

Manufacturer Declaration for EN50438:2013

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

Omniksol-2k-TL3-S
Omniksol-2.5k-TL3-S
Omniksol-3k-TL3-S

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.

26th June 2018


Chenyang Pei
(Product Manager)

Enclosure 1

Test results sheet

Power quality

Harmonic current emission								
Maximum permissible harmonic current as per EN61000-3-2 Class A								
Harmonic	2 nd	3 rd	5 th	7 th	9 th	11 th	13 th	15 th ≤ n ≤ 39 th
Limit	1.08	2.3	1.14	0.77	0.4	0.33	0.21	0.15 ^{a)} (15/n)
Test value	0.014	0.173	0.042	0.066	0.036	0.015	0.042	< 0.1

^{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%	0.560	0.244

Power factor			
Protection limit	+0.95-0.95 at three voltage levels		
	210V	230V	250V
Test value	0.988	0.996	0.993

Grid monitoring

Under/ Over frequency

Parameter	Under frequency		Over frequency	
	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	0.412s	50.51Hz	0.447s

Under / Over voltage

Parameter	Under voltage		Over voltage	
	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	0.453s	253.3V	0.416s

LoM

Output power level ^{a)}	Min.	Medium	Max.
Trip setting clearance time	0.5s	0.5s	0.5s
Trip value clearance time	0.242s	0.286s	0.318s

^{a)} Indicative values are shown for minimum, medium and maximum power levels.

Fault level contribution

Short-circuit current at micro-generator terminals					
Omniksol-2k-TL3-S			Omniksol-2.5k-TL3-S		
Time after fault	Volts	Amps	Time after fault	Volts	Amps
20ms	241	11.2	20ms	241	13.3
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	17.3ms	In seconds	Time to trip	17.1ms	In seconds
Omniksol-3k-TL3-S					
Time after fault	Volts	Amps			
20ms	241	16.4			
100ms	N/A	N/A			
250ms	N/A	N/A			
500ms	N/A	N/A			
Time to trip	18.7ms	In seconds			

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