SolarEdge SE27.6K-RW000NNN2

SolarEdge SE 27.6K Inverter User Manual

Model: SE27.6K-RW000NNN2

1. PRODUCT OVERVIEW

The SolarEdge SE 27.6K Inverter (Model SE27.6K-RW000BNN4) is an advanced photovoltaic inverter designed for optimal energy conversion and system reliability. It integrates intelligent digital control technology with efficient power conversion, ensuring high energy yields and robust performance.

Important Note: SolarEdge inverters are designed to operate exclusively with SolarEdge performance optimizers to achieve their full potential and ensure system compatibility.

Image of the SolarEdge SE 27.6K Inverter, a white rectangular unit with a display panel at the bottom and a '12 YEARS Warranty' badge. This unit is designed for efficient solar energy conversion.

Key Features:

- **Optimized Performance:** Ensures constant input voltage regardless of external factors like temperature fluctuations or varying string lengths, achieving an optimal efficiency of 98%.

- **High Reliability:** Built with robust technology, offering a standard 12-year warranty, extendable up to 20 years.

- **Integrated Data Monitoring:** Features a built-in data logger that collects and transmits module-level data from performance optimizers. This data is used for performance analysis, fault detection, and automatic error reporting via the SolarEdge Monitoring portal.

- **Ease of Installation:** Lightweight design allows for installation by a single technician.

- **Connectivity:** Supports broadband internet connection or Wireless ZigBee for data transmission.

- **Durability:** IP65 protection rating, suitable for both outdoor and indoor installations.

2. SPECIFICATIONS

Brand	SolarEdge
Manufacturer	SolarEdge
Model Number	SE27.6K-RW000NNN2
Item Weight	32 kg
Batteries Included	No
Batteries Required	No
ASIN	B076DBJRN1
First Available Date	January 19, 2018
Guaranteed Software Updates Until	Unknown
Discontinued by Manufacturer	No

3. SETUP AND INSTALLATION

The SolarEdge SE 27.6K Inverter is designed for straightforward installation, often manageable by a single installer due to its relatively low weight. Proper planning and adherence to local electrical codes are crucial for a safe and efficient setup.

3.1. Pre-Installation Checklist

- Verify all components are present and undamaged (inverter, optimizers, mounting hardware).
- Ensure the installation site meets environmental requirements (temperature, ventilation, protection from direct sunlight/rain).
- Confirm compliance with all local electrical codes and regulations.
- Gather necessary tools and safety equipment.

3.2. Mounting the Inverter

Select a suitable mounting location, typically a wall, ensuring adequate clearance for ventilation and maintenance. Use appropriate mounting brackets and fasteners to securely attach the inverter to the chosen surface. The IP65 rating allows for both indoor and outdoor installation, but protection from extreme weather is always recommended.

3.3. Electrical Connections

1. **DC Input:** Connect the DC strings from the SolarEdge power optimizers to the designated DC input

terminals on the inverter. Ensure correct polarity and secure connections.

2. **AC Output:** Connect the AC output of the inverter to the main electrical panel or grid connection point, following local wiring standards.

3. **Grounding:** Properly ground the inverter according to electrical safety standards.

3.4. Monitoring Connection

Connect the inverter to the internet for monitoring purposes. This can be done via a broadband Ethernet connection or wirelessly using the integrated ZigBee communication module. Refer to the SolarEdge monitoring portal setup guide for detailed instructions on configuring your system for online monitoring.

4. OPERATING INSTRUCTIONS

4.1. Initial Power-Up

After all electrical connections are secured and verified, switch on the AC disconnect and then the DC disconnect (if present). The inverter will initiate its startup sequence, performing self-tests and connecting to the grid. Observe the inverter's display or indicator lights for status updates.

4.2. Monitoring System Performance

The SolarEdge Monitoring portal provides detailed, module-level performance data. Access the portal via a web browser to view real-time energy production, historical data, and system status. This portal is crucial for understanding your system's efficiency and identifying potential issues.

4.3. Normal Operation

During normal operation, the inverter will convert DC power from the solar panels into AC power for your home or the grid. The display or LED indicators will typically show green or a similar 'operational' status. Any deviations should be investigated via the monitoring portal or by consulting the troubleshooting section.

5. MAINTENANCE

Regular maintenance helps ensure the longevity and optimal performance of your SolarEdge inverter. While the system is designed for high reliability, periodic checks are recommended.

5.1. Routine Checks

- **Visual Inspection:** Periodically inspect the inverter for any visible damage, loose connections, or signs of wear. Ensure ventilation openings are clear of obstructions.

- **Cleaning:** Keep the inverter's exterior clean. Use a soft, damp cloth to wipe away dust or dirt. Do not use abrasive cleaners or spray water directly onto the unit.

- **Performance Monitoring:** Regularly check the SolarEdge Monitoring portal for consistent energy production and to identify any performance anomalies.

5.2. Software Updates

While specific information on guaranteed software updates is not available, it is generally good practice to ensure your inverter's firmware is up-to-date. Consult the SolarEdge support website or your installer for information on available updates and installation procedures.

6. TROUBLESHOOTING

The SolarEdge system is designed with advanced diagnostics to help identify and resolve issues. Many problems can be detected and even resolved remotely via the monitoring portal.

6.1. Using the Monitoring Portal for Diagnostics

The SolarEdge Monitoring portal provides detailed error reports and performance alerts. If you notice a drop in energy production or an error message on the inverter's display, first check the portal. It can often pinpoint the exact issue, down to the module level, saving time and potential service costs.

6.2. Common Issues and Basic Solutions

- **No Power Output:**
  - Check if AC and DC disconnects are in the 'ON' position.
  - Verify circuit breakers in your electrical panel are not tripped.
  - Check the inverter's display for specific error codes.

- **Low Energy Production:**
  - Check for shading on solar panels.
  - Ensure panels are clean and free of debris.
  - Consult the monitoring portal for module-level performance to identify underperforming optimizers.

- **Communication Errors:**
  - Verify internet connection to the inverter (Ethernet cable or Wi-Fi/ZigBee signal).
  - Restart your router or network equipment.

For persistent issues or complex error codes, it is recommended to contact a certified SolarEdge installer or SolarEdge technical support.

7. WARRANTY AND SUPPORT

7.1. Product Warranty

The SolarEdge SE 27.6K Inverter comes with a standard**12-year warranty**, demonstrating the manufacturer's confidence in its reliability and durability. This warranty period can be extended up to 20 years. For detailed terms, conditions, and warranty registration, please refer to the official SolarEdge website's download section or contact your authorized SolarEdge distributor.

7.2. Technical Support

For technical assistance, system diagnostics, or service requests, utilize the SolarEdge Monitoring portal for initial troubleshooting. If further support is required, contact your certified SolarEdge installer. You can also find comprehensive support resources, FAQs, and contact information on the official SolarEdge website.