

String Inverter (SUN2000-45KTL-US-HV)



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

Safe

- DC AFCI compliant to UL 1699B
- DC disconnect integrated, safe and convenient for maintenance
- Category surge arresters for both DC and AC
- Ground fault protection
- Residual Current Detection (RCD) protection

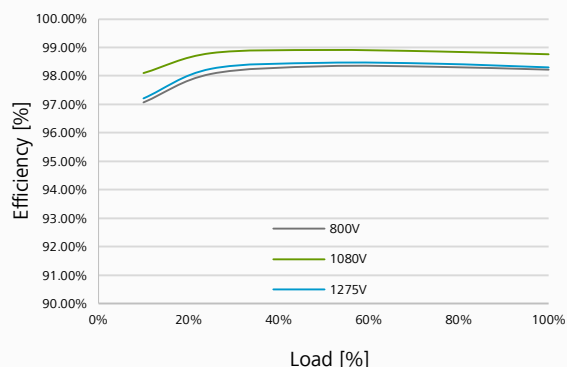
Efficient

- Max. efficiency 98.8%, CEC. efficiency 98.5%

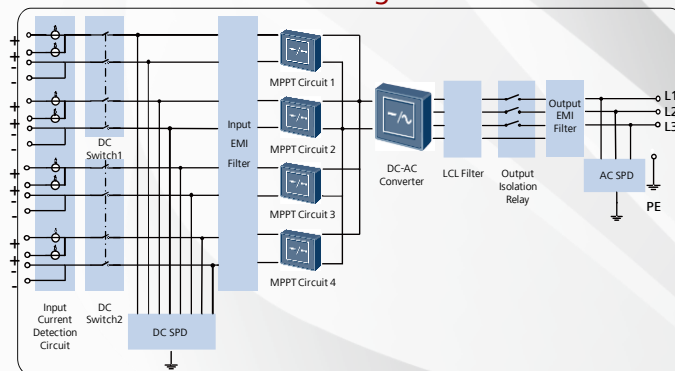
Reliable

- Natural cooling technology
- Protection rating of NEMA 4X

Efficiency Curve



Circuit Diagram



SUN2000-45KTL-US-HV



String Inverter (SUN2000-45KTL-US-HV)



Technical Specifications	SUN2000-45KTL-US-HV-D0
Efficiency	
Max. Efficiency	98.8%
California Energy Commission Efficiency	98.5%
Input	
Max. Input Voltage	1,500 V
Max. Current per MPPT	22 A
Max. Short Circuit Current per MPPT	30 A
Min. Operating Voltage / Start Voltage	600V / 650V
Full Power MPPT Voltage Range	880 V ~ 1,275 V
MPPT Operating Voltage Range	600 V ~ 1,450 V
Rated Input Voltage	1,080 V
Max. Number of Inputs	8
Number of MPP Trackers	4
Output	
Rated AC Active Power	45,000 W
Max. AC Apparent Power	50,000 VA
Max. AC Active Power (cosφ=1)	45,000 W
Rated Output Voltage	600 Vac, 3W+PE
Rated AC Grid Frequency	50 Hz / 60 Hz
Max. Output Current	48.1 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
AC Overcurrent Protection	Yes
DC Reverse-Polarity Protection	Yes
PV-array String Fault Monitoring	Yes
DC Surge Arrester	Category C
AC Surge Arrester	Category C
Insulation Monitoring	Yes
Residual Current Detection	Yes
Communication	
Display	LED Indicators
RS485	Yes
USB / Bluetooth + APP	Yes
Power Line Communication (PLC)	Yes
General	
Dimensions (W×H×D)	36.6×23.6×10.6 inches (930×600×270 mm)
Weight	143 lb. (65 kg)
Operation Temperature Range	-13°F ~ +140°F (-25 °C ~ +60 °C)
Cooling	Natural Convection
Max. Operating Altitude Without Derating	13,123 ft. (4,000 m)
Relative Humidity	0 ~ 100%
DC Connector	Amphenol Helios H4
AC Connector	Waterproof PG Terminal + OT Connector
Protection Rating	NEMA 4X
Internal Consumption at Night	< 3 W
Topology	Transformerless
Standards Compliance	
Safety /EMC	UL 1741, UL 1699B, UL 1998, CSA C22.2 #107.1-01, FCC Part 15
Grid Code	IEEE 1547, IEEE 1547.1

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