

Smart Energy Controller



Active Safety

AI Powered
Active Arcing Protection



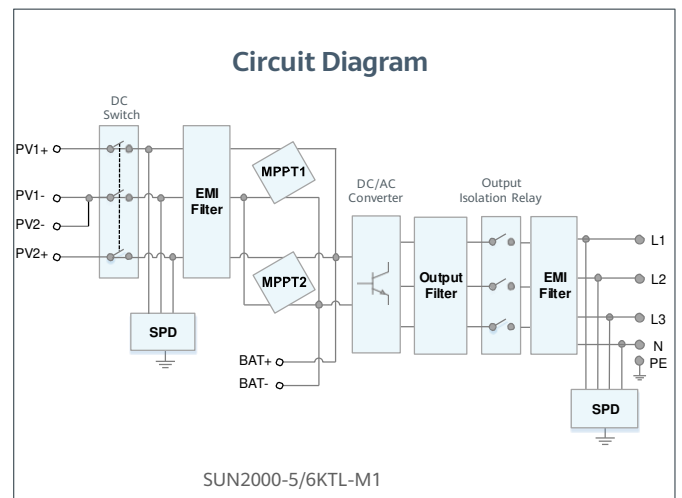
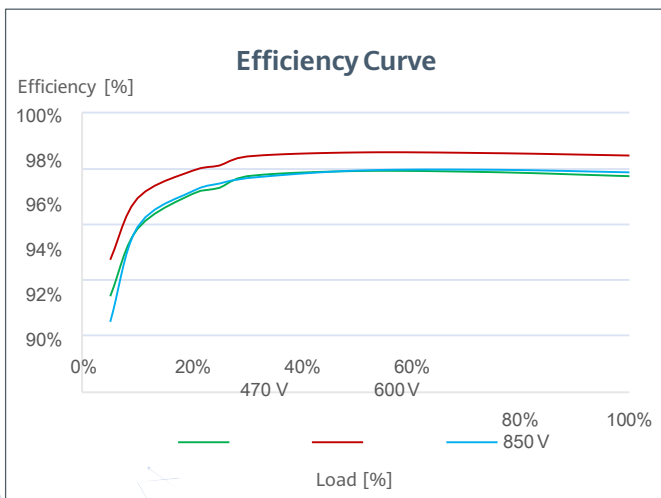
Higher Yields

Up to 30% More Energy
with Full Optimizer



Flexible Communication

WLAN, Fast Ethernet, 4G
Communication Supported



SUN2000-5/6KTL-M1
Technical Specification

| Technical Specification | SUN2000-5KTL-M1 | SUN2000-6KTL-M1 |
|--|--|-----------------|
| Efficiency | | |
| Max. efficiency | 98.4% | 98.6% |
| European weighted efficiency | 97.5% | 97.7% |
| Input (PV) | | |
| Recommended max. PV power ¹ | 7,500 Wp | 9,000 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 | 11 A | |
| Max. short-circuit current | 15 A | |
| Number of MPP trackers | 2 | |
| Max. number of inputs | 2 | |
| Input (DC Battery) | | |
| Compatible Battery | HUAWEI Smart ESS Battery 5kWh – 30kWh | |
| Max number of connected battery | 2 | |
| Voltage range | 600 V ~ 980 V | |
| Max Input current | 16.7 A | |
| Max charge Power | 10,000 W | |
| Max discharge Power | 5,000 W | 6,000 W |
| Output | | |
| Grid connection | Three-phase | |
| Rated output power | 5,000 W | 6,000 W |
| Max. apparent power | 5,500 VA | 6,600 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 | 8.5 A | 10.1 A |
| Adjustable powerfactor | 0.8 leading ... 0.8lagging | |
| Max. total harmonic distortion | ≤ 3 % | |
| Backup poweroutput | Yes (via Backup Box-B1) | |
| 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 ~ + 60 °C (-13 °F ~ 140 °F) | |
| Relative operating humidity | 0 %RH ~ 100 %RH | |
| Operating altitude | 0 ~ 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 (37.5lb) | |
| Dimension (incl. mounting bracket) | 525 x 470 x 146.5 mm (20.7 x 18.5 x 5.8 inch) | |
| Degree of protection | IP65 | |
| Optimizer Compatibility | | |
| DC MBUS compatible optimizer | SUN2000-450W-P | |
| Standard Compliance (more available upon request) | | |
| Certificate | EN/IEC 62109-1, EN/IEC 62109-2, IEC 62116 | |
| Grid connection standards | AS/NZS4777:2015 | |

*1 Inverter max input PV power is 20,000Wp when long strings are designed and fully connected with SUN2000-450W-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. Please limit input voltage to maximum 600Vdc according to AS/NZS 4777.1:2016

*3 Any DC input voltage beyond the operating voltage range may result in inverter improper operating.

*4 SUN2000-5-6KTL-M1 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)..