

6. Cables and accessories

All the cables shall be supplied conforming to IEC 60227/IS 694 & IEC60502/IS 1554 shall be 1.1 kV grade as per requirement. Only PVC copper cables shall be used. The size of the cables between array and interconnections, array to junction boxes, junction box to PCU, PCU to AC distribution box etc. shall be so selected to keep the voltage drop and losses to the minimum.

Permissible Wire Drop on DC side shall be $\leq 1\%$. The bidder shall supply installation accessories, which are required to install and successfully commission the power plant.

7. Earthing and Lightning Protection

Earthing: The array structure of the PV yard shall be grounded properly using adequate number of earthing kits. All metal casing or shielding of the power plants shall be thoroughly grounded to ensure safety of the solar power plants.

Lightning: The SPV power plants shall be provided with the lightning and over voltage protection. The main aim in this protection shall to reduce the over voltage to a tolerable value before it reaches the PV or other sub system components. The source of over voltage can be lightning, atmosphere disturbances, etc.

E. Technical data of Power Conditioning Unit (PCU) / Solar Inverter (1 unit)

1. General Data

Width:	511 mm
Height:	724 mm
Depth:	226 mm
Dimension (width):	511 mm
Dimension (height):	724 mm
Dimension (depth):	226 mm
Weight:	35.52 kg
Protection class:	NEMA 4X
Night time consumption:	< 1 W
Inverter topology:	Transformerless
Cooling:	Variable speed fan
Elevation:	2000 m (6560 ft) with a max. input voltage of 1000 V / 3400 m (11160 ft) with a max. input voltage of 850 V
Certificates and compliance with standards:	UL 1741-2010, UL1998 (for functions: AFCI and isolation monitoring), IEEE 1547-2003, IEEE 1547.1-2008, ANSI/IEEE C62.41, FCC Part 15 A & B, NEC Article 690, C22. 2 No. 107.1-01