

By the product certificate number

Issued to:

License holder:

SolarEdge Technologies Ltd.
1 Hamada street, Herzliya Pituach 4673335, Israel

Trademark:



Factory location:

SolarEdge Technologies Ltd.
2 Hamerkava street, industrial Zone, Tziporit, Israel

It is certified that the product:

Type of product: **Three-Phase Photovoltaic Inverter**

Model:

SE330K

Technical Data:

Rated Power	330 kW
Rated Voltage	690 V_{ac}
Rated Frequency	50 Hz
Firmware version	2.3.132
Number of phases	Three Phase (3/N/PE)
Isolation transformer	No

Is in compliance with product requirements of the standard:

- **Technical Prescription C10/11 of Synergrid. Edition 2.2 (15.03.2021):** Specific technical prescriptions regarding power-generating plants operating in parallel to the distribution network. (1)

(1) Equipment considered to be connected to power generating plants of Type B (≥ 1 MW) to the medium voltage grid (> 1 kV)

Is in compliance with the requirements of regulation:

- **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.

The above-mentioned product is certified according to the standard Technical Prescription C10/11 of Synergrid. Edition 2.2 (15.03.2021) and is valid to be installed in PV generating plants up to and including Type B to be connected to a MV distribution network. The relation between this European Standard with the relevant Article of COMMISSION REGULATION (EU) 2016/631 (NC RfG) is considered as it is indicated in the annex H of the standard EN 50549-2:2019&AC:2019-03+A1:2023.

Aforementioned equipment is certified according to SGS internal procedure PE.T-ECPE-35 according to requirements established on standard UNE-EN ISO/IEC 17065.

This certificate is first issued on 02nd August 2024

This certificate is valid until the 02nd August 2029

Madrid, 02nd Auguts 2024

Daniel Arranz Muñiz
Certification Manager



ANNEX I: EN 50549 PARAMETER TABLE

Clause(s) / subclause(s) of Technical Prescription C10/11 of Synergrid	Parameter	Remarks/ additional information	Configurable value range	Default value
D.4.1 Operating frequency range	47.0 – 47.5 Hz Duration		Not required	-
	47.5 – 48.5 Hz Duration		30	30 min
	48.5 – 49.0 Hz Duration		30	30 min
	49.0 – 51.0 Hz Duration		Not configurable	Unlimited
	51.0 – 51.5 Hz Duration		30	30 min
	51.5 – 52.0 Hz Duration		Not required	-
D.4.2 Minimal requirement for active power delivery at underfrequency	Reduction threshold		Not configurable	49 Hz
	Maximum reduction rate		Not configurable	2 % P _M /Hz
D.4.3 Continuous operating voltage range	Upper limit		Not configurable	110 % U _n
	Lower limit		Not configurable	90 % U _n
D.5.1 Rate of change of frequency (ROCOF) immunity	ROCOF withstand capability		Not configurable	2 Hz/s



Clause(s) / subclause(s) of Technical Prescription C10/11 of Synergrid	Parameter	Remarks/ additional information	Configurable value range	Default value
D.5.2 Under-voltage ride through (UVRT) Generating plant with non-synchronous generating technology	Maximum power resumption time		Not configurable	1 s
	Voltage-Time-Diagram		See Figure 12 of C10/11 Edition 2.2 (15.03.2021)	Time [s]
				U [p.u.]
D.6.1 Power response to overfrequency	Threshold frequency f1		50.2 Hz – 52.0 Hz	50.2 Hz
	Droop		2 % – 12 %	5 % (40 % P _{ref} /Hz)
	Power reference		For ESS P _{max} Others P _M	P _M
	Intentional delay		0 – 2 s	0s
	Deactivation threshold fstop		50.0 Hz – f1	Deactivated
	Deactivation time tstop		0 – 600 s	-
	Acceptance of staged disconnection		No	No
D.6.2 Power response to underfrequency	Threshold frequency f1		49.8 Hz – 46.0 Hz	49.8 Hz
	Droop		2 – 12 %	5 % (40 % P _{ref} /Hz)
	Power reference		P _{max}	P _{max}
	Intentional delay		0 – 2 s	0 s
D.7.1 voltage support by reactive power - Capabilities	Active factor / Reactive power (%Pd) range overexcited		0.1 –1 / 100 %P _d - 0	0.1 –1 / 100 %P _d - 0
	Active factor / Reactive power (%Pd) range underexcited		0.1 –1 / 100 %P _d - 0	0.1 –1 / 100 %P _d - 0



Clause(s) / subclause(s) of Technical Prescription C10/11 of Synergrid	Parameter	Remarks/ additional information	Configurable value range	Default value										
D.7.1 voltage support by reactive power – Control modes	Enabled control mode		Q setp. Q(U) Q(P)	Q set point										
D.7.1 voltage support by reactive power - Set point control modes	Q set point and excitation		0 – 98.8 % PD	0										
	cos ϕ set point and excitation		0.9 over-excited to 0.9 under-excited	Not available										
D.7.1 voltage support by reactive power - Voltage related control modes	Characteristic curve			<table border="1"> <thead> <tr> <th>U (%Un)</th> <th>Q (%Pn)</th> </tr> </thead> <tbody> <tr> <td>93%</td> <td>+60%</td> </tr> <tr> <td>94%</td> <td>0%</td> </tr> <tr> <td>106%</td> <td>0%</td> </tr> <tr> <td>107%</td> <td>-60%</td> </tr> </tbody> </table>	U (%Un)	Q (%Pn)	93%	+60%	94%	0%	106%	0%	107%	-60%
		U (%Un)	Q (%Pn)											
		93%	+60%											
		94%	0%											
	106%	0%												
	107%	-60%												
	Time constant		3 s – 60 s	10 s										
Min cos ϕ		0,0 – 1	0,9											
Lock-in power		0 % – 20 %	Deactivated											
Lock-out power		0 % – 20 %	Deactivated											
D.7.2 voltage support by reactive power - Power related control mode	Threshold frequency f1		100 %U _n – 110 %U _n	108 %U _n										
	Droop		2 % – 12 %	10 %P _{max} / %U _n										
	Power reference		P _{max}	P _{max}										
D.7.3 Voltage support during faults and voltage steps – General	Enabling		Enable Disable	Disabled										
	Static voltage range overvoltage		100 % U _c – 120 % U _c	110 % U _c										
	Static voltage range undervoltage		80 % U _c – 100 % U _c	90 % U _c										
/ Generating Plant with non-synchronous generator	Insensitivity range of $\Delta U_{50\text{per}}$		0 % – 15 %	5 %										
	Gradient k1		0 – 6	2										
	Gradient k2		0 – 6	2										



Clause(s) / subclause(s) of Technical Prescription C10/11 of Synergrid	Parameter	Remarks/ additional information	Configurable value range	Default value
D.7.3 Optional Modes / Generating Plant with non-synchronous generator	Active power priority		N/A	N/A
	Reactive current limitation [% rated current]		0 % - 100 %	Disable
	Zero current threshold		0 % - 100 %	Disable
D.7.3 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
D.3 Requirements on voltage and frequency protection	Threshold for protection as dedicated device [in A or kW. kVA]	Equipment greater than 30kVA	N/A	
D.3 Requirements on voltage and frequency protection	Overvoltage threshold 10 min mean protection	Equipment greater than 30kVA	N/A	
D.8 Automatic reconnection after tripping	Lower frequency		47.0 Hz – 50.0 Hz	49.9 Hz
	Upper frequency		50.0 Hz – 52.0 Hz	50.1 Hz
	Lower voltage		50 % U_c – 100 % U_c	90 % U_c
	Upper voltage		100 % U_c – 120 % U_c	110 % U_c
	Observation time		10 s – 600 s	60 s
	Active power increase gradient		6 % - 3000 %/min	10 %/min
D.8 Starting to generate electrical power	Lower frequency	Connection and reconnection. Will be performed by an external device	N/A	N/A
	Upper frequency		N/A	N/A
	Lower voltage		N/A	N/A
	Upper voltage		N/A	N/A
	Observation time		N/A	N/A
	Active power increase gradient		N/A	N/A
D.9.1 Ceasing active power	Activation option		Digital input / Modbus	
D.9.2 Reduction of active power on set point	Activation option		Digital input / Modbus	
D.10 Remote information exchange	Available communication standards	Remote information exchange shall be evaluated according to requirements of DSO/TSO or other interested parties	N/A	

