# Intyg om överensstämmelse

**Sökande:** **SolarEdge Technologies Ltd.**
1 HaMada Street
Herzliya 4673335
**Israel**

**Produkt:** **Fotovoltaisk växelriktare**

**Modell:** **SE50K**
**SE55K**
**SE66.6K**
**SE75K**
**SE82.8K**
**SE100K**

**Avsedd användning:**

Automatisk frånkopplingsanordning med övervakning av trefas-nätet i enlighet med EN 50549-1:2019, SS-EN 50549-1:2019 för solcellsystem med en trefas parallellkoppling över en inverterare i det allmänna kraftnätet. Den automatiska frånkopplingsanordningen är inbyggd i de ovannämnda inverterarna.

**Gällande bestämmelser och standarder:**

**EN 50549-1:2019, SS-EN 50549-1:2019 (EIFS 2018:2)**
Fordringar på generatoranläggningar för anslutning i parallelldrift med elnät - Del 1: Anslutning till lågspänningsnät - Generatoranläggningar upp till och med typ B

**EN 50438:2013, SS-EN 50438:2014**
Fordringar för anslutning av smågeneratorer i parallelldrift med det allmänna elnätet kompletterat med ändringar beslutade av SEK TK 8

**DIN V VDE V 0126-1-1:2006 (4.1 Funktionell Säkerhet)**
Automatisk frånkopplingsanordning mellan en generator och det allmänna lågspänningsnätet

Säkerhetskonceptet för en ovannämnd representativ produkt överensstämmer, vid utfärdandet av detta certifikat, med gällande säkerhetsspecifikationer för den avsedda användningen i enlighet med bestämmelserna.

| | | | |
|---|---|---|---|
| **Rapportnummer:** | **17TH0209-EN50549-1_1** | **Certifieringsprogram:** | **NSOP-0032-DEU-ZE-V01** |
| **Certifikatnummer:** | **U20-0093** | **Datum för utfärdande:** | **2020-02-25** |

**Institutet certifiering**

Holger Schaffer

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

Institutet Certifiering för Bureau Veritas Consumer Products Services Germany GmbH ackrediterat enligt DIN EN ISO / IEC 17065

En partiell representation av intyget kräver skriftligt godkännande av Bureau Veritas Consumer Products Services Germany GmbH

## Appendix

**Extract from test report according to EN 50549-1** **Nr. 17TH0209-EN50549-1_1**

**Type Approval and declaration of compliance with the requirements of EN 50549-1.**

| | |
|---|---|
| **Manufacturer / applicant:** | SolarEdge Technologies Ltd.<br>1 HaMada Street<br>Herzliya 4673335<br>Israel |
| | |
| **Micro-generator Type** | Photovoltaic (PV) inverter |

| | SE50K | SE55K | SE66.6K | SE75K |
|---|---|---|---|---|
| **Input DC voltage range [V]** | 680 – 1000 | 680 – 1000 | 680 – 1000 | 680 – 1000 |
| **Input DC current [A]** | 72,5 | 80 | 80 | 108,5 |
| **Output AC voltage [V]** | 220/230 Vac, L-N<br>380/400 Vac, L-L | 220/230 Vac, L-N<br>380/400 Vac, L-L | 277 Vac, L-N<br>480 Vac, L-L | 220/230 Vac, L-N<br>380/400 Vac, L-L |
| **Output AC current [A]** | 72,5 | 80 | 80 | 109 |
| **Output power [VA]** | 50000 | 55000 | 66000 | 75000 |

| | SE82.8K | SE100K | | |
|---|---|---|---|---|
| **Input DC voltage range [V]** | 680 – 1000 | 680 – 1000 | | |
| **Input DC current [A]** | 120 | 120 | | |
| **Output AC voltage [V]** | 220/230 Vac, L-N<br>380/400 Vac, L-L | 277 Vac, L-N<br>480 Vac, L-L | | |
| **Output AC current [A]** | 120 | 120 | | |
| **Output power [VA]** | 82800 | 100000 | | |

| | |
|---|---|
| **Firmware version** | Main DSP software version beginning with 1.130<br>Aux DSP software version beginning with 2.19 |
| | |
| **Measurement period:** | 2019-10-13 to 2019-12-10<br>2018-02-01 to 2018-05-10 |

**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 an error.

## Appendix

**Extract from test report according to EN 50549-1** **Nr. 17TH0209-EN50549-1_1**

| Setting of the interface protection SE50K / SE55K / SE75K SE82.8K | | |
|---|---|---|
| **Parameter** | **max. disconnection time** | **Trip value** |
| Over voltage (stage 1) | 60s | 230V +11% (255,3V) |
| Over voltage (stage 2) | 0,2s | 230V +15% (264,5V) |
| Under voltage | 0,2s | 230V -15% (195,5V) |
| Over frequency | 0,5s | 50Hz +4% (52Hz) |
| Under frequency | 0,5s | 50Hz -6% (47Hz) |
| Reconnection settings for voltage (normal operational startup) | 0,85Vn (195,5V) ≤ V ≤ 1,10Vn (253V) | |
| Reconnection settings for frequency (normal operational startup) | 47,5Hz ≤ f ≤ 50,1Hz | |
| Reconnection time (normal operational startup) | ≥ 180s | |
| Reconnection settings for voltage (automatic reconnection after tripping) | 0,85Vn (195,5V) ≤ V ≤ 1,10Vn (253V) | |
| Reconnection settings for frequency (automatic reconnection after tripping) | 47,5Hz ≤ f ≤ 50,1Hz | |
| Reconnection time (automatic reconnection after tripping) | ≥ 180s | |
| Active power gradient after reconnection | 10% $P_{Emax}$ / per minute | |
| Active power delivery at under frequency | electronic inverter, no active power reduction | |
| Power response to over frequency (frequency / droop s) | 50,5Hz / 8% | |
| Permanent DC-injection | ≤ 0,5% of rated inverter output current or ≤ 20mA | |
| Rate of change of frequency (ROCOF) | 5Hz/s | |
| Loss of mains according EN 62116 (LoM) | 0,5s | |

**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.

The above stated generators are tested according to the requirements in the EN 50549-1:2019 and EIFS 2018:2. Any modification that affects the tests must be named by the manufacturer/supplier of the product to ensure that the product meets all requirements of the EN 50549-1:2019 and EIFS 2018:2.

## Appendix

**Extract from test report according to EN 50549-1** **Nr. 17TH0209-EN50549-1_1**

| Setting of the interface protection SE66.6K / SE100K | | |
|---|---|---|
| **Parameter** | **max. disconnection time** | **Trip value** |
| Over voltage (stage 1) | 60s | 277V +11% (307,5V) |
| Over voltage (stage 2) | 0,2s | 277V +15% (318,6V) |
| Under voltage | 0,2s | 277V -15% (235,5V) |
| Over frequency | 0,5s | 50Hz +4% (52Hz) |
| Under frequency | 0,5s | 50Hz -6% (47Hz) |
| Reconnection settings for voltage (normal operational startup) | 0,85Vn (235,5V) ≤ V ≤ 1,10Vn (304,7V) | |
| Reconnection settings for frequency (normal operational startup) | 47,5Hz ≤ f ≤ 50,1Hz | |
| Reconnection time (normal operational startup) | ≥ 180s | |
| Reconnection settings for voltage (automatic reconnection after tripping) | 0,85Vn (235,5V) ≤ V ≤ 1,10Vn (304,7V) | |
| Reconnection settings for frequency (automatic reconnection after tripping) | 47,5Hz ≤ f ≤ 50,1Hz | |
| Reconnection time (automatic reconnection after tripping) | ≥ 180s | |
| Active power gradient after reconnection | 10% $P_{Emax}$ / per minute | |
| Active power delivery at under frequency | electronic inverter, no active power reduction | |
| Power response to over frequency (frequency / droop s) | 50,5Hz / 8% | |
| Permanent DC-injection | ≤ 0,5% of rated inverter output current or ≤ 20mA | |
| Rate of change of frequency (ROCOF) | 5Hz/s | |
| Loss of mains according EN 62116 (LoM) | 0,5s | |

**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.

The above stated generators are tested according to the requirements in the EN 50549-1:2019 and EIFS 2018:2. Any modification that affects the tests must be named by the manufacturer/supplier of the product to ensure that the product meets all requirements of the EN 50549-1:2019 and EIFS 2018:2.