

SOLAR CABLES FOR PHOTOVOLTAIC (PV) SYSTEMS



PV SOLAR CABLES

H1Z2Z2-K / 62930 IEC 131
(1/1 kV AC - 1,5/1,5 kV DC)
EN 50618 / IEC 62930



APPLICATION

H1Z2Z2-K Solar cables are conforming to european standards 'EN 50618' and international standards 'IEC 62930' designed for interconnection in photovoltaic systems such as solar panel arrays. Suitable for fixed installations within pipes or systems, indoor or outdoor solar applications, installations where fire, smoke emissions and toxic fumes pose potential risks to life and equipments.

Our solar cables fully meet the requirements of EN 50618 and IEC 62930 and have approval from TÜV NORD.

The expected lifespan of our solar cables under normal usage conditions as specified as in standard EN 50618 is at least 25 years. In order to provide a high-quality cable with a 25-year expected lifespan, these cables has gone trough a comprehensive manufacturing and testing audit procedure.

CONSTRUCTION

- Conductor** : Tinned annealed copper in accordance with IEC 60228 Class 5
- Insulation** : Cross-linked compound in accordance with EN 50618 Table B.1
- Outer Sheath** : Cross-linked compound in accordance with EN 50618 Table B.1

SHEATH COLOR

- Black 
- Red 

CHARACTERISTICS

Rated Voltage (U_o/U)

AC: 1000 / 1000 V
 DC: 1500 / 1500 V

Test Voltage

6,5 kV AC, 15 kV DC (5 min.)

Temperature Ratings

-40°C / +90°C

Installations Temperatures

-25°C / +60°C

Min. Bending Radius

EN 50565-1

Cold Bend

EN 60811-504 (-40°C)

Cold Elongations

EN 60811-505 (-40°C)

Cold Impact

EN 60811-506 & EN 50618 (-40°C)

Damp Heat Test

EN 50618 (1000h, 90°C & 85% humidity)

Halogenfree Properties

EN 50525-1 (Annex B)

Low Smoke Emission

EN 61034-2 (Light transmittance > 60%)

Flame Retardancy

EN 60332-1-2

Weather Resistance

EN 50618 (Annex E)

Acid and Alkaline Resistance

EN 50618 (Annex B)

Shrinkage Test

EN 50618, (Table 2)

Durability of Print

EN 50618



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DIMENSIONS

PART NO.	NUMBER OF CORES	CROSS-SECTIONS	COLOUR	CONDUCTOR DIAMETER	OUTER DIAMETER		BENDING RADIUS	WEIGHT	CONDUCTOR RESISTANCE
				mm	min. mm	max. mm	min. mm	kg/km	at 20° C ohm/km
SPV50015BK000	1	1,5	BLACK	1,6	4,4	5,4	22	33	13,7
SPV50015RD000	1	1,5	RED	1,6	4,4	5,4	22	33	13,7
SPV50025BK000	1	2,5	BLACK	2,0	4,8	5,9	24	41	8,21
SPV50025RD000	1	2,5	RED	2,0	4,8	5,9	24	41	8,21
SPV50040BK000	1	4	BLACK	2,5	5,3	6,6	26	57	5,09
SPV50040RD000	1	4	RED	2,5	5,3	6,6	26	57	5,09
SPV50060BK000	1	6	BLACK	3,0	6,0	7,4	30	73	3,39
SPV50060RD000	1	6	RED	3,0	6,0	7,4	30	73	3,39
SPV50100BK000	1	10	BLACK	4,0	7,0	8,8	35	110	1,95
SPV50100RD000	1	10	RED	4,0	7,0	8,8	35	110	1,95
SPV50160BK000	1	16	BLACK	5,0	8,0	10,1	40	170	1,24
SPV50160RD000	1	16	RED	5,0	8,0	10,1	40	170	1,24
SPV50250BK000	1	25	BLACK	6,1	9,9	12,5	50	260	0,795
SPV50250RD000	1	25	RED	6,1	9,9	12,5	50	260	0,795
SPV50350BK000	1	35	BLACK	7,4	11,4	14,0	56	360	0,565
SPV50350RD000	1	35	RED	7,4	11,4	14,0	56	360	0,565
SPV50500BK000	1	50	BLACK	8,8	13,2	16,3	65	500	0,393
SPV50500RD000	1	50	RED	8,8	13,2	16,3	53	500	0,393

ELECTRICAL PARAMETERS

PART NO.	NUMBER OF CORES	CROSS-SECTIONS	COLOUR	CONDUCTOR RESISTANCE	CURRENT CARRYING CAPACITY			SHORT CIRCUIT CURRENT
				at 20° C ohm/km	AT 60° C Ambient Temperature			(1 s. From 90° C to 250° C)
					Single Cable in Free Air	Single Cable on Surface A	Two Loaded Cables Touching On a Surface	kA
SPV50015BK000	1	1,5	BLACK	13,7	30	29	24	0,20
SPV50015RD000	1	1,5	RED	13,7	30	29	24	0,20
SPV50025BK000	1	2,5	BLACK	8,21	41	39	33	0,35
SPV50025RD000	1	2,5	RED	8,21	41	39	33	0,50
SPV50040BK000	1	4	BLACK	5,09	55	52	44	0,56
SPV50040RD000	1	4	RED	5,09	55	52	44	0,56
SPV50060BK000	1	6	BLACK	3,39	70	67	57	0,85
SPV50060RD000	1	6	RED	3,39	70	67	57	0,85
SPV50100BK000	1	10	BLACK	1,95	98	93	79	1,42
SPV50100RD000	1	10	RED	1,95	98	93	79	1,42
SPV50160BK000	1	16	BLACK	1,24	132	125	107	2,28
SPV50160RD000	1	16	RED	1,24	132	125	107	2,28
SPV50250BK000	1	25	BLACK	0,795	176	167	142	3,57
SPV50250RD000	1	25	RED	0,795	176	167	142	3,57
SPV50350BK000	1	35	BLACK	0,5229	218	207	176	5,00
SPV50350RD000	1	35	RED	0,5229	218	207	176	5,00
SPV50500BK000	1	50	BLACK	0,393	276	262	221	7,15
SPV50500RD000	1	50	RED	0,393	276	262	221	7,15

CURRENT RATING CONVERSION FACTORS FOR DIFFERENT AMBIENT TEMPERATURES

AMBIENT TEMPERATURE °C	≤ 60	70	80	90
CONVERSION FACTOR	1	0,92	0,84	0,75

STANDARD MARKING

"SOLEN CABLE TUV NORD EN 50618 H1Z2Z2-K 1xN mm2 1,5 kV DC / 62930 IEC 131 HALOGEN FREE LOW SMOKE SCXXXX (yyyy) XX MT"

*N: Cross Section *SCXXXX: Traceability Code *(yyyy): Year marking *XX MT: Meter Marking