

# SUN2000-50KTL-M3 Smart PV Controller



## Higher Yields

Upto 30% More Energy  
with Optimizer



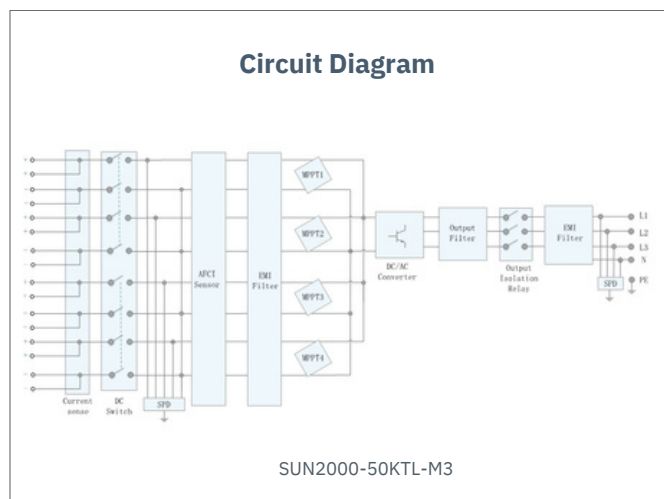
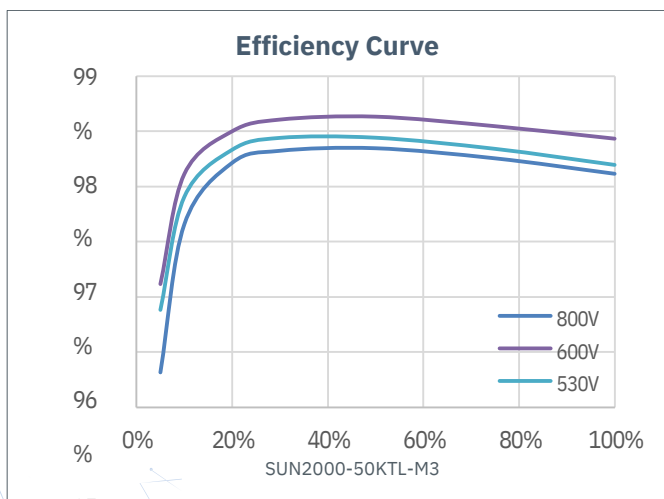
## Active Safety

AI Powered  
Active Arcing Protection



## Flexible Communication

WLAN, Fast Ethernet, 4G  
Communication Supported



**Technical Specification** **SUN2000-50KTL-M3**

Efficiency	
Max.Efficiency	98.5
EuropeanEfficiency	%
	98.0

Input	
Max.InputVoltage1	1,100V
Max. Current perMPPT	30A
Max. Current perInput	20 A
Max. Short Circuit Current perMPPT	40A
StartVoltage	200V
MPPTOperatingVoltageRange2	200 V ~ 1,000V
Rated InputVoltage	600V
Number ofInputs	8
Number of MPPTrackers	4

Output	
Rated AC ActivePower	50,000W
Max. AC ApparentPower	55,000VA
Max. AC Active Power(cosφ=1)	55,000W
Rated OutputVoltage	400 Vac/ 480 Vac, 3W+(N) + PE
Rated AC GridFrequency	50 Hz / 60Hz
Rated OutputCurrent	72.2 A @ 400Vac, 60.1 A @
Max. OutputCurrent	480Vac 79.8 A @ 400Vac, 66.5 A
Adjustable Power FactorRange	@ 480Vac
Max. Total HarmonicDistortion	0.8 LG ... 0.8LD
	<3%

Protection	
Input-side DisconnectionDevice	Yes
Anti-islandingProtection	Yes
AC OvercurrentProtection	Yes
DC Reverse-polarityProtection PV-array String FaultMonitoring DC	Yes
SurgeArrester	TypeII
AC SurgeArrester	TypeII
DC Insulation ResistanceDetection	Yes
Residual Current MonitoringUnit	Yes
ArcFaultProtection	Yes
Ripple ReceiverControl	Yes
Integrated PIDRecovery3	Yes

Communication	
Display	LED Indicators, Bluetooth + APP
RS485	Yes
SmartDongle	WLAN/EthernetviaSmartDongle-WLAN-FE(Optional) 4G/3G/2GviaSmartDongle-4G(Optional)
Monitoring BUS(MBUS)	Yes(IsolationTransformerrequired)

Optimizer Compatibility	
DC MBUSCompatible Optimizer	MERC-1100/1300W-P

General Data	
Dimensions (W x H xD)	640 x 530 x 270 mm (25.2 x 20.9 x 10.6 inch)
Weight (with mountingplate)	49 kg (108.1 lb)
Operating TemperatureRange	-25°C ~ 60°C (-13°F ~ 140°F)
CoolingMethod	Smart Air Cooling
Max. OperatingAltitude	4,000 m (13,123 ft.)
RelativeHumidity	0% RH ~ 100% RH
DCCollector	Amphenol HH4
AC Connector	Waterproof Connector + OT/DT Terminal
ProtectionDegree	IP 66
Topology	Transformerless
Nighttime PowerConsumption	≤ 5.5W

Standard Compliance (more available upon request)	
Safety	EN62109-1/-2, IEC62109-1/-2, EN50530, IEC62116, IEC60068, IEC61683
GridConnectionStandards	IEC 61727, VDE-AR-N4105, VDE0126-1-1, BDEW, G59/3, UTEC15-712-1, CEIO-16, CEIO-21, RD661, RD1699, P.O.12.3, RD413, EN-50438-Turkey, EN-50438-Ireland, C10/11, MEA, ResolutionNo.7, NRS097-2-1, 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)