

PHOTON SMARTBOX

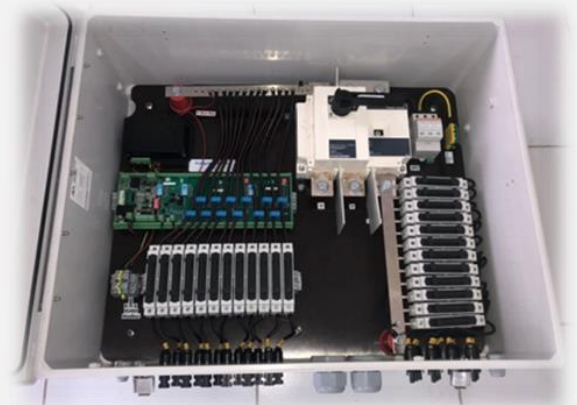
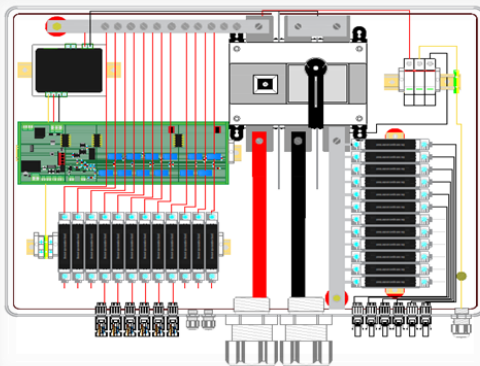
The smartest and safest string monitoring box



First SMB in India with IEC 61439 1&2 Certification

- Smart microcontroller based
- 1500V & 1000V Systems
- Solar PV String Monitoring
- Temperature Monitoring
- Advanced Smart Analytics
- RS485 Modbus RTU, IEC protocols
- IEC 62208 (IP66) enclosure
- IEC 61439 1&2 TUV certified
- Tooth Bus-bar design
- Plug & Play MC4 connectors

Photon SMARTBOX are the latest generation STRING MONITORING & COMBINER BOXES, STRING JUNCTION BOXES & SCADABOX from Photon company. Our microcontroller based Smartbox comes with the latest **IOT** technology and available with communication protocols of RS 485/ **ModbusRTU/ IEC 61850** power plant communication protocol. These are assembled in IEC 62208 (IP66) all weather enclosures for the highest standards in reliability & safety. Stand-out features include **IEC 61439 1&2 certification (the latest IEC standard)**, latest pass-through sensors for high accuracy readings, MC4 connectors for easy connectivity, tooth bus-bar design for reduced cabling & improved reliability, advanced smart analytics (first in India), temperature monitoring and error alerts through SMS/email/SCADA/Cloud. The active analytics and alerts keep plant personnel alerted of vital parameters like lower generation, temperature anomalies or potential fire hazards. This ensures prompt information to service personnel, reduces drastic generation losses & improves safety by warning about potential fires. Available in 12in-1out, 16in-1out options or as per customer requirements



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1. Enclosure Specifications (typical)				
Dimensions of the Enclosure Box	762 (L) x 610 (W) x 257 (H) mm, Weight ~30kgs			
Mounting Type	Vertical Mounted			
Material	Fibreglass reinforced polyester (GRP)			
2. Electrical Specifications				
	12 in 01 out		16 in 01 out	
	1000V or1500V		1000V or1500V	
	Single String	Two String	Single String	Two String
Max. String Current (Isc)	9A	18A	9A	18A
Max. DC Current (Isc max)	108A	216A	144A	288A
Max. allowed DC Current(Idc max)	135A	270A	180A	360A
Max. Current per measuring channel	30A	30A	30A	30A
Individual String Fuse Size	15A	25A	15A	25A
Rated impulse withstand voltage	8kV	8kV	8kV	8kV
Uimp Input & Terminals				
Power	*108kWp for 1000V system. *162kWp for 1500Vsystem.	*216kWp for 1000V system. *324kWp for 1500V system.	*144kWp for 1000V system. *216kWp for 1500V system.	*288kWp for 1000V system. *432kWp for 1500V system.
3. Communication Specifications				
Communication Interface	RS485 , OFC			
Communication Protocol	ModbusRTU, IEC 61850			
4. Environmental Specifications				
Temperature	-20 to 60°C			
Humidity	95%			
Altitude	Upto 2000m above sea level			
5. Protection Standard Specifications				
	Rating	Norm		
Fibreglass reinforced polyester Enclosure (GRP)	RAL-7035 colour, UV Stabilized	IEC 62208		
Double Insulation	Halogen Free	IEC 61439-1		
Mechanical (Impact) Resistance	IK10	IEC- 62262		
Protection against dust-water	IP-66	IEC- 60529		
Thermal Class	A	UNE- 21305		
Self extinguishing material	960°	IEC 60695-2		
Temperature Range	-30° +60°	IEC 60670		
Rated Voltage	1500V	IEC 61439-5		
Dielectric Strength	5,000V	IEC 61439-5		
Insulation Rating	5M Ω	IEC 61439-5		

*Note: The specifications mentioned in this datasheet are according to the individual components used and as per design.

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