

## HMP1500-K004 PV COMBINER BOX



In solar photovoltaic power generation system, in order to reduce the cable connection between solar panel cell array and inverter《GB/T18479-2001 The ground using photovoltaic ( PV ) power system overview and guide》 and the PV solar system characteristic, Combined with our many years of design experience, develop photovoltaic lightning combiner box. Users can connect a certain number of photovoltaic cells with the same specifications in series, forming a series of photovoltaic series, then several photovoltaic series are connected in parallel to the photovoltaic convergence lightning combiner box. After confluence inside the photovoltaic lightning combiner box, by a DC circuit breaker output, using with PV inverter that consist of a complete Photovoltaic power generation system, which realize the connection with the market power grid.

In order to improve the reliability and practicability of the system, the lightning protection for photovoltaic special DC modules, DC fuse, circuit breaker and so on are configured in the PV lightning combiner box, which ensure the maximum effectiveness of solar photovoltaic system.

The structure of the combiner box and the manufacturing quality of the cabinet itself, the main circuit connection, the secondary line and the installation of electrical components meet the following requirements:

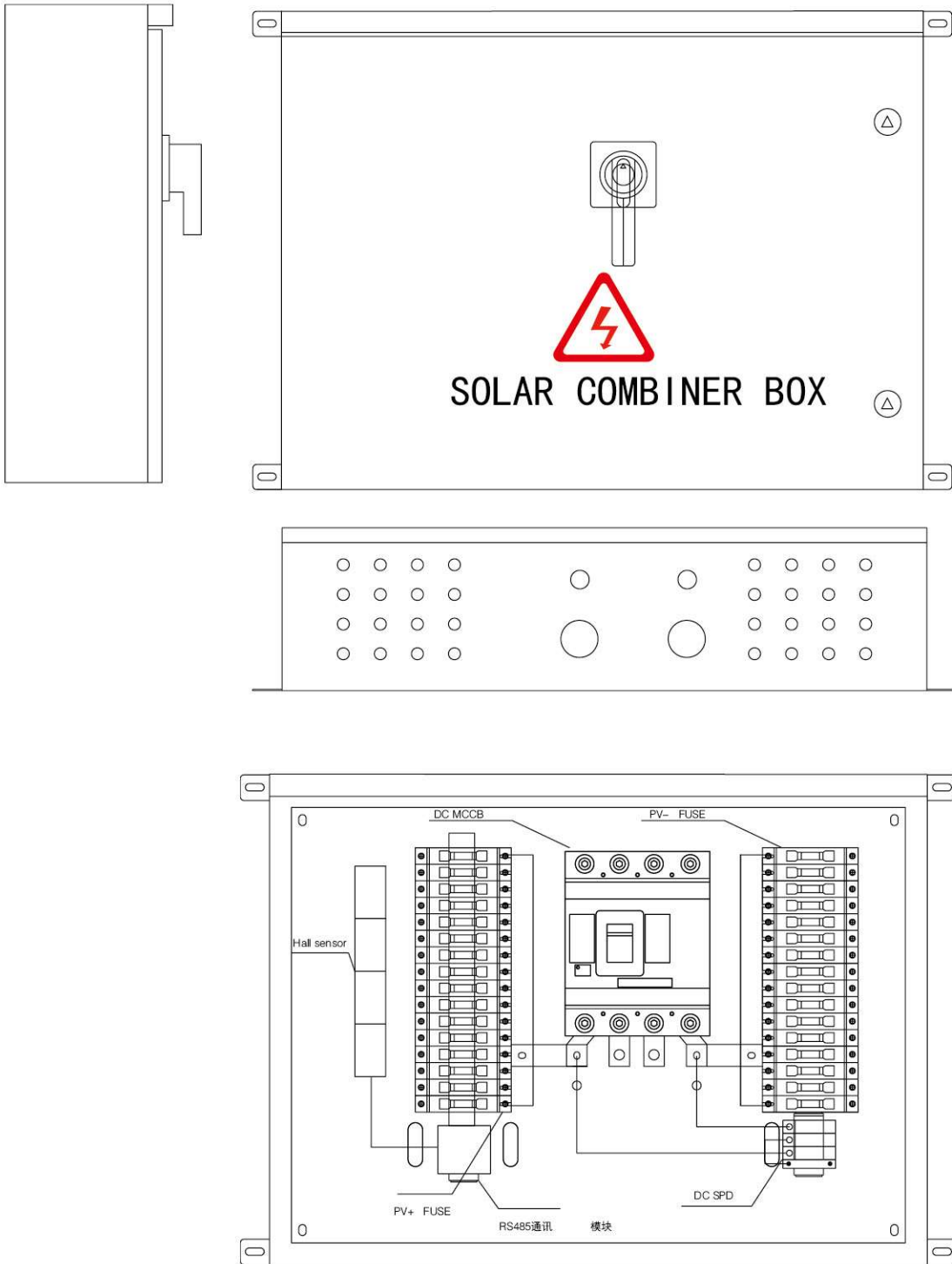
- a) Rack assembly related parts should meet their respective technical requirements;
- b) The cabinet should be firm and flat, and the surface should be smooth and flat without flaking, rust and cracks.;
- c) The panel of the rack should be flat, and the text and symbols should be clear, tidy, standardized and correct;
- d) Label, logo, marks shall be complete clarity;
- e) Various switch should be easy to operate, flexible and reliable.
- f) The box body adopts Q235 thickness 1.5mm cold rail steel plate, Surface spray plastic, Sealing strip with polyurethane foam sealing strip ( SOFT POLYURETHANE FOAM SEALING STRIP ) , after foaming, the width is not less than 15mm, the thickness is not less than 6mm, Install an IP67 M24\*1.5 breather valve on the left side of the cabinet;
- g) the cabinet safety degree is IP65, flame class is UL790-Class.
- h) Installation environment:

Environment parameter				Use environment	Transportation condition	Storage condition	Remark
	Item	Data	Unit				
Climatic condition	Temperature	Low	℃	-30	-40	-40	The maximum internal temperature of the outdoor application cabinet is not more than 70 °C.
		High	℃	+55	+70	+70	/
	Humidity	Low relative humidity	%	5	/	5	/
		High relative humidity	%	95	/	95	/
		condensation	Yes /No	No	/	No	/
	Elevation	Low	m		0		/
High		m		2000			

When assemble the combiner box, use 4pcs M8\*8 nut bolt or Expansion Screw to fix it on the assemble position.

The box size(16 circuits): 670\*1000\*300, installation size: 1040\*635

Attachment drawing:



## The combiner box meets the following two-element installation

PV Combiner Box Datasheet	
Part Number	HMP1500VDC PV Combiner BoX Datasheet
Technical data	
Strings Number	8/10/12//14/16 /20/24Strings
Dimensions (H/W/D) mm	Designed according to configuration requirements
Material	Matel+Plastic sprayed surface
Install method	Screw
Degree of protection (according to EN 60529)	IP65
Out Color	Offwhite
Electrical properties	
Max. open circuit DC voltage	1500V DC
Earthing (DC)	Yes
Max. DC short circuit current per input	15A DC
Surge protection Device	1500V DC 40KA(II)
Surge protection RS-485 side/RS232 (string monitoring)	Optional
Inputs	
Number of DC inputs (plus and minus = one input)	Designed according to configuration requirements
Connection DC input cables (+) to	Fuse holder (0,75 mm <sup>2</sup> - 25 mm <sup>2</sup> )
Connection DC input cables (-) to	Fuse holder (0,75 mm <sup>2</sup> - 25 mm <sup>2</sup> )
Entrance DC input cables through	M16 cable gland, IP67, Ø:5-10 mm
Fuses	With Fuse 15A 10*85or10*65
Location of fuses	Positive and negative inputs
Outputs	
Number of DC outputs (plus and minus = one output)	1
Connection DC output cables to	Match by output cable size
Exit DC output cables through	Match by output cable size
Max. output circuit breaker current(A)	8 way125A; 10 way160A;12 way180A; 14 way200A; 16 way225A;20 way315A; 24 way350A;
Switch-disconnector with auxiliary contact	MCCB 1500VDC
String monitoring	
Outside the cabinet	Optional
Monitoring of input current, voltage and temperature	Optional