

# SUN2000-29.9/36/40KTL-M3 Smart PV Controller



## Smart

8 PVs intelligent monitoring



## Efficient

Max. efficiency 98.7%



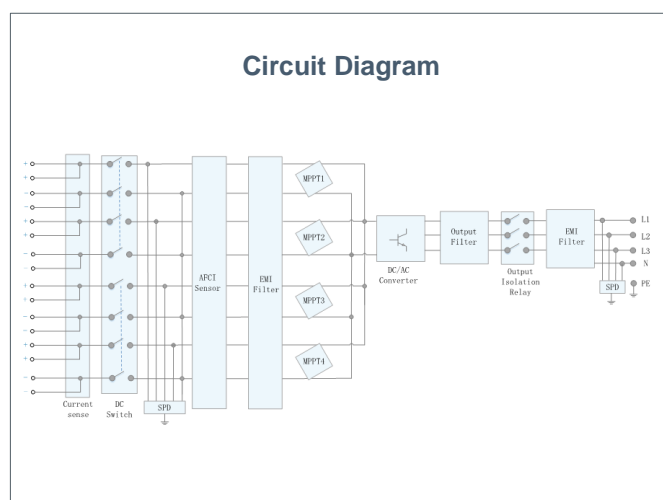
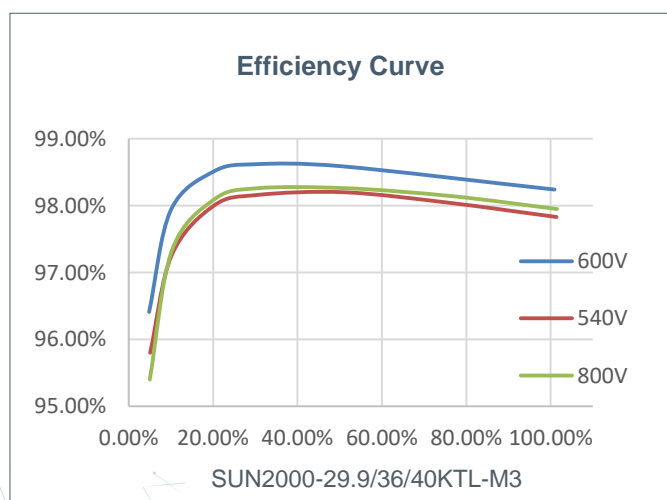
## Safe

Fuse free design



## Reliable

Type II surge arresters for DC & AC



SUN2000-29.9/36/40KTL-M3  
**Technical Specification**

Technical Specification	SUN2000-29.9KTL-M3	SUN2000-36KTL-M3	SUN2000-40KTL-M3
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**Efficiency**

Max. Efficiency	98.7%		
European Efficiency	98.4%		

**Input**

Max. Input Voltage <sup>1</sup>	1,100 V		
Max. Current per MPPT	26 A (two string)/20 A (single string) <sup>2</sup>		
Max. Short Circuit Current per MPPT	40 A		
Start Voltage	200 V		
MPPT Operating Voltage Range <sup>3</sup>	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
Rated AC Apparent power	29,900 VA	36,000 VA	40,000 VA
Max. AC Apparent Power	29,900 VA	40,000 VA	44,000 VA
Rated Output Voltage	230 Vac / 400 Vac, 3W/N+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 <sup>4</sup>	Yes

**Communication**

Display	LED Indicators, Integrated WLAN + FusionSolar APP
RS485	Yes
Smart Dongle	WLAN/Ethernet via Smart Dongle-WLAN-FE (Optional) 4G / 3G / 2G 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)
Nosie 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	≤5.5W
Country of Manufacture	China

**Optimizer Compatibility**

DC MBUS Compatible Optimizer	SUN2000-450W-P, SUN2000-450W-P2, SUN2000-600W-P
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**Standard Compliance (more available upon request)**

Safety	EN 62109-1/-2, IEC 62109-1/-2, EN 50530, IEC 62116, IEC 60068, IEC 61683, IEC 61727
Grid Connection Standards	AS/NZS 4777.2 2020

1. The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage inverter.  
2. The MPPT voltage of each PV string must exceed the lower limit of Full Power MPPT Voltage Range. (Full Power MPPT Voltage Range: 29.9KTL@500~800V, 36KTL@520~800V, 40KTL@540~800V)  
3. Any DC input voltage beyond the operating voltage range may result in inverter improper operating.  
4. 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 (nPERT, HIT)