

SMART ENERGY CONTROLLER

SUN2000-10KTL-BEM1



Active Safety
AFCI Active Arcing
Protection



Higher Yields
Up to 30% More Energy
with Optimizer ¹



Battery Ready
Plug & Play Battery
Interface ²

SUN2000-3/4/5/6/8/10KTL-M1 (High Current Version)

Technical Specification

Technical Specification		SUN2000-10KTL-M1
Efficiency		
Max. efficiency		98.6%
European weighted efficiency		98.1%
Input (PV)		
Recommended max. PV power		15,000 Wp
Max. input voltage ¹		1,100 V
Operating voltage range ²		140 ~ 980 V
Startup voltage		200 V
Rated input voltage		600 V
Max. input current per MPPT		13.5 A
Max. short-circuit current		19.5 A
Number of MPP trackers		2
Max. input number per MPP tracker		1
Input (DC Battery)		
Compatible battery		HUAWEI Smart String ESS 5kWh-30kWh
Operating voltage range		600 ~ 980 V
Max. operating current		16.7 A
Max. charge power		10,000 W
Max. discharge power		10,000 W
Output (On Grid)		
Grid connection		Three-phase
Rated output power		10,000 W
Max. apparent power		10,000 VA
Rated output voltage		220 V AC/380 V AC, 230 V AC/400 V AC, 3W/N+PE
Rated AC grid frequency		50 Hz/60 Hz
Max. output current		16.9 A
Adjustable power factor		0.8 leading ... 0.8 lagging
Max. total harmonic distortion		≤ 3%
Output (Off Grid)		
BackupBox		BackupBox-B1
Max. apparent power		3,300 VA
Rated output voltage		220 V/230 V
Max. output current		15 A
Power factor range		0.8 leading ... 0.8 lagging
Protection Feature		
Input-side disconnection device		Yes
Anti-islanding protection		Yes
DC reverse polarity protection		Yes
Insulation monitoring		Yes
DC surge protection		Yes, compatible with TYPE II protection class according to EN/IEC 61643-11
AC surge protection		Yes, compatible with TYPE II protection class according to EN/IEC 61643-11
Residual current monitoring		Yes
AC overcurrent protection		Yes
AC short-circuit protection		Yes
AC overvoltage protection		Yes
Arc fault protection		Yes
Ripple receiver control		Yes
Battery charging from grid		Yes
General Specification		
Operating temperature range		-25°C to +60°C (-13°F to +140°F)
Relative operating humidity		0%-100% RH
Max. operating altitude		4,000 m (13,123 ft.) (Derating above 2000 m)
Cooling		Natural convection
Display		LED Indicators; Integrated WLAN + FusionSolar app
Communication		RS485; WLAN/Ethernet via Smart Dongle-WLAN-FE; 4G/3G/2G via Smart Dongle-4G (Optional)
Weight (incl. mounting brackets)		17 kg (37.5 lb)
Dimensions (incl. mounting brackets)		525 mm x 492.5 mm x 166 mm
IP rating		IP65
Nighttime power		< 5.5 W
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, IEC 62116
Grid connection standards		C10/C11

*1 The max. input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage the inverter.

*2 Any DC input 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.