



## 8kVA 48V Inverter/Charger

### **Description**

The Inverter/Charger can be used for the following:

- **UPS (Uninterrupted Power Supply)** for Load Shedding
- **Off-Grid System**, with or without Generator Backup
- **Solar Power System** in conjunction with **Mains/Grid**

### **Battery**

The Inverter/Charger is Compatible with **Lithium-Ion** Batteries, but can also be used with Lead Acid Batteries (Wet, AGM or Gel).

### **AC Input**

The Inverter/Charger has **two** independent AC inputs. It has a dedicated input for **Mains/Grid** and a dedicated input for a **Generator**.

### **Parallel and Three Phase**

Up to 3 Inverters can be connected in Parallel to give a **24kVA Single Phase Supply**.

3 Units can be connected to give a Three Phase Supply. Up to 3 units can be connected in parallel per phase to give a **72kVA Three Phase Supply**.

### **Dynamic Current Limit of Battery Charger**

An input Current Limit can be set on each of the AC input sources. When in Charging mode, the load is supplied directly from the AC input source. As the load changes, the Inverter/Charger will dynamically change the charging current of the batteries, to prevent the AC input source from being overloaded.

### **LCD and LED display**

The LED Display gives a graphic representation of the status of the system.

The LCD Display and keypad give you access to real-time values of all parameters.

### **Easy System Configuration without Computer or Programmer**

The system can be configured and all settings can be done with the LCD display and keypad. The user can change settings if necessary.

### **Remote Monitoring**

The system can be monitored remotely with the use of a Riot Cloudlink. All data can be stored and displayed on the Riot portal.

## Grid Tied Inverter

Grid Tied Inverters are accommodated on the output of the Inverter/Charger in Off-Grid applications. The Inverter/Charger will use frequency shift to control the Grid Tied Inverters.

### Inverter Specifications

|                               |   |                               |
|-------------------------------|---|-------------------------------|
| Nominal Battery Voltage       | : | 48 Vdc                        |
| Input Voltage Range           | : | 30 – 75 Vdc                   |
| Operating Voltage Range       | : | 40 – 66 Vdc                   |
| Output Voltage                | : | 220 – 230 Vac Settable, 50 Hz |
| Waveform                      | : | Pure Sine Wave                |
| Total Harmonic Distortion     | : | < 3%                          |
| Continuous Output Power @25°C | : | 8000 VA                       |
| Continuous Output Power @25°C | : | 6500 W                        |
| Continuous Output Power @40°C | : | 5500 W                        |
| Maximum Output Power          | : | 18 000 VA for 5 s             |
| Maximum Efficiency            | : | >92%                          |
| Power Consumption – No Load   | : | 39W                           |

### Charger Specifications

|                                  |   |  |
|----------------------------------|---|--|
| Input Voltage (Grid & Generator) | : | 180Vac – 270Vac                          |
| Input Frequency                  | : | 45Hz – 55Hz                              |
| Input Current                    | : | 30 Amp AC                                |
| Charging Current                 | : | 100 Amp DC                               |
| Charging type                    | : | 3 Stage (Bulk, Absorb, Float) & Equalize |

### General Specifications

|                        |   |                          |
|------------------------|---|--------------------------|
| Enclosure              | : | Powder coated mild steel |
| Dimensions (h x w x d) | : | 610mm x 330mm x 250mm    |
| Mounting               | : | Wall Mount               |
| Weight                 | : | 53 kg                    |

### Protection Features

|                             |   |                          |
|-----------------------------|---|--------------------------|
| Over Load Protection        | : | Electronic               |
|                             | : | DC Circuit Breaker       |
| Over Voltage Protection     | : | 66 V                     |
| Under Voltage Protection    | : | Settable (40.0V – 50.0V) |
| Short Circuit Protection    | : | 100 Amp AC               |
| Over Temperature Protection | : | >75°C                    |

### Other Features

|                                 |   |                                   |
|---------------------------------|---|-----------------------------------|
| Zero spark connection           | : | Charge DC Bus with resistor       |
| Cooling                         | : | Fan Cooled                        |
| Battery Connection              | : | M8 Stud on Copper Busbar          |
| 230V AC Connection              | : | Screw Terminals 10mm <sup>2</sup> |
| Generator Start/Auxiliary Relay | : | 1 Amp, Screw Terminal             |