



### Active Safety

AI Powered Arcing Protection



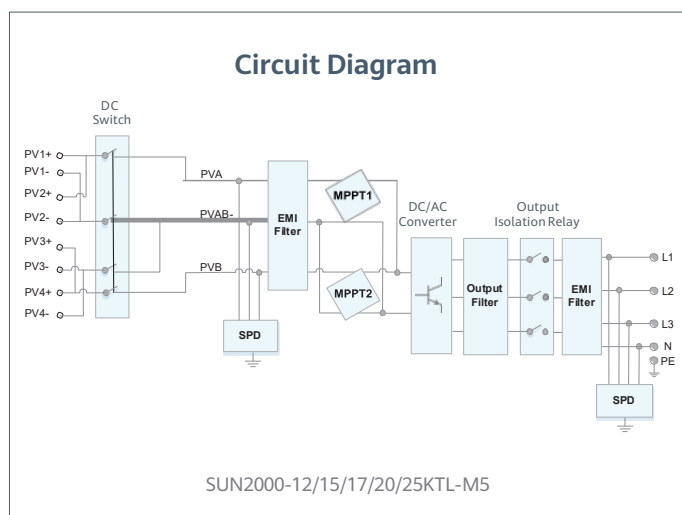
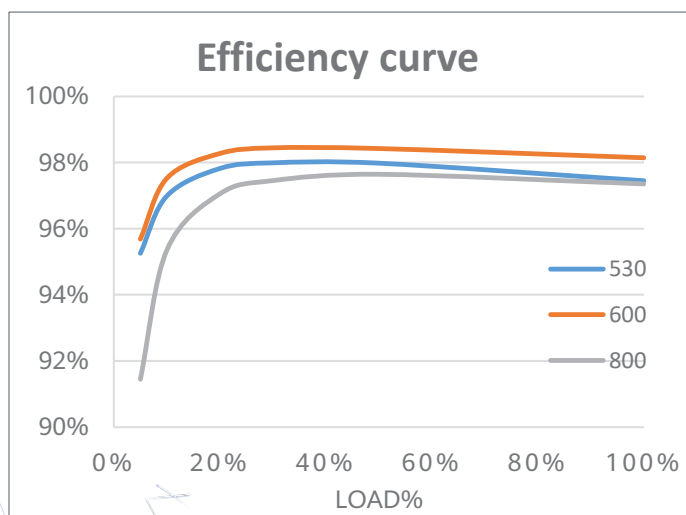
### Higher Yields

Up to 30% More Energy with Optimizer



### Flexible Communication

WLAN, Fast Ethernet, 4G  
Communication Supported



# SUN2000-12/15/17/20/25KTL-M5

## Technical Specification

| Technical Specification | SUN2000<br>-12KTL-M5 | SUN2000<br>-15KTL-M5 | SUN2000<br>-17KTL-M5 | SUN2000<br>-20KTL-M5 | SUN2000<br>-25KTL-M5 |
|-------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|-------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|

### Efficiency

|                              |       |       |       |       |       |
|------------------------------|-------|-------|-------|-------|-------|
| Max. efficiency              | 98.4% | 98.4% | 98.4% | 98.4% | 98.4% |
| European weighted efficiency | 97.9% | 98.0% | 98.1% | 98.1% | 98.2% |

### Input

|                                           |                                          |           |           |           |           |
|-------------------------------------------|------------------------------------------|-----------|-----------|-----------|-----------|
| Recommended max. PV power <sup>1</sup>    | 18,000 Wp                                | 22,500 Wp | 25,500 Wp | 30,000 Wp | 37,500 Wp |
| Max. input voltage <sup>2</sup>           | 1100 V                                   |           |           |           |           |
| Full-load MPPT voltage range              | 370V~800V                                | 410V~800V | 440V~800V | 480V~800V | 530~800V  |
| MPPT Operating voltage range <sup>3</sup> | 200 V ~ 1000 V                           |           |           |           |           |
| Start-up voltage                          | 200 V                                    |           |           |           |           |
| Rated input voltage                       | 600 V                                    |           |           |           |           |
| Max. input current per MPPT               | 30 A (two string) / 20 A (single string) |           |           |           |           |
| Max. short-circuit current                | 40 A                                     |           |           |           |           |
| Number of MPP trackers                    | 2                                        |           |           |           |           |
| Max. number of inputs                     | 4                                        |           |           |           |           |

### Output

|                                |                                                                       |              |              |              |              |
|--------------------------------|-----------------------------------------------------------------------|--------------|--------------|--------------|--------------|
| Grid connection                | Three phase                                                           |              |              |              |              |
| Rated output power             | 12,000 W                                                              | 15,000 W     | 17,000 W     | 20,000 W     | 25,000 W     |
| Max. apparent power            | 13,200 W                                                              | 16,500 VA    | 18,700 VA    | 22,000 VA    | 27,500 VA    |
| Rated output voltage           | 220 Vac / 380 Vac, 230 Vac / 400 Vac, 239.6 Vac / 415Vac, 3W + N + PE |              |              |              |              |
| Rated AC grid frequency        | 50 Hz / 60 Hz                                                         |              |              |              |              |
| Max. output current            | 18.2A/380Vac                                                          | 25.2A/380Vac | 28.6A/380Vac | 33.6A/380Vac | 42.0A/380Vac |
|                                | 17.3A/400Vac                                                          | 23.9A/400Vac | 27.1A/400Vac | 31.9A/400Vac | 39.9A/400Vac |
|                                | 16.7A/415Vac                                                          | 23.1A/415Vac | 26.1A/415Vac | 30.8A/415Vac | 38.5A/415Vac |
| Adjustable power factor        | 0.8 leading ... 0.8 lagging                                           |              |              |              |              |
| Max. total harmonic distortion | ≤ 3 %                                                                 |              |              |              |              |

### Features & Protections

|                                      |              |
|--------------------------------------|--------------|
| Overvoltage Category                 | PV II/AC III |
| Input-side disconnection device      | Yes          |
| Anti-islanding protection            | Yes          |
| AC over-current protection           | Yes          |
| DC reverse-polarity protection       | Yes          |
| String fault detection               | Yes          |
| DC surge protection                  | TYPE II      |
| AC surge protection                  | CLASS II     |
| Residual current monitoring unit     | Yes          |
| Arc fault protection                 | Yes          |
| Ripple 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                                          | Smart air cooling                                                                                       |
| Display                                          | LED Indicators; Integrated WLAN + FusionSolar App                                                       |
| Communication                                    | RS485; WLAN/Ethernet via Smart Dongle-WLAN-FE (Optional)<br>4G / 3G / 2G via Smart Dongle-4G (Optional) |
| Weight (with mounting plate)                     | 21kg (46.4 lb)                                                                                          |
| Dimensions (W x H x D)<br>(incl. mounting plate) | 546 x 460 x 228mm (21.5 x 18.1 x 9.0 inch)                                                              |
| Degree of protection                             | IP66                                                                                                    |

### Optimizer Compatibility

|                              |                                                                                   |
|------------------------------|-----------------------------------------------------------------------------------|
| DC MBUS compatible optimizer | SUN2000-450W-P, SUN2000-450W-P2, SUN2000-600W-P, SUN2000-1300W-P, SUN2000-1100W-P |
|------------------------------|-----------------------------------------------------------------------------------|

### Standard Compliance (more available upon request)

|                           |                                                                                                                                                     |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Safety                    | EN/IEC 62109-1, EN/IEC 62109-2                                                                                                                      |
| Grid connection standards | G99, EN 50549, CEI 0-21, CEI 0-16, VDE-AR-N-4105, VDE-AR-N-4110, C10/11, ABNT, VFR 2019, UNE 217001, UNE 217002, RD 244, TOR D4, IEC61727, IEC62116 |

\*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 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)