TOPSOLAR® PV H1Z2Z2-K

TÜV solar PV cable.

ACCORDING TO: EN 50618 / IEC 62930 / UTE C 32-502

100% Green Energy Cable Production

Cca

APPLICATION

The TOPSOLAR® PV H1Z2Z2-K cable, which is TÜV certified according to EN 50618 and AENOR certified according to IEC 62930, it is suitable for both fixed and mobile solar installations (solar farms, rooftop solar installations and floating plants).
It is a highly flexible cable compatible with all major connectors and specially designed for the connection of photovoltaic panels.
This versatile single-conductor cable is designed to meet the varying needs of the solar industry.
Suitable for wet, damp and humid locations.

- Solar PV installations string cable.

CONSTRUCTION

Conductor
Electrolytic annealed tinned copper, class 5 (flexible) according to IEC 60228 and EN 60228.

Insulation
Halogen free cross-linked rubber according to table B1 in Annex B of EN 50618 and IEC 62930.

Outer sheath
Halogen free cross-linked flexible rubber according to table B1 in Annex B of EN 50618 and IEC 62930.
Red or black colour.

CHARACTERISTICS

Electrical performance
Low voltage: 1,5 (1,8) kV DC.
1,0/1,0 kV AC.

Thermal performance
Maximum conductor temperature: 90°C (120°C during 20.000 h).
Maximum short-circuit temperature: 250°C (max. 5 s).
Minimum service temperature: -40°C (fixed and protected installations).

Fire performance
Flame non-propagation according to EN 60332-1-2 / IEC 60332-1-2.
Fire non-propagation according to EN 50399.
Reaction to fire CPR: C_{ca}-s1b, d2, a1 according to EN 50575.
Low smoke halogen free according to EN 60754-1 / IEC 60754-1.
Low corrosive gases emission according to EN 60754-2 / IEC 60754-2.
Low smoke emission according to EN 61034 / IEC 61034:
Light transmittance > 60%.

Mechanical performance
Minimum bending radius:
4x cable diameter (cable diameter ≤ 8 mm)
5x cable diameter (8 < cable diameter ≤ 12 mm)
6x cable diameter (cable diameter > 12 mm).
Impact resistance: AG2 Medium severity.

Environmental performance
Chemical & Oil resistance: Excellent.
Grease & mineral oils resistance: Excellent.
Ozone resistant according to EN 50618.
UV Resistant according to EN 50618 and IEC 62930.
Water resistance: AD7+ Immersion.
AD8 Submersion.

Installation conditions
Open Air.
Buried.
In conduit.

STANDARDS / COMPLIANCE

According to
EN 50618/ IEC 62930 / UTE C 32-502

Standards and approvals
TÜV Rheinland (from 2.5 to 25mm² in Black and Red) / RETIE / AENOR/ RoHS / CE / UKCA

CPR (Construction Products Regulation)
C_{ca}-s1b, d2, a1

Type Approved
Safety
Regular Production Surveillance
TÜVRheinland CERTIFIED
www.tuv.com ID 1111257811

RETIE
AENOR
RoHS Compliant
CE
UKCA
CPR EN 50575

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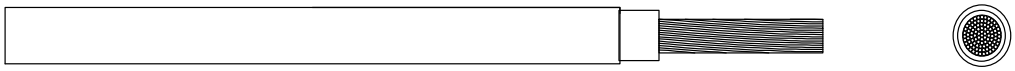
DIMENSIONS & ADMISSIBLE INTENSITIES



Cross-Section (mm^2)	Diameter (mm)	Weight (kg/km)	Single cable free in air (A)	Single cable on surfaces (A)	Two cables adjacent on surface (A)	Voltage drop (V/A · km)
1 x 1,5	4,5	35	30	29	24	38,1
1 x 2,5	5,0	45	41	39	33	22,8
1 x 4	5,4	60	55	52	44	14,3
1 x 6	6,0	80	70	67	57	9,49
1 x 10	7,0	120	98	93	79	5,46
1 x 16	8,2	180	132	125	107	3,47
1 x 25	10,2	280	176	167	142	2,23
1 x 35	11,5	375	218	207	176	1,58
1 x 50	13,3	525	276	262	221	1,10
1 x 70	15,0	720	347	330	278	0,772
1 x 95	17,0	930	416	395	333	0,585
1 x 120	18,7	1.175	488	464	390	0,457
1 x 150	21,0	1.475	566	538	453	0,368
1 x 185	23,5	1.805	644	612	515	0,301
1 x 240	26,3	2.345	775	736	620	0,228
1 x 300 *	29,3	2.935	879	834	715	0,182
1 x 500 **	38,0	4.935	-	-	-	0,108

* Cable outside of the standard EN 50618.
** Cable outside of the standard EN 50618 and IEC 62930.

The tolerances on the nominal outer diameters are:
Cables with outer diameter d ≤ 7 mm. → -0,1 +0,2 mm
Cables with outer diameter 7 < d < 10 mm. → -0,1 +0,3 mm
Cables with outer diameter d ≥ 10 mm. → -0,2 +0,4 mm

Current-carrying capacities, in amperes, are according to EN 50618 (ambient temperature of 60 °C).
In all cases are supposed a direct current circuit.
Voltage drop is calculated with conductor temperature of 120 °C.

CORRECTION FACTORS FOR AIR TEMPERATURE

Air Temp. (ºC)	Up to 60	70	80	90
Factor	**1**	0,92	0,84	0,75

For groups reduction factors according to IEC 60364-5-52, Table B.52-17 shall apply.