Fusionsolar C&I SmartPV Solution

SUN5000 Series

ProfiLink

PV Optimizer Collaboration
Links Module-level Optimization
Increase Yield by 5% to 30%

SafeLink

Links Varies of Safe Functions
AFCI+ RSD / SSLD+RSD
Covers the Breakpoint of PV Safety

SmartLink

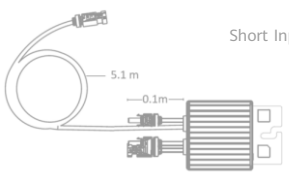
One-stop Smart Platform Links Smartdesign & Module-level Management
Provide Lifecycle Intelligent Experience

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 1.9 in.)	
Weight (including cables)	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/humidity range	–40°C to +85° C [6]/ 0%–100% RH	
Degree of protection	IP68	

Technical Specification

Technical Specification	SUN5000-150K-MG0
Efficiency	
Max. efficiency	98.6% @400V, 98.8% @480V
European efficiency	98.4%
Input	
Max. Input Voltage	1,100 V
Max. Short Circuit Current	66 A
Operating Voltage Range	200 V ~ 1,000 V
Max. input number	12
Output	
Nominal AC Active Power	150,000 W
Max. AC Apparent Power	165,000 VA
Max. AC Active Power (cosϕ=1)	165,000 W
Nominal Output Voltage	380 V/400 V/480Vac
Rated AC Grid Frequency	50 Hz / 60 Hz
Nominal Output Current	227.9 A @380 V, 216.5 A @400 V, 180.4A @480Vac
Max. Output Current	253.2 A @380 V, 240.5 A @400 V, 200.5A @480Vac
Adjustable Power Factor Range	0.8 leading... 0.8 lagging
alternating current THDi	＜1%
Protection	
Anti-islanding Protection	Yes
AC Overcurrent Protection	Yes
DC Surge Arrester	Type II
AC Surge Arrester	Type II
DC Insulation Resistance Detection	Yes
Residual Current Monitoring Unit	Yes
Smart String Level Disconnector	Yes
Arc Fault Protection	Yes
Smart Connector Temperature Detector	Yes
PID Recovery	Yes
PV Ground-Fault Protection	Yes
Communication	
Display	LED indicators; WLAN adaptor + FusionSolar APP
RS485 / USB	Yes
Smart Dongle-4G	Smart Dongle – 4G / WLAN (Optional)
Monitoring BUS (MBUS)	Yes (Isolation Transformer Required)
General Data	
Dimensions (W x H x D)	1,000 x 710 x 395 mm
Weight (with mounting plate)	102 kg
Operating Temperature Range	-25°C ~ 60°C
Cooling Method	Smart Air Cooling
Max. Operating Altitude	4,000 m (13,123 ft.)
Relative Humidity	0 ~ 100%
DC Connector	Amphenol HH4
AC Connector	Waterproof Connector + OT/DT Terminal
Protection Degree	IP66
Standard Compliance (more available upon request)	
Certificate	EN 62109-1/-2, IEC 62109-1/-2, IEC 62116, IEC 61727, IEC 60068, IEC 61683
Grid Connection Standards	VDE-AR-N4105, EN 50549-1, EN 50549-2, RD 661, RD 1699, C10/11

String Configuration (Full Optimizer Configuration)[7/8/9] * **MERC-1100/1300W-P support full optimizer configuration only**	SUN5000-150KTL-MG0
Minimum optimizers per string	12
Maximum optimizers per string	20
Maximum DC power per string	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 be 1 V.
*4 It is for PV module frame/extruded aluminum profile racking system installation.
*5 Pay attention to PV module wire length. To match PV modules with a split junction box and short output wire, the long-input-cable version (input wire: 1.3 m(+/-); output wire 0.1m(+)/2.9m (-)) of MERC -1100/1300W-P is available upon request.
*6 When the operating temperature of the MERC -1100/1300W-P reaches 70 ℃ to 85 ℃, 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 any damage.
*7 Each PV module under the same inverter must be equipped with a MERC -1100/1300W-P.
*8 SUN2000-450W-P2/600W-P and MERC -1100/1300W-P can NOT be used in mixture under the same Smart Energy/PV controller.
*9 It is recommended that strings under the same inverter have an equal capacity. If it is not feasible, the capacity difference between strings under the same inverter must not exceed 2 kW. Otherwise, the energy yield will be reduced.
* This datasheet only shows Preliminary Version, the information may change. Please contact with HWlocal supplier for the latest version