19.06.2025 rev.20.0

INVERTER APPROVAL FOR INSTALLATION IN ISRAEL

STANDARDS APPLIED FOR SAFETY EVALUATION OF INVERTERS:

AS/NZS 3100
Approval and test specification – General requirements for electrical equipment

SI 4777 Part 2 / AS/NZS 4777.2: 2005
Grid connection of energy system via inverters – Part 2: Inverter requirements

SI 4777 Part 3 / AS/NZS 4777.3: 2005
Grid connection of energy system via inverters – Part 3: Grid protection requirements

or

IEC 62109-1: 2010 / EN 62109-1: 2010
Safety of power converters for use in photovoltaic power systems – Part1: General requirements

IEC/EN 62109-2: 2011 / VDE 0126-14-2:2012
Safety of power converters for use in photovoltaic power systems – Part2: Particular requirements for inverters

or

EN 50178
Electronic equipment for use in power installations

or

UL1741
Inverters, Converters, Controllers and Interconnection System equipment for Use with Distributed Energy Resources

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and

IEEE 2030.5:2018 *
IEEE Standard for Smart Energy Profile Application Protocol

*** Required for Inverters over 100kW**

*** Optional/Recommended for Inverters below 100kW**

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And EMC/Radio frequency

A. IEC/EN 61000-6-1 - Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity standard for residential, commercial and light-industrial environments.

B. IEC/EN 61000-6-2 - Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments.

C. IEC/EN 61000-6-3 - Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for equipment in residential environments.

D. IEC/EN 61000-6-4 - Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments.

or

FCC Part 15 - RADIO FREQUENCY DEVICES.

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OPTION 1

The SII Test Report and the certificate issued based on review of provided test reports and basic safety tests

Required documentation:

1. Full test reports* according to **any one** of the applied standards / set of standards (see the list below) issued by an accredited laboratory and the laboratory accreditations according to ISO/IEC 17025: 2017 including the scope covering the applicable standards.
   Note: provided test reports shall include the list of critical components.
   * CB Scheme test reports are given preference.

Applicable Standards	
AS / SI 4777 Parts 2, 3: 2005 + AS 3100	**or**
EN 50178	**or**
UL 1741	**or**
VDE 0126-14-2: 2012 + IEC 62109-1: 2010	**or**
IEC 62109-2 + IEC 62109-1: 2010	

IEEE 2030.5:2018 *	**and**
*** Required for Inverters over 100kW**	
*** Optional/Recommended for Inverters below 100kW**	

2. A sample of the inverter for testing.
3. User / Installation Manual.
4. Manufacturer declaration* including the following information:
   - 4.1 Compliance with "Guidelines document: Technical requirements for photovoltaic inverters", update 6.2022 (see Appendix 2, pages 5-16 of this document).
   - 4.2 Whether the inverter employs or does not employ an **integrated** residual leakage current device/monitor (RCD/RCM) for protection of the **DC** line in case of excessive residual currents and excessive sudden changes of the residual current. Protection means shall include an **automatic** disconnection **function**.
   - 4.3 Type of grid connection (LV/HV).
   - 4.4 Compliance with the requirements of IEEE 2030.5:2018.

* For detailed explanation regarding the declaration, see Appendix 1 on page 4.

Cost: NIS 9,100

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OPTION 2

The SII certificate issued based on the review of provided test reports

Required documentation:

1. Full test reports* according to **any one** of the applied standards / set of standards (see the list below) issued by an accredited laboratory that has signed a mutual agreement with the SII (see the table below) and laboratory accreditations according to ISO/IEC 17025: 2017 including the scope covering the applicable standards.
   Note: provided test reports shall include the list of critical components.
   * CB Scheme test reports are given preference.

SII Approved Testing Labs*	Applicable Standards
Bureau Veritas, Germany UL TÜV Rheinland TÜV SUD INTERTEK SGS Spain, Madrid * Only the branches that have a mutual agreement with the SII for acceptance of test reports.	AS / SI 4777 Parts 2, 3: 2005 + AS 3100 **or** EN 50178 **or** UL 1741 **or** VDE 0126-14-2: 2012 + IEC 62109-1: 2010 **or** IEC 62109-2 + IEC 62109-1: 2010 **or** ---------- IEEE 2030.5:2018 * **and** * **Required for Inverters over 100kW** * **Optional/Recommended for Inverters below 100kW**

2. Manufacturer declaration* including the following information:

   2.1 Compliance with "Guidelines document: Technical requirements for photovoltaic inverters", update 6.2022 (see Appendix 2, pages 5-16 of this document).

   2.2 Whether the inverter employs or does not employ an **integrated** residual leakage current device/monitor (RCD/RCM) for protection of the **DC** line in case of excessive residual currents and excessive sudden changes of the residual current. Protection means shall include an **automatic** disconnection **function**.

   2.3 Type of grid connection (LV/HV).

   2.4 Compliance with the requirements of IEEE 2030.5:2018.

* For detailed explanation regarding the declaration, see Appendix 1 on page 4.

3. No sample is required.

Cost NIS 3,952

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APPENDIX 1

Manufacturer Declaration

A proper declaration shall contain the following wording:

We, _____ (name and address of the inverter manufacturer), hereby declare that the inverter models listed below*

1. Can be adjusted according to "Guidelines document: Technical requirements for photovoltaic inverters", update 6.2022 (attached);
2. Are suitable for connection to the **HV** / **LV** / **HV+LV** (choose one) grid;
3. Employ / Do not employ (choose one) an **integrated** residual leakage current device/monitor (RCD/RCM) (choose one) for protection of the **DC** line in case of excessive residual currents and excessive sudden changes of the residual current.
4. **For models over 100kW**: Comply with the requirements of IEEE 2030.5:2018
   For models below 100kW: Comply with the requirements of IEEE 2030.5:2018 or Shall **not** be installed in parallel.

*Note: the model designations should be specified and listed in full, exactly as they appear in the test report. Naming a series of models will not be accepted.

The declaration should be duly **dated** and **signed** by an authorized person, specifying his/her full name and a position in the company. It should be **sealed** with a company official stamp.

The declaration should bear an official **company logo** and the **company details** (its full name, address and contact details).

The original Guidelines document shall be attached to the declaration.

Only the declarations made up as specified above will be accepted.

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APPENDIX 2

Guidelines document: Technical requirements for photovoltaic inverters
Part A: Technical requirements for photovoltaic inverters connected to low voltage

(11 pages attached)

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