

POLYCAB SOLAR

H1Z2Z2-K BS EN 50618

Photovoltaic Solar DC Cable, Halogen Free, Flame Retardant

Salient Features

- Halogen free
 - Electron Beam Cross-linked
 - Flame retardant
 - Long life
- Flexibility
 - UV, Ozone resistant
 - Hydrolysis resistant
 - High temperature resistant



Voltage Rating

Nominal Voltage:1500 V DC between conductors as well as conductor and earth.
Max permitted voltage: 1800 V

Operation Temperature

Fixed: -40°C to +120°C
Maximum operating conductor temperature: +120°C

Construction

- Conductor: Tinned copper conductor as per IEC 60228, class 5.
- Insulation: E-Beam cross linked halogen free and flame-retardant compound (XLPO)
- Sheath: E-Beam cross linked halogen free and flame-retardant compound (XLPO)

Identification

Insulation : (-ve) Black & (+ve) Red
Sheath : (-ve) Black & (+ve) Black (70%)with red Strip (30%)

Bending Radius

For fixed installation - > 4D
For occasional movement - > 5D

Standard and References

EN/IEC 60228
EN 50618
IEC 60332-1-2

Test Voltage

6.5kV AC 50Hz

Compliance

Fire Performance	EN 60332-1
Smoke Emission	IEC 61034/ EN 50268-2
Halogen free material	EN 50267-2-1 / IEC 60754-2
Resistance to ozone	EN 50396
Weathering / UV	HD 605/A1 or DIN 53667
Life Expectancy	IEC 60216
Water Resistance	
-Category {(AD7/AD8)}	IEC 60364-5- 51

DIMENSIONAL CHARACTERISTICS

Single Core Cross sectional Area	Nominal insulation thickness	Nominal Sheath thickness	Approx. Overall Diameter	Max. DC Resistance at 20° C
mm2	mm	mm	mm	Ω/km
1.5	0.7	0.8	5.0	13.7
2.5	0.7	0.8	5.5	8.21
4.0	0.7	0.8	6.0	5.09
6.0	0.7	0.8	6.5	3.39
10	0.7	0.8	7.5	1.95
16	0.7	0.9	8.5	1.24
25	0.9	1.0	10.5	0.795
35	0.9	1.1	12.0	0.565
50	1.0	1.1	14.0	0.393
70	1.1	1.2	16.0	0.277
95	1.1	1.3	18.0	0.210
120	1.2	1.3	19.5	0.164
150	1.4	1.4	21.5	0.132
185	1.6	1.6	24.5	0.108
240	1.7	1.7	27.0	0.0817
300	1.8	1.8	30.0	0.0654

CURRENT RATINGS

Nominal Cross sectional Area	Current Carrying Capacity according to method of installation		
	Single Cable Free in air	Single Cable on a surface	Two loaded cables touching, on a surface
mm2	A	A	A
1.5	30	29	24
2.5	41	39	33
4	55	52	44
6	70	67	57
10	98	93	79
16	132	125	107
25	176	167	142
35	218	207	176
50	276	262	221
70	347	330	278
95	416	395	333
120	488	464	390
150	566	538	453
185	644	612	515
240	775	736	620
300	895	850	713

*Current Ratings are based on EN 50618 at Max. Conductor Temperature 120°C and Ambient Air temperature 60°C.

Note: the expected period of use at maximum conductor temperature at 120° C is limited to 20,000 hours

Current rating / de-rating factors other than 60°C ambient temperature.

Up to 60°C	70°C	80°C	90°C
1.00	0.92	0.84	0.75

Note: These cables can be provided with twisted formation, If required.