Manufacture Declaration for EN50438:2013

Omnik New Energy Co., Ltd. here by confirms that the product lines:

Omniksol-SMP300
Omniksol-SMP600

Are in conformity with the EN50438:2013 requirement and contain "Irish Settings" option for the connection of micro-generators in parallel with public low-voltage distribution networks.

The test results are summarized in the **Enclosure 1** of this declaration.

Omnik New Energy Co., Ltd

3rd May 2018

Chenyang.Pei
(Product Manger)

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Enclosure 1

Test results sheet

Power quality

Harmonic current emission								
Maximum permissible harmonic current as per EN61000-3-2 ClassA								
Harmonic	2nd	3rd	5th	7th	9th	11th	13th	$15^{th} \leq n \leq 39^{th}$
Limit	1.08	2.3	1.14	0.77	0.4	0.33	0.21	$0.15^{a)}(15/n)$
Test value	0.0008	0.0204	0.0077	0.0035	0.0038	0.0051	0.0077	< 0.01
$^{a)}$50% or some other declared value close to the midpoint between minimum and maximum.								

Voltage fluctuations and flicker				
Maximum permissible voltage fluctuation(express as a percentage of nominal voltage at 100% power) and flicker as per EN 61000-3-3				
	Starting	Stopping	Running	
Limit	3.3%	3.3%	P_{st}=1.0	P_{lt}=0.65
Test value	0.00%	0.00%	0.109	0.077

Power factor			
Protection limit	+0.95-0.95 at three voltage levels		
	210V	230V	250V
Test value	0.989	0.998	0.995

Grid monitoring

Under/ Over frequency

	Under frequency		Over frequency	
Parameter	Frequency	Time	Frequency	Time
Protection limit (EN 50438 Annex A)	48Hz	0.5s	50.5Hz	0.5s
Actual setting	48Hz	0.5s	50.5Hz	0.5s
Trip value (test result)	47.99Hz	0.452s	50.51Hz	0.593s

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Under / Over voltage

	Under frequency		Over frequency	
Parameter	Voltage	Time	Voltage	Time
Protection limit (EN 50438 Annex A)	230V-10%	0.5s	230V+10%	0.5s
Actual setting	207.0V	0.5s	253.0V	0.5s
Trip value(test result)	206.8V	0.443s	253.3V	0.516s

LoM

Output power level [a)]	Min.	Medium	Max.
Trip setting clearance time	0.5s	0.5s	0.5s
Trip value clearance time	0.172s	0.236s	0.378s
[a)] Indicative values are shown for minimum, medium and maximum power levels.			

Fault level contribution

Short-circuit current at micro-generator terminals					
Omniksol-SMP300			Omniksol-SMP600		
Time after fault	Volts	Amps	Time after fault	Volts	Amps
20ms	231	1.31	20ms	231	2.42
100ms	N/A	N/A	100ms	N/A	N/A
250ms	N/A	N/A	250ms	N/A	N/A
500ms	N/A	N/A	500ms	N/A	N/A
Time to trip	35.2ms	In seconds	Time to trip	58.3ms	In seconds

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