Certificate of compliance

Applicant:	**SolarEdge Technologies Ltd.** **1 HaMada Street** **Herzliya 4673335** **Israel**			
Product:	**Photovoltaic (PV) inverter**			
Model:	**SE50K**	**SE55K**	**SE66.6K**	**SE82.8K**
	SE90K	**SE100K**	**SE66.6K***	**SE80K***
	SE120K*			
Note:	*** 480 V mains voltage models**			

Inverter for three-phase parallel connection to the public grid. The network monitoring and disconnection device is an integral part of the above-mentioned model.

Applied rules and standards:

DANSK ENERGI:2019

Technical requirements for connection of power-generating plants to the low-voltage grid (≤1kV) Type A
Type A power plants above 50kW

4.1 Tolerance of Frequency and voltage deviations
4.2 Start-up and reconnection of a power-generating plant
4.3 Active power control
4.4 Reactive power control
4.5 Protection
4.6 Power Quality
4.7 Exchange of information

DIN V VDE V 0126-1-1:2006-02 (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:	**20TH0532-DK1/DK2_1** **20TH0532-Power Quality_0**	**Certification Program:**	**NSOP-0032-DEU-ZE-V01**
Certificate number:	**U22-0080**	**Date of issue:**	**2022-02-09**

Certification body

Thomas Lammel

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

A partial representation of the certificate requires the written approval of Bureau Veritas Consumer Products Services Germany GmbH

Appendix

Extract from test report according to DANSK ENERGI **Nr. 20TH0532-DK1/DK2_1**
20TH0532-Power Quality_0

Type Approval and declaration of compliance with the requirements of DANSK ENERGI				
Manufacturer / applicant	SolarEdge Technologies Ltd. 1 HaMada Street Herzliya 4673335 Israel			
Micro-generator Type	Photovoltaic inverter			
	SE50K	SE55K	SE66.6K	SE82.8K
Input DC voltage range [V]	680 - 1000	680 - 1000	680 - 1000	680 - 1000
Input DC current [A]	2 x 36,25	2 x 40	2 x 48,25	3 x 40
Output AC voltage [V]	220 / 380 230 / 400	220 / 380 230 / 400	220 / 380 230 / 400	220 / 380 230 / 400
Output AC current [A]	72,5	80	96,5	120
Output power [VA]	50000	55000	66600	82800
	SE90K	SE90K	SE100K	SE66.6K*
Input DC voltage range [V]	680 - 1000	680 - 1000	680 - 1000	680 - 1000
Input DC current [A]	3 x 43,5	3 x 43,5	3 x 48,25	2 x 40
Output AC voltage [V]	220 / 380 230 / 400	220 / 380 230 / 400	220 / 380 230 / 400	277 / 480
Output AC current [A]	130,5	130,5	145	80
Output power [VA]	89970	90000	100000	66600
	SE80K*	SE120K*	--	--
Input DC voltage range [V]	680 - 1000	680 - 1000	--	--
Input DC current [A]	2 x 48,25	3 x 48,5	--	--
Output AC voltage [V]	277 / 480	277 / 480	--	--
Output AC current [A]	96,5	145	--	--
Output power [VA]	80000	120000	--	--
Firmware version	Beginning with DSP1: 1.20 / DSP2: 2.20			
Note:	* 480 V mains voltage models			
Measurement period	2019-11-29 – 2020-05-29, 2020-06-01 – 2020-07-31			

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 each 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 DANSK ENERGI **Nr. 20TH0532-DK1/DK2_1**
20TH0532-Power Quality_0

Setting of the parameter values for DK1 and DK2:		
	Settings for DK1	**Setting for DK2**
	LFSM-O	
Threshold frequency [Hz]	50,2	50,5
Droop [% of Pn]	5% (40% Pn/Hz)	4% (50% Pn/Hz)
Intentional Delay	500ms	500ms
	Reactive Power	
	Q fix	Q fix
Active/disabled [On/Off]	On	On
Q setpoint [VAr]	0	0
	cos φ fix	
Active/disabled [On/Off]	Off	Off
PF setpoint [PF]	1	1
	cos φ (P)	
Active/disabled [On/Off]	Off	Off
cos φ (P) P1 [% of P_n]	0	0
cos φ (P) PF1 [PF]	1	1
cos φ (P) P2 [% of P_n]	50	50
cos φ (P) PF2 [PF]	1	1
cos φ (P) P3 [% of P_n]	100	100
cos φ (P) PF3 [PF]	0,9 inductive	0,9 inductive
cos φ (P) Lockin [% of U_n]	105	105
cos φ (P) Lockout [% of U_n]	100	100
	Connection and Reconnection	
Gradient [% of P_n/min]	20	20
Observation time [seconds]	180	180
U_{min} [% of U_n]	85	85
U_{max} [% of U_n]	110	110
f_{min} [Hz]	47,5	47,5
f_{max} [Hz]	50,2	50,5
	System Protection	
f> [s]	0,15	0,15
f> [Hz]	51,5	51,5
f< [s]	0,15	0,15
f< [Hz]	47,5	47,5
U> [s]	60	60
U> [% of U_n]	110	110
U>> [s]	0,15	0,15
U>> [% of U_n]	115	115
U< [s]	50	50

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Extract from test report according to DANSK ENERGI **Nr. 20TH0532-DK1/DK2_1**
20TH0532-Power Quality_0

Setting of the parameter values for DK1 and DK2:

	Settings for DK1	**Setting for DK2**
U< [% of U_n]	85	85
	Loss of Mains Detection	
U<< [s]	0,15	0,15
U<< [% of U_n]	80	80

Note.

The settings of the interface protection are password protected adjustable.

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.