



Certificate of compliance

Applicant: SolarEdge Technologies Ltd.
1 HaMada Street
Herzliya 4673335
Israel

Product: Grid-tied photovoltaic (PV) inverter

Model: SE50K
SE55K
SE75K
SE82.8K

Use in accordance with regulations:

Automatic disconnection device with three-phase mains surveillance in accordance with DANSK ENERGI:2021 Type B for photovoltaic systems with a three-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:

DANSK ENERGI:2021

Technical requirements for connection of power-generating plants to the low-voltage grid ($\leq 1\text{kV}$) Type B

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: 17TH0209-DK1/DK2_type-B_1

Certification Program: NSOP-0032-DEU-ZE-V01

Certificate number: U22-0501

Date of issue:

2022-08-22



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 DANKS ENERGI Type B

Nr. 17TH0209-DK1/DK2_type-B_1

Type Approval and declaration of compliance with the requirements of DANKS ENERGI

Manufacturer / applicant:	SolarEdge Technologies Ltd. 1 HaMada Street Herzliya 4673335 Israel
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Micro-generator Type	Grid-tied photovoltaic inverter			
	SE50K	SE55K	SE75K	SE82.8K
Input DC voltage range [V]	680 – 1000			
Input DC current [A]	72,5	80	108,5	120
Output AC voltage [V]	220/230 Vac, L-N 380/400 Vac, L-L			
Output AC current [A]	72,5	80	109	120
Output power [VA]	50000	55000	75000	82800

Firmware version	Main DSP software version is 1.13 Aux DSP software version is 2.19
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Measurement period:	2020-02-12 – 2020-04-08
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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.

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

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	Settings for DK1	Setting for DK2
	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]	0,2	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	
Rocof<< [s]*	0,04	0,04
Rocof<< [Hz/sec]*	2,5	2,5

Note.

B1.2.8.5 Harmonics:

Unit SE50K passed the criteria for a Connection Point with a SCR <33

Unit SE55K passed the criteria for a Connection Point with a SCR <33

Unit SE75K passed the criteria for a Connection Point with a SCR <33

Unit SE82.8K passed the criteria for a Connection Point with a SCR <33