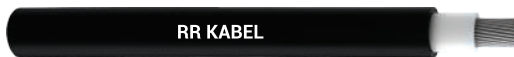


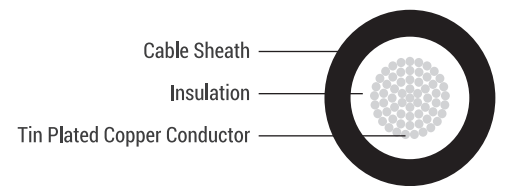


SOLAR CABLES SMART CHOICE FOR SUSTAINABLE FUTURE

SOLAR CABLE - IS 17293



REACH | RoHS | CE



APPLICATION

Solar cable popularly known as DC Solar or Photovoltaic cables are used for interconnection between various elements in photovoltaic (PV) system including roof top PV systems in residential or commercial buildings, PV panels / module interconnection, between panel and string box or from string box to inverter. These are used as free hanging, movable or fixed installations in various indoor, outdoor, hazard explosion areas, in industries as well as in agriculture. They are suitable for applications in equipment with protective insulations (protecting class II).

STATUTORY REQUIREMENT:

The Quality Control Order (QCO) on DC Solar Cable released by Ministry of Commerce & Industry on 24th August 2023, mandates the use of DC Solar cable marked with IS 17293 in India. Any person who contravenes the provisions of this Order shall be punishable under the provisions of the Bureau of Indian Standards Act, 2016.

STANDARD

IS 17293:2020

TECHNICAL DATA

Voltage : AC 1.0/1.0 kV

Max. PV-System Voltage : DC up to 2.0 kV possible

Max. permissible operating voltage in AC systems : 0.7/1.2 kV

Max. permissible operating voltage in DC systems : 0.9/1.8 kV

Short Circuit Temperature : 250°C (referring to period of 5 sec.)

Operating Temperature Range : -40°C to +90°C

Minimum Bending Radius : Fixed Installation approx. 4 x cable Ø

CABLE CONSTRUCTION

Conductor : Fine wire bunch of annealed tinned copper conductors according to IS 8130

Insulation : UV resistant crosslinked Halogen Free Flame Retardant core insulation

Core identification : Red, Black or Natural

Sheath : UV resistant crosslinked Halogen Free Flame Retardant sheath over insulation

Cable Colour : Black, Red, Black with red strip (or as required)

PROPERTIES

- Ultraviolet (UV) resistant
- Weather (Ozone) resistant
- Damp-Heat resistant (tested for 1000 hours at 90°C and 85% humidity)
- Non-toxic & Non-corrosive
- Smoke emission is negligible & transparent
- Excellent water resistant
- Acid and alkali resistant
- Ammonia resistant
- Self-extinguishing and flame retardant according to IS 10810 part 53 & 62

Please complete the part numbers for these cables by adding the suffix (in place of 'xx') for the insulation colour required as per the list: 02 - black, 03 - red, 07 - natural

CABLE DESIGN PARAMETERS

Part Number	Nominal cross-sectional area (sq. mm)	Nominal Insulation thickness (mm)	Nominal Sheath thickness (mm)	Approx. cable diameter (mm)	Current carrying capacity according to method of installation			Maximum DC Conductor Resistance at 20°C (Ω/km)
					Single cable free in air (Amps)	Single cable on surface (Amps)	Two loaded cables touching on surface (Amps)	
12020101xx01	1.5	0.7	0.8	4.7	28	27	22	13.7
12020102xx01	2.5	0.7	0.8	5.1	38	36	30	8.21
12020103xx01	4	0.7	0.8	5.6	52	49	41	5.09
12020104xx01	6	0.7	0.8	6.2	66	63	53	3.39
12020105xx01	10	0.7	0.8	7.1	89	87	73	1.95
12020106xx01	16	0.7	0.9	8.3	120	118	97	1.24
12020107xx01	25	0.9	1.0	10.2	167	158	126	0.795
12020108xx01	35	0.9	1.1	11.5	207	196	156	0.565
12020109xx01	50	1.0	1.2	13.4	261	248	190	0.393
12020110xx01	70	1.1	1.2	15.2	329	313	245	0.277
12020111xx01	95	1.1	1.3	17.0	394	374	298	0.21
12020112xx01	120	1.2	1.3	18.7	462	440	348	0.164
12020113xx01	150	1.4	1.4	20.9	537	510	401	0.132
12020114xx01	185	1.6	1.6	23.3	611	581	460	0.108
12020115xx01	240	1.7	1.7	26.2	735	698	545	0.0817
12020116xx01	300	1.8	1.8	29.5	831	788	631	0.0654
12020117xx01	400	2.0	2.0	33.5	999	947	751	0.0495



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