



# User and Installation Manual

## Grid-Tie Solar Inverter

2.2kW/3.3kW/4kW/5kW/6kW

Zenergize Power Tech Pvt. Ltd.

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# 1 Introduction

## 1.1 Overview

Solar Inverter is a power-conditioning unit designed to convert direct current (DC) electricity generated by photovoltaic (PV) modules into alternating current (AC) utility-grade power suitable for grid export. It incorporates an advanced Maximum Power Point Tracking (MPPT) algorithm to ensure optimum energy harvest by continuously extracting the maximum available power from the connected PV string. The inverter is compatible with all mainstream PV module technologies, including Crystalline-Silicon (c-Si), Thin-Film (TF), and other standard module types.

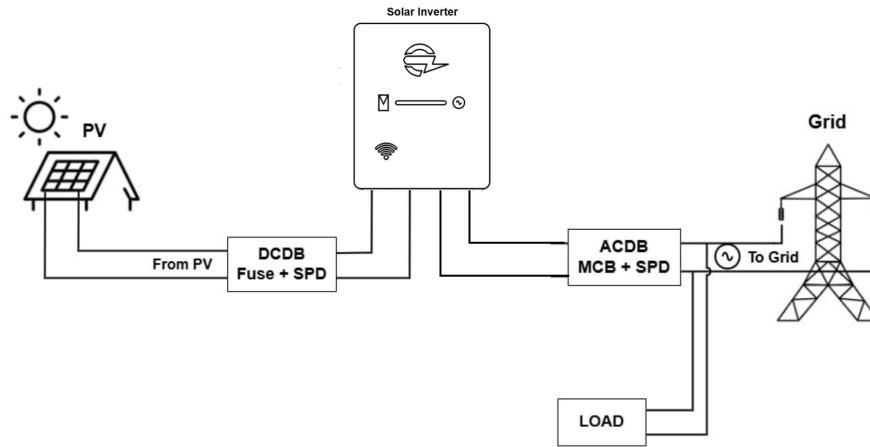


Figure 1: A typical roof-top solar PV system

A typical roof-top solar PV system is shown in Figure 1. In Distribution Box, a separate DC circuit breaker is installed between inverter and PV string and a separate AC circuit breaker is installed between inverter and grid utility.

## 1.2 Box Contents

- Before beginning installation, inspect the unit and all components in the package.
- Do not proceed if any item appears damaged.
- If damage is detected, stop the installation immediately and contact the supplier for a replacement.

The package must include the following items:

| S.No. | Items                          |
|-------|--------------------------------|
| 1     | GTSI                           |
| 2     | Fasteners                      |
| 3     | MC4 Connectors – 2 (+ve & -ve) |
| 4     | AC Grid Connector – 1          |
| 5     | Antennas – 2                   |

Table 1: Box Contents

### 1.3 Product Overview

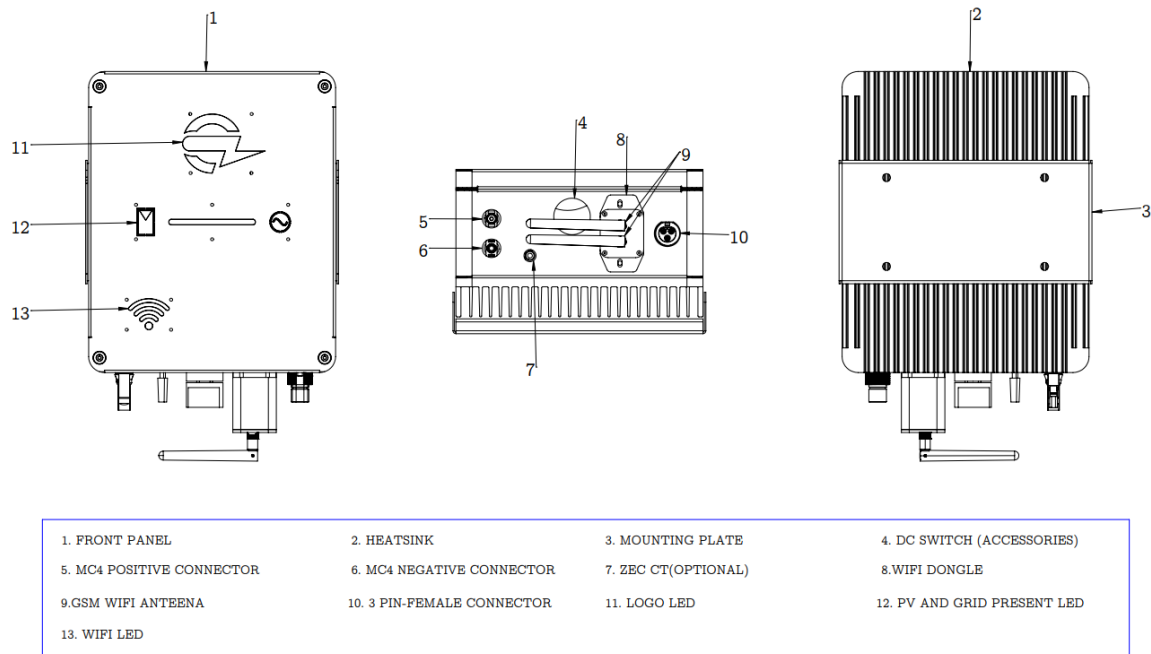


Figure 2: Product Overview

### 1.4 Factors Affecting The Performance of Inverter

Inverter performance is influenced by various environmental and system conditions. While the inverter is designed to be the most efficient in India, the actual energy generated by the solar system will vary based on sunlight levels, temperature, shading, weather, grid-side parameters such as grid voltage, grid frequency, grid current and the configuration of the PV modules. Understanding these factors helps ensure stable operation and optimal energy output.

#### 1.4.1 Angle of the Sun

The angle at which sunlight reaches the PV array directly affects power generation. As the sun's position changes throughout the day and across seasons, the intensity of sunlight on the modules varies. When the sun is lower in the sky, light intensity decreases due to increased atmospheric path, resulting in reduced energy production. Typically, most locations experience 4–6 hours of effective sunlight per day.

#### 1.4.2 Temperature

Environment temperature affects the power output of PV modules. Higher the temperature, lower the power output of PV module. Comparing the pole-mounted PV array, roof-mounted PV module array generates less power due to less air circulation and and excessive heat from the roof top.

At temperatures above 70°C, the output will drop to zero because the solar inverter automatically shuts down to protect itself from overheating.

| Temperature (C) | Output (% of STC) | 2.9 kWp | 4.5 kWp | 5.3 kWp | 6.6 kWp | 7.0 kWp |
|-----------------|-------------------|---------|---------|---------|---------|---------|
| 25              | 100.00%           | 2.90    | 4.50    | 5.30    | 6.60    | 7.00    |
| 35              | 100.00%           | 2.90    | 4.50    | 5.30    | 6.60    | 7.00    |
| 45              | 100.00%           | 2.90    | 4.50    | 5.30    | 6.60    | 7.00    |
| 55              | 100.00%           | 2.90    | 4.50    | 5.30    | 6.60    | 7.00    |
| 60              | 83.33%            | 2.42    | 3.75    | 4.42    | 5.50    | 5.83    |
| 65              | 66.67%            | 1.93    | 3.00    | 3.53    | 4.40    | 4.67    |
| 70              | 50.00%            | 1.45    | 2.25    | 2.65    | 3.30    | 3.50    |

Table 2: PV power vs temperature

### 1.4.3 Partial Shade

Avoid shading on the PV modules at all times. Even minor shading on a single module can cause a significant reduction in the power output of the entire string. Inspect the installation area carefully and remove or prevent any potential shadow sources, including tree branches, nearby buildings, or utility lines. While the inverter uses an MPPT algorithm to extract maximum power under varying conditions, preventing shading remains essential for maintaining consistent and reliable energy production.

### 1.4.4 Weather Conditions

Weather and environmental factors can temporarily lower solar power generation.

- **Dust or Dirt:** Reduces sunlight reaching the modules; periodic cleaning is recommended.
- **Fog or Smog:** Limits available sunlight and can cause reduced output during affected hours.

### 1.4.5 Grid Voltage

The inverter shall operate only within the permitted grid voltage range of 192–264 V. Voltage outside this limit will cause the inverter to reduce output or disconnect. Grid voltage and site wiring shall be maintained within the specified range given in the technical data.

### 1.4.6 Grid Frequency

The inverter shall synchronise only when the grid frequency remains within 47.5–50.5 Hz. Any deviation will stop power injection until normal frequency is restored. The allowable range and trip time are specified in the technical data.

### 1.4.7 Grid Current

The inverter output current is limited by its rated continuous output current (11–30 A depending on model). Sudden load changes will affect grid stability and will impact inverter output. Large electrical loads shall be managed to maintain stable operation. Refer to the technical data for complete current specifications.

### 1.4.8 Configuration & Rating of PV modules

PV modules may be connected in series, parallel, or a series-parallel combination depending on the system design requirements. Any selected configuration must strictly comply with the

electrical limits and operating conditions specified in **Table 4 (Section 8)**. Ensure that the resulting string voltage, string current, and overall array power remain within the inverter's permissible input ratings for safe and reliable operation.

### 1.4.9 Other Factors

Other system-related factors may also impact overall performance.

- **Mismatched PV Modules:** Differences in module performance can lower the output of the entire string.
- **Inverter Efficiency:** Some power is lost during DC to AC conversion. The inverter operates at conversion efficiency of 97.7%–98.2%. Refer to the technical data section for complete efficiency specifications.
- **Wire Losses:** Resistive losses occur in cables, especially if undersized or excessively long.

## 2 Important Safety Warnings

1. The tasks described in this manual may be performed by qualified personnel only.
2. Pay close attention to all cautions and warnings provided in this manual, as failure to follow them may result in equipment damage, electrical hazards, or personal injury.
3. This is a high-power appliance and requires careful handling. It operates at higher power levels than standard home equipment, so use caution at all times.

### 2.1 General Precautions

#### Convention Used:

**CAUTION!** This notice highlights conditions or practices that, if not followed, may lead to personal injury. Observe all instructions carefully to avoid harmful or unsafe operating conditions.

**WARNING!** This notice alerts you to conditions or practices that could result in damage to the inverter or any equipment connected to it. Always follow the prescribed procedures to prevent hazardous or damaging situations.

#### **CAUTION!**

- Before installing and using this inverter, read all instructions and cautionary markings on the inverter and all appropriate sections of this guide.
- Normally grounded conductors may be ungrounded and energized when a ground fault is indicated.

**WARNING!**

- Do not carry out any maintenance or cleaning until both AC and DC power are fully disconnected. Switching off the inverter controls will not eliminate the electrical hazard, as internal capacitors will remain charged for up to 10 minutes after all power sources are removed. A discharging rod should be used, or the full capacitor discharge period should be allowed to pass before any work is started.
- Do not disassemble this inverter yourself. It contains no user-serviceable parts. Attempting to service the inverter yourself may cause a risk of electrical shock or fire and will void the manufacturer's warranty.
- Do not operate the inverter with damaged, loose, or undersized wiring. Ensure all existing wiring is in good condition to prevent fire or electric shock hazards.
- Do not use non-recommended accessories or tools. Only use accessories approved by the installer to avoid risks of fire, electric shock, or injury.
- Do not cover or obstruct the heat sink. Proper ventilation is required to prevent overheating and fire hazards.
- Do not operate the inverter if it has been dropped, hit, or otherwise damaged. If the unit appears damaged, request an RMA (Return Material Authorization) before further use.
- For safety purposes, installation of a DC switch is required alongside the inverter (*The DC switch is an additional accessory that can be procured separately from the company*)

## 3 Installation Procedure

### 3.1 Selection of Mounting Location

Consider the following points before selecting where to install:

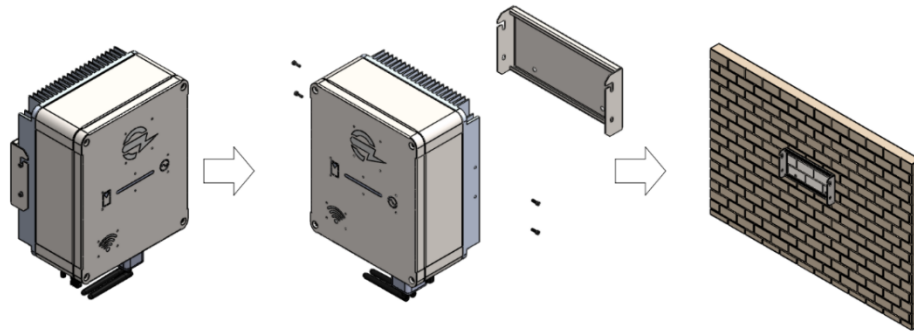
- Do not mount the inverter on flammable construction materials.
- Mount on a solid surface.
- For proper air circulation to dissipate heat, allow a clearance of approximately 20 cm to the side and approximately 50 cm above and below the unit.
- Dusty conditions on the unit may impair the performance of this inverter.
- The ambient temperature should be between  $-25\text{ }^{\circ}\text{C}$  and  $55\text{ }^{\circ}\text{C}$  to ensure optimal operation.
- The recommended installation position is to be adhered to (vertical).
- The inverter is rated IP-65 for basic outdoor protection, but a suitable shed or cover shall be provided to ensure long-term reliability.

### 3.2 Mounting Unit with Heat Sink and Wall Mounting Bracket

Use only the mounting plate provided with the inverter to ensure secure and reliable installation. Install the plate on the wall using appropriate screws and follow the steps below carefully to ensure correct mounting and proper stability of the inverter

#### 1. Remove the Mounting Plate:

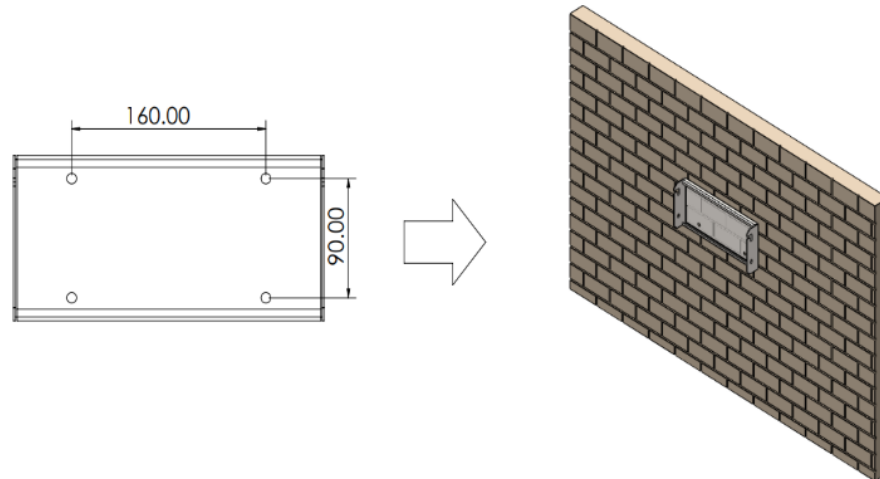
Detach the mounting plate from the back of the inverter unit by loosening the screws as shown below. Keep the screws safely for later use.



Removing the mounting plate from the inverter.

#### 2. Mark the Mounting Points on the Wall:

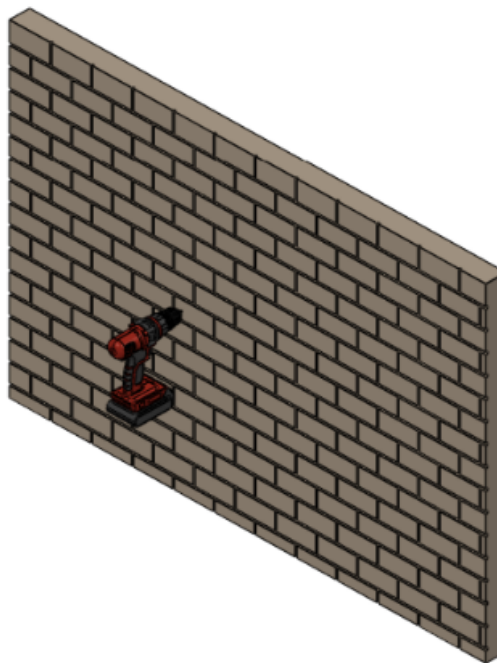
Use the detached mounting plate as a template to mark the drilling positions on the wall. Ensure the plate is level and positioned at the correct height before marking.



Use the plate as a template to mark drilling points on the wall.

### 3. Drill the Holes:

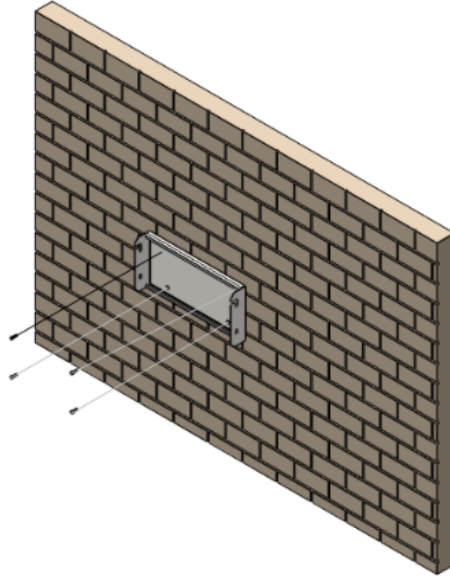
Drill holes at the marked positions according to the mounting plate dimensions. Verify that the drilled holes align correctly for a proper fit.



Drilling the holes at marked positions.

### 4. Attach the Mounting Plate to the Wall:

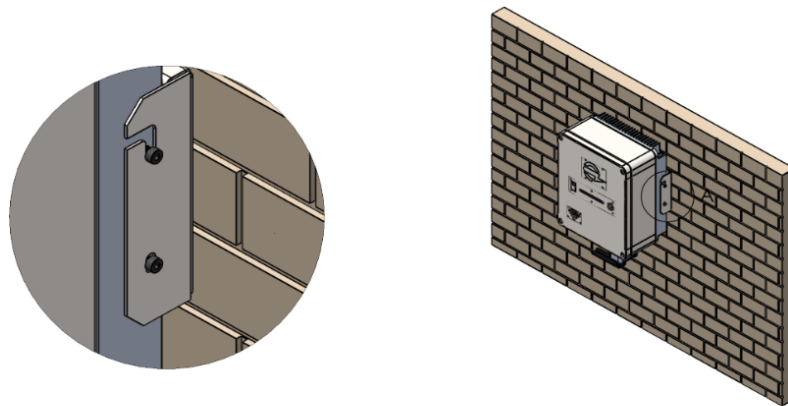
Fix the mounting plate to the wall using suitable screws (M5, SUS304) and wall plugs if required. Tighten the screws firmly to ensure that the mounting plate is securely attached to the wall.



Mounting plate fixed securely to the wall.

**5. Mount the Inverter on the Plate:**

Carefully align the inverter with the wall-mounted plate and slide it into position. Ensure the hooks or slots are properly engaged for a secure hold.



Inverter aligned and mounted securely on the wall-mounted plate.

**6. Verify the Installation:**

Ensure the inverter is firmly fixed and does not move when gently pulled. The final installation should be stable and level on the wall.

## 4 Grid Connection

Before connecting the inverter to the AC utility, ensure that a dedicated AC MCD + SPD circuit breaker is installed between the inverter and the grid. This allows safe disconnection of the inverter during maintenance or under load conditions.

1. Gather all AC connector components: front male panel, three-core terminal, housing, seal ring, screw-cap, gasket, hex nut, and the AC cable. Ensure all parts are clean and undamaged.
2. Strip the insulation from the three-core AC cable (L, N, and Earth) to the specified length. Avoid damaging or cutting the conductor strands during stripping.
3. Insert each stripped conductor into its corresponding position on the three-core terminal. Tighten the terminal screws firmly and verify that each wire is securely clamped.
4. Slide the screw-cap, seal ring, and connector housing onto the AC cable in the correct order before proceeding with assembly.
5. Place the O-ring and gasket properly onto the terminal body to ensure waterproof sealing. Confirm that all sealing components are correctly seated.
6. Insert the wired three-core terminal into the connector housing until it locks into place. Verify that the terminal is fully engaged and cannot be pulled out.
7. Slide the screw-cap forward and tighten it onto the housing. Ensure the cap is firmly tightened by hand to maintain a secure and weatherproof connection. Do not over-tighten.
8. Mount the front male panel on the inverter and secure it using the hex nut supplied. Confirm that the panel gasket is correctly aligned for proper sealing.
9. Align the AC connector with the front male panel socket and push until it locks into place. Verify that the connection is secure, sealed, and strain-free.

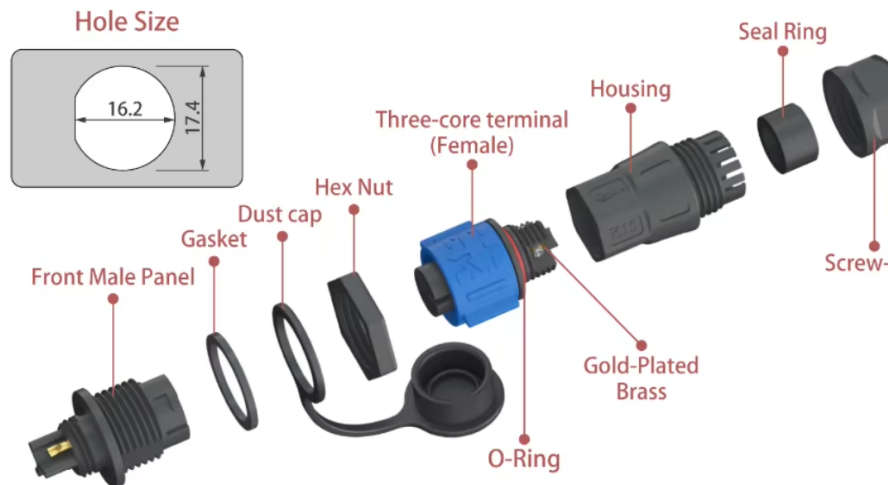


Figure 3: AC Connector Assembly

**WARNING!**

- The inverter's internal protection mechanisms safeguard the unit from damage; however, they do not provide complete protection for user or installer safety. You must install a separate circuit breaker to ensure proper isolation and protection.
- For safe and reliable system performance, cables of the correct size and specification must be used. The recommended cable dimensions should be followed to prevent overheating or electrical hazards. The table below should be referred to for the required cable sizes and circuit breaker ratings.

| Model       | Cable Cross-Section | Circuit Breaker Rating |
|-------------|---------------------|------------------------|
| GSTI-2K2-1P | 2 mm <sup>2</sup>   | 240 V / 14 A           |
| GSTI-3K3-1P | 4 mm <sup>2</sup>   | 240 V / 20 A           |
| GSTI-4K0-1P | 4 mm <sup>2</sup>   | 240 V / 25 A           |
| GSTI-5K0-1P | 6 mm <sup>2</sup>   | 240 V / 32 A           |
| GSTI-6K0-1P | 6 mm <sup>2</sup>   | 240 V / 40 A           |

Table 3: Recommended AC cable and circuit breaker specifications for AC grid connection

**WARNING!**

The inverter's earth terminal must be grounded before operation. The grounding conductor shall be rated for at least 30 A fault current, and the earth resistance shall be kept below 5  $\Omega$  to prevent electric shock.

## 5 PV Connection

The MC4 connector must be assembled correctly to ensure a safe and reliable PV connection. Follow the instructions below carefully to prepare the wire, assemble the connector components, and ensure a secure and weatherproof connection.

1. Gather all required components: wire, cap, pin, gasket, and the connector housing. Ensure all parts are clean and undamaged.
2. Strip the insulation from the wire to the specified length. Avoid damaging or cutting the conductor strands during stripping.
3. Insert the stripped wire into the pin and crimp it securely using the appropriate crimping tool. Confirm that the pin is firmly attached to the conductor.
4. Slide the cap onto the wire with the correct orientation before proceeding with the connector assembly.
5. Insert the gasket into the connector housing. Ensure that the gasket is properly seated to maintain waterproof sealing.
6. Insert the crimped pin into the connector housing until it locks into place. Verify that the pin is fully engaged and cannot be pulled out.
7. Slide the cap toward the connector housing and screw it into place. Tighten the cap firmly by hand to ensure a secure and weatherproof connection. Do not overtighten.

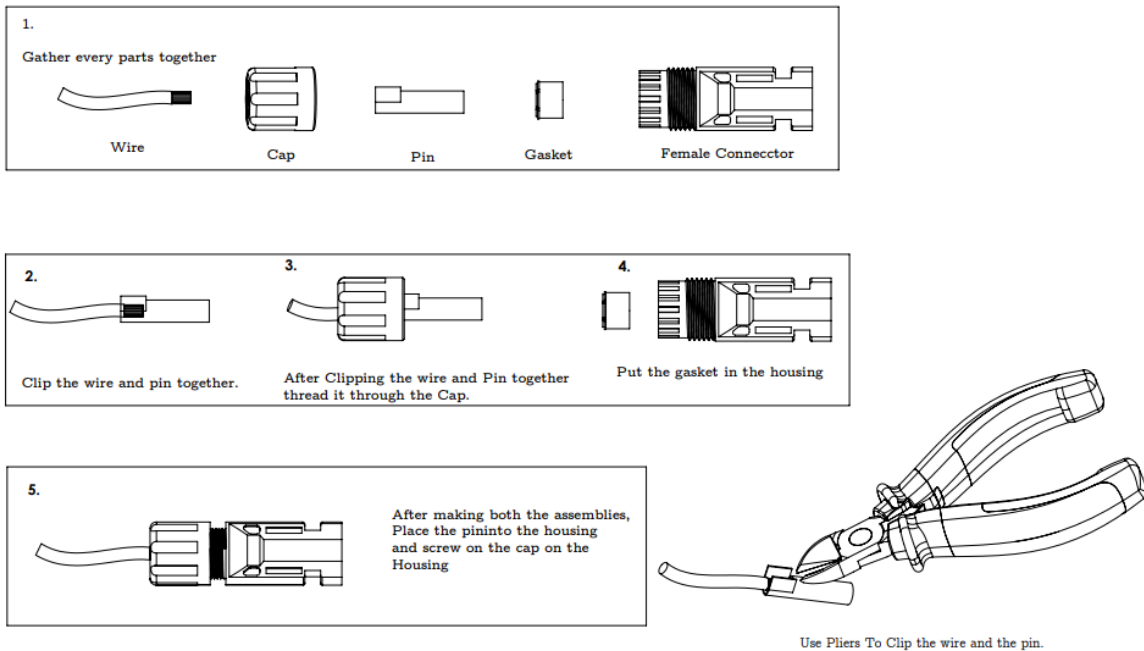


Figure 4: MC4 Connector Assembly

**WARNING!**

- A dedicated DC switch must be used for isolating the PV input. The use of a DC circuit breaker is not permitted, as it does not provide the required level of safety for DC interruption.
- For safe and reliable system performance, cables of the correct size and specification must be used. The recommended cable dimensions should be followed to prevent overheating or electrical hazards. The table below should be referred to for the required cable sizes and circuit breaker ratings.

| Model       | Cable Cross-Section |
|-------------|---------------------|
| GSTI-2K2-1P | 2 mm <sup>2</sup>   |
| GSTI-3K3-1P | 4 mm <sup>2</sup>   |
| GSTI-4K0-1P | 4 mm <sup>2</sup>   |
| GSTI-5K0-1P | 6 mm <sup>2</sup>   |
| GSTI-6K0-1P | 6 mm <sup>2</sup>   |

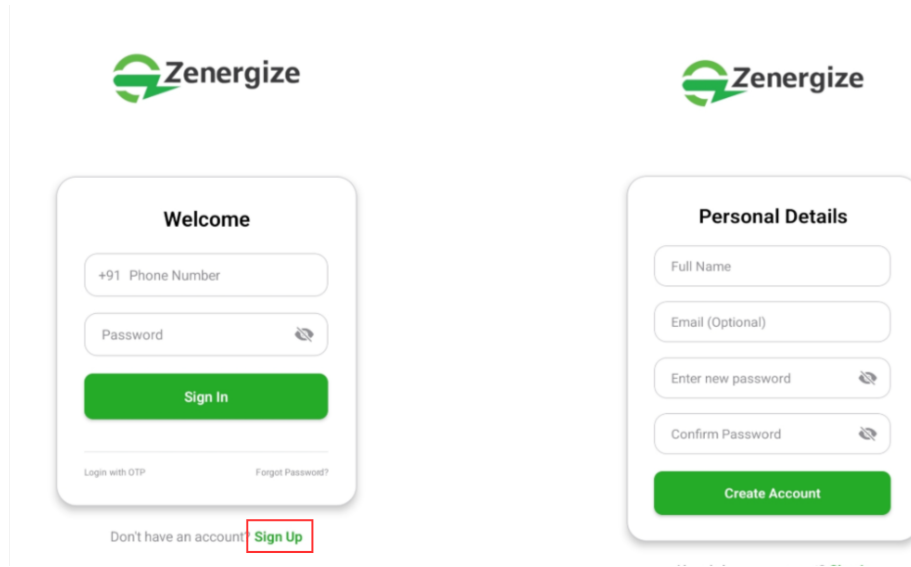
Table 4: Recommended DC cable specifications for PV connection

**WARNING!**

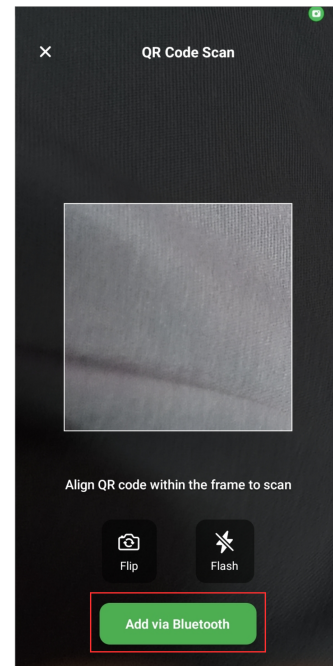
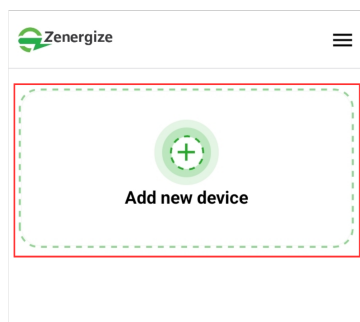
The inverter's earth terminal must be grounded before operation. The grounding conductor shall be rated for at least 30 A fault current, and the earth resistance shall be kept below 5  $\Omega$  to prevent electric shock.

## 6 User Manual for Mobile App

1. Install the Zenergize Mobile App (iOS / Android).
2. Open the app and click on **Sign Up**. Fill in the required details such as name, email, phone number, and password.

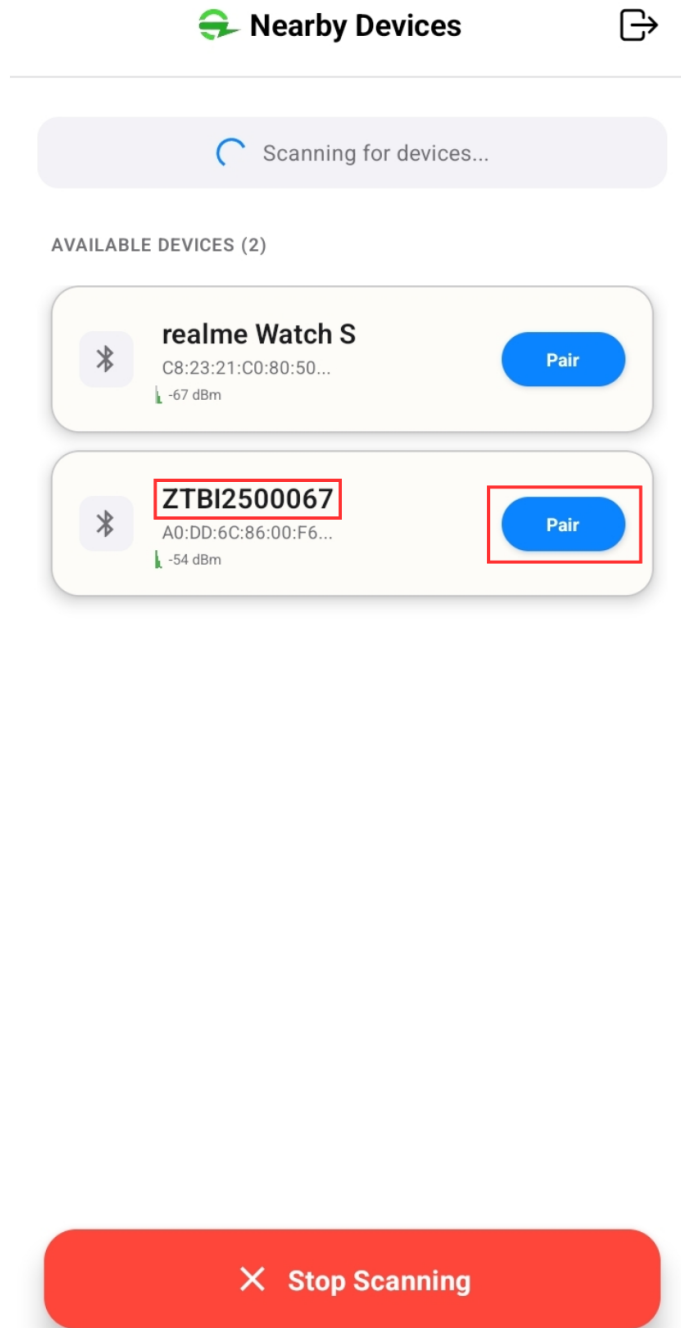


3. Complete the verification process using the OTP.
4. After logging in, tap on **Add Device** and select **Add via Bluetooth**. The app will start scanning for nearby devices.



5. A list of nearby devices will appear. Select the device name that begins with “**ZT**” and tap **Pair**.

**Note :** If multiple devices are shown, refer to the QR code on your unit and match the last 8 alphanumeric characters to ensure you are pairing the correct device.



- Once pairing is complete, enter the name of your GTSI and fill in the location details, then tap **Continue**. Providing the exact location ensures faster and more accurate service resolution.

**Link Device**

**Name Your Device**

My Inverter

**Location Information**  
Add location details

**Add Location** Auto-detect  
Fill in address details

**Address \***  
Enter your address...

**State** **PIN Code**

State PIN Code

**Country**  
Country

Skip for now **Save Location**

**Link Device**

**Name Your Device**

My Inverter

**Location Information**  
Parwanoo, Parwanoo, Himachal Pradesh, India, 173220

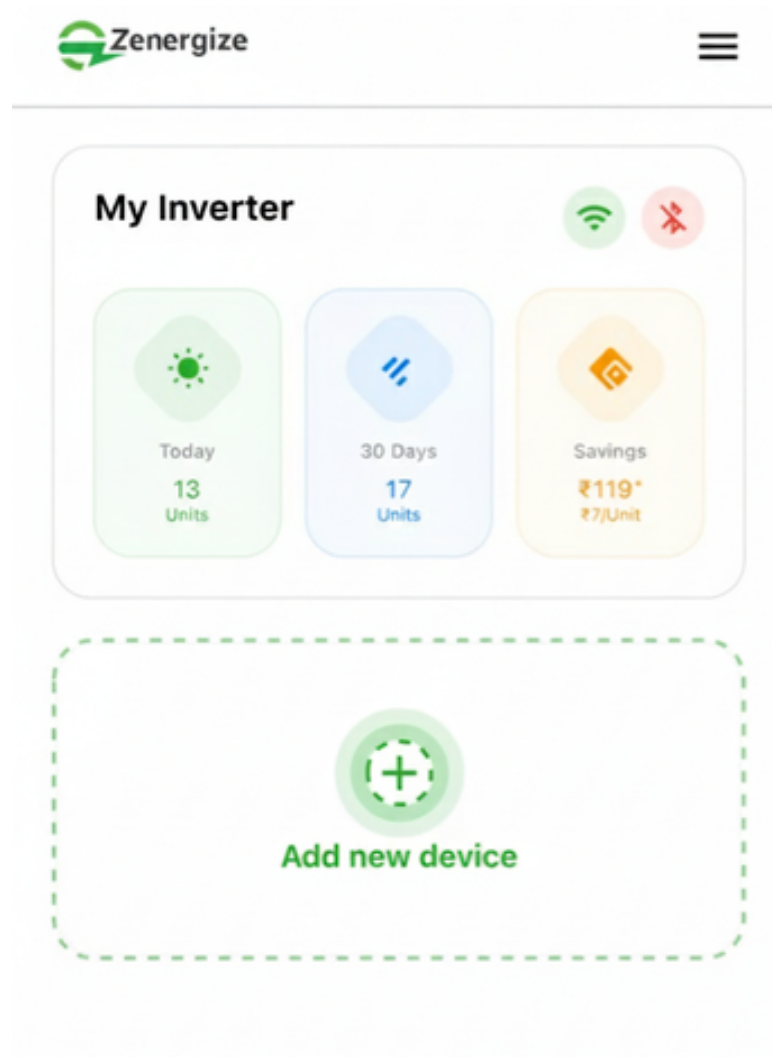
**Connect to Device**  
Connected to Device

**Why Add These Details?**

- Location helps optimize energy performance and provides better service recommendations
- Bluetooth verification ensures secure device connection and authentic device pairing

**Continue**

7. The device will now be linked successfully and will appear on the home screen for monitoring and control.



## 7 Maintenance and Cleaning

Check the following points to ensure proper operation of whole solar system at regular intervals.

- Heat sink of the inverter should be cleaned from dust.

### WARNING!

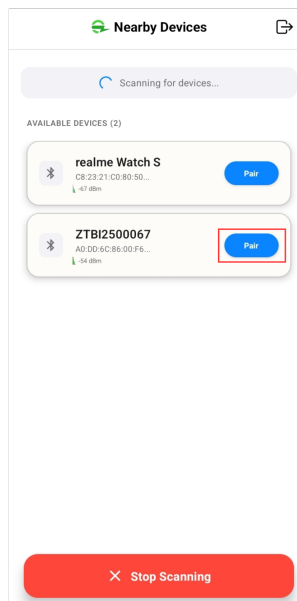
The inverter is built with an IP-65 enclosure, but pressure washers or any high-pressure cleaning methods shall not be used, as they will force water into the unit. The inverter shall be protected from direct water exposure at all times and shall be installed indoors or under a suitable shed or cover to ensure long-term reliability.

- Clean the PV modules, during the cool time of the day, whenever it is visibly dirty.
- Periodically inspect the system to make sure that all wires and supports are securely fastened in place.

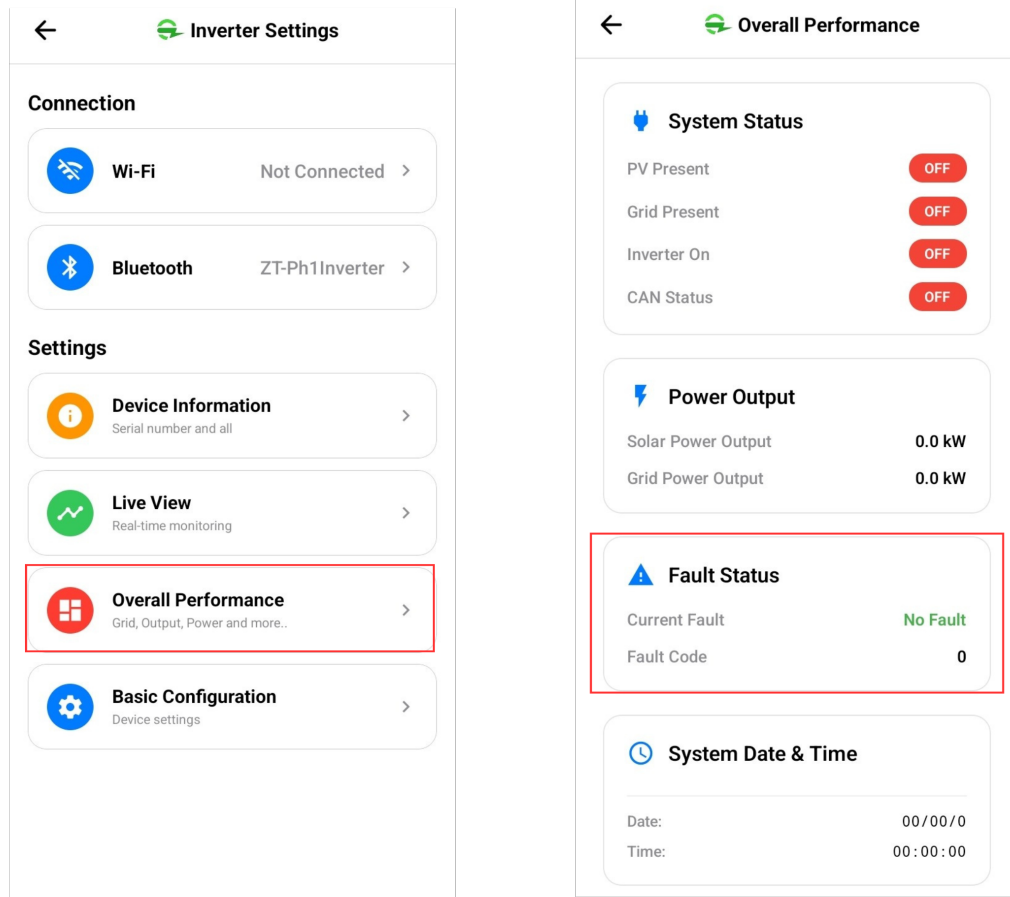
## 8 Trouble Shooting (Only for Service Engineer)

For troubleshooting, refer to the Overall Performance tab to check for any existing faults. Access to the diagnostic interface is restricted, and only authorized Service Engineers can log in. If troubleshooting is required, please contact Zenergize Service Engineer.

1. The application will automatically begin scanning for nearby devices. Select the device name beginning with “ZT” and tap on **Pair**.



2. Once pairing is complete open the **Overall Performance** tab. Here, you can view the system status, fault status, and corresponding fault codes (if any). In case of any troubleshooting, always refer to this tab for diagnostic information.



## 8.1 Fault Related Information

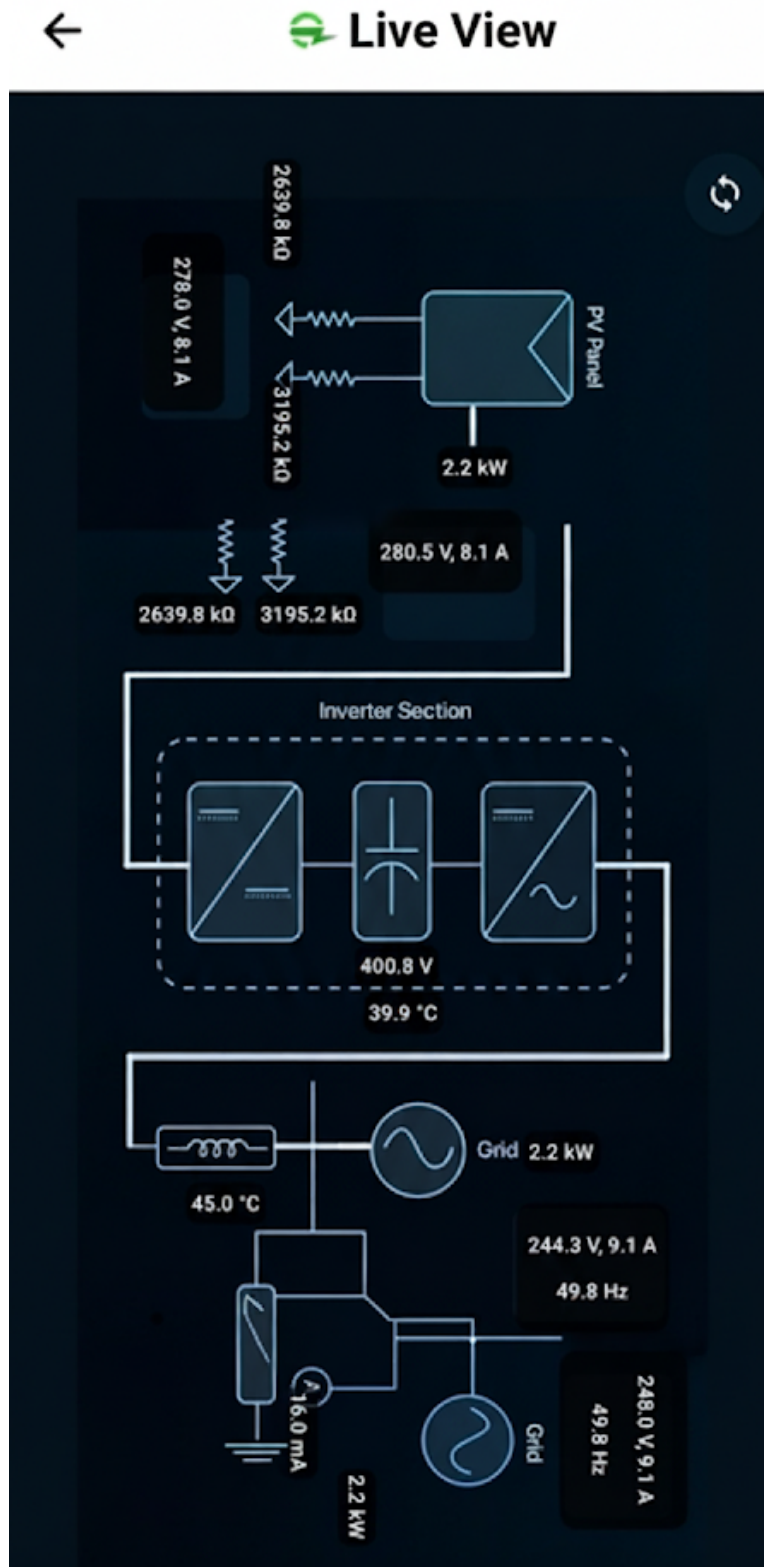
When a fault occurs, fault code will be displayed on the app. In Table 5, inverter faults with their solutions have been provided.

| S.No. | Fault                         | Fault Code |
|-------|-------------------------------|------------|
| 1     | No Fault                      | 0          |
| 2     | Grid Over Current             | 1          |
| 3     | Grid Under Current            | 2          |
| 4     | PV Over Current               | 3          |
| 5     | PV Under Current              | 4          |
| 6     | Grid Under Voltage            | 5          |
| 7     | Grid Over Voltage             | 6          |
| 8     | Grid Under Frequency          | 7          |
| 9     | Grid Over Frequency           | 8          |
| 10    | Residual Current Fault        | 9          |
| 11    | DC Link Over Voltage          | 10         |
| 12    | DC Link Under Voltage         | 11         |
| 13    | Soft Charge Failed            | 12         |
| 14    | PV Lower Power Trip           | 17         |
| 15    | INV Offset by Server          | 18         |
| 16    | PV Current Sensor Failure     | 19         |
| 17    | Hardware - Grid Over Current  | 20         |
| 18    | Hardware - Grid Under Current | 21         |
| 19    | Hardware - PV Over Current    | 22         |

Table 5: Fault Codes

If any fault code appears, please perform a reset by switching OFF the Grid MCB, and then switching it ON again. If the fault persists after the reset, please contact our support team at [support@zenergize.in](mailto:support@zenergize.in) for assistance.

Once the fault has been resolved, navigate to the **Live View** tab to monitor the real-time performance of the system and ensure it is operating correctly without any faults.



## 9 Technical Data

| S.No.                       | Technical Data                                    | GSTI-2K2-1P                               | GSTI-3K3-1P                               | GSTI-4K0-1P                               | GSTI-5K0-1P                               | GSTI-6K0-1P                               |
|-----------------------------|---|---|---|---|---|---|
| <b>PV String Input Data</b> |   |   |   |   |   |   |
| 1                           | Maximum PV Power at STC                           | 2.9 kW <sub>p</sub>                       | 4.5 kW <sub>p</sub>                       | 5.3 kW <sub>p</sub>                       | 6.6 kW <sub>p</sub>                       | 7.0 kW <sub>p</sub>                       |
| 2                           | Operating PV Input Voltage Range                  | 50-420 V                                  |   |   |   |   |
| 3                           | MPPT Range for Full Load                          | 110-420 V                                 | 165-420 V                                 | 200-420 V                                 | 125-420 V                                 | 150-420 V                                 |
| 4                           | Nominal Input DC Voltage                          | 280 V                                     |   |   |   |   |
| 5                           | Max. continuous input current                     | 20 A                                      |   |   |   |   |
| 6                           | PV Short Circuit Current                          | 22 A                                      |   |   |   |   |
| 7                           | Number of MPPT Trackers                           | 1   | 1   | 1   | 2   | 2   |
| 8                           | Number of Input Strings per MPPT Tracker          | 1   | 1   | 1   | 2   | 2   |
| 9                           | Maximum Back-feed current                         | 0 A                                       |   |   |   |   |
| 10                          | Compatible Technology                             | S-Ci                                      |   |   |   |   |
| <b>AC Output Data</b>       |   |   |   |   |   |   |
| 11                          | Rated Output Power                                | 2.0 kW                                    | 3.0 kW                                    | 4.0 kW                                    | 5.0 kW                                    | 6.0 kW                                    |
| 12                          | Maximum Output Apparent Power                     | 2.8 kVA                                   | 4.5 kVA                                   | 5.3 kVA                                   | 6.6 kVA                                   | 7.9 kVA                                   |
| 13                          | Nominal Output Voltage / Range                    | 240 Vac (192 - 264 V) (Trip time - 2.0s)  |   |   |   |   |
| 14                          | Nominal Output Frequency / Range                  | 50 Hz (47.5-50.5 Hz) (Trip time - 0.2s)   |   |   |   |   |
| 15                          | Maximum Continuous Output Current                 | 11 A                                      | 17 A                                      | 20 A                                      | 25 A                                      | 30 A                                      |
| 16                          | In-rush current at inverter start-up              | 15 A (Peak)                               |   |   |   |   |
| 17                          | Output Power Factor                               | Unity (adjustable 0.8 lead - 0.8 lag)     |   |   |   |   |
| 18                          | Output Current THD (@ Nominal output voltage an ) | < 2.5%                                    | < 2.0%                                    | < 1.8%                                    | < 1.5%                                    | < 1.25%                                   |
| 19                          | Active Power Control                              | 0.2-2.2 kW                                | 0.3-3.3 kW                                | 0.4-4 kW                                  | 0.5-5 kW                                  | 0.6-6 kW                                  |
| 20                          | Reactive Power Control                            | 1.3 kVAr capacitive to 1.3 kVAr inductive | 2.0 kVAr capacitive to 2.0 kVAr inductive | 2.4 kVAr capacitive to 2.4 kVAr inductive | 3.0 kVAr capacitive to 3.0 kVAr inductive | 3.6 kVAr capacitive to 3.6 kVAr inductive |
| <b>Efficiency Data</b>      |   |   |   |   |   |   |
| 21                          | Maximum Efficiency                                | 97.5%                                     | 97.7%                                     | 97.7%                                     | 97.9%                                     | 97.9%                                     |
| 22                          | Conversion Efficiency                             | 97.7%                                     | 97.8%                                     | 97.8%                                     | 98.2%                                     | 98.0%                                     |
| 23                          | Euro Efficiency (rated PV/grid)                   | ≥94.5%                                    |   |   |   |   |
| 24                          | Static MPPT Efficiency (EN50530)                  | ≥99%                                      |   |   |   |   |
| 25                          | Dynamic MPPT Efficiency (EN50530)                 | ≥97.5%                                    |   |   |   |   |
| 26                          | CEC Efficiency (rated PV/grid)                    | ≥95%                                      |   |   |   |   |
| 27                          | Maximum Efficiency (CEC)                          | 97.6%                                     | 97.8%                                     | 97.9%                                     | 98.3%                                     | 98.1%                                     |
| <b>General Data</b>         |   |   |   |   |   |   |
| 28                          | IP Protection                                     | IP65                                      |   |   |   |   |
| 29                          | Cooling   | Natural Air Cooling                       |   |   |   |   |
| 30                          | Operating Altitude                                | ≤ 3,000 m                                 |   |   |   |   |
| 31                          | Operating Temperature                             | -25°C to 55°C                             |   |   |   |   |
| 32                          | Noise   | Less than 25 dB                           |   |   |   |   |
| 33                          | Humidity  | 5% to 95%                                 |   |   |   |   |
| 34                          | Night Self consumption (control electronics)      | Less than 7 W                             |   |   |   |   |
| 35                          | Topology  | Transformerless                           |   |   |   |   |
| 36                          | Protective Class                                  | Class I                                   |   |   |   |   |
| 37                          | Grid Side Connector                               | 3-pin connector, 650 V, 25 A, IP68        |   |   |   |   |
| 38                          | PV Side Connector                                 | MC4 Connector, IP-67, UL E343181          |   |   |   |   |
| 39                          | Weight (kg)                                       | 9   | 10  | 12  | 14  | 16  |
| 40                          | Dimensions (H x W x D mm)                         | 285 x 250 x 135                           | 350 x 300 x 200                           | 350 x 300 x 200                           | 350 x 300 x 200                           | 350 x 300 x 200                           |

| S.No.                        | Technical Data                    | GSTI-2K2-1P                        | GSTI-3K3-1P | GSTI-4K0-1P | GSTI-5K0-1P | GSTI-6K0-1P |
|------------------------------|-----------------------------------|------------------------------------|-------------|-------------|-------------|-------------|
| <b>Protection (Built-in)</b> |                                   |                                    |             |             |             |             |
| 41                           | Anti-Islanding Protection         | Integrated                         |             |             |             |             |
| 42                           | Input Reverse Polarity Protection | Integrated                         |             |             |             |             |
| 43                           | SPD AC Side                       | 350 Vac, Type-III SPD Integrated   |             |             |             |             |
| 44                           | SPD DC Side                       | 1,000 VDC, Type-III SPD Integrated |             |             |             |             |
| 45                           | Residual Current Monitoring Unit  | Integrated                         |             |             |             |             |
| 46                           | Output Over Current Protection    | Integrated                         |             |             |             |             |
| 47                           | Output Short Circuit Protection   | Integrated                         |             |             |             |             |
| 48                           | Grid Over Voltage Protection      | Integrated                         |             |             |             |             |
| <b>Standards</b>             |                                   |                                    |             |             |             |             |
| 49                           | Safety Standard                   | IS 16221 / IEC 62109-2             |             |             |             |             |
| 50                           | Anti-Islanding Standard           | IS 16169 / IEC 62116               |             |             |             |             |
| 51                           | Harmonic Current Control          | IEC 61000-3-2                      |             |             |             |             |

Table 6: Specifications of Single Phase Grid Tie Inverters: GSTI-2K2-1P to GSTI-6K0-1P

## 10 Contact Us

For any support, service requests, or technical assistance, please reach out to us using the details below:

- **Email:** support@zenergize.in
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