

Smart String Inverter (SUN2000-42KTL)



Smart

- 4 MPPTs for versatile adaptations to different layouts
- 8 strings intelligent monitoring and fast trouble-shooting
- Power Line Communication (PLC) supported
- Smart String I-V Diagnosis supported

Efficient

- Max. efficiency 98.8%, European efficiency 98.6%

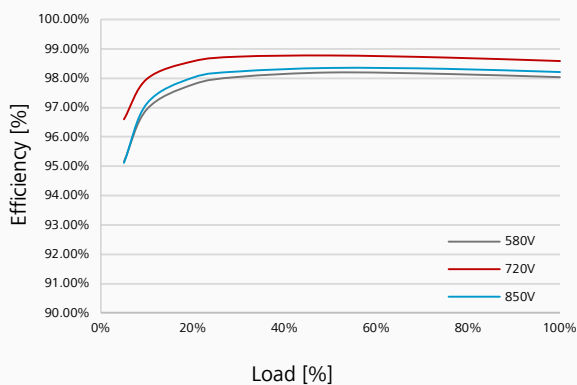
Safe

- DC disconnect integrated, safe and convenient for maintenance
- Type II surge arresters for both DC and AC
- Ground fault protection
- Residual Current Monitoring Unit (RCMU) integrated inside

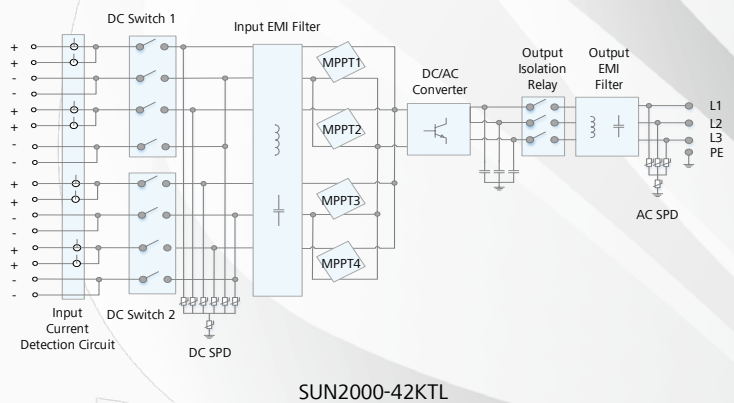
Reliable

- No need for external fans with natural cooling technology
- Protection rating of IP65

Efficiency Curve



Circuit Diagram



Smart String Inverter (SUN2000-42KTL)



Technical Specifications	SUN2000-42KTL
Efficiency	
Max. Efficiency	98.8%
European Efficiency	98.6%
Input	
Max. DC Usable Power	47,900 W
Max. Input Voltage	1,100 V
Max. Current per MPPT	22 A
Max. Short Circuit Current per MPPT	30 A
Min. Operating Voltage / Start Input Voltage	200 V / 250 V
Full Power MPPT Voltage Range	580 V ~ 850 V
MPPT Operating Voltage Range	200 V ~ 1000 V
Rated Input Voltage	720 V
Max. Number of Inputs	8
Number of MPP Trackers	4
Output	
Rated AC Active Power	42,000 W
Max. AC Apparent Power	47,000 VA
Max. AC Active Power (cosφ=1)	Default 47,000 W; 42,000W optional in settings
Rated Output Voltage	277V / 480V, 3W+PE
Rated AC Grid Frequency	50 Hz / 60 Hz
Max. Output Current	56.6 A
Adjustable Power Factor	0.8 LG ... 0.8 LD
Max. Total Harmonic Distortion	< 3%
Protection	
Input-side Disconnection Device	Yes
Anti-Islanding Protection	Yes
DC Reverse-Polarity Protection	Yes
PV-array String Fault Monitoring	Yes
DC Surge Arrester	Type II
AC Surge Arrester	Type II
Insulation Detection	Yes
Residual Current Monitoring Unit	Yes
Communication	
Display	LED Indicators
USB / Bluetooth +APP	Yes
RS485	Yes
PLC	Yes
General	
Dimensions (W×H×D, with mounting plate)	930 × 550 × 283 mm (36.6 x 21.7 x 11.1 inches)
Weight	60 kg (132.3 lb.), without mounting plate 62 kg (136.7 lb.), with mounting plate
Operation Temperature Range	-25 °C ~ 60 °C (-13°F ~ 140°F)
Cooling	Natural Convection
Max. Operating Altitude	4,000 m (13,123 ft.)
Relative Humidity	0 ~ 100%
DC Connector	Amphenol Helios H4
AC Connector	Waterproof PG Terminal + OT Connector
Protection Rating	IP65
Topology	Transformerless
Standards Compliance	
Safety	EN/IEC 62109-1, EN/IEC 62109-2
Grid Code	IEC 61727, IEC62116, VDE-AR-N4105, VDE 0126-1-1, BDEW 2008, G59/3, UTE C 15-712-1, CEI 0-16, CEI 0-21, RD 661/2007, RD 1699/2011, RD 413/2014, PO 12.3, EN-50438-Turkey, EN-50438-Ireland, PEA, Resolution No.7, NRS 097-2-1