POLYCAB

ELECTRICAL CABLES FOR PHOTOVOLTAIC SYSTEMS

TECHNICAL DATASHEET-PROTOTYPE APPROVAL

Sr.No.	Description	Unit	2.5 SQ.MM	4 SQ.MM	6 SQ.MM	10 SQ.MM	16 SQ.MM
1	Manufacturer Name		Polycab Wires Private Limited,India				
2	Cable type and Applicable Standard (Cable Code)		Solar DC Cable as per BS EN 50618 (H1Z2Z2-K)				
3	Rated d.c. Voltage		1.5 kV				
4	Rated a.c. Voltage		1.0/1.0 kV				
5	**CONDUCTOR**						
a)	Material		**Annealed Tinned Flexible copper conductor as per Class 5 of BS EN 60228**				
b)	Conductor Size	Sq.mm	2.5	4	6	10	16
c)	No/Maximum Dia. of strands	No/mm	50 x 0.26	56 x 0.31	84 x 0.31	80 x 0.41	126 x 0.41
d)	Max. D.C Cond. Resistance at 20 Deg. C.	Ohm/km	8.21	5.09	3.39	1.95	1.24
6	**INSULATION**						
a)	Material		**E-Beam Cross linkable LSOH Compound (Polyolefin Type) as per Annexure B Table B.1 of BS EN 50618**				
b)	Nominal Thickness	mm	0.7	0.7	0.7	0.7	0.7
c)	Minimum Thickness at any point	mm	0.53	0.53	0.53	0.53	0.53
d)	Core Identification		**Black | Red**				
e)	Minimum Insulation Resistance at 20°C	MΩ.km	690	580	500	420	340
f)	Minimum Insulation Resistance at 90°C	MΩ.km	0.69	0.58	0.5	0.42	0.34
g)	Tensile Strength(Min.)	N/mm2	8 N/mm²				
h)	Elongation at Break(Min.)	%	125%				
7	**Sheath**						
a)	Material		**E-Beam Cross linkable LSOH (Polyolefin Type) Compound as per Annexure B Table B.1 of BS EN 50618**				
b)	Nominal Thickness	mm	0.8	0.8	0.8	0.8	0.9
c)	Minimum Thickness at any point	mm	0.58	0.58	0.58	0.58	0.67
d)	Sheath Colour		**Black | Black with red stripe**				
e)	Tensile Strength(Min.)	N/mm2	8 N/mm²				
f)	Elongation at Break(Min.)	%	125%				
8	Nominal Overall Diameter	mm	5.1 ± 0.4 mm	5.7 ± 0.4 mm	6.3 ± 0.4 mm	7.2 ± 0.4 mm	8.5 ± 0.4 mm
9	Shape of Cable		Circular				
10	Current rating in Air at 60°C (Single cable free in air)	A	41	55	70	98	132
11	Lower operating temperature	°C	- 25°C				
12	Upper operating temperature	°C	+ 90°C				
13	Max. conductor temp. under normal operating conditions	°C	120°C (20000h)				
14	Max. conductor temp at the termination of short circuit	°C	250°C for 5seconds				
15	HV Test (A.C.)		6.5 kV for 5 Mins.				
	(D.C.)		15 kV for 5 Mins.				
16	Surface Resistance Test	Ohm	≥ 10 ⁹ as per BS 50395				
17	Ovality		Ovality shall be limited :The difference between any two values of the actual overall diameter of a sheathed cable at the same cross section shall not exceed 15%				
18	Material Properties						
a)	Fire retardent		EN 60332-1				
b)	Assessment of Halogens		EN 50525-1 Annex B				
c)	Low smoke Emission		EN 61034-2 (Light Transmittance > 60%)				
d)	Resistance against Acid & Alkaline		EN 60811-404				
e)	Weathering/UV Resistance		EN 50289-4-17, method A for 720h (360 cycles)				
f)	Ozone Resistance		EN 50396:2005				
19	Recommended minimum bending radius in mm		8 - 10 times the overall diameter of the cable				
20	Max. Tensile strength when pulled with pulling eye	Kg	13	20	31	51	82
21	Printing		**YEAR 'H1Z2Z2-K' POLYCAB 1.5KV DC SOLAR CABLE SIZE EBXL 'EN 50618:2014' TUV LOGO WITH SEQUENTIAL METER MARKING**				

Note:-The values given above are subject to tolerances as per the relevant standards.

Note for marking : 1)The Distance between the end of one elements of marking & the beginning of the next identical elements of marking shall be not greater than 550 mm (the letter and figures shall consist of upright block characters with a minimum height of 3 mm)