

Certificate of Conformity

Product certificate number:

No. 2621/0029-C-CER/E1

Issued to:

Holder: **NingBo Deye Inverter Technology Co., Ltd.**
No. 26 South YongJiang Road, Daqi, Beilun, NingBo, China



Trademark:



Manufacturer:

NingBo Deye Inverter Technology Co., Ltd.
No. 26 South YongJiang Road, Daqi, Beilun, NingBo, China

It is certified that the product:

Type of generating unit: **Hybrid Inverter**

Models:		SUN-3K-SG04LP1-24-EU	SUN-3K-SG04LP1-EU	SUN-3.6K-SG04LP1-EU	SUN-5K-SG04LP1-EU	SUN-6K-SG04LP1-EU
Technical Data:	Nominal power [kW]	3000	3000	3600	5000	6000
	Nominal voltage [V]	230	230	230	230	230
	Nominal frequency [Hz]	50	50	50	50	50
	Firmware version	Software version: Ver5980 Communication version: Verc339 Hardware version: Ver1.0				
	Number of phases	Single Phase				
	Isolation Transformer	No				

Is in compliance with the standard:

IEC 61683:1999.

Photovoltaic systems. Power conditioners. Procedure for measuring efficiency.

This certificate is based upon the test results of the Test Report n° GZES211002949103-02
The above-mentioned generating unit is certified according to the SGS internal procedure PE.T-ECPE-33 based on the requirements of the UNE-EN ISO / IEC 17065.

This certificate supersedes the certificate 2622/0029-C-CER

First issued on 09th March 2022

This certificate is valid until 09th March 2027

Madrid, 04th April 2022



Daniel Arranz Muñiz
Certification Manager



Summary efficiency results measured for the tested models:

These efficiency results are representatives for the referred models with a testing frequency of 50Hz.

Power conditioner type – Grid Connected

UN-3K-SG04LP1-24-EU					
Test condition	10%Sn	25%Sn	50%Sn	75%Sn	100%Sn
Minimum rated input voltage ⁽¹⁾	96.3%	97.6%	97.7%	97.6%	97.0%
Nominal input voltage ⁽²⁾	96.3%	97.5%	97.7%	97.5%	97.1%
90% of the maximum rated input voltage ⁽³⁾	97.0%	97.7%	97.7%	97.3%	96.9%

⁽¹⁾ 300 V; ⁽²⁾370 V; ⁽³⁾382.5 V

SUN-3K-SG04LP1-EU					
Test condition	10%Sn	25%Sn	50%Sn	75%Sn	100%Sn
Minimum rated input voltage ⁽¹⁾	96.3%	97.6%	97.7%	97.6%	97.0%
Nominal input voltage ⁽²⁾	96.3%	97.5%	97.7%	97.5%	97.1%
90% of the maximum rated input voltage ⁽³⁾	97.0%	97.7%	97.7%	97.3%	96.9%

⁽¹⁾ 300 V; ⁽²⁾370 V; ⁽³⁾382.5 V

SUN-3.6K-SG04LP1-EU					
Test condition	10%Sn	25%Sn	50%Sn	75%Sn	100%Sn
Minimum rated input voltage ⁽¹⁾	96.4%	97.4%	97.7%	97.5%	97.0%
Nominal input voltage ⁽²⁾	96.5%	97.5%	97.6%	97.2%	96.9%
90% of the maximum rated input voltage ⁽³⁾	96.5%	97.6%	97.7%	97.3%	96.9%

⁽¹⁾ 300 V; ⁽²⁾370 V; ⁽³⁾382.5 V

SUN-5K-SG04LP1-EU					
Test condition	10%Sn	25%Sn	50%Sn	75%Sn	100%Sn
Minimum rated input voltage ⁽¹⁾	96.8%	97.5%	97.7%	97.4%	96.8%
Nominal input voltage ⁽²⁾	96.4%	97.6%	97.8%	97.3%	96.9%
90% of the maximum rated input voltage ⁽³⁾	96.5%	97.5%	97.6%	97.2%	96.9%

⁽¹⁾ 300 V; ⁽²⁾370 V; ⁽³⁾382.5 V

SUN-6K-SG04LP1-EU					
Test condition	10%Sn	25%Sn	50%Sn	75%Sn	100%Sn
Minimum rated input voltage ⁽¹⁾	96.5%	97.6%	97.7%	97.3%	96.9%
Nominal input voltage ⁽²⁾	96.3%	97.6%	97.7%	97.3%	96.9%
90% of the maximum rated input voltage ⁽³⁾	96.5%	97.6%	97.6%	97.3%	96.9%

⁽¹⁾ 300 V; ⁽²⁾370 V; ⁽³⁾382.5 V



Power conditioner type – Stand Alone

UN-3K-SG04LP1-24-EU								
Test condition			5%Sn	10%Sn	25%Sn	50%Sn	75%Sn	100%Sn
Minimum rated input voltage ⁽¹⁾	Resistive load		94.3%	96.4%	97.8%	97.8%	97.6%	97.1%
	Fixed power factor	0.25 or minimum	--	--	87.6%	89.2%	--	91.5%
		0.50(>minimum)	--	--	89.3%	91.6%	--	92.1%
		0.75(>minimum)	--	--	89.1%	91.0%	--	91.7%
	Non-linear load	25% of rated VA	--	--	95.0%	92.9%	--	93.5%
		50% of rated VA	--	--	--	96.9%	--	95.0%
Complex load		--	--	--	91.4%	--	96.2%	
Nominal input voltage ⁽²⁾	Resistive load		94.5%	96.3%	97.6%	97.7%	97.5%	97.1%
	Fixed power factor	0.25 or minimum	--	--	87.9%	90.5%	--	91.1%
		0.50(>minimum)	--	--	90.3%	90.3%	--	90.3%
		0.75(>minimum)	--	--	89.4%	89.9%	--	92.1%
	Non-linear load	25% of rated VA	--	--	94.1%	95.2%	--	93.4%
		50% of rated VA	--	--	--	96.9%	--	94.9%
Complex load		--	--	--	91.8%	--	94.4%	
90% of the maximum rated input voltage ⁽³⁾	Resistive load		94.3%	96.3%	97.6%	97.7%	97.5%	97.0%
	Fixed power factor	0.25 or minimum	--	--	88.5%	90.5%	--	92.0%
		0.50(>minimum)	--	--	90.0%	91.6%	--	92.0%
		0.75(>minimum)	--	--	88.6%	89.5%	--	90.9%
	Non-linear load	25% of rated VA	--	--	94.1%	95.4%	--	93.8%
		50% of rated VA	--	--	--	96.9%	--	94.9%
Complex load		--	--	--	91.3%	--	95.6%	

⁽¹⁾ 300 V; ⁽²⁾370 V; ⁽³⁾382.5 V

SUN-3K-SG04LP1-EU								
Test condition			5%Sn	10%Sn	25%Sn	50%Sn	75%Sn	100%Sn
Minimum rated input voltage ⁽¹⁾	Resistive load		94.3%	96.4%	97.8%	97.8%	97.6%	97.1%
	Fixed power factor	0.25 or minimum	--	--	87.6%	89.2%	--	91.5%
		0.50(>minimum)	--	--	89.3%	91.6%	--	92.1%
		0.75(>minimum)	--	--	89.1%	91.0%	--	91.7%
	Non-linear load	25% of rated VA	--	--	95.0%	92.9%	--	93.5%
		50% of rated VA	--	--	--	96.9%	--	95.0%
Complex load		--	--	--	91.4%	--	96.2%	
Nominal input voltage ⁽²⁾	Resistive load		94.5%	96.3%	97.6%	97.7%	97.5%	97.1%
	Fixed power factor	0.25 or minimum	--	--	87.9%	90.5%	--	91.1%
		0.50(>minimum)	--	--	90.3%	90.3%	--	90.3%
		0.75(>minimum)	--	--	89.4%	89.9%	--	92.1%
	Non-linear load	25% of rated VA	--	--	94.1%	95.2%	--	93.4%
		50% of rated VA	--	--	--	96.9%	--	94.9%
Complex load		--	--	--	91.8%	--	94.4%	
90% of the maximum rated input voltage ⁽³⁾	Resistive load		94.3%	96.3%	97.6%	97.7%	97.5%	97.0%
	Fixed power factor	0.25 or minimum	--	--	88.5%	90.5%	--	92.0%
		0.50(>minimum)	--	--	90.0%	91.6%	--	92.0%
		0.75(>minimum)	--	--	88.6%	89.5%	--	90.9%
	Non-linear load	25% of rated VA	--	--	94.1%	95.4%	--	93.8%
		50% of rated VA	--	--	--	96.9%	--	94.9%
Complex load		--	--	--	91.3%	--	95.6%	

⁽¹⁾ 300 V; ⁽²⁾370 V; ⁽³⁾382.5 V



SUN-3.6K-SG04LP1-EU								
Test condition			5%Sn	10%Sn	25%Sn	50%Sn	75%Sn	100%Sn
Minimum rated input voltage ⁽¹⁾	Resistive load		94.6%	96.7%	97.3%	97.7%	97.5%	97.1%
	Fixed power factor	0.25 or minimum	--	--	97.1%	96.2%	--	94.2%
		0.50(>minimum)	--	--	94.3%	95.1%	--	94.2%
		0.75(>minimum)	--	--	94.6%	95.5%	--	94.6%
	Non-linear load	25% of rated VA	--	--	94.1%	95.6%	--	94.2%
		50% of rated VA	--	--	--	97.0%	--	95.0%
Complex load		--	--	--	91.5%	--	94.7%	
Nominal input voltage ⁽²⁾	Resistive load		94.6%	96.5%	97.4%	97.7%	97.7%	97.2%
	Fixed power factor	0.25 or minimum	--	--	97.1%	96.4%	--	94.4%
		0.50(>minimum)	--	--	95.1%	95.5%	--	94.7%
		0.75(>minimum)	--	--	94.6%	95.2%	--	94.0%
	Non-linear load	25% of rated VA	--	--	94.2%	95.0%	--	93.8%
		50% of rated VA	--	--	--	96.8%	--	94.9%
Complex load		--	--	--	91.2%	--	95.7%	
90% of the maximum rated input voltage ⁽³⁾	Resistive load		94.5%	96.7%	97.1%	97.7%	97.6%	97.2%
	Fixed power factor	0.25 or minimum	--	--	97.1%	96.2%	--	94.7%
		0.50(>minimum)	--	--	97.1%	96.2%	--	94.7%
		0.75(>minimum)	--	--	94.6%	95.5%	--	95.0%
	Non-linear load	25% of rated VA	--	--	94.2%	95.2%	--	94.0%
		50% of rated VA	--	--	--	96.9%	--	95.0%
Complex load		--	--	--	91.5%	--	95.3%	

⁽¹⁾ 300 V; ⁽²⁾370 V; ⁽³⁾382.5 V

SUN-5K-SG04LP1-EU								
Test condition			5%Sn	10%Sn	25%Sn	50%Sn	75%Sn	100%Sn
Minimum rated input voltage ⁽¹⁾	Resistive load		95.2%	97.3%	97.7%	97.7%	97.5%	97.2%
	Fixed power factor	0.25 or minimum	--	--	88.4%	89.3%	--	90.4%
		0.50(>minimum)	--	--	89.5%	91.0%	--	91.3%
		0.75(>minimum)	--	--	90.2%	91.0%	--	93.0%
	Non-linear load	25% of rated VA	--	--	89.8%	91.9%	--	94.0%
		50% of rated VA	--	--	--	97.0%	--	94.9%
Complex load		--	--	--	91.7%	--	95.1%	
Nominal input voltage ⁽²⁾	Resistive load		94.5%	96.4%	97.7%	97.7%	97.4%	97.0%
	Fixed power factor	0.25 or minimum	--	--	90.4%	90.9%	--	93.0%
		0.50(>minimum)	--	--	91.0%	91.9%	--	92.5%
		0.75(>minimum)	--	--	90.7%	91.5%	--	93.2%
	Non-linear load	25% of rated VA	--	--	89.9%	91.0%	--	93.0%
		50% of rated VA	--	--	--	96.8%	--	94.8%
Complex load		--	--	--	92.1%	--	95.3%	
90% of the maximum rated input voltage ⁽³⁾	Resistive load		94.4%	96.7%	97.4%	97.7%	97.6%	97.2%
	Fixed power factor	0.25 or minimum	--	--	91.1%	91.6%	--	92.6%
		0.50(>minimum)	--	--	89.3%	91.1%	--	91.6%
		0.75(>minimum)	--	--	91.8%	92.2%	--	93.2%
	Non-linear load	25% of rated VA	--	--	89.9%	91.0%	--	93.0%
		50% of rated VA	--	--	--	96.9%	--	94.9%
Complex load		--	--	--	92.2%	--	95.0%	

⁽¹⁾ 300 V; ⁽²⁾370 V; ⁽³⁾382.5 V



SUN-6K-SG04LP1-EU								
Test condition		5%Sn	10%Sn	25%Sn	50%Sn	75%Sn	100%Sn	
Minimum rated input voltage ⁽¹⁾	Resistive load	94.9%	96.6%	97.7%	97.7%	97.6%	97.2%	
	Fixed power factor	0.25 or minimum	--	--	91.9%	92.0%	--	92.6%
		0.50(>minimum)	--	--	91.8%	92.6%	--	93.7%
		0.75(>minimum)	--	--	92.2%	93.2%	--	94.1%
	Non-linear load	25% of rated VA	--	--	95.2%	97.4%	--	95.6%
		50% of rated VA	--	--	--	97.0%	--	95.1%
Complex load		--	--	--	91.9%	--	95.6%	
Nominal input voltage ⁽²⁾	Resistive load	94.5%	96.4%	97.6%	97.7%	97.6%	97.0%	
	Fixed power factor	0.25 or minimum	--	--	91.0%	93.2%	--	93.4%
		0.50(>minimum)	--	--	92.3%	93.1%	--	93.2%
		0.75(>minimum)	--	--	92.5%	93.8%	--	94.1%
	Non-linear load	25% of rated VA	--	--	95.1%	96.4%	--	95.3%
		50% of rated VA	--	--	--	96.9%	--	95.0%
Complex load		--	--	--	92.3%	--	94.9%	
90% of the maximum rated input voltage ⁽³⁾	Resistive load	94.6%	96.6%	97.6%	97.7%	97.6%	97.1%	
	Fixed power factor	0.25 or minimum	--	--	92.4%	88.8%	--	90.6%
		0.50(>minimum)	--	--	91.7%	92.5%	--	93.1%
		0.75(>minimum)	--	--	92.1%	93.3%	--	93.4%
	Non-linear load	25% of rated VA	--	--	95.4%	96.3%	--	95.3%
		50% of rated VA	--	--	--	96.9%	--	95.0%
Complex load		--	--	--	92.2%	--	95.1%	

⁽¹⁾ 300 V; ⁽²⁾ 370 V; ⁽³⁾ 382.5 V

