

SSEG DETAILS

SSEG Type reference:	PHOTO-VOLTAIC GRID TIED INVERTER
Manufacturer:	SolarEdge Technologies Ltd.
Tel:	+972-9-957-6620
Fax:	+972-9-957-6591
Address:	6 HeHarash St. P.O.Box 7349, Neve Neeman, Hod Hasharon 45240, Israel
Type reference:	SE7k, SE8k, SE9k, SE10k, SE12.5k , SE15k, SE16k, SE17k
Max AC Power:	7kW, 8kW, 9kW, 10kW, 12.5kW, 15kW, 16kW, 17kW

TEST HOUSE DETAILS

Name and address of test house	Bureau Veritas Consumer Product Services GmbH Businesspark A96, 86842 Türkheim, Germany
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TEST DETAILS

- Power quality
 - Harmonic current emissions
 - Voltage fluctuations and flicker
 - Power factor
 - DC injection
- Under/over frequency tests
- Under/over voltage tests
- Loss of mains test
- Reconnection times

SolarEdge Technologies

US: 900 Golden Gate Terrace, Suite E, Grass Valley, CA 95945

Germany: Bretonischer Ring 18, 85630 Grasbrunn (Munich)

Japan: B-9 Ariake Frontier Building, 3-7-26 Ariake, Koto-Ku, Tokyo, 135-0063

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POWER QUALITY

Harmonic	3 rd	5 th	7 th	9 th	11 th	13 th	THD	PWHD
Limit phase 1	1.8%	1.9%	1.0%	0.11%	0.54%	0.73%	3.5%	1.9%
Limit phase 2	1.7%	1.7%	1.1%	0.12%	0.51%	0.73%	3.4%	1.8%
Limit phase 3	1.57%	2.19%	1.22%	0.39%	0.48%	0.99%	3.5%	1.7%
Test value L1 [A]	0.5142	0.3379	0.1347	0.0272	0.0349	0.0176	4.51 %	1.33 %
Test value L2 [A]	0.4897	0.4254	0.1565	0.0473	0.0858	0.0374	4.64 %	2.06 %
Test value L3 [A]	0.5261	0.3326	0.1379	0.0246	0.0315	0.0129	4.31 %	1.12 %

Voltage Fluctuations and Flicker				
Parameter	d _c	d _{max}	P _{st}	P _{lt}
Limit	3.3 %	4 %	1.0	0.65
Measured	2.9723	0.2972	0.3410	0.3410

Note * Maximum permissible voltage fluctuation (expressed as a percentage of nominal voltage at 100% power) and flicker. As per BS EN 61000-3-3.

Power factor			
G59/2 limit	+/- 0.95 pf		
Output voltage	212 V	230 V	248 V
Test value	0.998c	0.998c	0.998c

DC injection			
G59/2 limit	0.25% of max output current		
Output power	10%	55%	100%
Test value phase 1	18.3 mA	18.4 mA	28.2 mA
Test value phase 2	17.4 mA	16.8 mA	5.81 mA
Test value phase 3	26.6 mA	29.4 mA	19.9 mA

UNDER / OVER FREQUENCY TESTS

Parameter	Under Frequency		Over Frequency	
	Frequency	Time	Frequency	Time
G59/2 limit stage 2	47.0 Hz	0.5 sec	52.0 Hz	0.5 sec *
Actual setting	47.20 Hz		51.80 Hz	
Trip value	47.20 Hz	458 ms	51.80 Hz	455 ms

UNDER / OVER VOLTAGE TESTS

Parameter	Under Voltage		Over Voltage	
	Voltage	Time	Voltage	Time
G59/2 limit stage 1	-13% V _n	2.5 sec	+10% V _n	1.0 sec
Actual setting	201 V		252 V	
Trip value	201.3 V	2.477 sec	252.4 V	976 ms

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G59/2 limit stage 2	-20% Vn	0.5 sec	+15% Vn	0.5 sec
Actual setting	185 V		264 V	
Trip value	185.5 V	473 ms	264.1 V	470 ms

LOSS OF MAINS TEST

Output power level	10%	55%	100%
G59/2 limit	5 sec		
Actual setting	2 sec		
Trip value	232 ms	932 ms	252 ms

RECONNECTION TIMES

Reconnection Time	Under/Over voltage	Under/Over Frequency	Loss of mains
Minimum value	180 sec		
Actual setting	180 sec	180 sec	180 sec
Recorded value	206 sec	205 sec	206 sec

OVER CURRENT PROTECTION

The products have to be installed with appropriate protection according to BS7671.

SHORT CIRCUIT CURRENT CONTRIBUTION

As Photovoltaic SSEGs are inverter connected, they are deemed to automatically comply with regulations and no further tests are required.

SELF MONITORING – SOLID STATE DISCONNECTION

Units do not provide solid state switching relays. In case the semiconductor bridge is switched off, then the voltage on the output drops to 0. In this case the relays on the output will also open.

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