Certificate of compliance

Applicant:	**SolarEdge Technologies Ltd.** 1 HaMada Street Herzliya 4673335 **Israel**
Product:	**Photovoltaic (PV) and battery inverter (Hybrid-System)**
Model:	**SE5K-RWB48** **SE7K-RWB48** **SE8K-RWB48** **SE10K-RWB48**

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:

Green Power Denmark:2022
Guide for connection of power-generating plants to the low-voltage grid (≤1kV)
Plant category A plant up to 125kW

4. Requirements for Type A power-generating plants
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 VDE V 0124-100:2020 (5.5.2.1 Functional safety of network and system protection)
Grid integration of generator plants - Low-voltage - Test requirements for generator units to be connected to and operated in parallel with low-voltage distribution networks

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:	**22TH0188-GPD-LV-DK1-DK2_0**	**Certification Program:**	**NSOP-0032-DEU-ZE-V01**
Certificate number:	**U23-1006**	**Date of issue:**	**2023-12-04**

Certification body

Domenik Koll
Head of Energy Systems

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

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

Testing laboratory accredited according to DIN EN ISO/IEC 17025

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

Type Verification Test Report	
Extract from test report according to Green Power Denmark	**No. 22TH0188-GPD-LV-DK1-DK2_0**

Type Approval and declaration of compliance with the requirements of Green Power Denmark				
Manufacturer / applicant	SolarEdge Technologies Ltd. 1 HaMada Street Herzliya 4673335 Israel			
Micro-generator Type	Photovoltaic (PV) and battery inverter			
	SE5K-RWB48	**SE7K-RWB48**	**SE8K-RWB48**	**SE10K-RWB48**
Photovoltaic (DC)				
Max DC voltage [V]	750 – 900	750 – 900	750 – 900	750 – 900
Input DC current [A]	13,3	16,0	17,3	20,0
Battery (DC)				
Battery DC voltage range [V]	40 – 62	40 – 62	40 – 62	40 – 62
Battery charge current [A]	130	130	130	130
Battery discharge current [A]	130	130	130	130
Connection (AC)				
Output AC voltage [V]	220/230 L-N 380/400 L-L 50 / 60 Hz	220/230 L-N 380/400 L-L 50 / 60 Hz	220/230 L-N 380/400 L-L 50 / 60 Hz	220/230 L-N 380/400 L-L 50 / 60 Hz
Max AC current [A]	8,0	11,5	13,0	16,0
Active Power [W]	5000	7000	8000	10000
Apparent power [VA]	5000	7000	8000	10000
Type	Bidirectional	Bidirectional	Bidirectional	Bidirectional
Firmware version	Main DSP 1.20 AUX DSP 2.20			
Batteries are used in the above stated storage system				
Brand	Solaredge Technologies GmbH	--	--	--
Technology	Li-Ion - LFP	--	--	--
Model	BAT-05K48	--	--	--
CUS module (kWh)	4,6	--	--	--
Firmware version of the BMS	BMS 1.1260.0	--	--	--
Number of modules	1-5 (1, 2, 3, 4, 5)	--	--	--
Description of the structure of the power generation unit: The power generation unit is equipped with a PV/DC 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.				

Type Verification Test Report

Extract from test report according to Green Power Denmark **No. 22TH0188-GPD-LV-DK1-DK2_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

Type Verification Test Report

Extract from test report according to Green Power Denmark **No. 22TH0188-GPD-LV-DK1-DK2_0**

	Settings for DK1	Setting for DK2
	System Protection	
f> [s]	0,2	0,2
f> [Hz]	51,5	51,5
f< [s]	0,2	0,2
f< [Hz]	47,5	47,5
U> [s]	60	60
U> [% of U_n]	110	110
U>> [s]	0,2	0,2
U>> [% of U_n]	115	115
U< [s]	50	50
U< [% of U_n]	85	85
	Loss of Mains Detection	
U<< [s]	0,2	0,2
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.