

# SUN2000-50KTL-M3 Smart PV Controller



## Higher Yields

Up to 30% More Energy  
with Optimizer



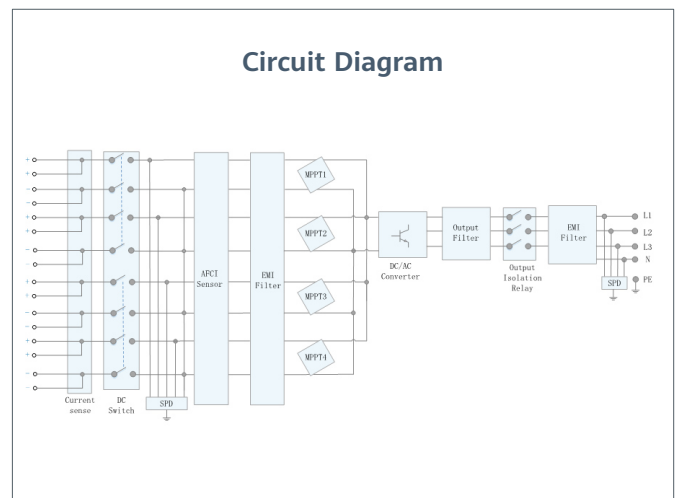
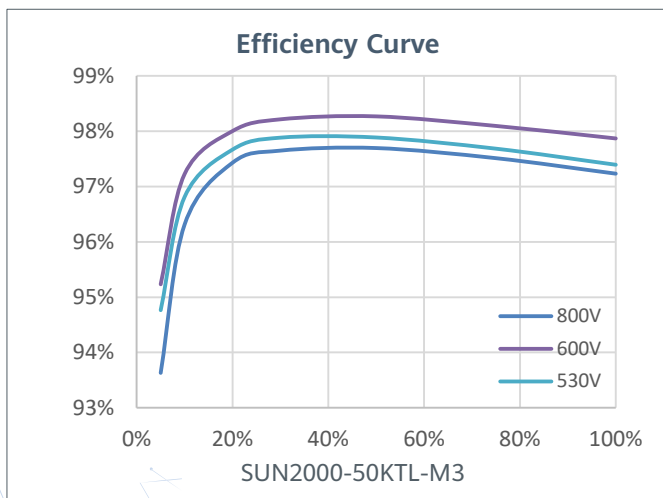
## Active Safety

AI Powered  
Active Arcing Protection



## Flexible Communication

WLAN, Fast Ethernet, 4G  
Communication Supported



Technical Specification		SUN2000-50KTL-M3
<b>Efficiency</b>		
Max. Efficiency		98.5%
European Efficiency		98.0%
<b>Input</b>		
Max. Input Voltage <sup>1</sup>		1,100 V
Max. Current per MPPT		30 A (per MPPT) / 20 A (per Input)
Max. Short Circuit Current per MPPT		40 A
Start Voltage		200 V
MPPT Operating Voltage Range <sup>2</sup>		200 V ~ 1,000 V
Rated Input Voltage		600 V
Number of Inputs		8
Number of MPP Trackers		4
<b>Output</b>		
Rated AC Active Power		50,000 W
Max. AC Apparent Power		55,000 VA
Max. AC Active Power (cosφ=1)		55,000 W
Rated Output Voltage		400 Vac / 480 Vac, 3W+(N) + PE
Rated AC Grid Frequency		50 Hz / 60 Hz
Rated Output Current		72.2 A @ 400Vac, 60.1 A @ 480Vac
Max. Output Current		79.8 A @ 400Vac, 66.5 A @ 480Vac
Adjustable Power Factor Range		0.8 LG ... 0.8 LD
Max. Total Harmonic Distortion		<3%
<b>Protection</b>		
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
Arc Fault Protection		Yes
Ripple Receiver Control		Yes
Integrated PID Recovery <sup>3</sup>		Yes
<b>Communication</b>		
Display		LED Indicators, Bluetooth + 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)
<b>General Data</b>		
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)		49 kg (108.1 lb)
Operating Temperature Range		-25°C ~ 60°C (-13°F ~ 140°F)
Cooling Method		Smart Air Cooling
Max. Operating Altitude		4,000 m (13,123 ft.)
Relative Humidity		0% RH ~ 100% RH
DC Connector		Amphenol Helios H4
AC Connector		Waterproof Connector + OT/DT Terminal
Protection Degree		IP 66
Topology		Transformerless
Nighttime Power Consumption		≤ 5.5W
<b>Standard Compliance (more available upon request)</b>		
Safety		EN 62109-1/-2, IEC 62109-1/-2, EN 50530, IEC 62116, IEC 60068, IEC 61683
Grid Connection Standards		IEC 61727, VDE-AR-N4105, VDE 4110, VDE 0126-1-1, BDEW, G59/3, UTE C 15-712-1, CEI 0-16, CEI 0-21, RD 661, RD 1699, P.O. 12.3, RD 413, EN-50438-Turkey, EN-50438-Ireland, C10/11, MEA, Resolution No.7, NRS 097-2-1, DEWA

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. SUN2000-30-50KTL-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)