



TECHNISCHES DATENBLATT WECHSELRICHTER

SUN2000-215KTL-H0

Smart String Inverter



9
MPP Trackers



Max. Efficiency
≥99.0%



Smart String-Level
Disconnecter



Smart I-V Curve Diagnosis
Supported



MBUS
Supported



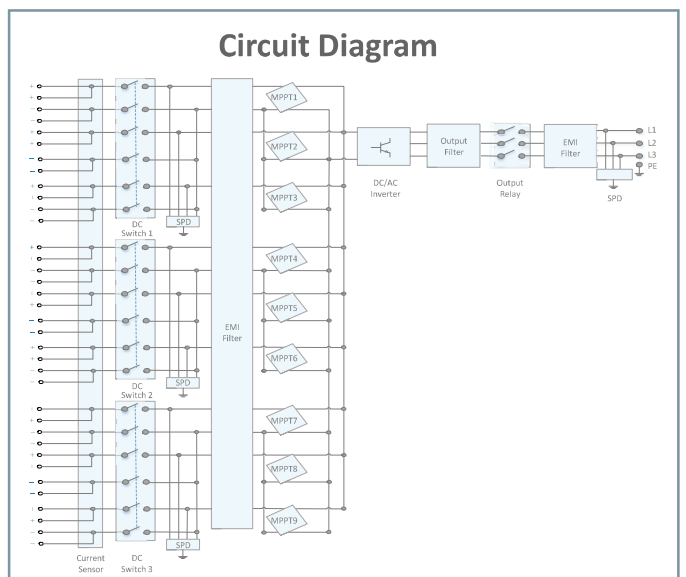
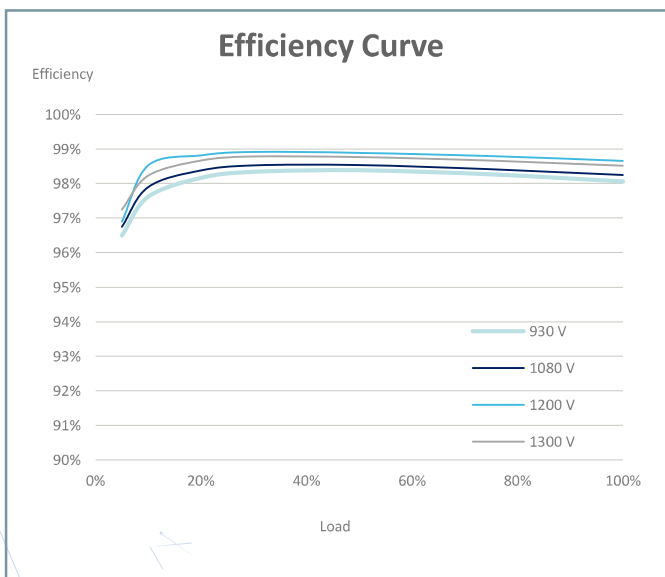
Fuse Free
Design



Surge Arresters for
DC & AC



IP66
Protection



Technical Specifications

Efficiency	
Max. Efficiency	99.00%
European Efficiency	98.80%
Input	
Max. Input Voltage	1,500 V
Max. Current per MPPT	30 A
Max. Short Circuit Current per MPPT	50 A
Start Voltage	550 V
MPPT Operating Voltage Range	500 V ~ 1,500 V
Nominal Input Voltage	1,080 V
Number of Inputs	18
Number of MPP Trackers	9
Output	
Nominal AC Active Power	200,000 W
Max. AC Apparent Power	215,000 VA
Max. AC Active Power (cosφ=1)	215,000 W
Nominal Output Voltage	800 V, 3W + PE
Rated AC Grid Frequency	50 Hz / 60 Hz
Nominal Output Current	144.4 A
Max. Output Current	155.2 A
Adjustable Power Factor Range	0.8 LG ... 0.8 LD
Total Harmonic Distortion	< 1%
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, WLAN + APP
USB	Yes
MBUS	Yes
RS485	Yes
General	
Dimensions (W x H x D)	1,035 x 700 x 365 mm (40.7 x 27.6 x 14.4 inch)
Weight (with mounting plate)	≤86 kg (189.6 lb.)
Operating Temperature Range	-25°C ~ 60°C (-13°F ~ 140°F)
Cooling Method	Smart Air Cooling
Max. Operating Altitude without Derating	4,000 m (13,123 ft.)
Relative Humidity	0 ~ 100%
DC Connector	Staubli MC4 EVO2
AC Connector	Waterproof Connector + OT/DT Terminal
Protection Degree	IP66
Topology	Transformerless

2 Test Results

2.1 Test Items and Results

Table 1 Test items and results

SN	Test Item	Standard Compliance	Test Parameter	Result	Location
1	Low temperature storage	IEC 60068-2-1 :2007	-40°C, 24h	Pass	Location 1
2	High temperature storage	IEC 60068-2-2 :2007	+70°C, 24h	Pass	Location 1
3	Damp heat steady state storage	IEC60068-2-78 :2012	+60°C, 95%RH, 96h	Pass	Location 1
4	Low temperature operation	IEC 60068-2-1 :2007	-25°C, 24h	Pass	Location 1
5	High temperature operation	IEC 60068-2-2 :2007	+60°C, 24h	Pass	Location 1
6	Temperature cycle operation	IEC 60068-2-14 :2009	-25°C to +60°C, 1°C/min, 3h soaked at each extreme temperature, 2 cycles	Pass	Location 1
7	Damp heat steady state operation	IEC60068-2-78 :2012	+60°C, 95%RH, 96h	Pass	Location 1
8	Damp heat cyclic operation	IEC 60068-2-30 :2005	+25°C~+60°C,95%, 48h	Pass	Location 1
9	Sinusoidal vibration operation (Test sample: package)	IEC 60068-2-6:2007	5 Hz to 9 Hz, Amplitude: 1.2 mm (O-P) 9 Hz to 200 Hz, Acceleration: 1 g 1oct/min, 3 axes, 5sweep cycles per axis	Pass	Location 1
10	Sinusoidal vibration operation (Test sample: product)	IEC 60068-2-6:2007	5 Hz to 9 Hz, Amplitude: 1.2 mm (O-P) 9 Hz to 200 Hz, Acceleration: 0.4 g 1oct/min, 3 axes, 5sweep cycles per axis	Pass	Location 1
11	Random Vibration operation	IEC 60068-2-64:2008	10Hz to 100Hz, Grms: 0.5 30min/ axis, 3 axes,	Pass	Location 1
12	Shock operation	IEC 60068-2-27:2008	Half sine, 11ms, 50m/s ² , 3 axes, 6 times per axis	Pass	Location 1
13	IP66	IEC60529:2001	IP66	Pass	Location 2
14	Salty Test	IEC 60068-2-52	28 day	Pass	Location 3
15	Acoustic test	NB/T 32004	Measurement surface, ≤ 65dB(A);	Pass	Location 4

2.2 Test Instruments

See the 3rd lab test report.

2.3 Auxiliary Equipments

Table 2 List of test auxiliary instruments

Name	Model	Manufacturer	Asset Number	Calibration Date	Calibration Interval (month)
DC Power Supply	N8957APV	Keysight	DE17052080	2019-10-23	12
DC Power Supply	N8957APV	Keysight	DE17062115	2019-10-23	12
DC Power Supply	N8957APV	Keysight	DE17122250	2019-7-04	12
DC Power Supply	N8957APV	Keysight	DE17032052	2019-10-23	12
DC Power Supply	N8957APV	Keysight	DE16391780	2019-10-23	12
DC Power Supply	N8957APV	Keysight	DE17022038	2019-10-23	12
DC Power Supply	N8957APV	Keysight	DE16231520	2019-10-23	12
DC Power Supply	N8957APV	Keysight	DE17062112	2019-10-23	12
DC Power Supply	N8957APV	Keysight	DE16431833	2020-7-11	12
DC Power Supply	N8957APV	Keysight	DE16391766	2020-7-11	12
DC Power Supply	N8957APV	Keysight	DE16391781	2020-7-11	12
DC Power Supply	N8957APV	Keysight	DE16411817	2020-7-11	12
DC Power Supply	N8957APV	Keysight	DE16391771	2020-7-11	12
DC Power Supply	N8957APV	Keysight	DE16341684	2020-7-11	12
DC Power Supply	N8957APV	Keysight	DE16341675	2019-10-23	12

3 Product Specification

3.1 Main Product

Table 3 Main product specification

SUN2000-196KTL-H0	
Rated Input Voltage	1080V DC,~800V AC,50Hz
Rated Power	196KW
Output Max Power	216KVA
SUN2000-200KTL-H2	
Rated Input Voltage	1080V DC,~800V AC,50Hz/60Hz
Rated Power	185KW
Output Max Power	215KVA
SUN2000-215KTL-H0	
Rated Input Voltage	1080V DC,~800V AC,50Hz/60Hz
Rated Power	200KW
Output Max Power	215KVA

	System monitor function	Normal	Normal	Normal	Normal
	Alarm information	No any Alarm information	No any Alarm information	No any Alarm information	No any Alarm information

4.13 IP Test

The test results meet the standard IEC60529-2001. For more details, see test report AGZ-20050017RT.

4.14 Salty Test

The test results meet the standard IEC60068-2-52. For more details ,see test report S456A-YW(1)-2020.

4.15 Acoustic Test

4.15.1 Test Procedure

- 1) Put the sample in the center of the hemi-anechoic room.
- 2) The locations of microphones are lay as the following figure.
- 3) Measure the background noise.
- 4) Power on the EUT, then adjust fan speed.
- 5) Record the data of the measurement points, and then calculate the sound power level.d=1m

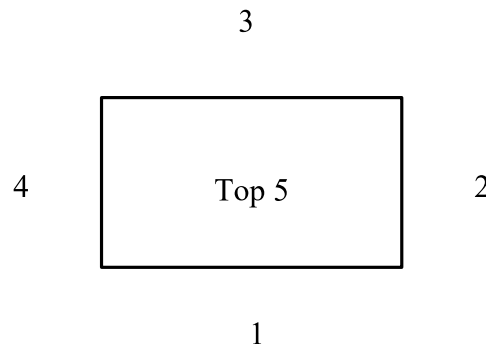


Figure 15. Photograph of Acoustic Test

4.15.2 Detailed Test Data

- 1) Sound pressure level produced by equipment while the rotational speed of air moving devices within the equipment under test is set to the speed that the devices would run at when the equipment is operating in an ambient temperature equal to full speed.

Table 17 Detailed test data of acoustic test

Test Item	Measurement max Point	Sound Pressure Level (dB(A))
Acoustic test		62.8
Background noise		60.1 dB(A)
Qualification criterion		≤65dB(A)