SG3300UD-MV
SG4400UD-MV

Turnkey Station for 1500 Vdc System MV Transformer Integrated

HIGH YIELD

- Advanced three-level technology, max. inverter efficiency 99%
- Effective cooling, full power operation at 45 ℃

SMART O&M

- Integrated zone monitoring and MV parameters monitoring function for online analysis and trouble shooting
- Modular design, easy for maintenance

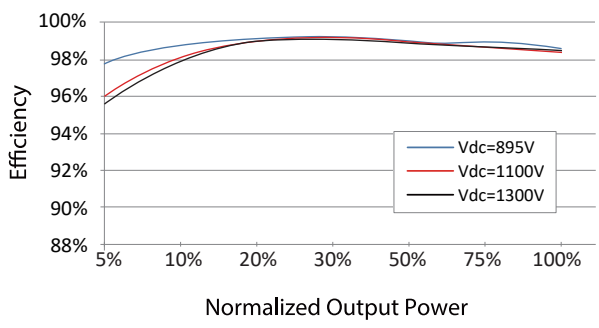
SAVED INVESTMENT

- Low transportation and installation cost due to 20-foot container design
- DC 1500V system, low system cost
- Integrated MV transformer, switchgear, and LV auxiliary power supply
- Q at night function optional

GRID SUPPORT

- Compliance with standards: IEC 61727, IEC 62116, IEC 62271-202, IEC 62271-200, IEC 60076
- Low/High voltage ride through (L/HVRT)
- Active & reactive power control and power ramp rate control

EFFICIENCY CURVE



SUNGROW
Clean power for all

Type Designation	SG3300UD-MV	SG4400UD-MV
Input (DC)		
Max. PV input voltage	1500 V	
Min. PV input voltage / Startup input voltage	895 V / 905 V	
MPP voltage range	895 – 1500 V	
No. of independent MPP inputs	3	4
No. of DC inputs	15(optional: 18/21 inputs negative grounding)	20(optional: 24/28 inputs negative grounding)
Max. PV input current	3 * 1400 A	4 * 1435 A
Max. DC short-circuit current	3 * 3528 A	4 * 3528 A
PV array configuration	Negative grounding or floating	
Output (AC)		
AC output power	3300 kVA @ 45 ℃ 3399 kVA @ 40 ℃ 3795 kVA @ 22.5 ℃	4400 kVA @ 45 ℃ 4532 kVA @ 40 ℃ 5060 kVA @ 22.5 ℃
Max. inverter output current	3 * 1160 A	4 * 1160 A
Max. AC output current	219.2 A	292.2 A
AC voltage range	10 kV – 35 kV	
Nominal grid frequency / Grid frequency range	50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz	
Harmonic (THD)	< 3 % (at nominal power)	
Power factor at nominal power / Adjustable power factor	> 0.99 / 0.8 leading – 0.8 lagging	
Feed-in phases / AC connection	3 / 3	
Efficiency		
Inverter max. efficiency / Inverter European efficiency	99.0 % / 98.8 %	
Transformer		
Transformer rated power	3300 kVA	4400 kVA
Transformer max. power	3795 kVA	5060 kVA
LV / MV voltage	0.63 kV / (10 – 35) kV	
Impedance	7 % (0 ~ ± 10 %) @ 3300 kVA	8 % (0 ~ ± 10 %) @ 4400 kVA
Transformer vector	Dy11	
Transformer cooling type	ONAN	
Oil type	Mineral oil (PCB free) or degradable oil on request	
Protection & Function		
DC input protection	Load break switch + fuse	
Inverter output protection	Circuit breaker	
AC MV output protection	Circuit breaker	
Surge protection	DC Type II / AC Type II	
Grid monitoring / Ground fault monitoring	Yes / Yes	
Insulation monitoring	Yes	
Overheat protection	Yes	
Q at night function	Optional	
General Data		
Dimensions (W*H*D)	6058 * 2896 * 2438 mm	
Weight	17.5 T	20 T
Degree of protection	Inverter: IP65 / Others: IP54	
Auxiliary power supply	5 kVA (optional: max. 40 kVA)	
Operating ambient temperature range	-35 to 60 ℃ (> 45 ℃ derating)	
Allowable relative humidity range	0 – 100 %	
Cooling method	Temperature controlled forced air cooling	
Max. operating altitude	1000 m (standard) / > 1000 m (optional)	
Display	LED indicators, WLAN + WebHMI	
Communication	Standard: RS485, Ethernet; Optional: optical fiber; MPLC	
Compliance	CE, IEC 62109, IEC 61727, IEC 62116, IEC 60068, IEC 61683, IEC62271-202, VDE-AR-N 4110:2018, VDE-AR-N 4120:2018, EN 50549-2, UNE 206007-1:2013, P.O.12.3, UTE C15-712-1:2013	
Grid support	Q at night (Optional), L/HVRT, active & reactive power control and power ramp rate control	

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Noise Test Report

TYPE TEST SHEET

This Type Test sheet shall be used to record the results of the type testing of Generating Unit			
Report reference number		RZ2023040702	
Report version		V1.0	
Date of issue		2023-04-07	
Standard reference		IEC 62109-1_2010	
Generating Unit technology		Grid-connected PV Inverter	
Inverter Type		SG4400UD-MV	
Rated power (KW)		4400	
Rated AC voltage (V)		630	
System supplier name		Sungrow Power Supply Co., Ltd.	
Address		No.1699 Xiyou Rd., New & High Technology Industrial Development Zone, Hefei, P.R. China	
Compiled by	张文明	Approved by	

Note that testing can be done by the manufacturer of an individual component, by an external test house, or by the supplier of the complete system, or any combination of them as appropriate.

Where parts of the testing are carried out by persons or organisations other than the supplier then the supplier shall keep copies of all test records and results supplied to them to verify that the testing has been carried out by people with sufficient technical competency to carry out the tests.

Report Version	Description
V1.0	Initial

The aim of this test is to determine the noise level when the PV Grid inverter in rated working condition.

Standard requirements: If equipment produces noise at a level that could cause a hazard, the noise shall be measured to determine the maximum sound pressure level that the equipment can produce (except that sound from alarms and from parts located remotely is not included). If the measured sound pressure exceeds 80dBA above a reference sound pressure of 20 μP, at a measurement distance of 1 m, the instructions shall include information regarding the sound pressure level and how to reduce the risk of hearing damage to safe levels, and the product shall be marked with symbol 22 of Annex C.

- **Used settings of the measurement device for Noise measurement:**

Measurement device	Calibration Date	Expire Date
AWA6228+	2023-01-02	2024-01-01

- **The conditions during testing are specified below:**

PV inverter operation mode	Actual operation condition （4839KW）
Voltage range	895-1300V
Grid frequency range	50Hz
Distance	1m、5m、10 m
Testing duration	10min
Date	2023-04-07

- **The system noise level please check the table below:**

1）Actual operation condition（1m@4839KW）

Orientation	Noise (dB)_1m
Front	85.0
Behind	85.0
Left	85.0
Right	84.0
Maximum Noise	85.0

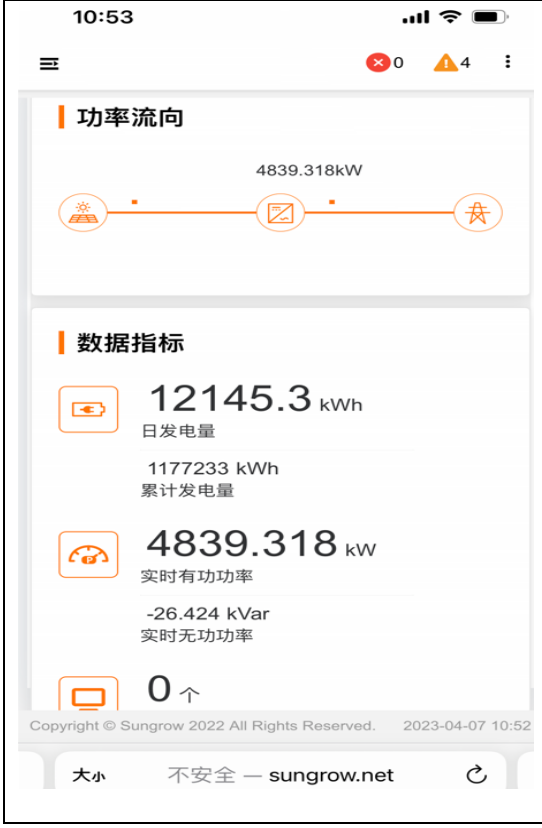
2）Actual operation condition（5m@4839KW）

Orientation	Noise (dB)_5m
Front	73.0
Behind	76.0
Left	73.0
Right	69.0
Maximum Noise	76.0

3）Actual operation condition（10m@4839KW）

Orientation	Noise (dB)_10m
Front	64.0
Behind	72.0
Left	66.0
Right	63.0
Maximum Noise	72.0

Site photos:
Actual operation condition

Actual operation condition	Background noise
	

1）1m noise photo

Front

Behind


F:DATA_0001
NR= 85(dB)
Respond:F Lp Max Min LeqT
SPL(Z) 85.9 125.0 70.8 93.9
SPL(C) 85.4 113.7 69.9 84.0
SPL(A) 85.3 94.6 65.4 80.9
16kHz 56.6 65.6 28.5 51.9
8kHz 68.7 73.9 48.5 64.9
4kHz 80.6 84.8 59.1 76.4
2kHz 78.4 85.9 53.6 73.4
1kHz 79.0 86.7 50.1 73.1
500Hz 79.8 88.5 57.5 75.4
250Hz 73.7 99.3 63.0 73.9
125Hz 71.9 108.2 56.4 73.2
63Hz 65.2 109.0 50.1 73.0
31.5Hz 67.8 110.9 54.6 77.4
16Hz 62.3 117.6 44.2 85.6
列表 Wei:Z Tm=00h21m29s 启动
AWA6228 型多功能声级计（噪声分析仪）
删除
设置
关机
输出
Left


1/1 OCT分析仪
F:DATA_0001
NR= 84(dB)
Respond:F Lp Max Min LeqT
SPL(Z) 90.1 125.0 70.8 94.2
SPL(C) 86.9 113.7 69.9 83.4
SPL(A) 86.1 94.6 65.4 79.4
16kHz 60.4 65.6 28.5 50.5
8kHz 69.0 72.8 48.5 63.8
4kHz 79.8 84.7 59.1 75.5
2kHz 80.8 81.1 53.6 70.8
1kHz 82.5 84.8 50.1 70.4
500Hz 81.8 88.5 57.5 74.6
250Hz 75.1 99.3 63.0 75.0
125Hz 76.0 108.2 56.4 72.6
63Hz 70.2 109.0 50.1 73.1
31.5Hz 76.2 110.9 54.6 77.3
16Hz 93.8 117.6 44.2 86.0
列表 Wei:Z Tm=00h19m18s 启动
AWA6228 型多功能声级计（噪声分析仪）
Right

2）5m noise photo

Front

Behind


2023-04-07
F:DATA_0001
NR= 73(dB)
Respond:F Lp Max Min LeqT
SPL(Z) 81.4 90.6 77.8 82.6
SPL(C) 78.2 79.1 76.0 77.4
16kHz 33.7 36.7 32.2 33.2
8kHz 62.2 62.8 60.3 61.7
4kHz 68.6 70.7 66.4 68.5
2kHz 69.9 71.0 68.1 69.4
1kHz 68.8 69.9 67.3 68.5
500Hz 73.6 76.4 68.8 72.4
250Hz 64.3 65.7 60.2 62.7
125Hz 68.5 70.3 64.2 67.3
63Hz 69.4 69.5 57.8 62.7
31.5Hz 67.9 74.0 61.5 68.8
16Hz 73.5 81.0 68.4 72.9
Wei:Z Tm=00h00m25s 启动

Left


F:DATA_0001
NR= 69(dB)
Max Min LeqT
91.1 75.2 79.4
77.7 73.1 75.3
16kHz 31.0 34.8 28.9 31.6
8kHz 56.3 57.9 54.2 56.1
4kHz 64.7 67.3 60.4 63.9
2kHz 65.2 66.7 62.8 64.8
1kHz 60.6 64.8 59.1 62.1
500Hz 67.4 71.4 64.0 68.2
250Hz 65.3 67.5 61.5 64.6
125Hz 68.5 72.0 64.7 68.6
63Hz 62.5 68.7 56.7 62.2
31.5Hz 69.3 76.1 59.3 67.8
16Hz 71.5 78.4 69.5 74.8
AWA6228*型多功能声级计（噪声分析仪）

Right

3）10m noise photo

Front

Behind

Left

Right

Additional comments
N/A