

# Certificate of Conformity

No. ESY 091566 0102 Rev. 01

**Holder of Certificate:** **SINENG ELECTRIC CO.,LTD.**

No.6 Hehui Road, Huishan District  
214174 Wuxi City  
PEOPLE'S REPUBLIC OF CHINA

**Product:**

**Converter**  
**GRID-CONNECTED HYBRID INVERTER**

**Model(s):**

**SN5.0HT, SN6.0HT, SN8.0HT, SN10HT, SN10HT-X,  
SN12HT, SN15HT, SN5.0HT-M1, SN6.0HT-M1,  
SN8.0HT-M1, SN10HT-M1, SN10HT-X-M1,  
SN12HT-M1, SN15HT-M1**

**Parameters:**

See next pages.

**Applicable standards:**

TOR Erzeuger Typ A Version 1.2:2022  
OVE-Richtlinie R 25:2020

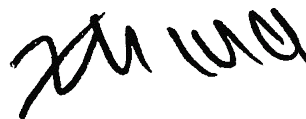
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**Test report no.:**

704092407518-01

**Date,**

2025-02-26



( Zhengdong Ma )

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Model	SN5.0HT/ SN5.0HT-M1	SN6.0HT/ SN6.0HT-M1	SN8.0HT/ SN8.0HT-M1
PV Input Parameters:			
Max. Input Voltage	DC 1000 V		
Max. Input Current	DC 18/18 A		
Isc PV (Absolute Max.)	DC 25/25 A		
MPPT Voltage Range	DC 160, ..., 950 V		
AC Output Parameters:			
Nominal Output Power	5 kW	6 kW	8 kW
Rated Apparent Output Power	5 kVA	6 kVA	8 kVA
Max. Apparent Output Power	5.5 kVA	6.6 kVA	8.8 kVA
Nominal Voltage	3/N/PE AC 230/400 V		
Nominal Frequency	50 Hz		
Rated Output Current	AC 7.3 A	AC 8.7 A	AC 11.6 A
Max. Output Current	AC 8.0 A	AC 9.6 A	AC 12.8 A
Power Factor	0.8(leading), ..., 0.8(lagging)		
Battery			
Voltage Range	DC 160, ..., 600 V		
Rated(Max.) Charge/Discharge Current	DC 25/25 A		
Battery Type	Li-ion		

Model	SN10HT/ SN10HT-M1
PV Input Parameters:	
Max. Input Voltage	DC 1000 V
Max. Input Current	DC 18/18 A
Isc PV (Absolute Max.)	DC 25/25 A
MPPT Voltage Range	DC 160, ..., 950 V
AC Output Parameters:	
Nominal Output Power	10 kW
Rated Apparent Output Power	10 kVA
Max. Apparent Output Power	11 kVA
Nominal Voltage	3/N/PE AC 230/400 V
Nominal Frequency	50 Hz
Rated Output Current	AC 14.5 A
Max. Output Current	AC 16.0 A
Power Factor	0.8(leading), ..., 0.8(lagging)
Battery	
Voltage Range	DC 160, ..., 600 V
Rated(Max.) Charge/Discharge Current	DC 25/25 A
Battery Type	Li-ion

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Model	SN10HT-X/ SN10HT-X-M1	SN12HT/ SN12HT-M1	SN15HT/ SN15HT-M1
PV Input Parameters:			
Max. Input Voltage	DC 1000 V		
Max. Input Current	DC 32/18 A		
Isc PV (Absolute Max.)	DC 40/25 A		
MPPT Voltage Range	DC 160, ..., 950 V		
AC Output Parameters:			
Nominal Output Power	10 kW	12 kW	15 kW
Rated Apparent Output Power	10 kVA	12 kVA	15 kVA
Max. Apparent Output Power	11 kVA	13.2 kVA	16.5 kVA
Nominal Voltage	3/N/PE AC 230/400 V		
Nominal Frequency	50 Hz		
Rated Output Current	AC 14.5 A	AC 17.4 A	AC 21.8 A
Max. Output Current	AC 16.0 A	AC 19.2 A	AC 24 A
Power Factor	0.8(leading), ..., 0.8(lagging)		
Battery			
Voltage Range	DC 160, ..., 600 V		
Rated(Max.) Charge/Discharge Current	DC 30/30 A		
Battery Type	Li-ion		

Default settings				
Requirements for power generator	Value default			
<b>1. Reactive power of inverter</b>				
1a. Fixed displacement factor $\cos \varphi_{\text{fixed}}$	1			
1b. Displacement factor/active power characteristic $\cos \varphi$ (P)	Setpoint	$\cos \varphi$	P/Pn	
	a	1	0	
	b	1	0.5	
1c. Reactive power voltage/voltage characteristic Q (U)	c	0.9 <sub>underexcited</sub>	1	
	Setpoint	U/Un	Q/Pn	
	a	0.92 Un	0.436	$\cos \varphi = 0.9$ overexcited
	b	0.96 Un	0	$\cos \varphi = 1$
	c	1.05 Un	0	$\cos \varphi = 1$
d	1.08 Un	-0.436	$\cos \varphi = 0.9$ underexcited	
	Time constant of a first-order filter (PT1 behaviour)	5s		
	Intentional delay time	0 s		
1d. Fixed reactive power $Q_{\text{fixed}}$	Q = 0			
1e. Fixed Power factor $\cos \varphi_{\text{fixed}}$	$\cos \varphi = 0.4$			
Note: if $\cos \varphi = 0.4$ is selected, the power factor is adjusted to the setting value automatically for power below 20% Pn.				
<b>2. Standard settings for active power control</b>				

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2a. Active power reduction at overfrequency LFSM-O	Start of power reduction from	Droop S <sub>2</sub>	
	50.2 Hz	5 % (40%P <sub>M</sub> /Hz)	
	Intentional delay time	0 s	
2b. Voltage related active power control P(U)	Standard values apply for setting the interpolation points of the characteristic curve:	U/Un	P/Pn
	Setpoint a	110% Un	100%
	Setpoint b	112% Un	0%
	Time constant of a first-order filter (PT1 behaviour)	5 s	
	Intentional delay time	0 s	
Remark: settling time = 15s (3Tau)			
<b>3. Default settings for FRT capability</b>			
FRT capability for undervoltage setpoint	0.8 Un		
<b>4. Default settings for the connection conditions</b>			
Setting values for connection conditions	Voltage	0.85 p.u. ≤ U ≤ 1.09 p.u.	
	Frequency	47.5 Hz < f < 50.10 Hz	
Settings for the minimum waiting time for connection to the grid	For automatic or operation-related connection	60 s	
	In case of reconnection after interface protection:	300 s	
Maximum gradient of the increase in active power after interface protection	10 % Pn/min		
<b>5. Default settings for interface protection</b>			
Default settings for the grid decoupling protection	Function	Setting values for protection relays	
	Overvoltage protection U <sub>eff</sub> >>	1.15 Un	0.1 s
	Overvoltage protection U <sub>eff</sub> > 10-min average value	1.11 Un	0.1 s
	Undervoltage protection U <sub>eff</sub> <	0.80 Un	1.5 s
	Undervoltage protection U <sub>eff</sub> <<	0.25 Un	0.5 s
	Overfrequency f>	51.5 Hz	0.1 s
	Underfrequency f<	47.5 Hz	0.1 s
	Grid failure	-	≤5.0 s
<b>Password protection for settings:</b>			
Password protection used for unauthorized change by user and not disclosed to the user.			