

# SUN2000-100KTL-M1 Smart PV Controller



10  
MPP Trackers



98.8% (@480V)  
Max. Efficiency



String-level  
Management



Smart I-V Curve Diagnosis  
Supported



MBUS  
Supported



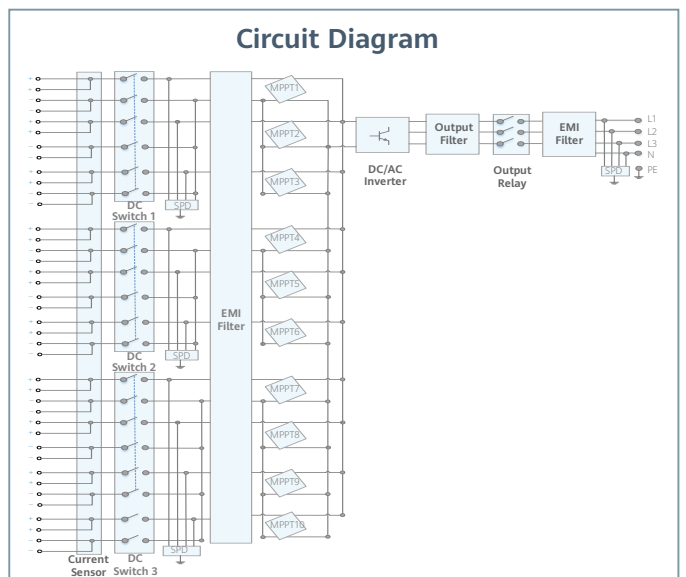
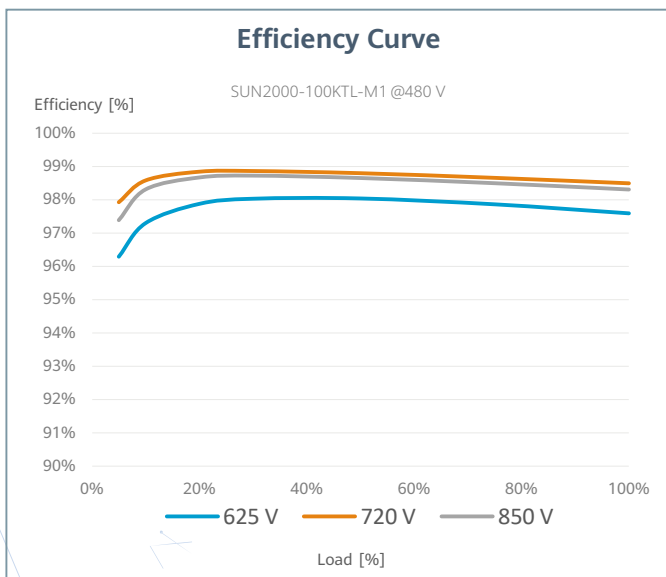
Fuse Free  
Design



Surge Arresters for  
DC & AC



IP66  
Protection

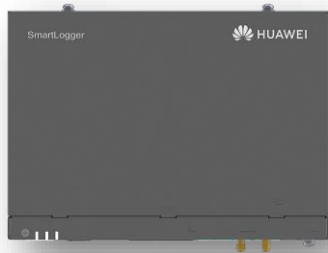


| Technical Specification                                  | SUN2000-100KTL-M1   |
|--|---|
| <b>Efficiency</b>  |   |
| Max. efficiency  | 98.8% @480 V, 98.6% @380 V / 400 V  |
| European efficiency                                      | 98.6% @480 V, 98.4% @380 V / 400 V  |
| <b>Input</b>   |   |
| Max. Input Voltage <sup>1</sup>                          | 1,100 V   |
| Max. Current per MPPT                                    | 26 A  |
| Max. Short Circuit Current per MPPT                      | 40 A  |
| Start Voltage  | 200 V   |
| MPPT Operating Voltage Range <sup>2</sup>                | 200 V ~ 1,000 V   |
| Nominal Input Voltage                                    | 720 V @480 Vac, 600 V @400 Vac, 570 V @380 Vac                                      |
| Number of MPP trackers                                   | 10  |
| Max. input number per MPP tracker                        | 2   |
| <b>Output</b>  |   |
| Nominal AC Active Power                                  | 100,000 W   |
| Max. AC Apparent Power                                   | 110,000 VA  |
| Max. AC Active Power (cosφ=1)                            | 110,000 W   |
| Nominal Output Voltage                                   | 480 V/ 400 V/ 380 V, 3W+(N)+PE  |
| Rated AC Grid Frequency                                  | 50 Hz / 60 Hz   |
| Nominal Output Current                                   | 120.3 A @480 V, 144.4 A @400 V, 152.0 A @380 V                                      |
| Max. Output Current                                      | 133.7 A @480 V, 160.4 A @400 V, 168.8 A @380 V                                      |
| Adjustable Power Factor Range                            | 0.8 leading... 0.8 lagging  |
| Max. Total Harmonic Distortion                           | < 3%  |
| <b>Protection</b>  |   |
| Input-side Disconnection Device                          | Yes   |
| Anti-islanding Protection                                | Yes   |
| AC Overcurrent Protection                                | Yes   |
| DC Reverse-polarity Protection                           | Yes   |
| PV-array String Fault Monitoring                         | Yes   |
| DC Surge Arrester  | Type II   |
| AC Surge Arrester  | Type II   |
| DC Insulation Resistance Detection                       | Yes   |
| Residual Current Monitoring Unit                         | Yes   |
| Arc Fault Protection                                     | Optional  |
| <b>Communication</b>                                     |   |
| Display  | LED indicators; WLAN adaptor + FusionSolar APP                                      |
| RS485  | Yes   |
| USB  | Yes   |
| Smart Dongle-4G  | 4G / 3G / 2G via Smart Dongle – 4G (Optional)                                       |
| Monitoring BUS (MBUS)                                    | Yes (isolation transformer required)  |
| <b>General Data</b>                                      |   |
| Dimensions (W x H x D)                                   | 1,035 x 700 x 365 mm  |
| Weight (with mounting plate)                             | 90 kg   |
| Operating Temperature Range                              | -25°C ~ 60°C  |
| Cooling Method   | Smart Air Cooling   |
| Max. Operating Altitude                                  | 4,000 m (13,123 ft.)  |
| Relative Humidity  | 0 ~ 100%  |
| DC Connector   | Staubli MC4   |
| AC Connector   | Waterproof Connector + OT/DT Terminal   |
| Protection Degree  | IP66  |
| Topology   | Transformerless   |
| Nighttime Power Consumption                              | < 3.5 W   |
| <b>Standard Compliance (more available upon request)</b> |   |
| Certificate  | EN 62109-1/-2, IEC 62109-1/-2, EN 50530, IEC 62116, IEC 61727, IEC 60068, IEC 61683 |
| Grid Connection Standards                                | VDE-AR-N4105, EN 50549-1, EN 50549-2, RD 661, RD 1699, C10/11                       |

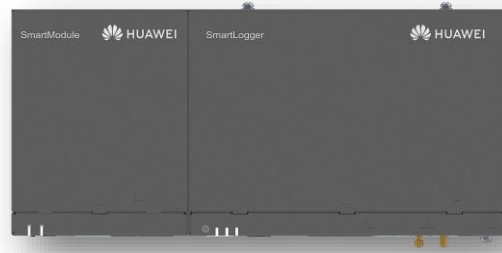
<sup>\*1</sup> The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage inverter.

<sup>\*2</sup> Any DC input voltage beyond the operating voltage range may result in inverter improper operating.

# SmartLogger3000B



Without SmartModule1000A



With SmartModule1000A



## Smart

Connecting up to 150 inverters,  
One-click commissioning



## Simple

Deployment wizard allowed, including  
parameters configuration, devices connection



## Reliable

Safety improvement with built-in  
lightning protection module

| Technical Specification             | SmartLogger3000B   | SmartLogger3000B<br>SmartModule1000A                               |
|-------------------------------------|--|--|
| <b>Device Management</b>            |  |  |
| Max. Number of Manageable Devices   | 200  |  |
| Max. Number of Manageable Inverters | 150  |  |
| <b>Communication Interface</b>      |  |  |
| WAN                                 | WAN x 1, 10 / 100 / 1,000 Mbps   |  |
| LAN                                 | LAN x 1, 10 / 100 / 1,000 Mbps   | LAN x 3, 10 / 100 / 1,000 Mbps                                     |
| Optical Ethernet                    | SFP x 2, 100 / 1,000 Mbps  |  |
| MBUS                                | MBUS x 1, 115.2 kbps, Compatible with PLC  |  |
| RS485                               | COM x 3,<br>1,200 / 2,400 / 4,800 / 9,600 / 19,200 / 115,200 bps                     | COM x 6<br>,200 / 2,400 / 4,800 / 9,600 / 19,200 / 115,200 bps     |
| Digital / Analog Input / Output     | DI x 4, DO x 2, AI x 4   | DI x 8, DO x 2, AI x 7   |
| PT100 / PT1000                      | 0  | 2  |
| Active DO                           | 12 V, 100 mA (connection with relay, sensor)   |  |
| Lighting Protection Module          | Yes  |  |
| <b>Communication Protocol</b>       |  |  |
| Ethernet                            | Modbus-TCP, IEC 60870-5-104  |  |
| RS485                               | Modbus-RTU, IEC 60870-5-103 (standard), DL / T645                                    |  |
| <b>Interaction</b>                  |  |  |
| LED                                 | LED Indicator x 3  | LED Indicator x 5  |
| WEB                                 | Embedded Web   |  |
| USB                                 | USB 2.0 x 1  |  |
| APP                                 | Communication by WLAN for Commissioning  |  |
| <b>Environment</b>                  |  |  |
| Operating Temperature Range         | -40°C ~ 60°C (-40°F ~ 140°F)   |  |
| Storage Temperature                 | -40°C ~ 70°C (-40°F ~ 158°F)   |  |
| Relative Humidity (Non-condensing)  | 5% ~ 95%   |  |
| Max. Operating Altitude             | 4,000 m (13,123 ft.)   |  |
| <b>Electrical</b>                   |  |  |
| AC Power Supply                     | 100 V ~ 240 V, 50 Hz / 60 Hz   |  |
| DC Power Supply                     | 24 V, 0.8 A  |  |
| Power Consumption                   | Typical 9 W, Max. 15 W   | Typical 10 W, Max. 18 W  |
| <b>Mechanical</b>                   |  |  |
| Dimensions (W x H x D)              | 225 x 160 x 44 mm (8.9 x 6.3 x 1.7 inch)<br>Without mounting ears                    | 350 x 160 x 44 mm (13.8 x 6.3 x 1.7 inch)<br>Without mounting ears |
| Weight                              | 2 kg (4.4 lb.)   | 3 kg (6.6 lb.)   |
| Protection Degree                   | IP20   |  |
| Installation Options                | Wall Mounting, DIN Rail Mounting, Tabletop Mounting, Integrated Inside SmartACU2000D |  |