

SUN2000-20KTL-M3 Smart String Inverter



Smart

8 strings intelligent monitoring



Efficient

Max. efficiency 97.6%



Safe

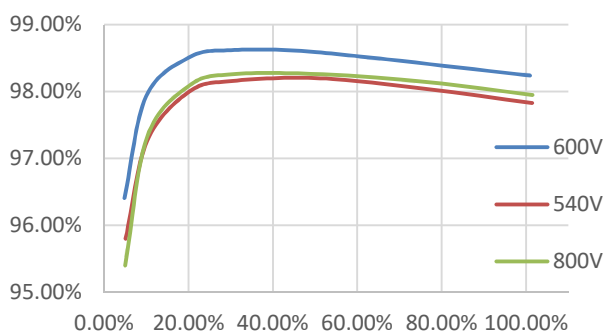
Fuse free design



Reliable

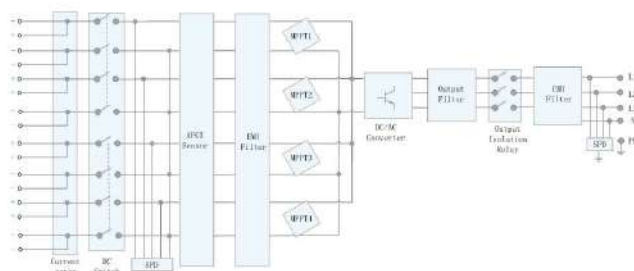
Type II surge arresters for DC & AC

Efficiency Curve



SUN2000-20KTL-M3

Circuit Diagram



Technical Specification

Technical Specification	SUN2000-20KTL-M3
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Efficiency

Max. Efficiency	97.6%
European Efficiency	97.2%

Input

Recommended Max. PV Power	30,000 Wp
Max. Input Voltage ¹	750 V
Max. Current per MPPT	26 A
Max. Short Circuit Current per MPPT	40 A
Start Voltage	200 V
MPPT Operating Voltage Range ²	200 V ~ 750V
Rated Input Voltage	360 V
Number of Inputs	8
Number of MPP Trackers	4

Output

Rated AC Active Power	20,000 W
Max. AC Apparent Power	22,000 VA
Max. AC Active Power (cosφ=1)	22,000 W
Rated Output Voltage	120 Vac / 208 Vac, 3W/N+PE 127 Vac / 220 Vac, 3W/N+PE
Rated AC Grid Frequency	50 Hz / 60Hz
Rated Output Current	57.2 A / 202 Vac 52.5 A / 220 Vac
Max. Output Current	63.2 A / 202 Vac 58.0 A / 220 Vac
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	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 ³	Yes

Communication

Display RS485	LED Indicators, Integrated WLAN + FusionSolar APP 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 (Derating above 45 °C @ Rated output power)
Cooling Method	Natural Convection
Max. Operating Altitude	0 - 4,000 m (Derating above 3000 m)
Relative Humidity	0% RH ~ 100% RH
Protection Degree	IP 66
Topology	Transformerless
Nighttime Power Consumption	≤ 5.5W

Optimizer Compatibility

DC MBUS Compatible Optimizer SUN2000-450W-P

Standard Compliance (more available upon request)

Safety	EN 62109-1/-2, IEC 62109-1/-2, EN 50530, IEC 62116, IEC 60068, IEC 61683
Grid Connection Standards	

1. The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage inverter.

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2. Any DC input voltage beyond the operating voltage range may result in inverter improper operating.

3. SUN2000-30~40KTL-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).