Certificate of compliance

Applicant:	**SolarEdge Technologie Ltd.** 1 HaMada Street Herzliya 467335 **Israel**
Product:	**Photovoltaic inverter**
Model:	**SE5K-RWB48** **SE7K-RWB48** **SE8K-RWB48** **SE10K-RWB48**

The device is designed to work as a generation unit of the type: A

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:

EN 50549-1:2019/A1:2023
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

4.4 Normal operating range
4.5 Immunity to disturbances
4.6 Active response to frequency deviation
4.7 Power response to voltage variations and voltage changes
4.8 EMC and power quality
4.9 Interface protection
4.10 Connection and starting to generate electrical power
4.11 Ceasing and reduction of active power on set point
4.13 Requirements regarding single fault tolerance of interface protection system and interface switch

EN 50549-10:2022
Requirements for generating plants to be connected in parallel with distribution networks - Part 10: Tests for conformity assessment of generating units

Compliance with the parameters in Annex C of the standard
(see appendix parameter table)

Commission Regulation (EU) 2016/631 of 14 April 2016
Establishing a network code on requirements for grid connection of generators (NC RFG).
Type approval for generation units to use in Type A plants.

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-EN50549-10_2**
Certificate number: **U24-0653_1**
Certification Program: **NSOP-0032-DEU-ZE-V10**
Date of issue: **2025-07-28**

Certification body

Georg LORITZ
Lab Supervisor Energy Systems

Accreditation

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

Type Approval and declaration of compliance with the requirements of EN 50549-1 and Commission Regulation (EU) 2016/631 of 14 April 2016				
Manufacturer	SolarEdge Technologie Ltd. 1 HaMada Street Herzliya 467335 Israel			
Product type	Photovoltaic inverter			
Static converter model	SE5K-RWB48	SE7K-RWB48	SE8K-RWB48	SE10K-RWB48
Input DC (photovoltaic)				
Input voltage range [V]	750 - 900	750 - 900	750 - 900	750 - 900
Max. input voltage [V]	900	900	900	900
Max. input current per Input [A]	13,3	17,3	17,3	20
Input DC (battery)				
DC voltage range [V]	40 - 62	40 - 62	40 - 62	40 - 62
Max. DC voltage [V]	62	62	62	62
Max. DC current per DC input [A]	125	125	125	125
Output AC				
Rated AC voltage [V]	380 / 220; 400 / 230	380 / 220; 400 / 230	380 / 220; 400 / 230	380 / 220; 400 / 230
Rated output current [A]	8	11,5	13	16
Max. output current [A]	8	11,5	13	16
Nom. converter output (P_{NINV}) [W]	5000	7000	8000	10000
Rated apparent power [VA]	5000	7000	8000	10000
In on-grid battery mode AC				
P_{sn} (nom. discharge power) [W]	5000	5000	5000	5000
P_{cn} (nom. charging power) [W]	5000	5000	5000	5000
P_{smax} (max. discharge power) [W]	5000	5000	5000	5000
P_{cmax} (max. charging power) [W]	5000	5000	5000	5000
Type	Bidirectional	Bidirectional	Bidirectional	Bidirectional
In off-grid battery mode				
P_{sn} (nom. discharge power) [W]	5000	5000	5000	5000
P_{smax} (max. discharge power) [W]	5000	5000	5000	5000

Batteries that can be used with the above static converter				
Brand	SolarEdge Technologies Ltd	--	--	--
Technology	Li-Ion	--	--	--
Model	BAT-05K48	--	--	--
CUS module (kWh)	4,6 / 5,12	--	--	--
Firmware version of the BMS	1.1407	--	--	--
Number of modules	1 - 5	--	--	--

Note

Batteries are not integrated into the inverter and must be installed according to local regulations.

Interface protection system and interface switch (Network and system protection "NS-protection")	
Type of protection	integrated NS-protection
Assigned to generation unit type	SE5K-RWB48, SE7K-RWB48, SE8K-RWB48, SE10K-RWB48
Integrated interface switch	Type of switching equipment 1: Relay (Model AZ2150) Type of switching equipment 2: Relay (Model AZ2150)
	Note: The output is switched off by the inverter bridge and two relay in series in each line and neutral.
Firmware version	Main DSP 1.20 / AUX DSP 2.20

Note

The settings of the product are password protected adjustable.

In case the 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 and the Commission Regulation (EU) 2016/631 of 14 April 2016. 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.

Software version	Main DSP 1.20 / AUX DSP 2.20
Name of parameter set	147 France
specific technical requirement (e,g, grid codes)	Enedis-PRO-RES_10E, Enedis-PRO-RES_64E 2023, FD C11-519-11_2023-10

Clause(s) / subclause(s) of EN 50549-1:2019 or EN 50549-2:2019	**Parameter[a]**	**Remarks/ additional information[b]**	**configurable value range**	**default value**
4.3.2 Interface switch	Single fault tolerance for interface switch	--	yes | no	yes
4.4.2 Operating frequency range	47,0 – 47,5 Hz Duration	--	0 s – 20 s	0 s
	47,5 – 48,5 Hz Duration	--	30 – 90 min	30 min
	48,5 – 49,0 Hz Duration	--	30 – 90 min	30 min
	49,0 – 51,0 Hz Duration	--	not configurable	unlimited
	51,0 – 51,5 Hz Duration	--	30 – 90 min	30 min
	51,5 – 52,0 Hz Duration	--	0 – 15 min	0 s
4.4.3 Minimal requirement for active power delivery at underfrequency	Reduction threshold	--	not configurable	Electronic inverter, no power reduction take place 49,5 Hz
	Maximum reduction rate	--	not configurable	≤ 2% P_M/Hz
4.4.4 Continuous operating voltage range	Upper limit	--	configurable 1,0 U_n – 1,3 U_n	1,15 U_n
	Lower limit	--	configurable 0,2 U_n – 1,0 U_n	0,85 U_n
4.5.2 Rate of change of frequency (ROCOF) immunity	ROCOF withstand capability (defined with a sliding measurement window of 500 ms) non-synchronous generating technology (inverter):	--	configurable 0 – 10 Hz/s	2 Hz/s

Software version	Main DSP 1.20 / AUX DSP 2.20
Name of parameter set	147 France
specific technical requirement (e,g, grid codes)	Enedis-PRO-RES_10E, Enedis-PRO-RES_64E 2023, FD C11-519-11_2023-10

Clause(s) / subclause(s) of EN 50549-1:2019 or EN 50549-2:2019	**Parameter[a]**	**Remarks/ additional information[b]**	**configurable value range**	**default value**	
4.5.3.2 Under-voltage ride through (UVRT) Generating plant with non-synchronous generating technology (inverter)	Voltage-Time- Diagram	--	see Figure 6 of EN 50549-1:2019 and EN 50549-2:2019	Time [s]	U [p,u,]
		--		0,00	0,20
		--		0,15	0,20
		--		1,50	0,85
		--		180	0,85
		--		180	0,90
	Fast fault current	--	Configurable, 1,1 I_{nom}	SE10K-RWB48: 16,00 A SE8K-RWB48: 13,00 A SE7K-RWB48: 11,50 A SE5K-RWB48: 8,00 A	
	Active power recovery after a short circuit	--	configurable	Start at 90% U_n	
	Fault recovery of active power (times calculated from the removal of the short circuit)	--	Non configurable	≤ 0,5 s	
	Value for recovered active power	--	configurable	≥ 90%	
	Accuracy for recovery of active power	--	not configurable	≤ 10%	
	Reactive power contribution has priority	--	yes | no	Yes	
4.5.4 Over-voltage ride through (OVRT)	Voltage-Time- Diagram	--	not configurable see Figure 8 of EN 50549-1:2019 and EN 50549-2:2019	Time [s]	U [p,u,]
		--		0,0	1,25
		--		0,1	1,25
		--		0,1	1,20
		--		5,0	1,20
		--		5,0	1,15
		--		60,0	1,15
		--		60,0	1,10
	Active power recovery after a short circuit	--	configurable	Start at 90% U_n	
	Fault recovery of active power (times calculated from the removal of the short circuit)	--	configurable	≤ 0,5 s	
	Value for recovered active power	--	configurable	≥ 90%	

Software version	Main DSP 1.20 / AUX DSP 2.20
Name of parameter set	147 France
specific technical requirement (e,g, grid codes)	Enedis-PRO-RES_10E, Enedis-PRO-RES_64E 2023, FD C11-519-11_2023-10

Clause(s) / subclause(s) of EN 50549-1:2019 or EN 50549-2:2019	**Parameter[a]**	**Remarks/ additional information[b]**	**configurable value range**	**default value**
	Accuracy for recovery of active power	--	not configurable	≤ 10%
4.6.1 Power response to overfrequency	Threshold frequency f1	--	50,2 Hz – 52,0 Hz	50,2 Hz
	Droop	--	2% – 12%	5%
	Power reference	--	P_M | P_{max}	Pmax, for synchronous generating technology and EESS P_M for other non-synchronous generating technology (inverter)
	Intentional delay	--	0 s – 2 s	0 s
	Deactivation threshold f_{stop}	--	50,0 Hz – f_1	disable
	Deactivation time t_{stop}	--	0 s – 600 s	disable
	Acceptance of staged disconnection	--	yes | no	yes
4.6.2 Power response to underfrequency	Threshold frequency f1	--	49,8 Hz – 46,0 Hz	Disable
	Droop	--	2% – 12%	Disable
	Power reference	--	P_M | P_{max}	Disable
	Intentional delay	--	0 s – 2 s	Disable
4.7.2.2 voltage support by reactive power - Capabilities	Active factor / Reactive power (%P_d) range overexcited	--	0,60 – 1 / 80% P_d - 0	0,9
	Active factor / Reactive power (%P_d) range underexcited	--	0,60 – 1 / 80% Pd - 0	0,9
4.7.2.3 voltage support by reactive power - Control modes	Enabled control mode	--	Q setp, Q(U) Q(P) cos φ setp, cos φ (P)	deactivated deactivated deactivated activated deactivated
4.7.2.3.2 voltage support by reactive power - Set point control modes	Q set point and excitation	--	0% – 80% P_D,	deactivated
	cos φ set point and excitation	--	1,0 – 0,6	0,9
4.7.2.3.3 voltage support by reactive power - Voltage related control modes	Characteristic curve	--	cos φ (P) Q(P)	deactivated
	Time constant	--	3 s – 60 s	10 s
	Min cos φ	--	0,0 – 1	0,9
	Lock-in power	--	0% – 20%	deactivated

Software version	Main DSP 1.20 / AUX DSP 2.20
Name of parameter set	147 France
specific technical requirement (e,g, grid codes)	Enedis-PRO-RES_10E, Enedis-PRO-RES_64E 2023, FD C11-519-11_2023-10

Clause(s) / subclause(s) of EN 50549-1:2019 or EN 50549-2:2019	**Parameter[a]**	**Remarks/ additional information[b]**	**configurable value range**	**default value**
	Lock-out power	--	0% – 20%	deactivated
4.7.2.3.4 voltage support by reactive power - Power related control mode	Characteristic curve	--	Q(U) P(U)	Q(U) (P(U) deactivated
only EN 50549-2:2019. 4.7.4.2.1 Voltage support during faults and voltage steps – General	Enabling	--	enable | disable	disabled
	Static voltage range overvoltage	--	100% U_c – 120% U_c	
	Static voltage range undervoltage	--	80% U_c – 100% U_c	
/ Generating Plant with non-synchronous generator (inverter)	Insensitivity range of ΔU50per	--		disabled
	Gradient k1	--	0 – 6	disabled
	Gradient k2	--	0 – 6	disabled
	Fast fault current	--	Rated value	1,1 I_{nom}
only EN 50549-2:2019. 4.7.4.2.1.2 Optional Modes / Generating Plant with non-synchronous generator	Active power priority	--	enable | disable	disable
	Reactive current limitation [% rated current]	--	0% – 100%	disable
	Zero current threshold	--	20% U_c – 100% U_c	disable
4.7.4.2.2 Zero current mode for converter connected generating technology / Generating Plant with non-synchronous generator	Enabling	--	enable | disable	disable
	Static voltage range overvoltage	--	100% U_n – 120% U_n	120% U_n
	Static voltage range undervoltage	--	20% U_n – 100% U_n	50% U_n

Software version	Main DSP 1.20 / AUX DSP 2.20
Name of parameter set	147 France
specific technical requirement (e,g, grid codes)	Enedis-PRO-RES_10E, Enedis-PRO-RES_64E 2023, FD C11-519-11_2023-10

Clause(s) / subclause(s) of EN 50549-1:2019 or EN 50549-2:2019	**Parameter[a]**	**Remarks/ additional information[b]**	**configurable value range**	**default value**
4.9.3 Requirements on voltage and frequency protection	Threshold for protection as dedicated device [in A or kW, kVA]	--	SE10K-RWB48: 10,00 A SE8K-RWB48: 40,00 A SE7K-RWB48: 40,00 A SE5K-RWB48: 40,00 A Note: Rated current of internal safety device!	Internal safety device
	Undervoltage threshold stage 1	--	57,0 V – 1 U_n	0,8 U_n
	Undervoltage operate time stage 1	--	0,1 s – 100 s	0,08 s
	Undervoltage threshold stage 2	--	57,0 V – 1 U_n	N/A
	Undervoltage operate time stage 2	--	0,1 s – 5 s	N/A
	Overvoltage threshold stage 1	--	1,0 U_n – 1,2 U_n	1,15 U_n
	Overvoltage operate time stage 1	--	0,1 s – 100 s	0,08 s
	Overvoltage threshold stage 2	--	1,0 U_n – 1,3 U_n	N/A
	Overvoltage operate time stage 2	--	0,1 s – 5 s	N/A
	Overvoltage threshold 10 min mean protection	--	1,0 U_n – 1,15 U_n	N/A
	Overvoltage operate time 10 min mean protection	--	60 – 600 s	N/A
	Underfrequency threshold stage 1	--	47,0 Hz – 50,0 Hz	47,5 Hz
	Underfrequency operate time stage 1	--	0,1 s – 100 s	0,08 s
	Underfrequency threshold stage 2	--	47,0 Hz – 50,0 Hz	N/A
	Underfrequency operate time stage 2	--	0,1 s – 5 s	N/A
	Overfrequency threshold stage 1	--	50,0 Hz – 52,0 Hz	51,5 Hz
	Overfrequency operate time stage 1	--	0,1 s – 100 s	0,08 s

Software version	Main DSP 1.20 / AUX DSP 2.20
Name of parameter set	147 France
specific technical requirement (e,g, grid codes)	Enedis-PRO-RES_10E, Enedis-PRO-RES_64E 2023, FD C11-519-11_2023-10

Clause(s) / subclause(s) of EN 50549-1:2019 or EN 50549-2:2019	**Parameter[a]**	**Remarks/ additional information[b]**	**configurable value range**	**default value**
	Overfrequency threshold stage 2	--	50,0 Hz – 52,0 Hz	N/A
	Overfrequency operate time stage 2	--	0,1 s – 5,0 s	N/A
	Loss of mains according EN 62116 (LoM)	--	0 s – 6000 s	ROCOF 2,5 Hz/s (0,5 s) active 2 s
only EN 50549-2:2019. 4.9.3 Requirements on voltage and frequency protection	Positive sequence under-voltage protection threshold	--	20% – 100%	
	Positive sequence under-voltage protection operate time	--	0,2 s – 100 s	
	Negative sequence over-voltage protection threshold	--	1% – 100%	
	Negative sequence over-voltage protection operate time	--	0,2 s – 100 s	
	Zero sequence over-voltage protection threshold	--	1% – 100%	
	Zero sequence over-voltage protection operate time	--	0,2 s – 100 s	
4.10.2 Automatic reconnection after tripping	Lower frequency	--	47,0 Hz – 50,0 Hz	49,5 Hz
	Upper frequency	--	50,0 Hz – 52,0 Hz	50,1 Hz
	Lower voltage	--	50% U_n – 100% U_n	85% U_n
	Upper voltage	--	100% U_n – 120% U_n	110% U_n
	Observation time	--	10 s – 600 s	60 s
	Active power increase gradient	--	6% – 3000% / min	10% / min
4.10.3 Starting to generate electrical power	Lower frequency	--	47,0 Hz – 50,0 Hz	49,5 Hz
	Upper frequency	--	50,0 Hz – 52,0 Hz	50,1 Hz
	Lower voltage	--	50% – 100% U_n	85% U_n
	Upper voltage	--	100% – 120% U_n	110% U_n
	Observation time	--	10 s – 600 s	60 s
	Active power increase gradient	--	6% – 3000% / min	N/A
4.11.1 Ceasing active power	activation option	--	Yes (RS485, DI)	

Annex certificate of conformity No. U24-0653_1

Extract from test report 22TH0188-EN50549-10_2 issued by a testing laboratory accredited by "Deutsche Akkreditierungsstelle GmbH (DAkkS)" according to ISO/IEC 17025. The accreditation is only valid for the scope listed in the annex of the accreditation certificate "D-PL-12024-03-04".

Software version		Main DSP 1.20 / AUX DSP 2.20		
Name of parameter set		147 France		
specific technical requirement (e,g, grid codes)		Enedis-PRO-RES_10E, Enedis-PRO-RES_64E 2023, FD C11-519-11_2023-10		
Clause(s) / subclause(s) of EN 50549-1:2019 or EN 50549-2:2019	**Parameter[a]**	**Remarks/ additional information[b]**	**configurable value range**	**default value**
4.11.2 Reduction of active power on set point	activation option	--	Yes (RS485, DI)	
4.12 Remote information exchange	available communication standards	--	No	

[a] If additional parameters have been evaluated during the test, these shall be added as additional lines in the table,

[b] This column should be used for manufacturer specific parameter descriptions,