

Smart PV Controller



Active Safety

AI Powered Arcing Protection



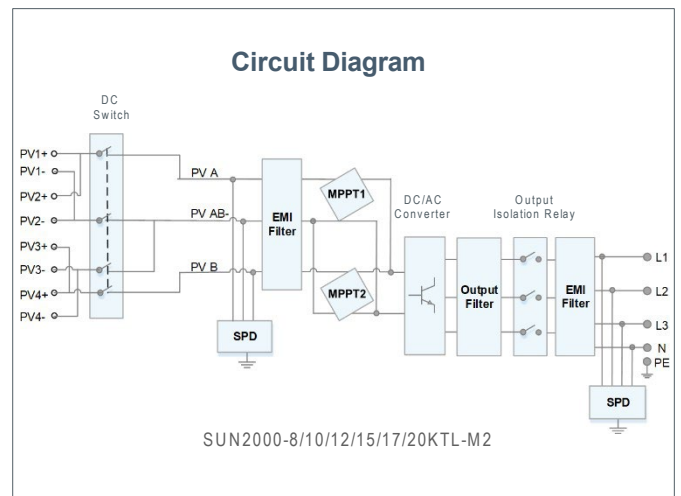
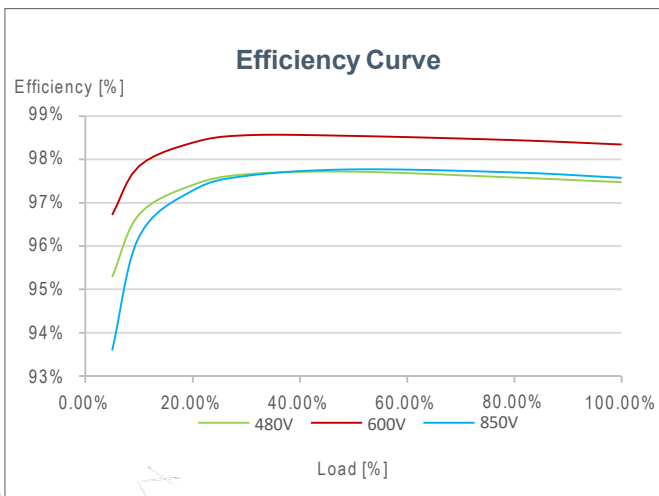
Higher Yields

Up to 30% More Energy with Optimizer



Flexible Communication

WLAN, Fast Ethernet, 4G
Communication Supported



| Technical Specification | SUN2000-8KTL-M2 | SUN2000-10KTL-M2 | SUN2000-12KTL-M2 | SUN2000-15KTL-M2 | SUN2000-17KTL-M2 | SUN2000-20KTL-M2 |
|-------------------------|-----------------|------------------|------------------|------------------|------------------|------------------|
|-------------------------|-----------------|------------------|------------------|------------------|------------------|------------------|

Efficiency

| | | | | | | |
|------------------------------|--------|--------|--------|--------|--------|--------|
| Max. efficiency | 98.50% | 98.50% | 98.50% | 98.65% | 98.65% | 98.65% |
| European weighted efficiency | 97.80% | 98.00% | 98.00% | 98.30% | 98.30% | 98.30% |

Input

| | | | | | | |
|--|-------------------|-----------|-----------|-----------|-----------|-----------|
| Recommended max. PV power ¹ | 12,000 Wp | 15,000 Wp | 18,000 Wp | 22,500 Wp | 25,500 Wp | 30,000 Wp |
| Max. input voltage ² | 1,080 V | | | | | |
| Operating voltage range ³ | 160 V ~ 950 V | | | | | |
| Start-up voltage | 200 V | | | | | |
| Rated input voltage | 600 V | | | | | |
| Max. input current per MPPT | 27 A ⁴ | | | | | |
| Max. short-circuit current | 39 A | | | | | |
| Number of MPP trackers | 2 | | | | | |
| Max. number of inputs | 4 | | | | | |

Output

| | | | | | | |
|--------------------------------|--------------------------------|-----------|-----------|-----------|-----------|-----------|
| Grid connection | Three phase | | | | | |
| Rated output power | 8,000 W | 10,000 W | 12,000 W | 15,000 W | 17,000 W | 20,000 W |
| Rated AC Apparent power | 8,000 VA | 10,000 VA | 12,000 VA | 15,000 VA | 17,000 VA | 20,000 VA |
| Max. apparent power | 8,800 VA | 11,000 VA | 13,200 VA | 16,500 VA | 18,700 VA | 22,000 VA |
| Rated output voltage | 230 Vac / 400 Vac, 3W + N + PE | | | | | |
| Rated AC grid frequency | 50 Hz / 60 Hz | | | | | |
| Max. output current | 13.4 A | 17 A | 20 A | 25.2 A | 28.5 A | 33.5 A |
| Adjustable power factor | 0.8 leading ... 0.8 lagging | | | | | |
| Max. total harmonic distortion | ≤ 3 % | | | | | |

Features & Protections

| | |
|--------------------------------------|--|
| Input-side disconnection device | Yes |
| Anti-islanding protection | Yes |
| AC over-current protection | Yes |
| AC short-circuit protection | Yes |
| AC over-voltage protection | Yes |
| DC reverse-polarity protection | Yes |
| DC surge protection | TYPE II |
| AC surge protection | Yes, compatible with TYPE II protection class according to EN/IEC 61643-11 |
| Residual current monitoring unit | Yes |
| Arc fault protection | Yes |
| Ripple receiver control | Yes |
| Integrated PID recovery ⁵ | Yes |

General Data

| | |
|--|---|
| Operation temperature range | -25 ~ + 60 °C (-13 °F ~ 140 °F) |
| Relative humidity | 0 % RH ~ 100% RH |
| Max. 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 (Optional) 4G / 3G / 2G via Smart Dongle-4G (Optional) |
| Weight (with mounting plate) | 25 kg |
| Dimensions (W x H x D) (incl. mounting plate) | 525 x 470 x 262 mm (20.7 x 18.5 x 10.3 inch) |
| Degree of protection | IP65 |
| Country of Manufacture | China |

Optimizer Compatibility

| | |
|------------------------------|----------------|
| DC MBUS compatible optimizer | SUN2000-450W-P |
|------------------------------|----------------|

Standard Compliance (more available upon request)

| | |
|---------------------------|--|
| Safety | EN/IEC 62109-1, EN/IEC 62109-2 |
| Grid connection standards | G98, G99, EN 50549, CEI 0-21, CEI 0-16, VDE-AR-N-4105, VDE-AR-N-4110, AS/NZS 4777.2 2020, C10/11, ABNT, VFR 2019, RD 1699, RD 661, PO 12.3, TOR D4, IEC61727, IEC62116, DEWA |

¹ 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 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 The MPPT voltage of each PV string must exceed the lower limit of Full Power MPPT Voltage Range. (Full Power MPPT Voltage Range: 12KTL@360~850V, 15KTL@380~850V, 17KTL@400~850V, 20KTL@450~850V)

⁵ SUN2000-8-20KTL-M2 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)