

Application

PV H1Z2Z2-K is a single-core solar cable acc. to EN 50618 and IEC 62930, suitable for both fixed and mobile solar installations: solar farms, rooftop installations and floating plants. It is a highly flexible cable, compatible with all common connectors and designed specifically for connecting photovoltaic panels. The cable is suitable for wet, damp and humid locations.

- String cable for solar PV installations.



CONSTRUCTION

Conductor	Electrolytic annealed tinned copper, class 5 (flexible) acc. to IEC 60228 and EN 60228.
Insulation	Halogen-free cross-linked rubber acc. to table B.1, Annex B of EN 50618 and IEC 62930.
Outer sheath	Halogen-free, flexible cross-linked rubber acc. to table B.1, Annex B of EN 50618 and IEC 62930. Colour red or black.

ELECTRICAL & THERMAL PROPERTIES

Rated voltage	1.5/1.5 kV DC (max. 1.8 kV DC); 1.0/1.0 kV AC.
Test voltage	6.5 kV AC.
Max. conductor temperature	90 °C (120 °C for 20,000 hours).
Max. short-circuit temperature	250 °C (max. 5 s).
Min. service temperature	-40 °C (fixed and protected installations).
Suitable for	Wet, damp and humid locations.

FIRE PERFORMANCE

Flame propagation, single cable	EN 60332-1-2 / IEC 60332-1-2.
Flame propagation, bunched	EN 50399.
Smoke and halogen	Halogen-free acc. to EN 60754-1/-2; low smoke acc. to EN 61034-2 (light transmittance > 60 %).
Reaction to fire (CPR)	Eca acc. to EN 50575; Cca-s1b,d2,a1 on request.

MECHANICAL & ENVIRONMENTAL PROPERTIES

Min. bending radius	4 × cable diameter (d ≤ 8 mm); 5 × cable diameter (8 < d ≤ 12 mm); 6 × cable diameter (d > 12 mm).
Impact resistance	AG2, medium severity.
Chemical and oil resistance	Excellent.
Grease and mineral oil resistance	Excellent.
Ozone and UV resistance	Ozone resistant acc. to EN 50618; UV resistant acc. to EN 50618 and IEC 62930.
Water resistance	AD7 (immersion); AD8 (submersion).
Installation	In open air, in conduit, and in conduit in the ground.

STANDARDS

Standards	EN 50618 / IEC 62930 / UTE C 32-502.
CPR	Eca acc. to EN 50575; Cca-s1b,d2,a1 on request.
Certification marks	TÜV Rheinland (standard 2.5 to 25 mm ² in black and red), RETIE, AENOR, RoHS and CE.

DIMENSIONS & TECHNICAL DATA

Current ratings in amperes acc. to EN 50618, table A.3, at an ambient temperature of 60 °C, for a DC circuit. Voltage drop calculated at a conductor temperature of 120 °C.

Cross-section (mm ²)	Diameter (mm)	Weight (kg/km)	Single cable free in air (A)	Single cable on a surface (A)	Two adjacent cables on a surface (A)	Voltage drop (V/A·km)
1 × 1.5	4.5	35	30	29	24	38.1
1 × 2.5	5.0	45	41	39	33	22.8
1 × 4	5.4	60	55	52	44	14.3
1 × 6	6.0	80	70	67	57	9.49
1 × 10	7.0	120	98	93	79	5.46
1 × 16	8.2	180	132	125	107	3.47
1 × 25	10.2	280	176	167	142	2.23
1 × 35	11.5	375	218	207	176	1.58
1 × 50	13.3	525	276	262	221	1.10
1 × 70	15.0	720	347	330	278	0.772
1 × 95	17.0	930	416	395	333	0.585
1 × 120	18.7	1,175	488	464	390	0.457
1 × 150	21.0	1,475	566	538	453	0.368
1 × 185	23.5	1,805	644	612	515	0.301
1 × 240	26.3	2,345	775	736	620	0.228
1 × 300 *	29.3	2,935	879	834	715	0.182
1 × 500 **	38.0	4,935	-	-	-	0.108

Tolerances on the nominal outer diameter

Outer diameter d	Tolerance
d ≤ 7 mm	-0.1 / +0.2 mm
7 < d ≤ 10 mm	-0.1 / +0.3 mm
d ≥ 10 mm	-0.2 / +0.4 mm

Correction factors for air temperature

Air temperature (°C)	Up to 60	70	80	90
Factor	1	0.92	0.84	0.75

* Cable outside the scope of EN 50618. ** Cable outside the scope of EN 50618 and IEC 62930. For group reduction factors, IEC 60364-5-52, table B.52.17 applies. All specifications, weights, dimensions and values are indicative and non-binding.