


# CG-\$\$\$!-D\* \* SERIES

DC#5 7 `bXi ghjU`bj Yfhfg !-D\* \* .) \$\$\$J5

## Features

- Packaged in two watertight IP66 enclosures
- Internal module ruggedized and conformal coated
- Rugged, field-proven design
- Conduction/convection cooling
- Filtered input/output
- Full electronic protection
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## Description

This industrial quality DC/AC inverter utilizes field proven, microprocessor controlled high frequency PWM technology to generate the required output power, with pure sign wave output voltage. It is packaged in two watertight, rugged diecast aluminum IP66 enclosures with sealed circular connectors mounted on a 16" x 13.44" base plate. Cooling is by conduction via baseplate to a heat-sinking surface and convection via the walls of the IP66 enclosure. The internal inverter unit is fully ruggedized and the boards are conformal coated to provide additional immunity to shock, vibration and humidity. The DC/DC input stage boosts the input voltage to a higher DC voltage, which feeds the DC/AC inverter to generate the required AC output. The high frequency conversion enables a compact construction, low weight and high efficiency. The input and output are filtered for low noise. Full electronic protection, low component count, large design headroom, and the use of components with established reliability contribute to a high MTBF. The units are manufactured at our plant under strict quality control. Customized versions are available. This design is suitable for transportation, mining, marine, oilrig, military and other severe environments.

## General Specifications

### Input Voltage (Nominal, range)

24Vdc (21-29V)  
48Vdc (42-56V)  
110Vdc (90-130V)  
125Vdc (106-145V)  
Consult factory for other input voltages and ranges

### Input Protection

Inrush current limiting  
Varistor  
Reverse polarity protection  
Internal safety fuse  
Lower voltage than the specified minimum input will not damage the unit

### Isolation

1000Vdc input to chassis  
2250Vdc input to output  
1500Vdc output to chassis  
Isolated floating output

### Standards

Designed to meet UL 458, EN60950-1 and corresponding international standards

### EMI

EN 55022 Class A with margins

### Output Voltage

115Vac @60Hz or 400Hz/2.6Arms continuous; or  
230Vac @ 50Hz/1.3Arms continuous  
Isolated floating output  
Consult factory for other output requirements

### Output Wave Form

Sinusoidal

### Total Harmonic Distortion

Less than 5% at full load

### Line/Load Regulation

± 5% from 10% load to full load

### Load Crest Factor

2 at 90% load

### Output Noise

High frequency ripple is less than 500mVrms (20MHz BW)

### Output Overload Protection

Current limiting with short circuit protection  
Thermal shutdown with automatic recovery in case of insufficient cooling

### Output Overvoltage Protection

140Vac (for 115Vac output) or 280Vac (for 230Vac output) by internal supply voltage limiting

### Efficiency

Typically 80% at full load  
Dependent on input/output combination

### Operating Temperature

-25 to +50°C temperature for full specification  
Extended temperature range available on request.

### Temperature Drift

0.05% per °C over operating temperature range

### Cooling

Conduction to customer heat-sink or chassis and natural convection

### Environmental Protection

IP66 enclosure  
Internal modules: full ruggedizing and conformal coating

### Shock/Vibration

IEC 61373 Cat 1 A&B

### Humidity

5 - 95% non-condensing

### MTBF

150,000 hours at 45 °C  
Demonstrated MTBF is significantly higher

### Indicators

None

### Control Input

None

### Alarm Output

Not installed  
Optional output Fail Alarm

### Dimensions (L x W x H)

Two D3 chassis side by side on baseplate:  
406 x 320 x 94mm  
(16 x 13.44 x 3.7")

### Weight

10kg (22 lbs)

### Connections

Input: 4 pole, male pins, MS3470W14-4P  
Output: 3 pole, female sockets, MS3112E12-3S

### RoHS Compliance

Fully compliant

### Warranty

Two years subject to application within good engineering practice