SUN2000-5/8/10KTL-M0

Smart Energy Center

Higher Revenue

Max. efficiency 98.6%

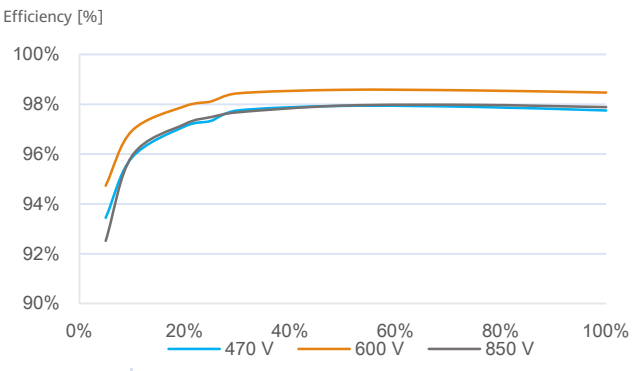
Simple & Easy

17 kg

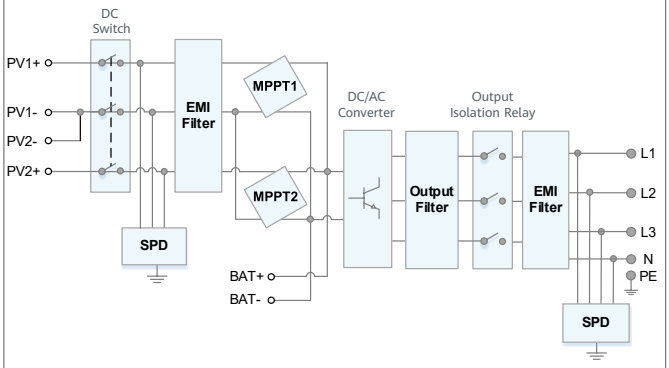
Safe & Reliable

Arc fault protection

Efficiency Curve



Circuit Diagram



SUN2000-5/8/10KTL-M0

Technical Specification

Technical Specification	SUN2000-5KTL-M0	SUN2000-8KTL-M0	SUN2000-10KTL-M0
Efficiency			
Max. efficiency	98.4%	98.6%	98.6%
European weighted efficiency	97.5%	98.0%	98.1%
Input			
Max. input voltage [1]	1,100 V		
Operating voltage range [2]	140 V ~ 980 V		
Start-up voltage	200 V		
Full power MPPT voltage range	240 V ~ 850 V	380 V ~ 850 V	470 V ~ 850 V
Rated input voltage	600 V		
Max. input current per MPPT	11 A		
Max. short-circuit current	15 A		
Number of MPP trackers	2		
Max. number of inputs	2		
Output			
Grid connection	Three-phase		
Rated output power	5,000 W	8,000 W	10,000 W
Max. apparent power	5,500 VA	8,800 VA	11,000 VA
Rated output voltage	220 Vac / 380 Vac, 230 Vac / 400 Vac , default 3W / N+PE ; 3W+PE		
Rated AC grid frequency	50 Hz / 60 Hz		
Max. output current	8.5 A	13.5 A	16.9 A
Adjustable power factor	0.8 leading ... 0.8 lagging		
Max. total harmonic distortion	≤ 3 %		
Features & Protections			
Input-side disconnection device	Yes		
Anti-Islanding protection	Yes		
DC reverse polarity protection	Yes		
Insulation monitoring	Yes		
DC surge protection	Yes, compatible TYPE II protection class according to EN/IEC 61643-11		
AC surge protection	Yes, compatible TYPE II protection class according to EN/IEC 61643-11		
Residual current monitoring	Yes		
AC overcurrent protection	Yes		
AC short-circuit protection	Yes		
AC overvoltage protection	Yes		
Ripple receiver control	Yes		
Arc fault protection (AFCI)	Yes		
General Data			
Operating temperature range	-25 ~ + 60 °C (-13 °F ~ 140 °F)		
Relative operating humidity	0 %RH ~ 100 %RH		
Operating altitude	0 - 4,000 m (13,123 ft.)		
Cooling	Natural convection		
Display	LED Indicators; Integrated WLAN + FusionSolar App		
Communication	RS485; WLAN/Ethernet via Smart Dongle-WLAN-FE; 4G / 3G / 2G via Smart Dongle-4G (Optional)		
Weight (incl. mounting bracket)	17 kg (37.5 lb)		
Dimension (incl. mounting bracket)	525 * 470 * 166 mm (20.7 * 18.5 * 6.5 inch)		
Degree of protection	IP65		
Night Time Power Consumption	< 5.5 W		
Standard Compliance (more available upon request)			
Safety	EN/IEC 62109-1, EN/IEC 62109-2, IEC62116		
Grid connection standards	G98, G99, EN 50438, EN 50549-1. CEI 0-21, VDE-AR-N-4105, AS 4777, C10/11, ABNT, UTE C15-712, RD 1699, TOR D4, IEC61727, DEWA, MEA(5,10KTL-M0), PEA(5,10KTL-M0)		

*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.
*

Smart PV Controller

inter solar award 2019 WINNER

Active Safety

AI Powered Arcing Protection

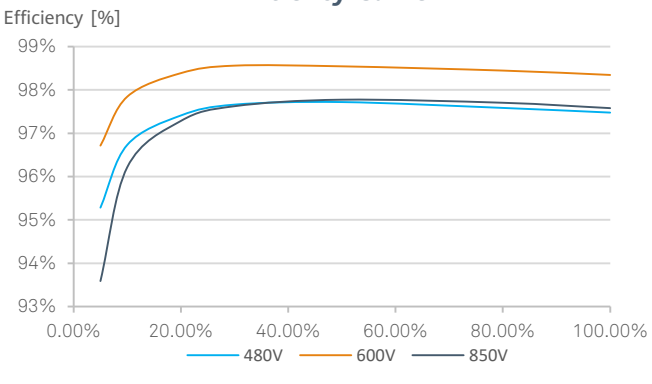
Higher Yields

Up to 30% More Energy with Optimizer [1]

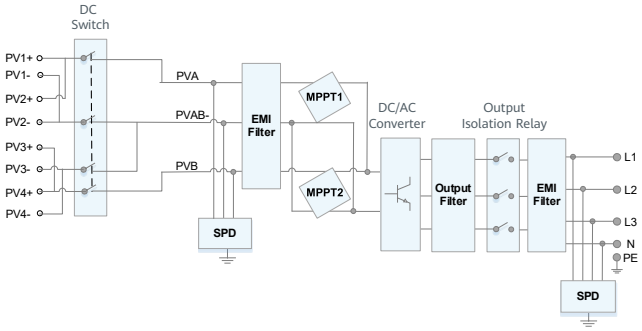
Flexible Communication

WLAN, Fast Ethernet, 4G Communication Supported

Efficiency Curve



Circuit Diagram



SUN2000-12/15/17/20KTL-M0/M2

*1 Only applicable to SUN2000-12/15/17/20KTL-M2 inverter.

Technical Specification

Technical Specification	SUN2000 -12KTL-M0	SUN2000 -15KTL-M0	SUN2000 -17KTL-M0	SUN2000 -20KTL-M0
Efficiency				
Max. efficiency	98.50%	98.65%	98.65%	98.65%
European weighted efficiency	98.00%	98.30%	98.30%	98.30%
Input				
Recommended max. PV power	24,000 Wp	29,760 Wp	29,760 Wp	29,760 Wp
Max. input voltage [1]	1,080 V			
Operating voltage range [2]	160 V ~ 950 V			
Start voltage	200 V			
Rated input voltage	600 V			
Max. input current per MPPT	22 A			
Max. short-circuit current	30 A			
Number of MPP trackers	2			
Max. input number per MPP tracker	2			
Output				
Grid connection	Three phase			
Rated output power	12,000 W	15,000 W	17,000 W	20,000 W
Max. apparent power	13,200 VA	16,500 VA	18,700 VA	22,000 VA
Rated output voltage	220 Vac / 380 Vac, 230 Vac / 400 Vac, 3W + N + PE			
Rated AC grid frequency	50 Hz / 60 Hz			
Max. output current	20 A	25.2 A	28.5 A	33.5 A
Adjustable power factor	0.8 leading ... 0.8 lagging			
Max. total harmonic distortion	≤ 3 %			
Features & Protections				
Input-side disconnection device	Yes			
Anti-islanding protection	Yes			
AC over-current protection	Yes			
AC short-circuit protection	Yes			
AC over-voltage protection	Yes			
DC reverse-polarity protection	Yes			
DC surge protection	Type II			
AC surge protection	Yes, compatible TYPE II protection class according to EN/IEC 61643-11			
Residual current monitoring unit	Yes			
Arc fault protection	Yes			
Ripple receiver control	Yes			
General Data				
Operation temperature range	-25 ~ +60 °C (-13 °F ~ 140 °F)			
Relative humidity	0 % RH ~ 100% RH			
Max. operating altitude	0 - 4,000 m (13,123 ft.) (Derating above 2000 m)			
Cooling	Natural Convection			
Display	LED indicators; integrated WLAN + FusionSolar APP			
Communication	RS485; WLAN/Ethernet via Smart Dongle-WLAN-FE (Optional) 4G / 3G / 2G via Smart Dongle-4G (Optional)			
Weight (with mounting plate)	25 kg			
Dimensions (W x H x D) (incl. mounting plate)	525 x 470 x 262 mm (20.7 x 18.5 x 10.3 inch)			
Degree of protection	IP65			
Nighttime Power Consumption	< 5.5 W			
Standard Compliance (more available upon request)				
Safety	EN/IEC 62109-1, EN/IEC 62109-2			
Grid connection standards	G98, G99, EN 50438, EN50549, CEI 0-21, CEI 0-16, VDE-AR-N-4105, VDE-AR-N-4110, AS 4777, C10/11, ABNT, UTE C15-712, RD 1699, RD 661, PO 12.3, TOR D4, IEC61727, IEC62116, 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.

Smart String Inverter

Smart I-V Curve Diagnosis supported

Max. efficiency 98.7%

Fuse free design

Protection degree of IP65

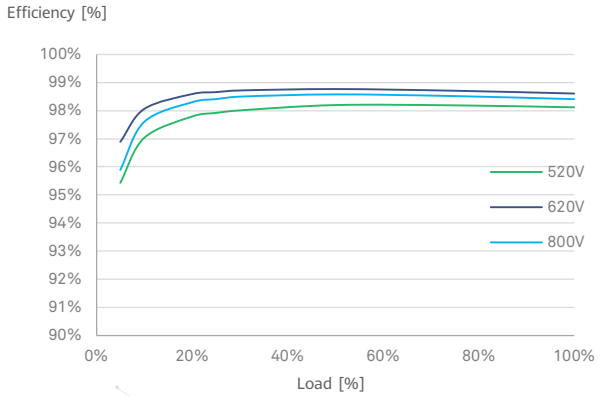
12 strings intelligent monitoring and fast trouble-shooting

Type II surge arresters for both DC and AC

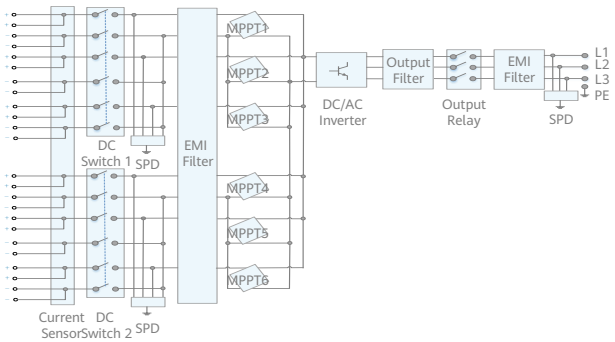
Residual Current Monitoring Unit (RCMU) integrated

MBUS supported

Efficiency Curve



Circuit Diagram



SUN2000-50KTL-M0

Technical Specification	SUN2000-50KTL-M0
Efficiency	
Max. Efficiency	98.7%
European Efficiency	98.5%
Input	
Max. Input Voltage	1,100 V
Max. Current per MPPT	22 A
Max. Short Circuit Current per MPPT	30 A
Start Voltage	200 V
MPPT Operating Voltage Range	200 V ~ 1,000 V
Rated Input Voltage	600 V
Number of Inputs	12
Number of MPP Trackers	6
Output	
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	220 V / 230 V, default 3W + N + PE; 380 V / 400 V, 3W + PE
Rated AC Grid Frequency	50 Hz / 60 Hz
Rated Output Current	76 A @380 V / 72.2 A @400 V
Max. Output Current	83.6 A @380 V / 79.4 A @400 V
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
Communication	
Display	LED Indicators, Bluetooth + APP
RS485	Yes
USB	Yes
Monitoring BUS (MBUS)	Yes
General Data	
Dimensions (W x H x D)	1,075 x 555 x 300 mm (42.3 x 21.9 x 11.8 inch)
Weight (with mounting plate)	74 kg (163.1 lb.)
Operating Temperature Range	-25°C ~ 60°C (-13°F ~ 140°F)
Cooling Method	Natural Convection
Max. Operating Altitude	4,000 m (13,123 ft.)
Relative Humidity	0 ~ 100%
DC Connector	Amphenol Helios H4
AC Connector	Cable Gland + OT Terminal
Protection Degree	IP65
Topology	Transformerless
Nighttime Power Consumption	< 2 W
Standard Compliance (more available upon request)	
Certificate	EN 62109-1/-2, IEC 62109-1/-2, EN 50530, IEC 62116, IEC 62910, IEC 60068, IEC 61683
Grid Code	IEC 61727, G59/3, AS/NZS 4777.2, EN50438, VDE4105/0126