

HIKRA

■ solar cables

HIKRA® SOL AL

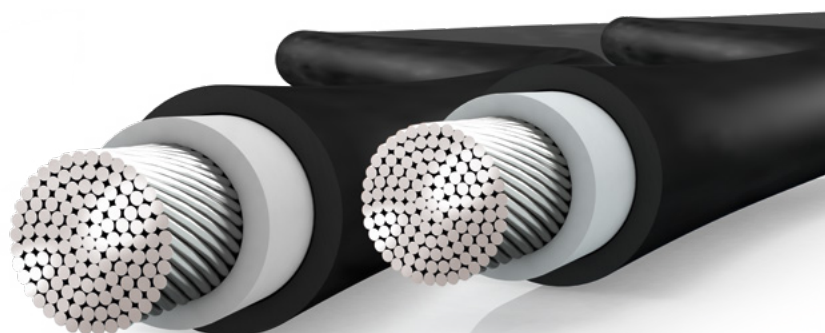
2 PfG 2642/01.22
PV1500DC-AL-K



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Designed to maximize plant performance.
Built for long-term reliability.

- ⊕ High resistance to water ingress and outstanding mechanical stability.
- ⊕ UV-resistant and highly resistant to environmental influences.
- ⊕ TÜV certified according to 2PfG2642/01.22.
- ⊕ Class 5 aluminium conductor according to IEC 60228.
- ⊕ Performance characteristics based on IEC 62930.



Type Approved
Safety
Regular Production
Surveillance

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ID 111134570



Article No Black	Cross-section (mm ²)	Max. resistance (Ω/km)	Single Cable in Free Air (A)	Single Cable Installed on a Surface (A)	Cable Diameter (mm)	Alloy AL Weight (kg/km)	Weight (kg/km)
77 42 01	1 x 6.0	5.05	58	50	6.6 (+/- 0.2 mm)	18.05	48.0
77 42 02	1 x 10.0	3.08	80	77	7.55 (+/- 0.2 mm)	28.27	69.0
77 42 03	1 x 16.0	1.91	110	106	9.30 (+/- 0.25 mm)	44.53	101.0
-	1 x 25.0	1.200	132	128	11.70 (+/- 0.25 mm)	72.1	151.1
-	1 x 35.0	0.868	157	152	12.40 (+/- 0.25 mm)	98.4	197.8

General Information

Factors influencing the current carrying capacity of HIKRA solar cables:

- Conductor material (Copper, Aluminium)
- Surface treatment (bare, tinned)
- Conductor cross-section
- Insulation Material
- Ambient temperature
- Installation method (free air, cable ducts, underground installation)
- Cable grouping (distance between circuits, multi-core cables, bundles)
- Normative reference: IEC 60287, IEC 60364-5-52

Temperature conversion factor

Ambient Temperature (°C)	Conversion factor (A)
30	1.00
40	0.91
50	0.82
60	0.71
70	0.58
80	0.41
90	0.00

Construction	
Strand Construction	Class 5 stranded aluminium conductor according to IEC 60228
Insulation	Cross linked polyolefin XLPO
Outer Sheath	Cross linked polyolefin XLPO
Color	Black
Marking	HIKRASOL AL PV1500DC-AL-K HALOGEN FREE LOW SMOKE 1x..mm² R50718364
Code designation	PV1500DC-AL-K
Standards	2 PfG 2642/01.22, EN 60228:2005, EN 60332-1-2:2004+A12:2020
Certificate	R 50718364

Technical characteristics	
Rated Voltage DC	DC 1.5 kV (max. 1.8 kV)
Voltage Test on Complete Cable	IEC 60245-2 clause 2.2
Current-Carrying Capacity (Reference Values)	See page 1
Short-circuit-temperature	250 °C / 5s

Material properties	
UV stability	IEC 62930 Annex E
Ozone resistance	IEC 60811-403
Insulation resistance	IEC 60245-2 (2.4)
DC-voltage test	250 °C / 5s
Long-Term Insulation Performance	IEC 62821-2 clause 5.1.1
Dynamic penetration test	IEC 62930 Annex D
Surface resistance of sheath	IEC 62821-2 clause 5.1.3
Sheath resistance: acid and alkaline	IEC 60811-404
Fire Performance	Flame retardant acc. to IEC 60332-1-2
Smoke density	IEC 61034-2
Halogen-Free Construction	Acc. to IEC 62821-1
Cold impact test	EN 60811-1-4 clause 8.5
Cold elongation test	EN 60811-505 -40°C 30%
Damp heat test	IEC 62930, EN 50618, IEC 60068-2-78 90°C 1000h
Min. bending radius fixed	5 x cable diameter
Design Lifetime	>25 Years

Temperature Range	
Ambient temperature	-40°C to 90°C
Max conductor temperature	90°C, 120°C 20.000h
Maximum Storage Temperature	40°C

Correction factor - Grouping	1*	2	3	4	5	6	7	8	9	12	16	20
Bundled in air (on a surface, embedded or enclosed)	1.00	0.80	0.70	0.65	0.60	0.57	0.54	0.52	0.50	0.45	0.41	0.38
Single layer (on wall, floor or unperforated tray)	1.00	0.85	0.79	0.75	0.73	0.72	0.72	0.71	0.70	-	-	-
Single layer (fixed directly under a wooden ceiling)	0.95	0.81	0.72	0.68	0.66	0.64	0.63	0.62	0.61	-	-	-
Single layer (on a perforated horizontal or vertical tray)	1.00	0.88	0.82	0.77	0.75	0.73	0.73	0.72	0.72	-	-	-
Single layer (on ladder support or cleats etc.)	1.00	0.87	0.82	0.80	0.80	0.79	0.79	0.78	0.78	-	-	-
Normative reference:	IEC 60364-5-52										*No. of circuits	

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