

SSEG DETAILS

SSEG Type reference:	PHOTO-VOLTAIC GRID TIED INVERTER
SSEG Technology (as per Annex):	ANNEX C. PHOTOVOLTAIC (PV)
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:	SE3000, SE3300, SE3500, SE4000, SE5000, SE6000
Max AC Power:	3000W, 3300W, 3500W, 4000W, 5000W, 6000W

TEST HOUSE DETAILS

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

- Power quality
 - Harmonic current emissions
 - Voltage fluctuations and flicker
 - DC injection
 - Power factor
- 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 current emissions (A)								
Harmonic	2 nd	3 rd	5 th	7 th	9 th	11 th	13th	15 th ≤ n ≤ 39 th
Limit * [A]	1.08	2.3	1.14	0.77	0.4	0.33	0.21	0.15 x (15/n)
Test value [A]	0.0291	0.2383	0.0856	0.042	0.041	0.0573	0.0119	< Limit

Note * Maximum permissible harmonic current As per BS EN 61000-3-2 Class A.

Voltage Fluctuations and Flicker				
	Starting	Stopping	Running	
Limit *	4%	4%	P _{st} = 1.0	P _{It} = 0.65
Test value	0.33	0.33	0.36	0.36

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

	DC injection			Power factor		
G83/1 Limit	20mA, tested at three power levels *			0.95 lag– 0.95 lead at three voltage levels		
Test level	10%	55%	100%	212 V	230 V	248 V
Test value #	<17 mA	<9 mA	<8 mA	0.999	0.999	0.999

Notes * Indicative values are shown for minimum, medium and maximum power levels.
Insert maximum value recorded during testing

UNDER / OVER FREQUENCY TESTS

Parameter	Under Frequency		Over Frequency	
	Frequency	Time	Frequency	Time
G83/1 Limit	47 Hz	0.5 sec *	50.5 Hz	0.5 sec *
Actual setting		47.20 Hz		50.49 Hz
Trip value	47.20 Hz	0.49 sec	50.49 Hz	0.48 sec

UNDER / OVER VOLTAGE TESTS

Parameter	Under Voltage		Over Voltage	
	Voltage	Time	Voltage	Time
G83/1 Limit	207 V	1.5 sec *	264 V	1.5 sec *
Actual setting		210.0 V		260.5 V
Trip value	209.5 V	1.48 sec	261 V	1.48 sec

Note: * For SSEG units that can withstand being re-energised from a source that is 180 out of phase with the SSEG output, it is permissible to extend the operating time of the interface protection to 5.0 seconds, as described in 5.3.1. Table 1.

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LOSS OF MAINS TEST

Method used	Resonant circuit		
Output power level *	10%	55%	100%
Trip setting	-	-	-
Trip value	110 ms	138 ms	125 ms

Note * Indicative values are shown for minimum, medium and maximum power levels.

RECONNECTION TIMES

Reconnection Time	Under/Over voltage	Under/Over Frequency	Loss of mains
Minimum value	180 sec	180 sec	180 sec
Actual Setting	180 sec	180 sec	180 sec
Recorded value	192.8 sec	213.3 sec	200.5 sec

FAULT LEVEL CONTRIBUTION

SSEG Short Circuit Test

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

SELF MONITORING – SOLID STATE SWITCHING

Test	Yes / No
It has been verified that in the event of the solid state switching device failing to disconnect the SSEG, the voltage on the output side of the switching device is reduced to a value below 50 volt within 0.5 sec.	Yes (redundant mechanical relays are used)

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