



Sound Power Level Test

SG125HX/SG250HX/SG350HX

SUNGROW

1 Introduction

This document describes the sound power level test result of SG125HX/ SG250HX/ SG350HX string inverters.

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2 Test Conditions

2.1 Tested Sound Source

Tab. 1 Tested Sound Source

Sample Name	PV Inverter	PV Inverter	PV Inverter
Sample Model	SG125HX	SG250HX	SG350HX
Sample Specifications	W: 1019mm H: 790mm D: 360mm	W: 1051mm H: 660mm D: 363mm	W: 1136mm H: 870mm D: 361mm
Auxiliary Devices and Acoustic Processing	None	None	None
Installation Conditions	Placed on a central suspended rack in a semi-anechoic chamber	Placed on a central suspended rack in a semi-anechoic chamber	Placed on a central suspended rack in a semi-anechoic chamber

2.2 Test Environment

Tab. 2 Test Environment

Environment Description	Located in a semi-anechoic chamber
Ambient temperature	25 °C
Ambient humidity	50.0%RH

2.3 Test Basis

ISO 3746:2010 《Acoustics—Determination of sound power levels and sound energy levels of noise sources using sound pressure—Survey methods using an enveloping measurement surface over a reflecting plane》

2.4 Test Equipment:

Tab. 3 Test Equipment

Equipment Preparation	Manufacturing Plant	Model	No.	Approved on	Effective Date
Simcenter 12-input Handheld Data Acquisition System	Siemens Industrial Software (Beijing) Co., Ltd.	SCADAS XS	SC-XS12-ACL	2023-02-23	2024-02-22
Acoustic calibrator	B&K	4231	3010773	2023-02-23	2024-02-22

3 Test Result

3.1 Sound Power Level Test Result of SG125HX

(1) Sensor Location in the Test



Fig. 1 Sensor Location in the Test

(2) Test Result

Tab. 4 Test Result of SG125HX

No.	Working Conditions	Sound power level/dB(A)
1	Running at 110% power, daytime	79.3
2	Running at 100% power, daytime	79.3
3	Running at 70% power, daytime	72.0
4	Running at 50% power, daytime	65.4
5	Running at 30% power, daytime	51.2
6	Running at 10% power, daytime	44.9

7	Running at 50% power under 37.5kVA, nighttime	54.1
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3.2 Sound Power Level Test Result of SG250HX

(1) Sensor Location in the Test

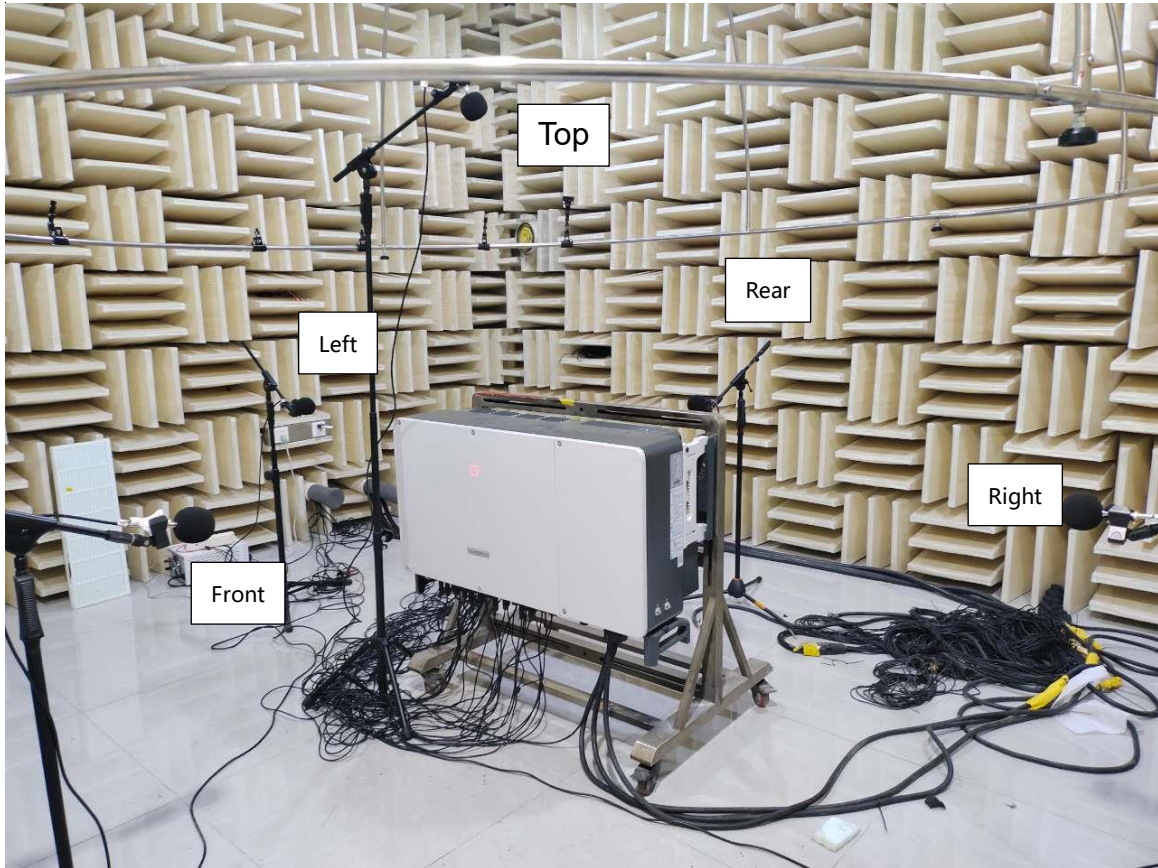


Fig. 2 Sensor Location in the Test

(2) Test Result

Tab. 5 Test Result of SG250HX

No.	Working Conditions	Sound power level/dB(A)
1	Running at 110% power, daytime	88.0
2	Running at 100% power, daytime	87.9
3	Running at 70% power, daytime	77.2
4	Running at 50% power, daytime	73.0
5	Running at 30% power, daytime	70.9

6	Running at 10% power, daytime	71.7
7	Running at 50% power under 75kVA, nighttime	71.8

3.3 Sound Power Level Test Result of SG350HX

(1) Sensor Location in the Test

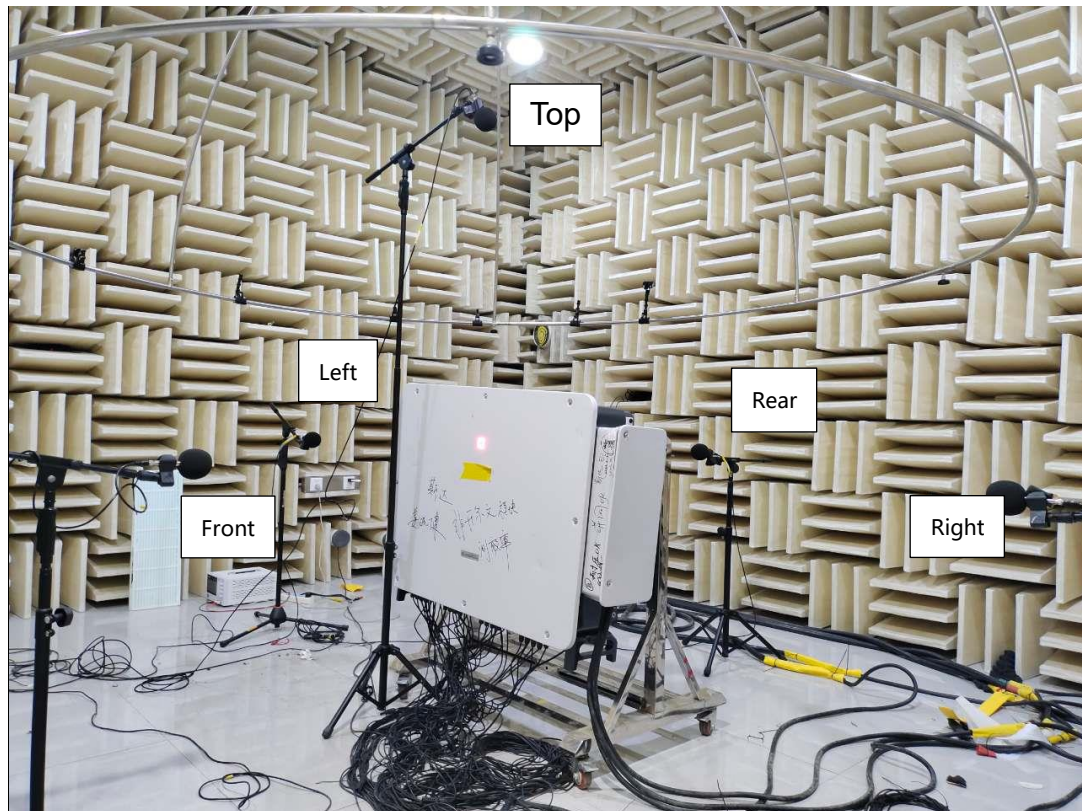


Fig. 3 Sensor Location in the Test

(2) Test Result

Tab. 6 Test Result of SG350HX

No.	Working Conditions	Sound power level/dB(A)
1	Running at 110% power, daytime	83.5
2	Running at 100% power, daytime	83.6
3	Running at 70% power, daytime	76.1
4	Running at 50% power, daytime	74.8
5	Running at 30% power, daytime	62.5

6	Running at 10% power, daytime	54.9
7	Running at 50% power under 105.5kVA, nighttime	66.6