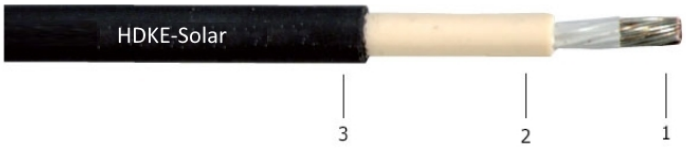
HALLEY CABLES

HDKE-Solar

Solar low voltage power cables

Halogen free cable for photovoltaic power supply systems



Construction:

1. Conductor : annealed tinned copper round flexible class 5.
2. Insulation : halogen free compound according to DKE 411.2.3.
3. Sheath : halogen free compound according to DKE 411.2.3.

Core identification : black.
Sheath colour : black or red.

Applications:

Flexible, weather resistant power cable. This cable is specially designed for the demanding applications in photovoltaic systems. The optimal cable link between solar modules and between modules and the inverter. It is suitable for rooftop and ground mounted systems, for rooftop and ground mounted systems; it can be laid outdoors, indoors and in pipe conducts. Not suitable for direct burying in ground. The cable is double insulated and therefore suitable for use in installations of safety class II.

Technical data and tests:

Rated voltage AC Uo/U (Umax)	: 0.6/1 (1.2) kV.
Rated voltage DC Umax	: 1.8 kV (conductor - conductor).
Nominal cross-section range	: 4 to 240 mm².
Ambient temperature range	: -40° C to +90° C.
Maximum conductor temperature	: 120° C.

Standards:

Standard specification	: DKE 411.2.3.
Conductor resistance	: EN 50395-5.
Conductor construction	: EN 60228.
AC voltage test	: 6.5 kV - No faults (EN 50395-6).
Measurement of ovality	: ≤ 15% (EN 50396-4.4).
Surface resistance of sheath	: min 109 Ω (EN 50395-11).
Insulation resistance	: min 1014 Ω/cm at 20° C, min 1011 Ω/cm at 90° C (EN 50395-8.2)
Long term resistance to DC	: DKE 411.2.3 Annex D.
Measurement of insulation thickness	: EN 50396-4.1.
Measurement of sheath thickness	: EN 50396-4.2.
Measurement of overall diameter	: EN 50396-4.4.
Pressure test at high temperature	: EN 60811-3-1.
Damp heat test	: EN 60068-2-78.
Resistance against acid and alkaline solution	: EN 60811-2-1-10.
Compatibility test	: DKE 411.2.3 Annex A.
Cold impact test	: DKE 411.2.3 Annex E.
Cold bending test	: EN 60811-1-4-8.2, for cable diameter ≤ 12.5 mm.
Cold elongation test	: EN 60811-1-4-8.4, for cable diameter >12.5 mm.
Ozone resistance	: EN 50396-8.1.3.
Weathering/UV resistance test	: HD 605-2.4.20.
Dynamic penetration test	: DKE 411.2.3 Annex F.
Notch propagation test	: DKE 411.2.3 Annex G.
Shrinkage test	: EN 60811-1-3-11.
Flame propagation	: EN 60332-1-2.
Halogen content	: DKE 411.2.3 Annex B.
Determination of halogens	: DKE 411.2.3 Annex C.

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DIMENSIONS

Nominal cross section mm²	Conductor diameter, nom. mm	Min.outer diameter mm	Max. outer diameter mm	Min. bending radius mm	Net cable weight approx. kg/km	Max. permissible tensile load (in use) N	Max. current load at 60° C A
4	2.4	6	6.8	21	70	60	55
6	3.4	7	8	24	95	90	70
10	4	7.5	8.6	26	135	150	98
16	5.2	8.6	9.9	40	190	240	132
25	6.8	10	11.7	47	280	375	176
35	8	11	13	52	375	525	218
50	9.5	13	14.7	58	520	750	276
70	11.4	15	16.8	67	710	1050	347
95	12.7	16	18.2	72	905	1425	416
120	16.8	20	22.7	90	1170	1800	488
150	18.3	21.6	24.4	96	1420	2250	566
185	18.9	22	25	100	1700	2775	644
240	21	24	27	108	2220	3600	775

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