HUAWEI

SMART ENERGY CONTROLLER

Model：SUN2000-12/15/17/20/25KTL-M5

Active Safety
AFCI Active Arcing Protection

Higher Yields
Up to 30% More Energy with Optimizer

Flexible Communication
WLAN, Fast Ethernet, and 4G Communication Supported

Version No.: 01-202411

SUN2000-12/15/17/20/25KTL-M5

Technical Specification

Technical Specification	SUN2000 -12KTL-M5	SUN2000 -15KTL-M5	SUN2000 -17KTL-M5	SUN2000 -20KTL-M5	SUN2000 -25KTL-M5
Efficiency					
Max. efficiency	98.4%	98.4%	98.4%	98.4%	98.4%
European weighted efficiency	97.9%	98.0%	98.1%	98.1%	98.2%
Input					
Recommended max. PV power [1]	18,000 Wp	22,500 Wp	25,500 Wp	30,000 Wp	37,500 Wp
Max. input voltage [2]	1100 V				
Full-load MPPT voltage range	370–800 V	410–800 V	440–800 V	480–800 V	530–800 V
MPPT operating voltage range [3]	200–1000 V				
Start-up voltage	200 V				
Rated input voltage	600 V				
Max. input current per MPPT	30 A (two-string)/20 A (single string)				
Max. short-circuit current	40 A				
Number of MPP trackers	2				
Max. number of inputs	4				
Output					
Grid connection	Three-phase				
Rated output power	12,000 W	15,000 W	17,000 W	20,000 W	25,000 W
Max. apparent power	13,200 W	16,500 VA	18,700 VA	22,000 VA	27,500 VA
Rated output voltage	220 V AC/380 V AC, 230 V AC/400 V AC, 239.6 V AC/415V AC, 3W + N + PE				
Rated AC grid frequency	50 Hz/60 Hz				
Max. output current	18.2 A/380 V AC 17.3 A/400 V AC 16.7 A/415 V AC	25.2 A/380 V AC 23.9 A/400 V AC 23.1 A/415 V AC	28.6 A/380 V AC 27.1 A/400 V AC 26.1 A/415 V AC	33.6 A/380 V AC 31.9 A/400 V AC 30.8 A/415 V AC	42.0 A/380 V AC 39.9 A/400 V AC 38.5 A/415 V AC
Adjustable power factor	0.8 leading ... 0.8 lagging				
Max. total harmonic distortion	≤ 3%				
Protection Feature					
Overvoltage category	PV II/AC III				
Input-side disconnection device	Yes				
Anti-islanding protection	Yes				
AC over-current protection	Yes				
DC reverse polarity protection	Yes				
String fault detection	Yes				
DC surge protection	TYPE II				
AC surge protection	CLASS II				
Residual current monitoring unit	Yes				
Arc fault protection	Yes				
Ripple receiver control	Yes				
General Specification					
Operating temperature range	–25°C to +60°C (–13°F to +140°F)				
Relative humidity	0%–100% RH				
Max. operating altitude	4,000 m (13,123 ft.) (Derated above 2000 m)				
Cooling	Smart air cooling				
Display	LED Indicators; Integrated WLAN + FusionSolar App				
Communication	RS485; WLAN/Ethernet via Smart Dongle-WLAN-FE (Optional) 4G/3G/2G via Smart Dongle-4G (Optional)				
Weight (with mounting plate)	21 kg (46.4 lb)				
Dimensions (W x H x D) (incl. mounting plate)	546 mm x 460 mm x 228 mm (21.5 in. x 18.1 in. x 9.0 in.)				
IP rating	IP66				
Optimizer Compatibility					
DC MBUS compatible optimizer	SUN2000-450W-P2, SUN2000-600W-P				
Standards Compliance (More Available Upon Request)					
Safety	EN/IEC 62109-1, EN/IEC 62109-2				
Grid connection standards	G99, EN 50549, CEI 0-21, CEI 0-16, VDE-AR-N-4105, VDE-AR-N-4110, C10/11, ABNT, VFR 2019, UNE 217001, UNE 217002, RD 244, TOR D4, IEC61727, IEC62116				

*1 The inverter max. input PV power is 40,000 Wp when long strings are designed and fully connected with SUN2000-450W-P power optimizers.
*2 The max. input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage the inverter.
*3 Any input DC voltage beyond the operating voltage range may result in inverter malfunction.

Disclaimer: The preceding values are measured by an internal laboratory of Huawei in a specific environment. The actual values may vary with products, software versions, usage conditions, and environmental factors.

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