

HIKRA®

solar cables
part of HIS CONNECT™

HIKRA® PlusEN50618 (H1Z2Z2-K)

DATA SHEET



HIKRA® Solarkabel



This cable is intended for use in PV installations e.g. acc. IEC 60364-7-712 and suitable for the application in/at equipment with protective insulation (protection class II). Our double insulated HIKRA® PlusEN50618 solar cable is intended for permanent use outdoor and indoor, for free movable, free hanging and fixed installation. Robust materials defy the long-term influences of nature and offer a maximum quality and safety. In case of proper use, the expected lifetime of this product will be at least 25 years. Thanks to its good resistance to atmospheric conditions, the cable has a specifically water repellency and can be laid underground. Please refer to our laying instructions.

IN FOCUS IS THE PLANT REVENUE. IN OPERATION OUR SOLAR CABLES.

HIKRA® stands for technically outstanding and integrated solutions, which have been developed taking into account all environmental, safety and costs aspect and even under the harshest conditions delivering a faultless performance.

Certification

- EN50618; H1Z2Z2-K; R6108819
- RoHS & Reach conform



YOUR ADVANTAGES

- Electron-beam cross-linked special compound: XLPO/XLPO
- Higher water resistance
- Direct burial
- CPR-classification of burning behavior: Eca
- Nominal voltage: Max. 1,8kV DC operating voltage
- Compatibility to all major PV connectors
- Individual packaging units: 100m coils, 500 m drums or in another kind upon request

TECHNICAL DATA

| Construction | |
|---------------------|---|
| Strand construction | Tin-plated copper strand (electrolytic copper), fine wire acc. IEC 60228 Class 5 |
| Insulation | Cross-linked Polyolefin; Shore hardness D 32; Minimum wall thickness acc. EN 50618 table 1 |
| Outer Sheath | Cross-linked special compound XLPO; Shore hardness D 36; Minimum wall thickness acc. EN 50618 table 1 |
| Colour | Sheath: black, red, blue; Insulation: clear – naturally colored |
| Marking | HIKRA PlusEN50618 H1Z2Z2-K 1x6,0mm ² R 60108819 CE |

| Technical characteristics | |
|--------------------------------------|--|
| Nominal voltage | 1,5kV DC and 1,0kV AC |
| Maximum permitted operating voltage: | 1,8kV DC (Internal examination 2,0kV DC) |
| Voltage test on complete cable | 6,5kV AC / 15kV DC (5 minutes water bath, 20±5°C) |
| Current carrying capacity | See document „Current rating – HIKRA® Solar Cable“ November 2013 |
| Max. resistance of conductor | EN 50395 Clause 5 |
| Short-circuit-temperature | 250° C/5s |

| Material properties | |
|---|---|
| UV stability | Tensile strength and ultimate-elongation after 720 h (360 cycles) ≥ 70% of initial values; EN 50289-4-17 acc. Method A; EN ISO 4892-1 (2000) and EN ISO 4892-2 (2006) |
| Ozone resistance | 72h, relative humidity 55±5%, Temperature 40±2°C (EN 50396 Method B; Ozone concentration (200±50)x10 ⁻⁶) |
| Insulation resistance | Insulation resistance in water bath, each 2h at +90°C and 2h at 20°C (Limit values acc. EN 50618 Table 1) |
| Surface resistance of sheath | ≥10 ⁹ Ω (applied voltage 100-500V DC, 1 minute) acc. EN 50395 Clause 11 |
| Dynamic penetration test | Spring-steel-needle through insulation or sheath (EN50618 Annex D) |
| Direct burial | Water immersion at 90°C, duration 12 weeks; Insulation resistance ≥ 3GΩ (internal examination acc. UL44 cl. 5.4 & UL2556 6.4.4.2.1) |
| Crushing- and impact-resistance | Impact-Resistance UL 854.23 and Crushing-Resistance UL 854.24 (internal examination) |
| Sheath resistance against acid and alkaline | 168h at 23°C in N-Oxal acid and N-Sodium hydroxide (EN 60811-404); ammoniac-resistant |
| Behaviour in case of fire | Flame-retardant acc. EN 60332-1-2 Annex A, low smoke emission (EN 61034,-2) |
| CPR-Performance | Fire behavior acc. to No. 305/2011/EU |
| Halogen-free | EN 50525-1, Annex B |
| Cold impact test | EN 60811-506, EN 50618 Annex C.1 at -40°C |
| Cold bending test | -40°C;16h (EN 60811-504) |
| Cold elongation test | Max. 30% elongation at -40±2°C, 16h (EN 60811-505) |
| Damp heat test | Duration 1000h at 90°C and min. 85% relative humidity (EN 60068-2-78) |
| Minimum bending radius flexible / fixed | 10x cable diameter 4x cable diameter |

| Temperature Range | |
|---|--|
| Temperature | Ambient temperature: -40° C to +90°C; Maximum conductor temperature: +120° C |
| Maximum storage temperature | +40°C |
| Minimum temperature for installation and handling | -25°C |

| | Order No | | | Cross-section mm ² | Construction n x max.-Ø (mm) | Max. Resistance (Ω/km) | External diameter (+/- 0,2 mm) | Copper index kg/km | Approx. Weight kg/km |
|--|----------|--------|--------|----------------------------------|------------------------------------|---------------------------|-----------------------------------|--------------------------|----------------------------|
| | black | red | blue | | | | | | |
| | 728379 | 728380 | 728381 | 1 x 2.5 | 50 x 0.26 | 8.21 | 5.0 | 24.0 | 45.0 |
| | 728370 | 728371 | 728372 | 1 x 4.0 | 56 x 0.31 | 5.09 | 5.4 | 38.4 | 55.0 |
| | 728373 | 728374 | 728375 | 1 x 6.0 | 80 x 0.31 | 3.39 | 6.0 | 57.6 | 75.0 |
| | 728376 | 728377 | 728378 | 1 x 10.0 | 80 x 0.41 | 1.95 | 7.1 | 96.0 | 115.0 |
| | 737860 | - | - | 1 x 16.0 | 120 x 0.41 | 1.24 | 8.1 | 153.6 | 170.0 |
| | 737863 | - | - | 1 x 25.0 | 196 x 0.41 | 0.795 | 10.3 | 240.0 | 270.0 |
| | 737864 | - | - | 1 x 35.0 | 280 x 0.41 | 0.565 | 11.8 | 336.0 | 370.0 |

