

HIKRA®

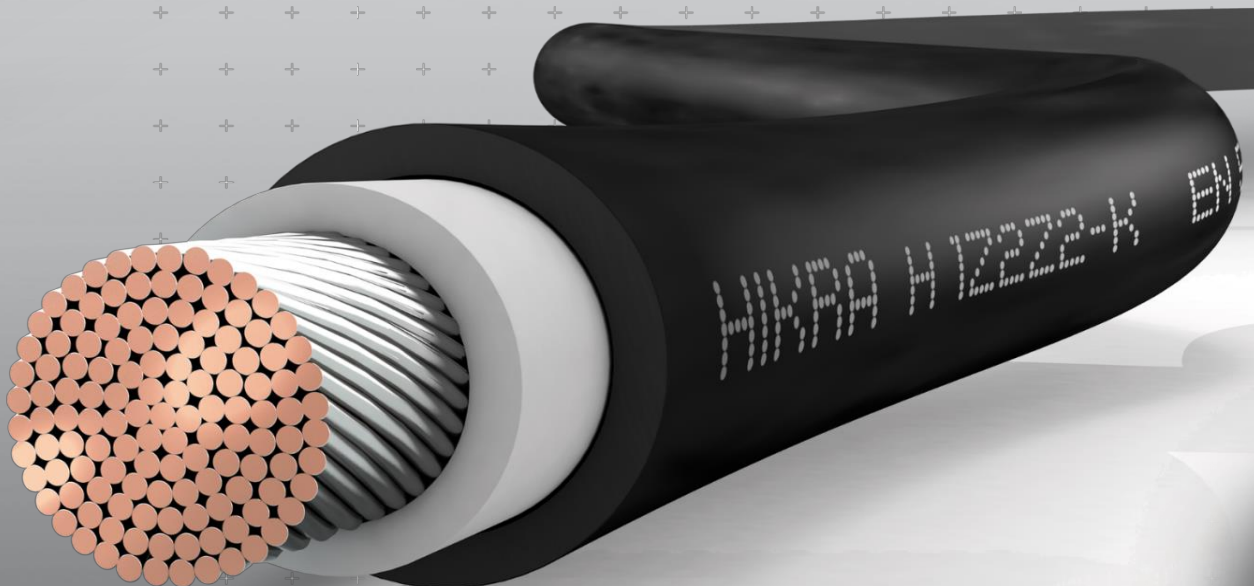
solar cables

HIKRA® PLUS DB EN50618 (H1Z2Z2-K) IEC62930

DATA SHEET

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

- Higher water resistance; Direct burial
- CPR compliant EN50575
- Higher mechanical stability
- 25 Years expected lifetime
- Meter Marking



SERM

ENERGY SOLUTIONS

HIKRA® PLUS DB

TECHNICAL DATA



Type Approved
Safety
Regular Production
Surveillance



www.tuv.com
ID 1111221037

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 PLUS DB <i>cross-section</i> EN 50618 H1Z2Z2-K 62930 IEC 131 CE R601480037 <i>Chargen No Meter marking</i>
Standards	EN50618 (H1Z2Z2-K) TÜV R60148037; IEC62930 131

Technical characteristics

Nominal voltage	1,5kV DC and 1,0kV AC
Maximum permitted operating voltage:	1,8kV DC (additional 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
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)
Dynamic penetration test	Spring-steel-needle through insulation or sheath (EN50618 Annex D)
Direct burial	Long-term water immersion at 90°C, duration 12 weeks; Insulation resistance ≥ 3GΩ (additional 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	Eca; Fire behavior EN50575
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±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	-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						
747455	747456	1 x 4.0	56 x 0.31	5.09	5.5	38.4	56.0
747457	747458	1 x 6.0	80 x 0.31	3.39	6.0	57.6	75.0
747459	747460	1 x 10.0	80 x 0.41	1.95	7.1	96.0	115.0