

# **CERTIFICATION OF CONFORMITY**

## Manufacturer: Ginlong Technologies Co., Ltd.

Address: No.57 jintong Road, Seafront (Binhai) Industrial park, Xiangshan Demonstration Industrial Estate, Xiangshan, Ningbo, Zhejinag, 315712, P.R. China

# Product: Automatic disconnection device between a generator and the public Medium-voltage grid

Model: Solis-80K-5G; Solis-100K-5G; Solis-110K-5G;

#### Use in accordance with regulations:

Automatic disconnection device with three-phase mains surveillance in accordance with EN 50438:2013 and DTIS-230206-BRL-2018 for photovoltaic systems with a three-phase parallel coupling via an inverter in the public mains supply. The automatic disconnection device is an integral part of the aforementioned inverter. This serves as a replacement for the disconnection device with isolating function that can access the distribution network provider at any time.

#### **Applied rules and standards:**

The result according to EN 50438:2013 for Ireland. The safety concept of an aforementioned representative product corresponds at the time of issue of this certificate of valid safety specifications for the specified use in accordance with regulations.

## Certificate Number: GLDQ201123

 Date and place Ningbo 2020-11-23

Parkny

#### **Power quality**

Harmonic current emissions								
	EVS-EN 61000-3-12 Limit (%)							
Harmonic	2nd	3rd	5th	7th	9th	11th	13th	$15$ th $\leq$ n $\leq$ 39th
Limit	8.0	21.6	10.7	7.2	3.8	3.1	2.0	/
Test value	0.33	0.14	0.91	0.77	0.04	0.31	0.40	<li>limits BS EN</li>

#### Voltage fluctuation and flicker

Maximum permissible voltage fluctuation (expressed as precentage of nominal voltage at rated poHer) and flicker (standard EVS-EN 61000-3-11)

	Starting	Stopping	Running (at rated poHer)				
Limit	3.3 %	3.3 %	Pst = 1.0	Plt = 0.65			
Test value	<1%	<1%	0.08	0.07			
Power factor							
EN 50438 limit	t	+ 0.95 -0.9	.95 -0.95 at three voltage levels				
Test level (AC voltage)		0 V	230 V	250 V			
Test value(at rated p	ower) 0.9	9947	0.9956	0.9963			

# Under / Over frequency tests

	Under frequency		Over frequency		
Parameter	Frequency	Time	Frequency	Time	
Protection limit	47.0 Hz	20s	52.0 Hz	0.5s	
Actual setting	47.0 Hz	20s	52.0 Hz	0.5s	
Trip value (test result)	46.99 Hz	20.03s	52.02 Hz	0.52s	

## Under / Over voltage tests (single stage protection)

	Under voltage		Over voltage		
Parameter	Voltage	Time	Voltage	Time	
Protection limit	230V-10%	0.5 s	230V+10%	0.5 s	
Actual setting	207V	0.5 s	253V	0.5 s	
Trip value (test result)	207.3V	0.52s	253.6V	0.52s	

#### Fault level contribution

Short-circuit current at micro-generator terminals, 199.3A Short-circuit applied to micro-generator at normal running condition 0 -2 s

#### Comments

The test result is based on Solis-110K-5G. All the series of inverters electrical character are the same. So the test result can cover all series.