

MERC-1100/1300W-P Smart Module Controller



Long String Design
to Reduce BOS



Maximum 20A Input Current
Suit All Type of PV Module



<5s PV Module
Auto-mapping



Identify Inefficient PV Module
Effectively



1V Safe Voltage Shutdown
Friendly to Inspection



Pinpointing Open-circuit Fault
for Quick Troubleshooting

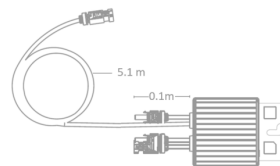


MERC-1100/1300W-P

Smart Module Controller

Technical Specification	MERC-1100W-P	MERC-1300W-P		
Input				
Rated Input DC Power ¹	1100 W	1300 W		
Absolute Maximum Input Voltage	125 V			
MPPT Operating Voltage Range	12.5 ~ 105 V			
Maximum Short Circuit Current (Isc) of Connected PV Module	20 A			
Maximum Efficiency	99.5 %			
Weighted Efficiency	99.0 %			
Overvoltage Category	II			
Output				
Maximum Output Voltage	80 V			
Maximum Output Current	22 A			
Output Bypass ²	Yes			
Safety Output Voltage per Optimizer ³	1 V			
Standard Compliance				
Safety	IEC62109-1 (class II safety)			
RoHS	Yes			
General Data				
Dimension (W X H X D)	149 x 104 x 48.8 mm (5.9 x 4.1 x 1.9 inch)			
Weight (including wires)	1.0 kg (2.2 lb.)			
Installation Part (optional)	PV Module Frame Plate / T-shaped Bolt ⁴			
Input Connector	Staubli MC4			
Input Wire Length	0.1 m (+/-) (short-input-cable version) ⁵			
Output Connector	Staubli MC4			
Output Wire Length	0.1 m (+), 5.1 m (-) (short-input-cable version) ⁵			
Operating Temperature	-40 °C ~ +85 °C ⁶			
Relative Humidity	0 % ~ 100 %			
Protection Rating	IP68			
Compatible Inverters	SUN2000-12/15/17/20KTL-M2, SUN2000-30/36/40KTL-M3, SUN2000-12/15/17/20/25KTL-M5, SUN2000-50KTL-M3			
PV System Design ^{7/8/9} (Only 1 PV string can be connected to each MPPT)	SUN2000-12~20KTL-M2	SUN2000-12~25KTL-M5	SUN2000-30~40KTL-M3	SUN2000-50KTL-M3
Minimum String Length (Power Optimizers)	8	8	8	8
Maximum String Length (Power Optimizers)	25	25	25	20
Maximum DC Power per String	20,000 W	20,000 W	20,000 W	20,000 W

Short-input-cable Version



^{*1} The maximum power of PV module at STC shall NOT exceed the "Rated Input DC Power" of MERC-1100/1300W-P. PV Modules with up to +5% power tolerance are allowed.

^{*2} Any power optimizer, which is connected to an operating inverter in a PV string, will be bypassed when it fails.

^{*3} When the MERC-1100/1300W-P is disconnected from inverter or when the inverter is off, its output voltage will become 1Vdc each.

^{*4} It is for PV module frame / extruded aluminum profile racking system installation.

^{*5} Please be cautious of the PV module wire length. To match with split junction box PV module with short output wire, the long-input-cable version (input wire: 1.3 m (+/-); output wire: 0.1 m (+)/ 2.9m (-)) of MERC-1100/1300W-P is available upon request.

^{*6} When the operating temperature of the MERC-1100/1300W-P reaches 70°C to 85°C, it may shut down due to over-temperature protection and report an over-temperature alarm. After the temperature decreases, it can automatically resume working without causing any damage.

^{*7} It is compulsory to equip all PV modules with MERC-1100/1300W-P under single inverter.

^{*8} SUN2000-450W-P2/600W-P and MERC-1100/1300W-P can NOT be used in mixture in single Smart Energy/PV Controller.

^{*9} It is recommended to split string capacity equally under single inverter. Moreover, it is compulsory to keep string capacity difference in single inverter no more than 2kW, otherwise the power generation yield can be reduced.