

# GRAVITAS IX12.5-115 GRAVITAS IX12.5-230 12.5kVA HOT-SWAP INVERTER SYSTEMS

## DESCRIPTION

UNIPOWER Telecom's Gravitas IX12.5 Series sine wave Inverter Systems which produce a maximum output of 12.5kVA at 115 or 230VAC, 50 or 60Hz. The system consists of a 5RU-high (8.5 inches), 23-inch shelf which holds up to 5 hot-swap inverter modules with outputs connected in parallel. In a 4+1 redundant mode it produces 10kVA output. The inverter modules operate off a nominal 48VDC input (42-56VDC range), and each module produces 115VAC at 22A or 230VAC at 11A full load. The system can be operated with up to five modules. The output is a 50 or 60Hz, low-distortion sine wave. Each module is protected by its own input and output circuit breakers, is self-cooled by two fans, and has input, output and sync OK LEDs.

The AC output has six load circuit breakers on the front panel. The AC load and DC input connections are made to terminals at the rear of the system. The output is fully isolated from the battery input. There is also a signal connector with a failure alarm output and a sync output signal used for paralleling with another Gravitas Inverter System.

The Gravitas IX 12.5 has high surge capability, up to 300%, which enables it to start motor loads.

## SAFETY STANDARDS

UL60950-1  
CSA 22.2, No. 60950-1  
EN60950-1

## TWO-YEAR WARRANTY



GRAVITAS IX12.5

## INVERTER MODULES

MODEL	INPUT	OUTPUT	FREQUENCY
INV2500-HS-60-E	42-56VDC	115VAC @ 22A	60Hz
INV2500-HS-50-E	42-56VDC	115VAC @ 22A	50Hz
INV2500H-HS-60-E	42-56VDC	230VAC @ 11A	60Hz
INV2500H-HS-50-E	42-56VDC	230VAC @ 11A	50Hz
INV2500H-HS-60*	42-56VDC	115VAC @ 22A	60Hz
INV2500H-HS-50*	42-56VDC	115VAC @ 22A	50Hz

\*NOTE: These two models have the AC neutral output grounded to chassis. The other four models (-E) have floating AC neutral outputs.

## INVERTER SYSTEM SHELVES

MODEL	SIZE	HEIGHT	CAPACITY	VOLTAGE
INVR5U-HS-B	23 Inches	5U (8.5 Inches)	5 Modules	115VAC
INVR5U-HS-B-H	23 Inches	5U (8.5 Inches)	5 Modules	230VAC

\*NOTE: Both shelves have floating neutral outputs.

## FEATURES

- ◆ Up to 12.5kVA Output
- ◆ 10kVA output 4+1 Redundant
- ◆ 115 VAC Out at 110A
- ◆ 230 VAC Out at 55A
- ◆ Low Distortion 50 or 60Hz Sine Wave
- ◆ 23" Shelf Holds Five Inverter Modules
- ◆ Hot-Swap Replacement in Shelf
- ◆ Five Mounting Positions High: 8.5"
- ◆ 42 to 56 VDC Input
- ◆ Circuit Breaker Input & Output Protection
- ◆ Fully Isolated from Battery Inputs
- ◆ 90% Typical Efficiency
- ◆ Up to 300% Surge Capability
- ◆ Powers Reactive Loads
- ◆ Parallel Capability
- ◆ N+1 Redundant Operation
- ◆ Overtemperature Protection
- ◆ Module Weight: 11.65 lbs. (5.3 kg.)

[www.unipowertelecom.com](http://www.unipowertelecom.com)

NORTH AMERICA CALL: 954-346-2442 • EUROPE CALL: +44 (0)1903 768200

# SPECIFICATIONS, GRAVITAS IX12.5

Typical at 48V Input, Full Load and 25°C Unless Otherwise Noted (115/230).

### INPUT

Voltage Range ..... 42-56 VDC  
 Input Current, Module, Full Load ..... <60A DC  
     Module, No Load ..... <1A DC  
 Input Current, System, Full Load ..... <300A DC  
     System, No Load ..... <5A DC  
 Input Protection, Each Module ..... 100A Circuit Breaker  
 EMI Filter, Conducted, Each Module ..... FCC2078 pt.15J Curve A  
     EN55022 Curve A  
 Voice Band Noise, 240 A-H Battery/ Module ..... <32dBmC

### OUTPUT

Voltage, Full Load ..... 115/230VAC  
 Voltage, No Load ..... 120/240VAC  
 Current, Max., Module ..... 22/11A RMS  
     System ..... 110/55A RMS  
 Frequency ..... 50 or 60Hz, ±0.1%  
 Total Harmonic Distortion ..... <2%  
 Load Crest Factor ..... 2.8 to 1  
 Output Protection, Each Module ..... 25A Circuit Breaker  
 Surge Capability ..... Up to 300%  
 Reactive Loads ..... +90° to -90° Phase  
 Efficiency ..... 90%  
 Load Circuits ..... 6

**SAFETY STANDARDS** ..... UL60950-1, CSA22.2 No.60950-1, EN60950-1

### STATUS INDICATORS, EACH MODULE

Input OK ..... Green LED  
 Sync OK ..... Green LED  
 Output OK ..... Green LED  
 System Alarm Contacts ..... Inverter Fail Alarm

### ENVIRONMENTAL

Operating Temp. Range ..... 0°C to 70°C  
 Output Current Derating ..... 2.5%/°C, 50°C to 70°C  
 Storage Temp. Range ..... -40°C to +85°C  
 Humidity ..... 0% to 95%, Non-Condensing  
 Cooling ..... Internal Fans

### PHYSICAL SPECIFICATIONS

Case Material, Inverter Module ..... Aluminum  
     23" Shelf ..... Steel  
 Dimensions, Inches (mm)  
     Module ..... 3.32 H x 8.50 W x 12.00 D  
         (84.3 x 216 x 311)  
     Shelf ..... 8.50 H x 21.36 W x 16.03 D  
         (216 x 543 x 407)  
 Rack Mounting Width ..... 23 Inches  
 Weight, Module ..... 11.65 lbs. (5.3kg)  
 Shelf ..... 38.25 lbs. (17.35kg.)

### OUTPUT FOR NUMBER OF INVERTERS (115/230)

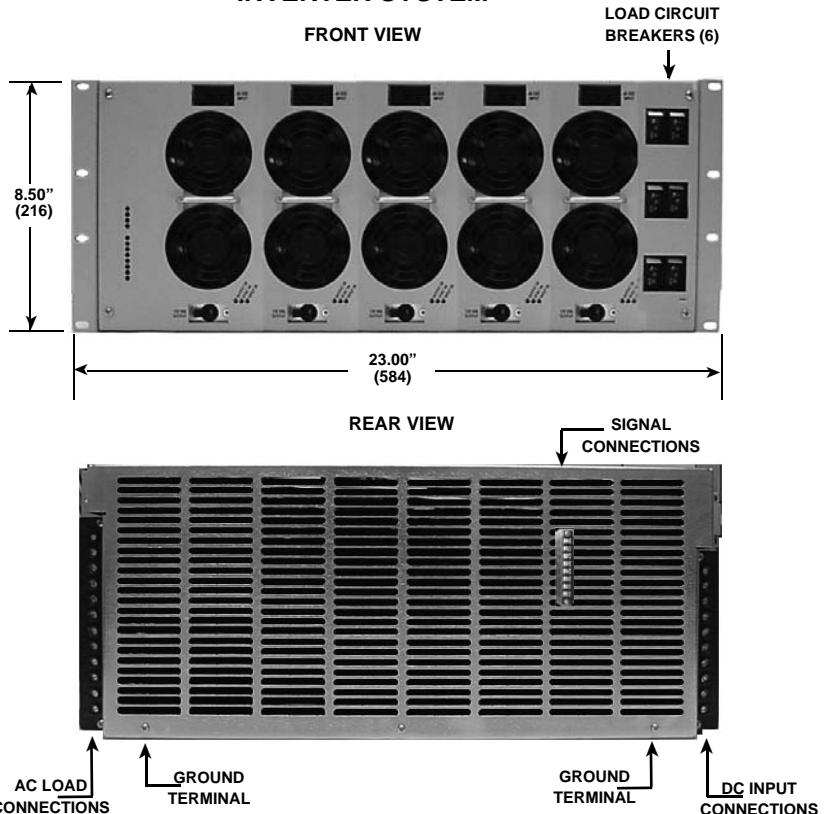
#### NON-REDUNDANT

NO.OF INVERTERS	KVA RATING	OUTPUT AC AMPS
1	2.5	22/11
2	5.0	44/22
3	7.5	66/33
4	10.0	88/44
5	12.5	110/55

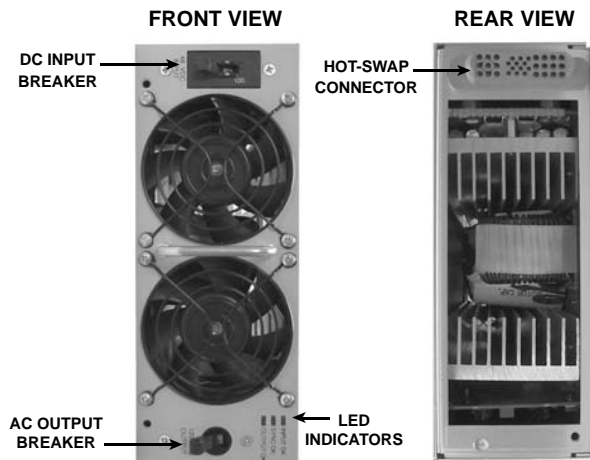
#### REDUNDANT

N+N INVERTERS	KVA RATING	OUTPUT AC AMPS
--	--	--
1+1	2.5	22/11
2+1	5.0	44/22
3+1	7.5	66/33
4+1	10.0	88/44

### INVERTER SYSTEM



### INVERTER MODULE



**ALL DIMENSIONS IN INCHES (mm).**  
 All specifications subject to change without notice.

### SHELF ORDERING GUIDE BREAKER CODES

INVR5U-HS-B-        
 INVR5U-HS-B-H-

Each of up to six AC circuit breakers must be designated by a code letter given below.

CODE	H	I	J	K	L	M
AMPS	5	10	15	20	25	30

IX12-5-115-revE-0710.ind