SUN2000-29.9/36/40KTL-M3
Smart String Inverter

Smart
- 8 strings intelligent monitoring

Efficient
- Max. efficiency 98.7%

Safe
- Fuse free design

Reliable
- Type II surge arresters for DC & AC

Efficiency Curve

Circuit Diagram
# Technical Specification


### Efficiency
- Max. Efficiency: 98.7%
- European Efficiency: 98.4%

### Input
- Max. Input Voltage: 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: 200 V ~ 1000 V
- Rated Input Voltage: 600 V
- Number of Inputs: 8
- Number of MPP Trackers: 4

### Output
- Rated AC Active Power: 29,900 W, 36,000 W, 40,000 W
- Max. AC Apparent Power: 29,900 VA, 40,000 VA, 44,000 VA
- Rated Output Voltage: 230 Vac / 400 Vac, 3W/NE+PE
- Rated AC Grid Frequency: 50 Hz / 60 Hz
- Rated Output Current: 43.2 A, 52.0 A, 57.8 A
- Max. Output Current: 43.2 A, 58.0 A, 63.8 A
- 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: Yes
- AC Surge Arrester: Yes
- DC Insulation Resistance Detection: Yes
- Residual Current Monitoring Unit: Yes
- Arc Fault Protection: Yes
- Ripple Receiver Control: Yes
- Integrated PID Recovery: Yes

### Communication
- Display: LED Indicators, Integrated WLAN + FusionSolar APP
- RS485: Yes
- Smart Dongle: WLAN/Ethernet via Smart Dongle-4G (Optional)
- Monitoring BUS (MBUS): Yes (Isolation Transformer required)

### 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): 43 kg (94.8 lb)
- Noise Level: < 46 dB
- Operating Temperature Range: -25 ~ + 60 °C (-13 °F ~ 140 °F)
- Cooling Method: Natural Convection
- Max. Operating Altitude: 0 ~ 4,000 m (13,123 ft.)
- Relative Humidity: 0% RH ~ 100% RH
- DC Connector: Staubli MC4
- AC Connector: Waterproof Connector + OT/DT Terminal
- Protection Degree: IP 66
- Topology: Transformerless
- Nighttime Power Consumption: ≤0.5W

### Optimizer Compatibility
- DC MBUS Compatible Optimizer: Yes
- Standard Compliance (more available upon request):
  - Safety: EN 62109-1/-2, IEC 62109-1/-2, EN 50530, IEC 62116, IEC 6068, IEC 61683
  - Grid Connection Standards: IEC 61727, AS/NZS 4777.2

### Notes
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 operation.
3. SUN2000-29.9~40KTL-M3 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 (PERT, HIT).