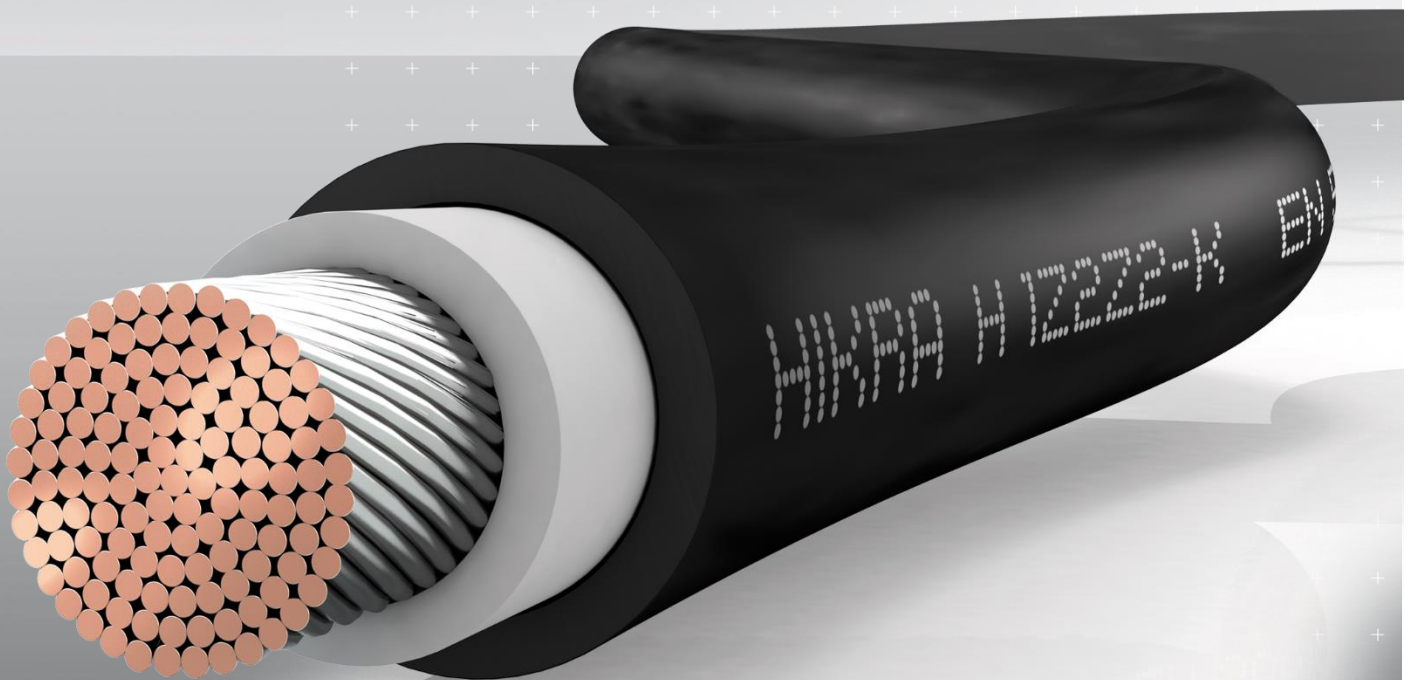


HIKRA®

solar cables
part of HIS CONNECT™

HIKRA® PlusEN50618 (H1Z2Z2-K)

DATA SHEET



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