

SUN2000-30/36/40KTL-M3 Smart PV Controller



Smart

Smart monitoring of 8 strings



Efficient

Maximum efficiency 98.7%



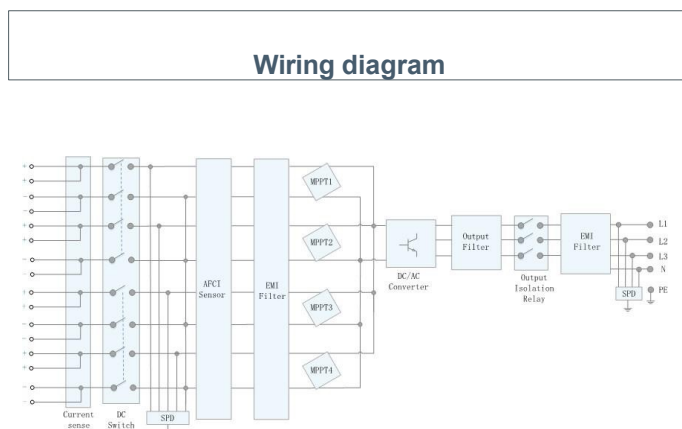
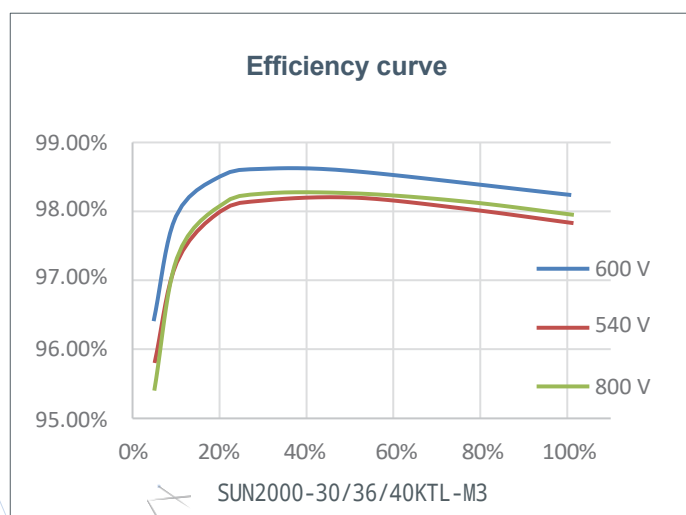
Safe

Fuse-free design



Reliable

Type II surge arresters for both DC and AC



Technical Specifications	SUN2000-30KTL-M3	SUN2000-36KTL-M3	SUN2000-40KTL-M3
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Efficiency

Max. efficiency	98.7%
European efficiency	98.4%

Input

Max. input voltage ¹	1,100 V
Max. current at MPPT	27 A (at MPPT) / 20 A (at input)
Max. short-circuit current at MPPT	40 A
Trigger voltage	200 V
MPPT ² operating voltage range	200 V to 1,000 V
Rated input voltage	600 V
Number of inputs	8
Number of MPP trackers	4

Output

Rated AC active power	30,000 W	36,000 W	40,000 W
Max. AC apparent power	33,000 VA ³	40,000 VA	44,000 VA
Rated output voltage	230 VAC / 400 VAC / 480 VAC, 3W/N + PE		
Rated AC mains frequency	50 Hz / 60 Hz		
Rated output current	43.3 A	52.0 A	57.8 A
Max. output current	47.9 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 disconnect device	Yes
Protection against the island effect	Yes
AC circuit overcurrent protection	Yes
DC circuit 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
Universal remote control receiver	Yes
Integrated PID ⁴ recovery	Yes

Communication

Display	LED indicators, integrated WLAN + FusionSolar APP
RS485	Yes
Smart Dongle	Wi-Fi/Ethernet via Smart Dongle-WLAN-FE (optional) 4G/3G/2G via Smart Dongle-4G (optional)

Basic Specifications

Dimensions (W × H × D)	640 × 530 × 270 mm (25.2 × 20.9 × 10.6")
Weight (including mounting plate)	43 kg (94.8 lb)
Operating temperature range	-25 to +60 °C (-13 to 140 °F)
Cooling method	Natural convection
Maximum operating altitude	4,000 m (13,123 ft) (performance reduction above 2,000 m)
Relative humidity	RH 0-100%
DC connector	Amphenol Helios H4
AC connector	Waterproof connector + OT/DT terminal
Protection rating	IP66
Topology	Without a transformer
Nighttime power consumption	≤5.5 W

Optimizer compatibility

Optimizer compatible with DC MBUS	SUN2000-450W-P, SUN2000-450W-P2, SUN2000-600W-P
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Standard compliance (others available upon request)

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 0126-1-1, BDEWG59/3, 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, AS/NZS 4777.2, DEWA

- The maximum input voltage is the upper limit of the DC voltage. Any higher DC input voltage could damage the inverter.
- Any DC input voltage outside the operating voltage range may cause the inverter to malfunction.
- For Austria, Germany, and Ukraine, the maximum apparent AC power must not exceed 30,000 VA (in accordance with the distribution system code: VDE-AR-N-4105 and Austria).
- The SUN2000-30-40KTL-M3 boosts the potential between the PV terminal and ground above zero using an integrated PID recovery function to mitigate PID-induced module degradation. Supported module types include: Type P (mono, poly)