

# Smart String Inverter



## Active Safety

AI Powered  
Arcing Protection



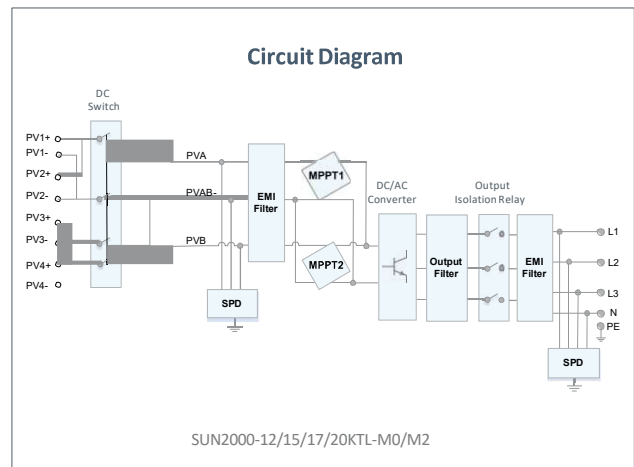
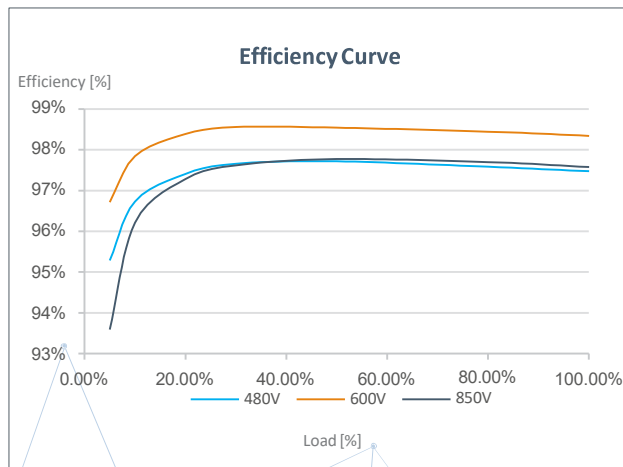
## Higher Yields

Up to 30% More Energy with  
Optimizer<sup>1</sup>



## Flexible Communication

WLAN, Fast Ethernet, 4G  
Communication Supported



\*1 Only applicable to SUN2000-12/15/17/20KTL-M2 inverter.



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| Technical Specification | SUN2000<br>-12KTL-M2 | SUN2000<br>-15KTL-M2 | SUN2000<br>-17KTL-M2 | SUN2000<br>-20KTL-M2 |
|-------------------------|----------------------|----------------------|----------------------|----------------------|
|-------------------------|----------------------|----------------------|----------------------|----------------------|

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

| Input                                  |               |           |           |           |
|--|---------------|-----------|-----------|-----------|
| Recommended max. PV power <sup>1</sup> | 18,000 Wp     | 22,500 Wp | 25,500 Wp | 30,000 Wp |
| Max. input voltage <sup>2</sup>        | 1,080 V       |           |           |           |
| Operating voltage range <sup>3</sup>   | 160 V ~ 950 V |           |           |           |
| Start-up voltage                       | 200 V         |           |           |           |
| Rated input voltage                    | 600 V         |           |           |           |
| Max. input current per MPPT            | 22 A          |           |           |           |
| Max. short-circuit current             | 30 A          |           |           |           |
| Number of MPP trackers                 | 2             |           |           |           |
| Max. input number per MPP tracker      | 2             |           |           |           |

| Output                         |   |           |           |           |
|--------------------------------|---|-----------|-----------|-----------|
| Grid connection                | Three phase                                       |           |           |           |
| Rated output power             | 12,000 W  | 15,000 W  | 17,000 W  | 20,000 W  |
| Max. apparent power            | 13,200 VA   | 16,500 VA | 18,700 VA | 22,000 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            | 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 <sup>4</sup> | 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   |
| Nighttime Power Consumption                   | < 5.5 W <sup>5</sup>   |

| 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 4777.2, C10/11, ABNT, VFR 2019, RD 1699, RD 661, PO 12.3, TOR D4, IEC61727, IEC62116, DEWA |

<sup>1</sup> Inverter max input PV power is 40,000 Wp when long strings are designed and fully connected with SUN2000-450W-P power optimizers.

<sup>2</sup> The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage inverter.

<sup>3</sup> Any DC input voltage beyond the operating voltage range may result in inverter improper operating.

<sup>4</sup> SUN2000-12~20KTL-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)

<sup>5</sup> <10 W when PID recovery function is activated.