

## DECLARATION OF EN50438 for Netherland

Manufacturer	Name	NINGBO GINLONG TECHNOLOGIES CO., LTD.
	Address	NO. 57 JINTONG ROAD, BINHAI INDUSTRIAL PARK, XIANGSHAN, NINGBO, ZHEJIANG, 315712, CHINA
Product	Product Name	GRID-TIE PV INVERTER
	Model	SINGLE PHASE INVERTER: Solis-mini-700-4G, Solis-mini-1000-4G, Solis-mini-1500-4G, Solis-mini-2000-4G, Solis-mini-2500-4G, Solis-mini-3000-4G, Solis-mini-3600-4G, Solis-mini-1000-LV
Applicable Standard	EN50438 : 2013 for Netherland	

### Test result

#### Test details

Name and address of test house	Ginlong technical Research and develop laboratory
Telephone number	(+86) 574 6578 1607
Date of test	2018.04.21

#### Under-/Over Frequency tests

Parameter	Under frequency		Over frequency	
	Frequency	Time	Frequency	Time
Protection limit	47.5 Hz	0.2 s	51.5 Hz	0.2 s
Actual setting	47.5 Hz	0.1 s	51.5 Hz	0.1 s
Trip value (test result)	47.0 Hz	0.98 s	52.0 Hz	0.11 s

#### Under-/Overvoltage tests (single-stage protection)

Parameter	Under voltage		Over voltage	
	Voltage	Time	Voltage	Time
Protection limit	184 V	0.2 s	275 V	0.2 s

Actual setting	184 V	0.1 s	275 V	0.1 s
Trip value (test result)	183.5 V	0.11 s	275.5 V	0.12 s

**LoM test**

ROCOF (df/dt)	Neg. gradient		Pos. gradient	
Parameter	Min.	Time	Max	Time
Protection limit	-0.4 Hz/s	0.5 s	+0.4 Hz/s	0.5 s
Actual setting	-0.4 Hz/s	0.4 s	+0.4 Hz/s	0.4 s
Trip value (test result)	-0.4 Hz/s	0.38 s	+0.4 Hz/s	0.41 s

The product stated above have been achieved and processed to the fullness examination according to EN50438 : 2013 for Netherland.

宁波锦浪新能源科技有限公司  
NINGBO GINLONG TECHNOLOGIES CO., LTD.

Date and place of issue  
Ningbo  
2014-5-28

*Zhangkun*

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**Information:**

All modification to should be confirmed by Ginlong, otherwise this declaration will no longer valid.