



# SOLAR CABLES FOR PHOTOVOLTAIC (PV) SYSTEMS





## YOUR RELIABLE PARTNER FOR APPROVED QUALITY DC SOLAR CABLES

As **SOLEN CABLE** we are aware of the importance of renewable and sustainable energy for the future of our world and all the life forms it contains. Accordingly in line with our vision, mission and corporate values, we contributing to renewable energy production with manufacturing solar cables for photovoltaic systems and applications with high quality standards to ensure that future generations inherit a clean and habitable world.

All phases of production are carried out in our new-built factory 100% integrated with our fast and efficient state-of-the-art machinery which especially for solar cable production. Besides that we are proud of using nature-friendly, renewable energy all these processes of the production phases.

## VISION

To be a worldwide branded solar cables manufacturer with sustainable and nature-friendly production and high quality standards that contribute to the use of renewable energy.

## MISSION

Implementing the philosophy of "RIGHT THE FIRST TIME," creating innovations ahead of competition, communicating and addressing problems at all levels with team understanding, and performing "Quick Service Delivery."

To deliver "Effective Savings in All Activities" in order to give the most cost-effective product and service to the client by preventing waste of time, money, the environment, and resources with all of our employees and suppliers.

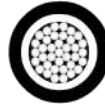
## SUSTAINABILITY

Sustainability and reducing CO2 emission is an important part of our DNA. Solen Cable always considers sustainable world very important, and we are serious about reducing CO2 emissions. We are also taking necessary steps to reduce these emissions and develop carbon footprints. We are trying to decarbonise our operations and mitigate climate risk. Our green energy investments continue for a sustainable future.

- ✓ Sustainable Production for Sustainable World.
- ✓ We can do Together More Greener World.
- ✓ We are Committed to Environmental and Social Responsibility
- ✓ Solen Cables are helping low-carbon lives come true.
- ✓ Committed to achieving Net Zero emissions.

# PV SOLAR CABLES H1Z2Z2-K

## EN 50618 / IEC 62930 IEC 131



### APPLICATION

Solen H1Z2Z2-K Solar cables conforming to European standard 'EN 50618' and international standard 'IEC 62930' are designed for installations in photovoltaic systems, solar parks, solar farms, rooftop solar systems and in interconnection of solar panels and inverter. 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 equipment.

### CONSTRUCTION

- Conductor** : Tinned annealed flexible copper-Class 5 according to IEC 60228
- Insulation** : Halogen free Cross-linked compound according to EN 50618 Table B.1
- Outer Sheath** : Halogen free Cross-linked compound according to EN 50618 Table B.1
- Sheath Colour** : Black or Red (Blue and Green-yellow available upon request)

### KEY FEATURES

- ✓ TÜV NORD approval certified
- ✓ REACH and RoHS Complaint
- ✓ CPR rating Dca acc. to EN 5057 5 (Cca upon request)
- ✓ Expected lifetime (Min. 25 years acc. to EN 50618)
- ✓ Higher insulation resistance
- ✓ High current carrying capacity
- ✓ Compatible for all major connectors
- ✓ AD8 water submersion complaint
- ✓ (internal tested – referred to test method EN 50525-2-21 Appendix E)
- ✓ Suitable for and wet, damp and humid locations
- ✓ Excellent flexibility
- ✓ Good stripping performance from conductor
- ✓ Abrasion resistant
- ✓ UV, Oil, Grease and Ozone resistant
- ✓ Resistance against Ammonia
- ✓ Acid and Alkaline resistant
- ✓ Anti rodent and Anti termite versions are available.

### CHARACTERISTICS

- Rated Voltage (U<sub>o/U</sub>)**  
AC: 1000 / 1000 V  
DC: 1500 V
- Max Voltage**  
AC: 1200 / 1200 V  
DC: 1800 V
- Test Voltage**  
6,5 kV AC, 15 kV DC (5 min.)
- Operating Temperature**  
-40°C / +90°C
- Max. Temperature at Conductor**  
+120°C based on EN 60216-1  
(20.000 h, 50% residual elongation)
- Installations Temperature**  
-25°C / +60°C
- Short Circuit Temperature**  
+250°C Max. 5 sec.
- Min. Bending Radius**  
≥ 4 x D as per EN 50565-1
- Cold Bend**  
EN 60811-504 (-40°C)
- Cold Elongation**  
EN 60811-505 (-40°C)
- Cold Impact**  
EN 60811-506 & EN 50618 (-40°C)
- Damp Heat Test**  
EN 50618 (1000h, 90°C & 85% humidity)
- Halogen Free 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
- Long Term Resistance of Insulation to DC**  
EN 50395 Clause 9  
IEC 62821-2

# PV SOLAR CABLES

# H1Z2Z2-K EN 50618 / IEC 62930

## DIMENSIONS

PART NO	NUMBER OF CORES	CROSS-SECTIONS	MAIN COLOURS	CONDUCTOR DIAMETER	NOMINAL OVERALL DIAMETER		BENDING RADIUS	WEIGHT	CONDUCTOR RESISTANCE
					mm	mm			
SPV50015CL000	1	1,5	● ●	1,6	4,50	-0,2 /+0,3	22	33	13,7
SPV50025CL000	1	2,5	● ●	2,0	4,90	-0,2 /+0,3	24	41	8,21
SPV50040CL000	1	4	● ●	2,5	5,50	-0,2 /+0,3	26	57	5,09
SPV50060CL000	1	6	● ●	3,0	5,90	-0,2 /+0,3	30	73	3,39
SPV50100CL000	1	10	● ●	4,0	6,90	-0,2 /+0,3	35	110	1,95
SPV50160CL000	1	16	● ●	5,0	8,00	-0,2 /+0,3	40	170	1,24
SPV50250CL000	1	25	● ●	6,1	10,00	-0,3 /+0,5	50	260	0,795
SPV50350CL000	1	35	● ●	7,4	11,00	-0,3 /+0,5	56	360	0,565
SPV50500CL000	1	50	● ●	8,8	13,20	-0,3 /+0,5	65	500	0,393

CL refers to Colour and for Red replace RD, for Black replace BK, for Green Yellow replace GY, for Blue replace BL

## ELECTRICAL PARAMETERS

PART NO	NUMBER OF CORES	CROSS-SECTIONS	MAIN COLOURS	CONDUCTOR RESISTANCE	CURRENT CARRYING CAPACITY* at 60° C Ambient Temperature			SHORT CIRCUIT CURRENT (5s. from 90° C to 250° C) kA
					at 20° C ohm/km	Single Cable in Free Air	Single Cable on Surface A	
SPV50015CL000	1	1,5	● ●	13,7	30	29	24	0,09
SPV50025CL000	1	2,5	● ●	8,21	41	39	33	0,15
SPV50040CL000	1	4	● ●	5,09	55	52	44	0,25
SPV50060CL000	1	6	● ●	3,39	70	67	57	0,37
SPV50100CL000	1	10	● ●	1,95	98	93	79	0,63
SPV50160CL000	1	16	● ●	1,24	132	125	107	1
SPV50250CL000	1	25	● ●	0,795	176	167	142	1,6
SPV50350CL000	1	35	● ●	0,5229	218	207	176	2,2
SPV50500CL000	1	50	● ●	0,393	276	262	221	3,2

\* max. conductor temperature: 120 °C.

\* NOTE: The expected period of use at a max. conductor temperature of 120 °C and at a max. ambient temperature of 90 °C is limited to 20 000 h.

## 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

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

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

# SYSTEM CERTIFICATES



ISO 9001:2015  
Quality Management System.  
12.2021



ISO 45001:2018  
Occupational Health and  
Safety Managements System.  
12.2021



ISO 14001:2015  
Environmental Management System  
12.2021



ISO 10002:2018  
Customer Satisfaction  
Managements System.  
12.2021

# PRODUCT CERTIFICATES



TUV NORD // 03.2022  
Cables For PV Systems  
Sertifika No / Certificate No. :  
44 780 22 406749 - 049



Conformité Européenne  
CPR Reaction to Fire with with class:  
Dca - s1a,d2,a1



Made in Turkey



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