MERC-1100/1300W-P

Smart Module Controller



Long String Design
Better for C&I Scenarios

Up to 20 A Input Current
Fit All Type Module

< 5s
Module Auto-Mapping

Temperature Detection
Safety Enhanced

1V Safe Voltage Shutdown
Easier for Detection

Arc Fault Pinpoint Positioning
Along PV Cable

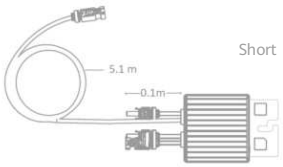
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MERC-1100/1300W-P

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Technical Specification	MERC-1100W-P	MERC-1300W-P
Input		
Rated Input DC Power[1]	1100 W	1300 W
Max. input voltage	125 V	
MPPT operating voltage range	12.5 – 105 V	
Max. short-circuit current (Isc)	20 A	
Max. efficiency	99.5 %	
Weighted efficiency	99.0 %	
Overvoltage category	II	
Output		
Max. output voltage	80 V	
Max. output current	22 A	
Output bypass[2]	Yes	
Shutdown output voltage per optimizer[3]	1 V	
Standards Compliance		
Safety	IEC62109-1 (class II safety)	
RoHS	Yes	
General Data		
Dimension (W x H x D)	149 mm x 104 mm x 49 mm (5.9 in. x 4.1 in. x 2.0 in.)	
Weight (including cables)	1.05 kg (2.2 lb.)	
Installation part (optional)	PV Module Frame Plate, T-shaped Bolt	
Input connector	MC4	
Input wire length	0.1 m (short input cable version)[4]	
Output connector	MC4	
Output wire length	0.1 m (+), 5.1 m (–) (short input cable version)[4]	
Operating temperature/humidity range	–40°C to +85°C [5]/ 0%–100% RH	
Degree of protection	IP68	
Compatible Inverter	SUN2000-8/10/12/15/17/20KTL-M2 SUN2000-20/29.9/30/36/40KTL-M3 SUN2000-12/15/17/20/23/25KTL-M5 SUN2000-50KTL-M3	

String Configuration (Full Optimizer Configuration) * **MERC-1100/1300W-P support full optimizer configuration only**	SUN2000-12-20KTL-M2		SUN2000-12-25KTL-M5		SUN2000-20-40KTL-M3		SUN2000-50KTL-M3
Minimum optimizers per string	6		6		6		6
Maximum optimizers per string	25		25		25		20
Recommend strings per inverter * Only one string can be connected to each MPPT. * The DC/AC ratio is 1.0 to 1.3 for this recommended configuration. For other ratios, refer to the user manual.	12KTL	15-20KTL	12KTL	15-25KTL	30/36KTL	40KTL	4
	1	2	1	2	3	4	
Maximum DC power per string * It is recommended that strings have equal capacity. The capacity difference between strings should ≤ 2 kW. Otherwise, the energy yield might be adversely affected.	20,000 W		20,000 W		20,000 W		20,000 W



Short Input Cable Version

*1 The rated power of modules under standard test conditions (STC) shall not exceed the rated DC input power of optimizers. The module power can be 5% higher than the rated optimizer power.
*2 Failed optimizers will be bypassed so that other optimizers and inverters will not be affected.
*3 When the optimizer output is an open circuit or the inverter connected to the optimizer is shut down, the default optimizer output is 1 V DC voltage.
*4 For the short input cable version (Input cable 0.1m (+/-), output cable 0.1m(+), 5.1m(-)), ensure that the PV module cables are long enough to connect to the optimizers. For split junction box module with a short cable, the long-input cable version of optimizer is available (input cables: 1.3 m (+/–); positive output cable: 0.1 m; negative output cable: 2.9 m) on request.
*5 When the operating temperature of the optimizer is 70°C to 85°C, the optimizer may shut down for overtemperature protection and report an overtemperature alarm. After the operating temperature drops to 70°C or below, the optimizer automatically recovers with no risk of damage.
*6 The SUN2000-450/600W-P cannot be mixed with the MERC-1100/1300W-P under the same inverter.
*7 The temperature detection function is only available on the short output cable (0.1 m).
*8 It is allowed to connect single PV module to the MERC-1100/1300W-P.

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