

# SUN2000-115KTL-M2 Smart PV Controller



10  
MPP Trackers



98.8% (@480V)  
Max. Efficiency



String-level  
Management



Smart I-V Curve Diagnosis  
Supported



MBUS  
Supported



Support  
Smart String Level  
Disconnecter

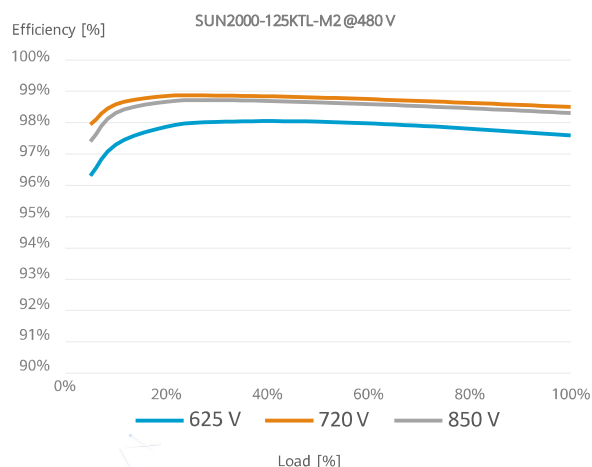


Surge Arresters for  
DC & AC

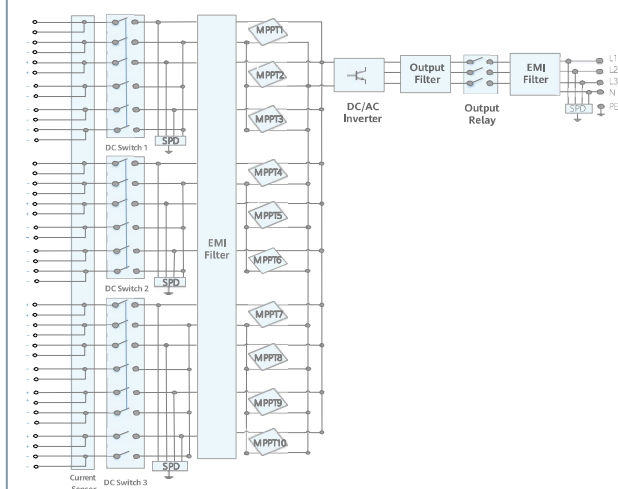


IP66  
Protection

## Efficiency Curve



## Circuit Diagram



## Technical Specification

## SUN2000-115KTL-M2

### Efficiency

|                     |                            |
|---------------------|----------------------------|
| Max. efficiency     | 98.6% @400 V, 98.8% @480 V |
| European efficiency | 98.4% @400 V, 98.6% @480 V |

### Input

|                                           |                                |
|-------------------------------------------|--------------------------------|
| Max. Input Voltage <sup>1</sup>           | 1,100 V                        |
| Max. Current per MPPT                     | 30 A                           |
| Max. Current per Input                    | 20 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                     | 600 V @400 Vac, 720 V @480 Vac |
| Number of MPP trackers                    | 10                             |
| Max. input number per MPP tracker         | 2                              |

### Output

|                                |                                |
|--------------------------------|--------------------------------|
| Nominal AC Active Power        | 115,000 W                      |
| Max. AC Apparent Power         | 125,000 VA                     |
| Max. AC Active Power (cosφ=1)  | 125,000 W                      |
| Nominal Output Voltage         | 400 V / 480 V, 3W+(N)+PE       |
| Rated AC Grid Frequency        | 50 Hz / 60 Hz                  |
| Nominal Output Current         | 166.0 A @400 V, 138.4 A @480 V |
| Max. Output Current            | 182.3 A @400 V, 151.9 A @480 V |
| Adjustable Power Factor Range  | 0.8 leading... 0.8 lagging     |
| Max. Total Harmonic Distortion | < 3%                           |

### Protection

|                                    |         |
|------------------------------------|---------|
| 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     |
| Smart String Level Disconnect      | Yes     |

### Communication

|                       |                                                |
|-----------------------|------------------------------------------------|
| 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)           |

### General Data

|                              |                                       |
|------------------------------|---------------------------------------|
| Dimensions (W x H x D)       | 1,035 x 700 x 365 mm                  |
| Weight (with mounting plate) | 93 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                               |

### Standard Compliance (more available upon request)

|                           |                                                                                     |
|---------------------------|-------------------------------------------------------------------------------------|
| 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.