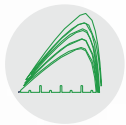


Smart Energy Controller

SUN2000-100KTL-M2



10 MPP Trackers



98.6% Max. Efficiency



String-level Management



DC Surge protection Type I + Type II



MBUS Supported



Support AFCI & Smart String Level Disconnecter



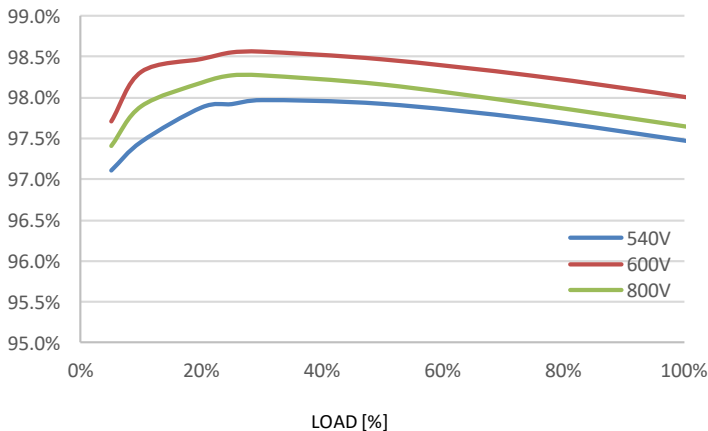
Surge Arresters for DC & AC



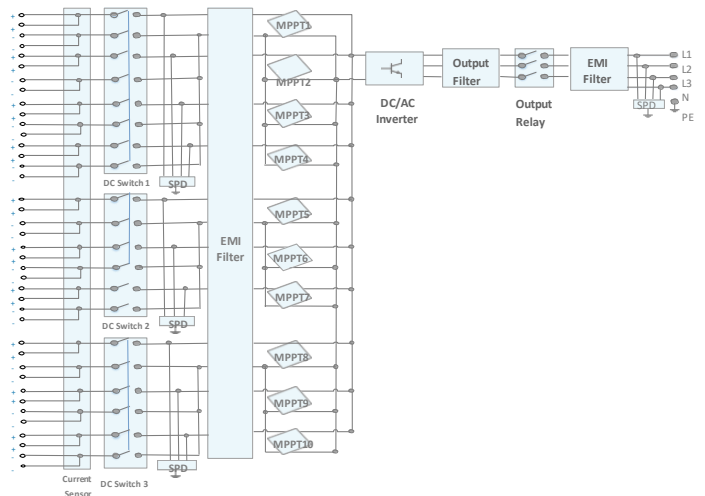
IP66 Protection

Efficiency Curve

SUN2000-100KTL-M2 @400V



Circuit Diagram



SUN2000-100KTL-M2

Technical Specification

| SUN2000 | -100KTL-M2 |
|---|---|
| | Efficiency |
| Max. efficiency | 98.6% @ 400 V |
| European efficiency | 98.4% @ 400 V |
| | Input |
| Max. Input Voltage ¹ | 1100 V |
| Max. Current per MPPT | 30 A |
| Max. Current per Input ³ | 20 A |
| Max. Short Circuit Current per MPPT | 40 A |
| Start Voltage | 200 V |
| MPPT Operating Voltage Range ² | 200 V - 1000 V |
| Nominal Input Voltage | 600 V @ 400 Vac |
| Number of MPP trackers | 10 |
| Max. input number per MPP tracker | 2 |
| | Output |
| Nominal AC Active Power | 100000 W |
| Max. AC Apparent Power | 110000 VA |
| Max. AC Active Power (cosφ=1) | 110000 W |
| Nominal Output Voltage | 400 V, 3W+(N)+PE |
| Rated AC Grid Frequency | 50 Hz / 60 Hz |
| Nominal Output Current | 144.4 A @ 400 V |
| Max. Output Current | 160.4 A @ 400 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 |
| AC Surge Arrester | Type II |
| DC Insulation Resistance Detection | Yes |
| Residual Current Monitoring Unit | Yes |
| Arc Fault Protection | Yes |
| Smart String Level Disconnecter | Yes |
| DC Surge protection ⁴ | Type I + II |
| | Communication |
| Display | LED indicators; WLAN adaptor + FusionSolar APP |
| RS485 | Yes |
| USB | Yes |
| Smart Dongle-4G | Smart Dongle – 4G / WLAN (Optional) |
| Monitoring BUS (MBUS) | Yes (isolation transformer required) |
| | General Data |
| Dimensions (W x H x D) | 1035 x 700 x 365 mm |
| Weight (with mounting plate) | 93 kg |
| Operating Temperature Range | -25°C to +60°C |
| Cooling Method | Smart Air Cooling |
| Max. Operating Altitude | 4000 m |
| Relative Humidity | 0 - 100% |
| DC Connector | Amphenol Helios H4 |
| 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 |

*1. The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage inverter.

*2. Any DC input voltage beyond the operating voltage range may result in inverter improper operating.

*3. Single-string access.

*4. SPD Type I+II for inverters with a manufacturing date after 09/01/2024, see self-declaration for more details