

# RO-GEN 102

## 3 Phase Static Inverter

### 1.2kVA Variable Voltage 0 to 140VAC RMS

### Variable Frequency (240 to 1kHz)/ Fixed Frequency (400Hz)

## Basic Data

Input	Output
115-240V, 50-60Hz	Isolated 3-phase Sine Wave 0 to 140Vac rms 240 to 1kHz 1.2kVA Continuous 2kVA Surge Rating (500ms)
WxDxH: 212x375x190mm	Weight: 15kg max
Operating Temperature: 0°C to +40°C	



## Description

The RO-GEN 102 converts single phase mains input into a three phase variable or fixed 400Hz frequency, variable voltage output from 0 to 140Vac rms up to 1.2kVA. It is ideal for service workshops, test facilities and research laboratories.

The input is EMC filtered and power factor corrected. The output frequency can be selected from either a variable setting of 240 to 1kHz, or a fixed 400Hz setting (quartz crystal controlled). Typical efficiency under full load conditions is 80%.

The outputs are independent from each other and isolated from the input by transformers. This makes for robust and reliable performance with enhanced safety. Safeguards include over-temperature and two stage overload protection.

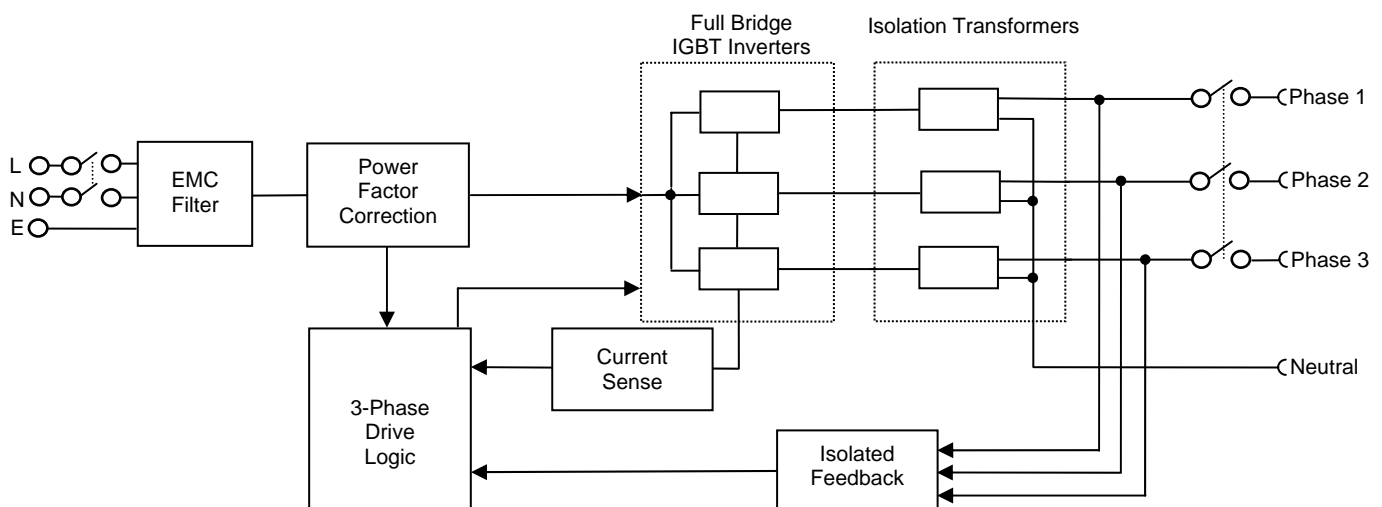
The unit is protected at continuous rated power. A 2kVA 500ms surge rating enables the unit to start complex loads demanding high inrush currents.

The RO-GEN 102 features both variable frequency and voltage, which are displayed on the front panel meters. Unit is equipped with temperature controlled fans. The housing is a rugged black anodised aluminium construction.

An analogue remote control facility is provided. In local mode the front panel controls include provision for output disable.

All units are manufactured on site in accordance with Roband's approved Quality Management System.

## Block Diagram



# RO-GEN 102

## Variable Output 0 to 140Vac rms 1.2kVA Mains Powered Variable/Fixed Frequency 3 Phase Static Inverter

### Specification

#### Input

Voltage	: 100 to 254Vac
Frequency	: 47 to 63Hz single phase
Protection	: Internal fuse
Factor	: >0.9 at full load

#### Output

Voltage	: 0 to 140Vac rms adjustable
Current	: 3.5A rms per phase
Power	: 1.2kVA total (400VA per phase) at 115V output and unity power factor
Current Limit	: > 5.8A per phase
Power Surge	: 2kVA for 500ms (667VA per phase)
Frequency	
Fixed Mode	: 400± 0.1Hz
Variable Mode	: 240 to 1kHz
Distortion	: Voltage: <5% typical (resistive loading)
Output Regulation	: <1%, zero to full load
Meter, Voltage	: ±1% Vrms (reading of phase 3 only)
Meter, Frequency	: ±1Hz

#### Efficiency

Full Load	: 80% typical
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#### Dynamic Characteristics

Start Up Time	: < 1.5s
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#### Protection

Overtemperature Shutdown  
Autorecovery Overload Protected  
Overload of any phase will shutdown all three phases

#### Remote Control

See Diagram

#### Environment

Operating Temperature	: 0 to +40°C
Storage Temperature	: -20 to +50°C
Relative Humidity	: 85% maximum

#### Connectors

Input	: 2m mains lead supplied, detachable
Output	: 4mm shrouded sockets, 5 off, mating plugs supplied
Remote Control	: 9 Way D type socket

#### Housing

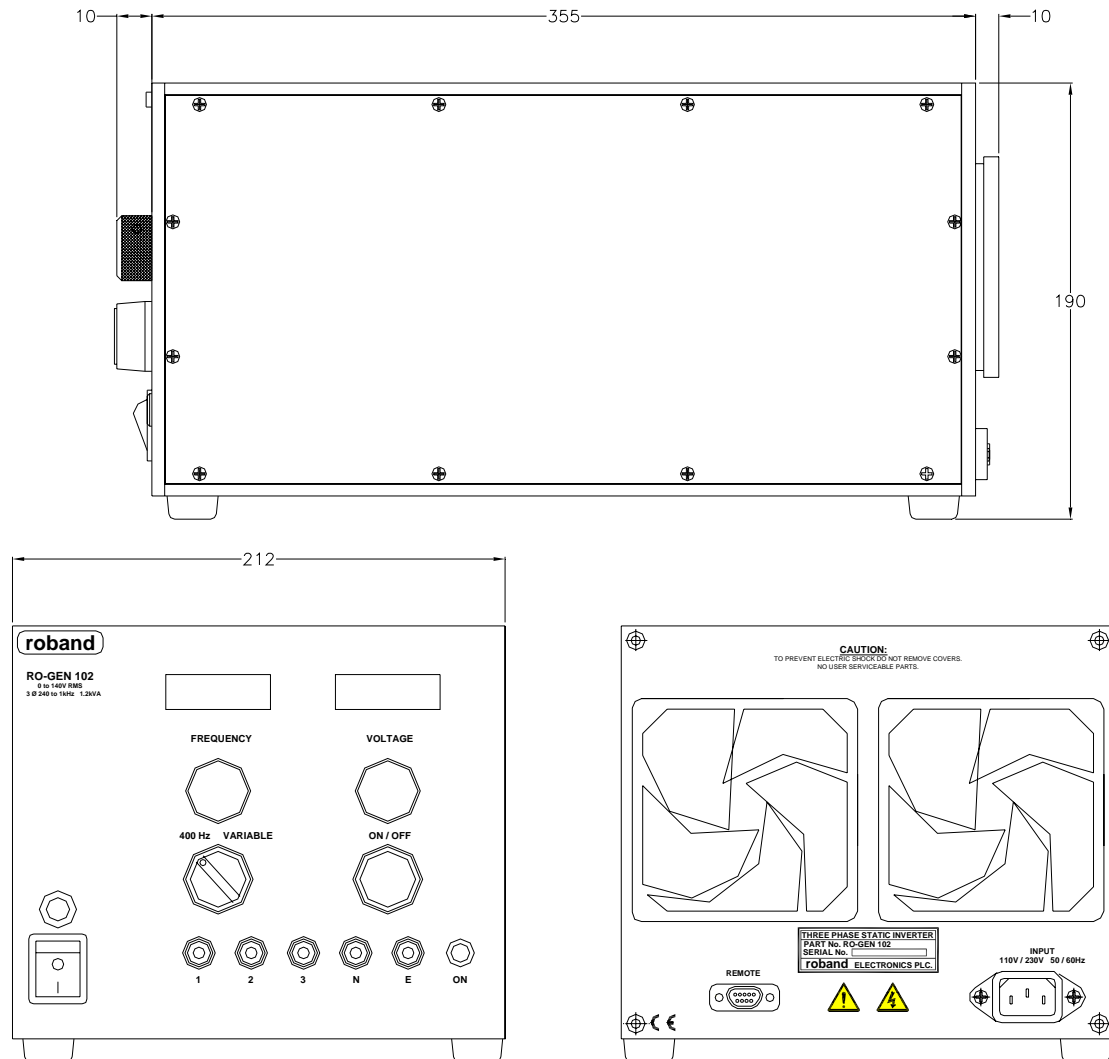
Size	: 212x375x190mm
Weight	: 15kg maximum
Material	: Anodised Aluminium Alloy

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## Variable Output 0 to 140Vac rms 1.2kVA Mains Powered Variable/Fixed Frequency 3 Phase Static Inverter

### Outline Drawing

Dimensions in mm



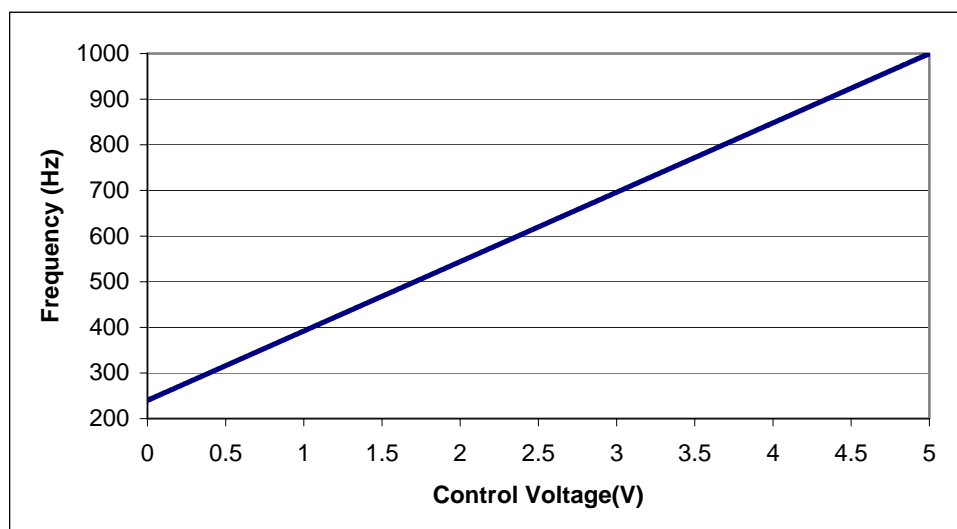
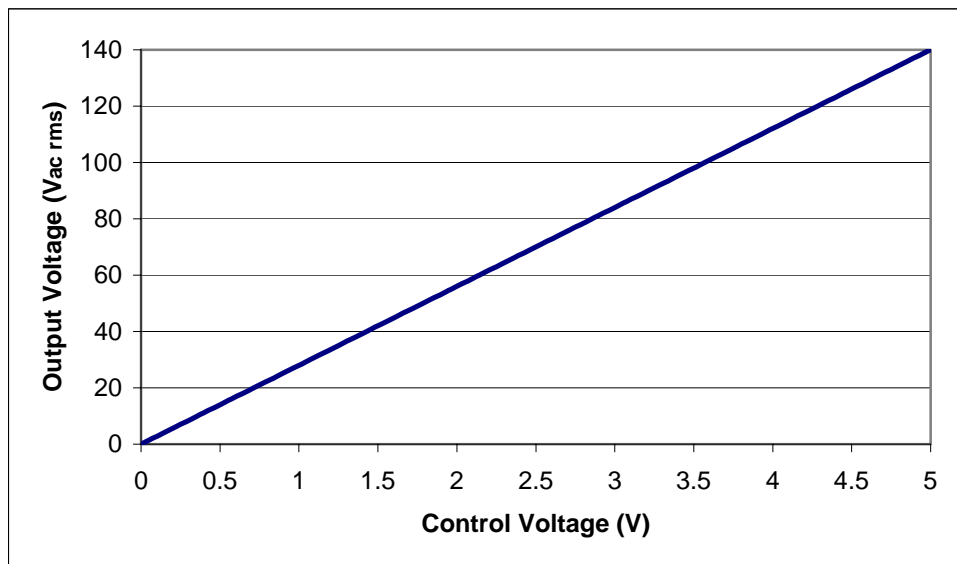
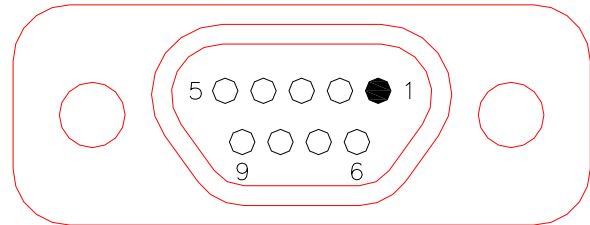
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### Remote Control

See handbook for operating instructions

Pin	Function
1	Auxiliary Bias (5V)
2	Remote Output Enable (5V)
3	Variable Voltage Control (0-5V)
4	Remote Control Enable (5V)
5	Remote Frequency Control (0-5V)
6	0V
7	0V
8	0V
9	0V



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## Variable Output 0 to 140Vac rms 1.2kVA

### Mains Powered Variable/Fixed Frequency 3 Phase Static Inverter

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#### EMC Performance

Roband RO-GEN 102, 3 Phase Static Inverter, is designed to meet the EMC Directive 89/336/EEC and the Low Voltage Directive 73/23/EEC. Compliance was demonstrated by conformance to the following specifications, which have been listed in the Official Journal of the European Communities.

- Emissions:
- a) BS EN61000-6-3:2001 Radiated, Class A
  - b) BS EN61000-6-3:2001 Conducted, Class A
  - c) BS EN61000-3-2 Ed.2:2001, Harmonics, Class A
- Immunity:
- BS EN61000-6-1: 2001
  - a) Part 4-2 Electrostatic Discharge, Performance B
  - b) Part 4-3 Electromagnetic Field, Performance A
  - c) Part 4-4 Fast Transients, Performance B
  - d) Part 4-5 Surges, Performance B
  - e) Part 4-11 Voltage Dips, 30% Reduction, Performance B
  - f) Part 4-11 Voltage Dips, 60% Reduction, Performance C
  - g) Part 4-11 Voltage Interruptions, Performance C

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#### Safety

Roband RO-GEN 102, 3 Phase Static Inverter, is designed to conform to BS EN61010-1: 2001, as demonstrated by safety analysis REL10213.

The seller reserves the right to amend or alter the specification without notice.  
Roband recognizes that different applications may require specific amendments to the unit.  
Whenever possible we will accommodate these special requirements seamlessly.