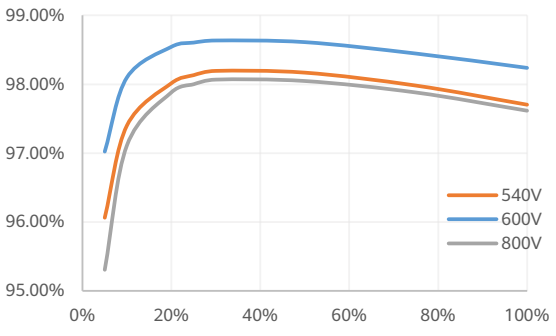
# SUN2000-30/40K-MC0
## Smart PV Controller

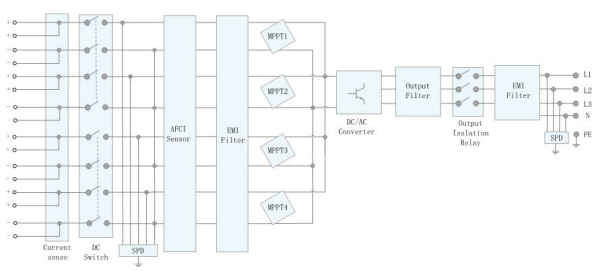


**Smart** **Efficient** **Safe** **Reliable**

### Efficiency Curve




### Circuit Diagram



SUN2000-30/40K-MC0

# Technical Specification

| Technical Specification | SUN2000-30K-MC0 | SUN2000-40K-MC0 |
|---|---|---|
| **Efficiency** | | |
| Max. Efficiency | 98.6% @400V, 98.7% @480V | |
| European Efficiency | 98.4% | |
| **Input** | | |
| Max. Input Voltage [1] | 1,100 V | |
| Max. Current per MPPT | 27 A (per MPPT) / 23 A (per Input) | |
| Max. Short Circuit Current per MPPT | 40 A | |
| Start Voltage | 180 V | |
| MPPT Operating Voltage Range [2] | 180 V ~ 1000 V | |
| Rated Input Voltage | 600 V | |
| Number of Inputs | 8 | |
| Number of MPP Trackers | 4 | |
| **Output** | | |
| Rated AC Active Power | 30,000 W | 40,000 W |
| Max. AC Apparent Power | 33,000 VA | 44,000 VA |
| Rated Output Voltage | 380 Vac / 400 Vac / 480 Vac, 3W/N+PE | |
| Rated AC Grid Frequency | 50 Hz / 60 Hz | |
| Rated Output Current | 45.6A@380V, 43.3 A@400V, 36.1A@480V | 60.8A@380V, 57.7 A@400V, 48.1A@480V |
| Max. Output Current | 50.4A@380V, 47.9 A@400V, 39.9A@480V | 67.2A@380V, 63.8 A@400V, 53.2A@480V |
| Adjustable Power Factor Range | 0.8 LG ... 0.8 LD | |
| 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 I + II [3] | |
| AC Surge Arrester | Type II | |
| DC Insulation Resistance Detection | Yes | |
| Residual Current Monitoring Unit | Yes | |
| Arc Fault Protection | Yes | |
| Ripple Receiver Control | Yes | |
| Integrated PID Recovery [4] | Yes | |
| **Communication** | | |
| Display | LED Indicators, Integrated WLAN + FusionSolar APP | |
| RS485 | Yes | |
| Smart Dongle | WLAN/Ethernet via Smart Dongle-WLAN-FE(Optional)<br>4G / 3G / 2G via Smart Dongle-4G (Optional) | |
| **General Data** | | |
| Dimensions (W x H x D) | 640 x 530 x 270 mm (25.2 x 20.9 x 10.6 inch) | |
| Weight (with mounting plate) | 45 kg | |
| Operating Temperature Range | -25 ~ + 60 °C (-13 °F ~ 140 °F) | |
| Cooling Method | Natural Convection | |
| Max. Operating Altitude | 4,000 m (13,123 ft.) (Derating above 2000 m) | |
| Relative Humidity | 0% RH ~ 100% RH | |
| DC Connector | Amphenol Helios H4 | |
| AC Connector | Waterproof Connector + OT/DT Terminal | |
| Protection Degree | IP 66 | |
| Topology | Transformerless | |
| **Optimizer Compatibility** | | |
| DC MBUS Compatible Optimizer | MERC-1100W/1300W-P | |
| **Standard Compliance (more available upon request)** | | |
| Safety | EN 62109-1/-2, IEC 62109-1/-2, IEC 62116, IEC 60068, IEC 61683 | |
| Grid Connection Standards | IEC 61727, VDE-AR-N4105, VDE 0124-1-1, UTE C 15-712-1, CEI 0-16, CEI 0-21, EN-50549, C10/11, MEA, PEA, DEWA, G99 | |

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. SPD devices comply with IEC/EN 61643-11 and IEC/EN 61643-31 standards.
4. SUN2000-30~40KTL-Mc0 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), N-type (nPERT, HIT)