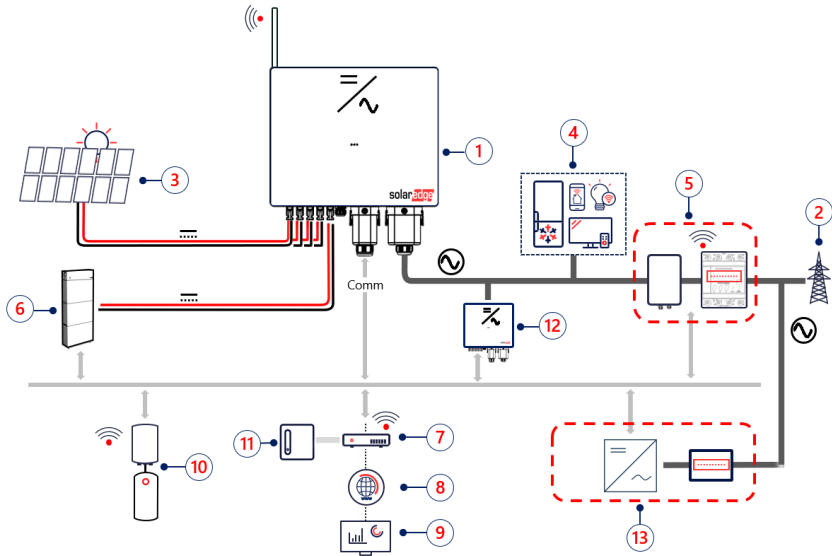


SolarEdge Nexus Inverter - Three Phase

Product Guide

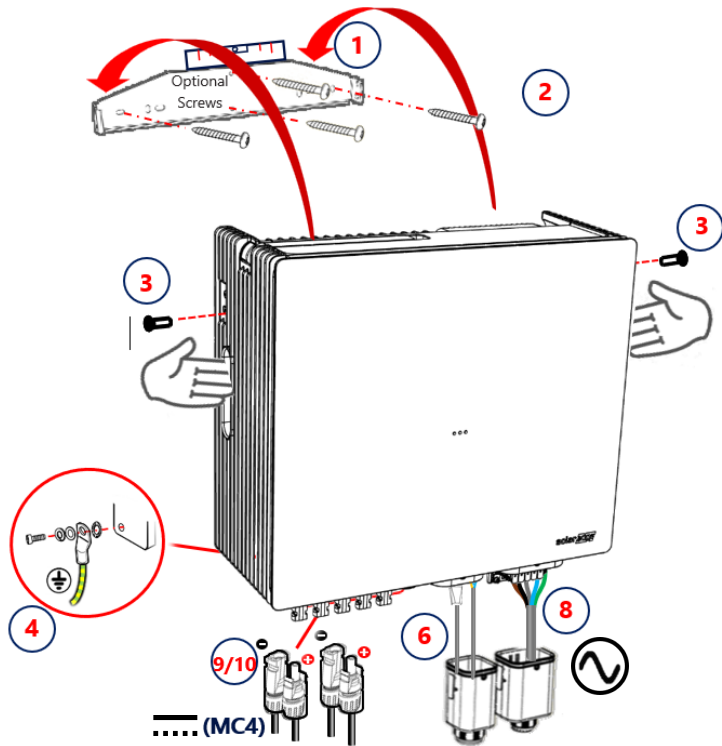


System description

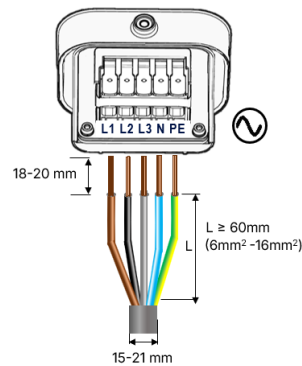


1. SolarEdge Nexus Inverter – Three Phase
2. Grid connection
3. PV string(s)
4. Home loads
5. SolarEdge Meter or SolarEdge Backup Interface (optional)
6. Battery (optional)
7. Internet Router
8. Internet / Cloud connection
9. SolarEdge Monitoring Platform
10. SolarEdge Smart Energy devices (optional)
11. SolarEdge ONE Controller (optional)
12. 2nd SolarEdge inverter (optional)
13. 3rd-party inverter with SolarEdge production meter (optional)

Installation



1. Install the mounting bracket on a wall. Use at least 2 screws.
2. Hang the inverter on the mounting bracket.
3. Secure the inverter to the mounting bracket using two side screws. Tighten the screws to 4 Nm.
4. Connect Protective Earth (PE) to the inverter. Use at least the same cross-section wire as for the AC wires.
5. Releases the screw and remove the cover of the communication cables compartment.
6. Connect the communication cables and reinstall the cover (see Connecting Communication). Tighten the cover screw to 2.2 Nm, and the nut of the gland to 2.8 Nm - 3.3 Nm.
7. Release the screw and remove the cover of the AC wires compartment.
8. Connect the AC wires and reinstall the cover. Tighten the cover screw to 2.2 Nm and the nut of the AC gland to 2.8 Nm - 3.3 Nm.



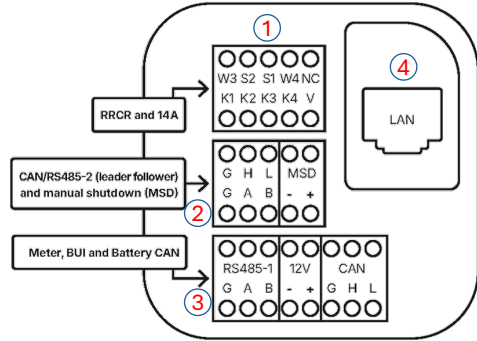
CAUTION! DO NOT use a circuit breaker with a current rating higher than that specified for this inverter model.

9. Connect the DC wires from the PV strings.
 - CAUTION!** Earthing of a conductor on the DC side is NOT permitted.
 10. Use any free MC4 connector port to connect the DC wires from the battery..
 - CAUTION!** Before connecting the inverter to a battery, make sure that the DC switch of the battery is turned OFF.
- Use DC cables with a cross-section of 6mm² and crimp MC4 connectors to connect Inv (+) to Bat (+) and Inv (-) to Bat (-).

Connecting communication

Note: Use CAT 6/7 twisted pair cable (min. 0.25 mm²) for communication connections.

1. RRRC / FFN 4-wire connector
2. RS485 or CAN communication with follower inverter (optional) + Manual Shutdown (MSD) Switch
3. Meter or BUI RS485; 12V for BUI; CAN bus communication with battery (optional)
4. LAN port for internet Router



Commissioning and Operation

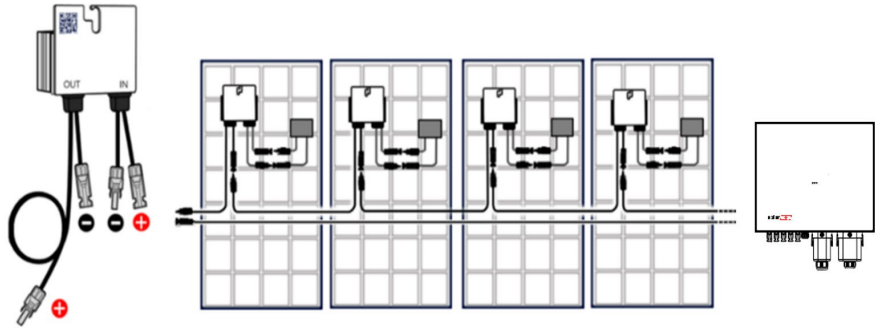
LED indicators

The LED indicators on the front panel of the inverter provide the following information:

Blue: communication ok. **Steady Green:** power production. **Blinking Green:** Grid connection ok. **Orange:** fault. For more LED indications refer to: <https://www.solaredge.com/leds>

PV strings

Note: Use PV modules with an IEC 61730 Class A rating.



General information

This product does not require maintenance.

Important safety warnings and cautions for solar equipment

GENERAL WARNINGS



- DANGER! RISK OF ELECTRIC SHOCK AND FIRE**
- This equipment produces and works with high DC and AC voltages. Failure to observe safety precautions may result in severe injury or death.
 - Installation, maintenance, and repair must only be performed by qualified personnel familiar with solar power systems and associated risks.
 - Do not attempt to repair the equipment yourself. There are no user-serviceable parts inside.

WARNING: Read all instructions and safety information thoroughly before installing or operating this equipment.

Electrical Safety

- DANGER! HIGH VOLTAGE**
- Solar panels produce DC electricity when exposed to light. A series of connected panels can produce high, potentially lethal voltages.
 - Inverters and optimizers may contain capacitors that retain charge even after disconnection. Wait at least 5 minutes after disconnection before handling.

- WARNING! PROPER GROUNDING REQUIRED**
- Ensure all equipment is properly grounded according to local electrical codes.
 - Use only with approved grounding methods to reduce the risk of electric shock.

Installation Precautions

- ⚠️ **CAUTION!** HEAVY EQUIPMENT
- Solar panels and inverters may be heavy. Use proper lifting techniques and equipment to avoid injury.
 - Ensure mounting surfaces can support the weight of the equipment.

- ⚠️ **WARNING!** MOUNTING HAZARDS
- Improperly mounted equipment can fall, causing injury or death.
 - Follow all mounting instructions precisely. Use specified mounting hardware.

- ⚠️ **CAUTION!** ENVIRONMENTAL CONDITIONS
- Install equipment only within the specified temperature and humidity ranges.
 - Protect equipment from direct exposure to rain and snow unless rated for such exposure.
 - Operating temperature range: -40°C to +60°C
 - IP Rating: IP65

Fire Safety

- ⚠️ **WARNING!** FIRE HAZARD
- Improper installation or use of damaged equipment may create a fire risk.
 - In case of fire, de-energize the system if safe to do so. Use a Type C fire extinguisher.

⚠️ **CAUTION!** Do not install near flammable gases or highly combustible materials.

Specific Equipment Warnings

Solar Inverters

- ⚠️ **DANGER!** RESIDUAL VOLTAGE
- Inverters may retain dangerous voltage levels even after disconnection from PV panels and the grid.
 - Wait at least 5 minutes and verify the absence of voltage before servicing.

- ⚠️ **WARNING!** GRID INTERCONNECTION
- Connection to the electrical grid must comply with local utility requirements.
 - Improper connection may result in equipment damage, fire, or electrical hazards.

Power Optimizers

- ⚠️ **DANGER!** HIGH DC VOLTAGE
- Optimizers output high DC voltage when connected to operating PV panels.
 - Treat all wiring as energized until confirmed otherwise.
- ⚠️ **CAUTION!** OPTIMIZER-PANEL MATCHING
- Use only with compatible PV panels that support IEC 61730 Class A rating. A mismatch may result in reduced performance or equipment damage.

PV Panels

- ⚠️ **WARNING!** ELECTRICAL GENERATION
- Panels generate electricity when exposed to light. Cover panels with opaque material during installation and maintenance.
- ⚠️ **CAUTION!** PANEL HANDLING
- PV panels can be damaged by improper handling. Follow manufacturer's guidelines for unpacking and installation.
 - Broken panels may have sharp edges. Handle with care and appropriate PPE.

Personal Protective Equipment (PPE)

- ⚠️ **CAUTION!** USE APPROPRIATE PPE
- Wear safety glasses, insulated gloves, and non-slip safety shoes during installation and maintenance.
 - Use fall protection equipment when working at heights.

Compliance and Disposal

CE Marking: This product complies with applicable EU directives.

WEEE Compliance: This product is subject to EU Directive 2012/19/EU on waste electrical and electronic equipment (WEEE). Do not dispose of this product as unsorted municipal waste. Please recycle where facilities exist or contact the manufacturer for proper disposal instructions.

RoHS Compliance: This product complies with EU RoHS Directive 2011/65/EU on the restriction of hazardous substances.

EMC Compliance: This equipment complies with EU EMC Directive 2014/30/EU on electromagnetic compatibility.

Emergency and Support Contact

For emergency assistance or technical support, contact:
[Insert Manufacturer's emergency contact information]

RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE

Specifications

***Note: These specifications are for reference only and may not be up to date. For the most up-to-date specifications, refer to the online product datasheet.**

***Note: The Nexis Inverter can work continuously at a Frequency of (nominal / range): 50Hz / 47Hz to 52Hz and an AC voltage of (nominal / range): 230V / 195.5V to 253V**

Model	NX13K	NX15K	NX17K	NX20K	Units
OUTPUT AC – LOADS / GRID					
Rated AC Power Output	12.99	15	17	20	kVA
Maximum AC Power Output per Phase	4330	5000	5666	6666	VA
AC Output Voltage – Line to Line (Nominal)	380 / 400 / 480				Vac
AC Output Voltage – Line to Neutral (Nominal)	220 / 230 / 277				Vac
AC Output Voltage – Line to Neutral (Range)	184 – 305				Vac
AC Frequency	50/60 ± 5				Hz
Grids Supported – Three Phase	3 / N / PE (WYE with Neutral), TT, TN-S, TNC-S				
Maximum Continuous Output Current per Phase	20	24	25.6	32	A
Power factor range (cos phi)	± 0.4 to 1				
Residual Current Detector / Residual Current Step Detector	300 / 30				mA
Maximum Short Circuit Current	TBD	TBD	TBD	TBD	A
Utility Monitoring, Islanding Protection, Configurable Power Factor, Country Configurable Thresholds	Yes				
Over Voltage Category	III				
OUTPUT AC – BACKUP POWER					
Maximum AC Power Output (230V/400V)	20				kVA
Maximum AC Power Output (277V/480V)	24				kVA
Maximum AC Power Output per Phase (230V)	6,667				VA
AC Output Voltage – Line to Line / Line to Neutral (Nominal)	380 / 220; 400 / 230; 480 / 277				Vac
AC Output Voltage – Line to Neutral (Range)	184 – 305				Vac
AC Frequency	50.2				Hz
Maximum Continuous Output Current per Phase	32.0	32.0	32.0	32.0	A
Residual Current Detector / Residual Current Step Detector	300 / 30				mA
Grids Supported – Three Phase	3 / N / PE (WYE with Neutral), TT, TNS, TN-C-S				
Off Grid Switchover Time	≤ 50				ms
Automatic Backup Transition Time with Backup Unit Interface	≤ 3				s
Over Voltage Category	II				

Model	NX13K		NX15K		NX17K		NX20K		Units
INPUT PV									
Maximum DC Power (Module STC)	26		30		34		40		kW
Transformerless, Ungrounded	Yes								
DC Input Voltage range	715 - 950								Vdc
Nominal DC Input Voltage	750								Vdc
Maximum Input Current per Inverter / DC Port	38.1 / 40		44.0 / 40		49.9 / 40		58.7 / 40		Adc
Reverse-Polarity Protection	Yes								
Ground-Fault Isolation Detection	167 kΩ Sensitivity								
Maximum Inverter Efficiency	99.0		99.0		99.0		99.0		%
European Weighted Efficiency	98.60		98.65		98.70		98.75		%
Supported Power Optimizers	SolarEdge S-Series and P-Series (1:1 Power Optimizers only)								
INPUT BATTERY									
Supported Battery Types	SolarEdge Nexis Battery								
Maximum Number of Batteries per Inverter	4 (maximum 4 blocks per battery = maximum 16 blocks)								
Maximum Charge Power	30		30		30		30		kW
Maximum Discharge Power Ongrid / Offgrid	12,990 / 20,000		15,000 / 20,000		17,000 / 20,000		20,000 / 20,000		W
Nominal Voltage	750								Vdc
Maximum Continuous Current per DC Port	40								Adc
Battery Communication	SolarEdge Home Network; CAN								
ADDITIONAL FEATURES									
Supported Communication Interfaces	Built-in: 1 x RS485 Modbus; 1 x RS485/CAN adjustable; 1 x CAN; LAN; Wi-Fi; SolarEdge Home Network Optional: Cellular LTE								
Maintenance	Not required								
STANDARD COMPLIANCE									
Safety	IEC 62109								
Grid Connection Standards	VDE-AR-N 4105:2018-11; TOR Stromerzeugungsanlagen Typ A Version 1.3; NA_EEA-NE7 - CH 2020; CEI 0-21; CEI 0-16; EN 50549-1; G98 Type A; G99 Type A; Synergrid C10/11; UNE 217002:2020; MSA EN 50549-1								
Emissions	IEC 61000-6-2; IEC 61000-6-3; IEC 61000-3-11; IEC 61000-3-12								
RoHS	Yes								
INSTALLATION SPECIFICATIONS									
DC Input	5 x MC4 ports for PV and BAT								
Dimensions (W x H x D)	488 x 428 x 200								mm
Weight	30.6								kg
Operating Temperature Range	-40 to +60								°C
Cooling	Convection cooling, no external fans								
Noise	< 40								dBA
Mounting	Wall brackets provided								
Protection Rating	IP65 – outdoor and indoor								
Humidity	0 - 95								%
Maximum Altitude	2,000								m
Pollution Degree	PD2								