Certificate of compliance

Applicant:	**SolarEdge Technologies Ltd.** 1 HaMada Street Herzliya 4673335 **Israel**
Product:	**Photovoltaic (PV) inverter**
Model:	**SE2200H** **SE3000H** **SE3500H** **SE3680H** **SE4000H** **SE4600H** **SE5000H*** **SE5000H** **SE6000H**

Use in accordance with regulations:

Automatic disconnection device with single-phase mains surveillance in accordance with EN50549-1:2019 for photovoltaic systems with a single-phase parallel coupling via an inverter in the public mains supply. The automatic disconnection device is an integral part of the aforementioned inverter.

Applied rules and standards:

EN 50549-1:2019
Requirements for parallel connection of installations with distribution networks - Part 1: Connection to an LV distribution network - Production of installations up to and including Type B

DIN V VDE V 0126-1-1:2006 (4.1 Functional safety)
Automatic disconnection device between a generator and the public low-voltage grid

At the time of issue of this certificate the safety concept of an aforementioned representative product corresponds to the valid safety specifications for the specified use in accordance with regulations.

Report number:	**16TH0371-EN50549-1_0**	**Certification Program:**	**NSOP-0032-DEU-ZE-V01**
Certificate number:	**U19-0662**	**Date of issue:**	**2019-12-17**

Certification body

Holger Schaffer

DAkkS Deutsche Akkreditierungsstelle D-ZE-12024-01-00

Certification body Bureau Veritas Consumer Products Services Germany GmbH accreditation to DIN EN ISO/IEC 17065

Appendix

Extract from test report according to EN 50549-1 **Nr. 16TH0371-EN50549-1_0**

Type Approval and declaration of compliance with the requirements of EN 50549-1.				
Manufacturer / applicant:	SolarEdge Technologies Ltd. 1 HaMada Street Herzliya 4673335 Israel			
Micro-generator Type	Photovoltaic (PV) inverter			
	SE2200H	**SE3000H**	**SE3500H**	**SE3680H**
Input DC voltage range [V]	270-480	270-480	270-480	270-480
Input DC current [A]	8,5	11,5	13,5	15
Output AC voltage [V]	230 @ 50Hz / 60Hz (N,PE)	230 @ 50Hz / 60Hz (N,PE)	230 @ 50Hz / 60Hz (N,PE)	230 @ 50Hz / 60Hz (N,PE)
Output AC current [A]	10	14	16	16
Output power [VA]	2200	3000	3500	3680
	SE4000H	**SE4600H**	**SE5000H***	**SE5000H**
Input DC voltage range [V]	270-480	270-480	270-480	270-480
Input DC current [A]	11	12,5	13,5	13,5
Output AC voltage [V]	230 @ 50Hz / 60Hz (N,PE)	230 @ 50Hz / 60Hz (N,PE)	230 @ 50Hz / 60Hz (N,PE)	230 @ 50Hz / 60Hz (N,PE)
Output AC current [A]	18,5	21	23	23
Output power [VA]	4000	4600	4985	5000
	SE6000H			
Input DC voltage range [V]	270-480			
Input DC current [A]	16,5			
Output AC voltage [V]	230 @ 50Hz / 60Hz (N,PE)			
Output AC current [A]	27,5			
Output power [VA]	6000			
Firmware version	Main DSP software version is 1.130 Aux DSP software version is 2.19			
Measurement period:	2019-10-13 to 2019-12-10			

Description of the structure of the power generation unit:

The power generation unit is equipped with a PV and line-side EMC filter. The power generation unit has no galvanic isolation between DC input and AC output. Output switch-off is performed with single-fault tolerance based on two series-connected relays in line and neutral. This enables a safe disconnection of the power generation unit from the network in case of error.

Appendix

Extract from test report according to EN 50549-1 **Nr. 16TH0371-EN50549-1_0**

Setting of the interface protection:

Parameter	Min. disconnection time	Max. disconnection time	Min. operate value	Max. operate value	Standard set value
Over voltage (stage 1) [a]	0,1s	600s	1,0V_n	1,3V_n	0,2s/1,2V_n
Over voltage (stage 2)	0,1s	600s	1,0V_n	1,3V_n	0,1s/1,25V_n
Under voltage (stage 1)	0,1s	600s	0,1V_n	1,0V_n	10s/0,2V_n
Under voltage (stage 2)	0,1s	600s	0,1V_n	1,0V_n	3s/0,8V_n
Over frequency	0,1s	600s	1,0f_n	1,2f_n	0,1s/1,03f_n
Over frequency (stage 1)	0,1s	600s	1,0f_n	1,2f_n	0,1s/1,03f_n
Under frequency	0,1s	600s	0,9f_n	1,0f_n	0,1s/0,95f_n
Under frequency (stage 2)	0,1s	600s	0,9f_n	1,0f_n	0,1s/0,95f_n
Reconnection settings for voltage	0,85Vn min, 1,1Vn max Adjustement range Min: 0-1Vn, Max:1-2Vn				0,85V_n (195,5V) ≤ V ≤ 1,10V_n (253V)
Reconnection settings for frequency	49,5Hz min, 50,2Hz max Adjustement range: Min: 44-50 Hz, Max: 50-66 Hz				49,5Hz ≤ f ≤ 50,2Hz
Reconnection time	60s Adjustement range: 0-600s				≥ 60s
Active power gradient after reconnection	10% Adjustement range: 1-10000%				10%PEmax / per minute
Permanent DC-injection	0,5% of rated inverter output current				
Loss of mains according EN 62116 (LoM)	2s				

Note:

[a] Over voltage – stage1: 10 min-mean-value corresponding to EN 50160.

The settings of the interface protection are password protected adjustable in the stated range above.

In case the above stated generators are used with an external protection device, the protection settings of the inverters are to be adjusted according to the manufacturer's declaration.

The above stated generators are tested according to the requirements in the EN 50549-1:2019. Any modification that affects the stated tests must be named by the manufacturer/supplier of the product to ensure that the product meets all requirements of the EN 50549-1:2019.