

Smart String Inverter

SUN2000-45KTL-US-HV-D0



Smart

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

Efficient

- Max. efficiency 98.7%
- CEC. efficiency 98.5%

Safe

- DC AFCI compliant to UL 1699B Type I
- Type II surge arresters for both DC and AC
- Residual Current Detection (RCD) protection

Reliable

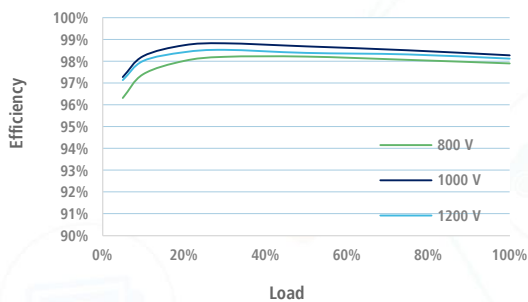
- Natural cooling technology
- Fuse free design
- Protection rating of NEMA Type 4X

Smart String Inverter (SUN2000-45KTL-US-HV-D0)



Technical Specifications	SUN2000-45KTL-US-HV-D0
	Efficiency
Max. Efficiency	98.7%
CEC Efficiency	98.5%
	Input
Max. Input Voltage	1,500 V
Max. Current per MPPT	22 A
Max. Short Circuit Current per MPPT	30 A
Start Voltage	650 V
MPPT Operating Voltage Range	600 V ~ 1,450 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)	50,000 W
Rated Output Voltage	600 Vac, 3W+PE
Rated AC Grid Frequency	60 Hz
Max. Output Current	48 A
Adjustable Power Factor	0.8 LG ... 0.8 LD
Max. Total Harmonic Distortion	< 3%
	Protection
DC Arc Fault Circuit Interrupter	Yes, compliant to UL 1699B Type I
Input-side Disconnection Device	Yes
Anti-Islanding Protection	Yes
DC Reverse-Polarity Protection	Yes
AC Overcurrent Protection	Yes
PV-array String Fault Monitoring	Yes
DC Surge Arrester	Type II
AC Surge Arrester	Type II
DC Insulation Detection	Yes
Residual Current Detection	Yes
	Communication
Display	LED Indicators
USB / Bluetooth + APP	Yes
RS485	Yes
Power Line Communication (PLC)	Yes
	General
Dimensions (W×H×D, With Mounting Plate)	36.6 inch × 23.6 inch × 10.6 inch (930 mm × 600 mm × 270 mm)
Weight (With Mounting Plate)	141 lb. (64 kg)
Operation Temperature Range	-13°F ~ 140°F (-25°C ~ 60°C)
Cooling	Natural Convection
Max. Operating Altitude	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 Type 4X
Topology	Transformerless
	Standards Compliance
Safety / EMC	UL 1741, UL 1699B, CSA C22.2 #107.1-01, FCC Part 15
Grid Code	IEEE 1547, IEEE 1547a

Efficiency Curve



Circuit Diagram

