 384
185	874 x 0.50	18.30 ± 0.20	26.6 ± 0.30	0.108	196	schwarz	12 585 454
240	1147 x 0.50	21.10 ± 0.20	30.2 ± 0.30	0.0817	253	schwarz	12 585 694

\* Number of wires (typical value) x diameter of single wire (max. value)

### Approvals :

(2.5 - 6.0 mm<sup>2</sup>)

Wires für photovoltaik systems ..... RADOX Solarkabel ..... TÜV Rheinland 2 Pfg 1169,  
..... certificate R60024042

### The wires are in conformity with :

Vertical flame spread ..... 50 < L ≤ 540 mm ..... EN 60332-1-2  
 Corrosivity of combustion gases ..... pH ≥ 4.3, σ ≤ 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  
 Acid and alkaline resistance ..... 168h / 23 °C ..... EN 60811-2-1, 10  
 Weather resistance ..... 720h ..... EN ISO 4892-2, Meth. A  
 RoHS Directive ..... fulfilled ..... 2002/95/EC