SUN2000-10KTL-BEM1 (High Current Version)

Smart Energy Controller

Active Safety

AI Powered
Active Arcing Protection

Higher Yields

Up to 30% More Energy
with Optimizer [1]

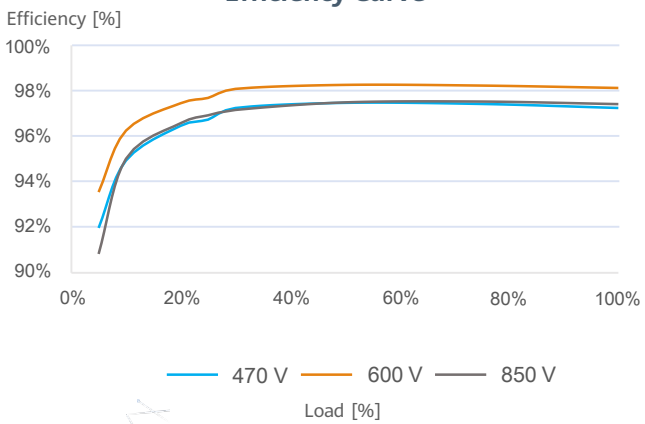
Battery Ready

Plug & Play battery interface [2]

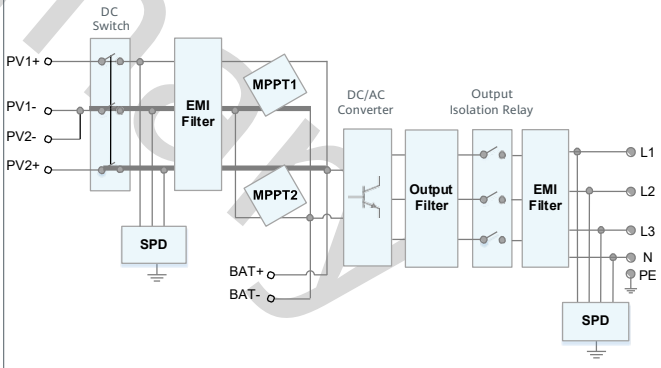
Flexible Communication

WLAN, Fast Ethernet, 4G
Communication Supported

Efficiency Curve



Circuit Diagram



SUN2000-10KTL-BEM1

Technical Specification	SUN2000-10KTL-BEM1
Efficiency	
Max. efficiency	98.6%
European weighted efficiency	98.1%
Input (PV)	
Recommended max. PV power [1]	15,000 Wp
Max. input voltage [2]	1,100 V
Operating voltage range [3]	140 V ~ 980 V
Start-up 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 V ~ 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 Vac / 380 Vac, 230 Vac / 400 Vac, 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)	
Backup Box	Backup Box – B1
Maximum apparent power	3,300 VA
Rated output voltage	220 V / 230 V
Maximum output current	15 A
Power factor range	0.8 leading ... 0.8 lagging
Features & Protections	
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
Integrated PID recovery [4]	Yes
Battery reverse charging from grid	Yes
General Data	
Operating temperature range	-25 °C ~ + 60 °C (-13 °F ~ 140 °F)
Relative operating humidity	0 % RH ~ 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 bracket)	17 kg (37.5 lb)
Dimension (incl. mounting bracket)	525 x 470 x 146.5 mm (20.7 x 18.5 x 5.8 inch)
Degree of protection	IP65
Nighttime Power Consumption	< 5.5 W [5]
Optimizer Compatibility	
DC MBUS compatible optimizer	SUN2000-450W-P, SUN2000-450W-P2, SUN2000-600W-P
Standard Compliance (more available upon request)	
Certificate	EN/IEC 62109-1, EN/IEC 62109-2, IEC 62116
Grid connection standards	G98, G99, EN 50438, CEI 0-21, VDE-AR-N-4105, AS 4777, C10/11, ABNT, UTE C15-712, RD 1699, TOR D4, NRS 097-2-1, IEC61727, IEC62116, DEWA

*1 Inverter max input PV power is 20,000 Wp when long strings are designed and fully connected with SUN2000-450W-P, SUN2000-450W-P2, SUN2000-600W-P power optimizers.
*2 The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage inverter.
*3 Any DC input voltage beyond the operating voltage range may result in inverter improper operating.
*4 SUN2000-10KTL-BEM1 raises potential between PV- and ground to above zero through integrated PID recovery function to recover module degradation from PID. Supported module types include: P-type (mono, poly).
*5 <10 W when PID recovery function is activated.