



**NOVA ELECTRIC**



### POPULAR OPTIONS

- Ruggedization Against High Shock, Vibration and Humidity
- MS Connector Mates
- Shock Mounts
- Electromechanical Transfer Switch
- High IP Protection for Front / Rear Panels
- Environmental Stress Screening Services
- Power Distribution Units (PDUs)

### CONTACT

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## OCGP-Series Rugged Pure Sine Wave DC-AC Inverters 2 KW - 12, 24, and 48 VDC Nominal 3 KW – 24 and 48 VDC Nominal



### GENERAL OVERVIEW

The OCGP-Series Pure Sinewave DC-AC Inverters are intended for commercial, industrial or military applications wherever standard utility-like power is required at 50 or 60 Hz. These units are ideal for running electronic loads such as computers, monitors, printers, telecom systems, radios, fluorescent lamps from batteries, field generators, and solar electro-voltaic panels. They can also drive hand drills, motors and small compressors when sized correctly for the inrush current. Variations of this Series have been formally qualified to MIL-STD-810 for Shock, Vibration, Humidity, Low Temperature, High Temperature, Temperature Shock, Low Pressure, and Sand and Dust, in addition to MIL-STD-461 for EMI. The compact chassis offers protection from the elements up to IP52.

Utilizing field proven technology, this family of rugged pure sinewave DC-AC Inverters is suitable for harsh environments applications including:

- Military Applications: Including HMMWV, UAV, Shipboard, Submarine, Aircraft, Mobile Power Units, Shelters, Transportable Systems, Tactical Systems, Ground Support, and more
- Heavy-Duty Industrial Applications
- Demanding Commercial Applications
- Communications Systems
- Utility Applications
- MIL-STD-810 Compliance
- MIL STD-461 Compliance

***The Leader In Rugged Power Conversion Technology Since 1966***

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## SPECIFICATIONS

### Electrical

INPUT VOLTAGE	12, 24 or 48 VDC Nominal
OUTPUT VOLTAGE 110V MODEL	100/110/120 VAC
OUTPUT VOLTAGE 220V MODEL	220/230/240 VAC
OUTPUT FREQUENCY	50 or 60 Hz (User Selectable with $\pm 0.5\%$ Accuracy)
CONTINUOUS POWER RATING	2000 W / 2000 VA or 3000 W / 3000 VA (See Model Chart)
SURGE RATING	<3500VA / 1 Second for 2 KW Model / <6000VA / 1 Second for 3 KW Model
EFFICIENCY 120V MODEL (FULL LOAD)	92% - 94%
EFFICIENCY 220V MODEL (FULL LOAD)	94% - 95%
OUTPUT WAVEFORM SINEWAVE 120V	<5%*
OUTPUT WAVEFORM SINEWAVE 220V	<3%**
OUTPUT REGULATION	$\pm 5\%$ (120V), $\pm 3\%$ (220V)

### Protective Features

OVERLOAD
SHORT CIRCUIT
REVERSE POLARITY (FUSE)
OVERTEMP, OVER/UNDER INPUT VOLTAGE

### Environmental

OPERATING TEMP.	-20° to +60°C With Derating 2.5% / Degree , above 40°C
STORAGE TEMP.	-40°C to + 71°C
MTBF	Over 100,000 Hours per Field Data
MTTR	30 Minutes
SHOCK	20g / 11ms per MIL-STD-810
VIBRATION	per MIL-STD-810 (Munson Road Test)
HUMIDITY	per MIL-STD-810 to 95% Non-Condensing
EMI	per MIL-STD-461 CE102, CS101, CS114, CS115, CS116, RE102, and RS103

Specifications subject to change without notice.

\* Normal Condition: VDC in = 12.5/25/50 — VAC out = 100/110/115/120 @ 80% Full Load (PF = 1.0)

\*\* Normal Condition: VDC in = 12.5/25/50 — VAC out = 200/220/230/240 @ 80% Full Load (PF = 1.0)

## SYSTEM COMPLIANCE

This unit is currently in use on military vehicle and shipboard applications worldwide, and variations of this design have been formally qualified to:

**MIL-STD-461E:** CE102, CS101, CS114, CS115, CS116, RE102, and RS103

**MIL-STD-810F:** Environmental Engineering Considerations and Laboratory Tests

- Low Pressure (Altitude) – Method 500.4, Procedure I (Storage/Air Transport) and Procedure II (Operation/Air Carriage)
- High Temperature Method 501.4, Procedure I (Storage) and Procedure II (Operation)
- Low Temperature Method 502.4, Procedure I (Storage) and Procedure II (Operation)
- Temperature Shock Method 503.4, Procedure II (Cyclic)
- Shock Method 516.5, Procedure VI (Bench Handling)
- Vibration Method 514.5, Procedure I (General Vibration)
- Humidity Method 507.4
- Sand and Dust Method 510.4, Procedure I (Blowing Dust)
- MIL-STD-810 Compliance
- MIL STD-461 Compliance

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## PARTIAL MODEL SELECTION

MODEL	INPUT RANGE VDC	OUTPUT VAC	OUTPUT FREQ. (Hz)	CONT. OUTPUT POWER	EFFICIENCY (FULL LOAD)	APPROX. WEIGHT (LB)	SIZE H x W x L
OCGP2K-12-120	10.5-16.5	120	50 or 60	2 KW	92-94%	31	9.00" x 12.00" x 19.75"
OCGP2K-12-220	10.5-16.5	220	50 or 60	2 KW	94-95%	31	9.00" x 12.00" x 19.75"
OCGP2K-24-120	21-33	120	50 or 60	2 KW	92-94%	31	9.00" x 12.00" x 19.75"
OCGP3K-24-120	21-33	120	50 or 60	3 KW	92-94%	37	9.00" x 12.00" x 19.75"
OCGP2K-24-220	21-33	220	50 or 60	2 KW	94-95%	31	9.00" x 12.00" x 19.75"
OCGP3K-24-220	21-33	220	50 or 60	3 KW	94-95%	37	9.00" x 12.00" x 19.75"
OCGP2K-48-120	42-66	120	50 or 60	2 KW	92-94%	31	9.00" x 12.00" x 19.75"
OCGP3K-48-120	42-66	120	50 or 60	3 KW	92-94%	37	9.00" x 12.00" x 19.75"
OCGP2K-48-220	42-66	220	50 or 60	2 KW	94-95%	31	9.00" x 12.00" x 19.75"
OCGP3K-48-220	42-66	220	50 or 60	3 KW	94-95%	37	9.00" x 12.00" x 19.75"

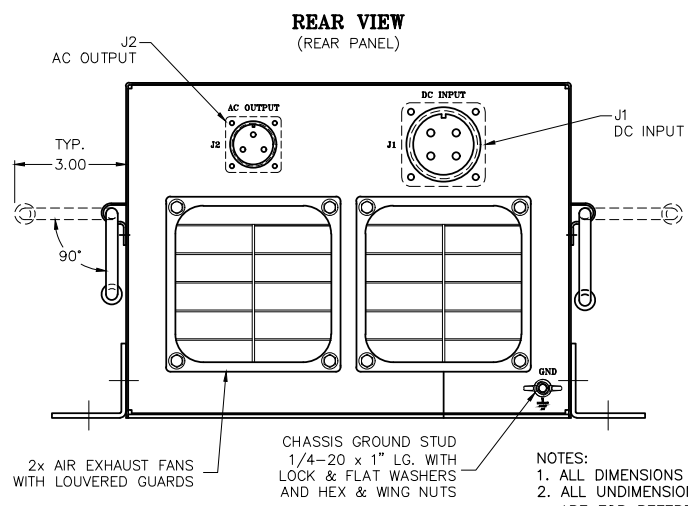
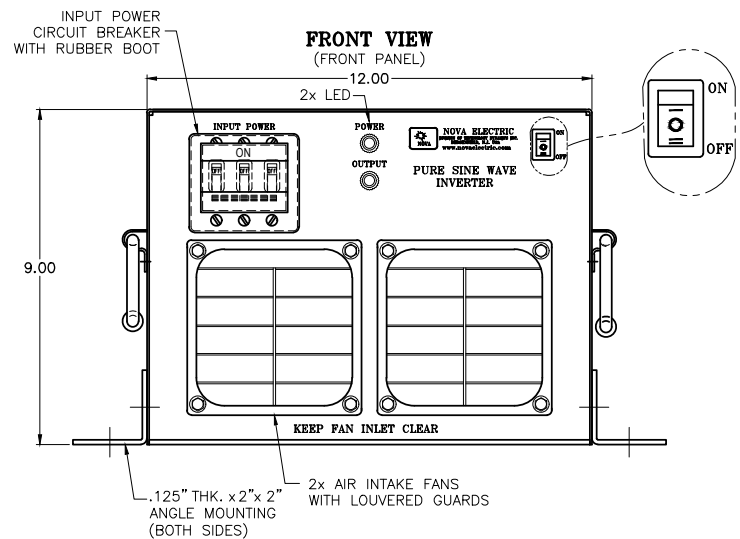
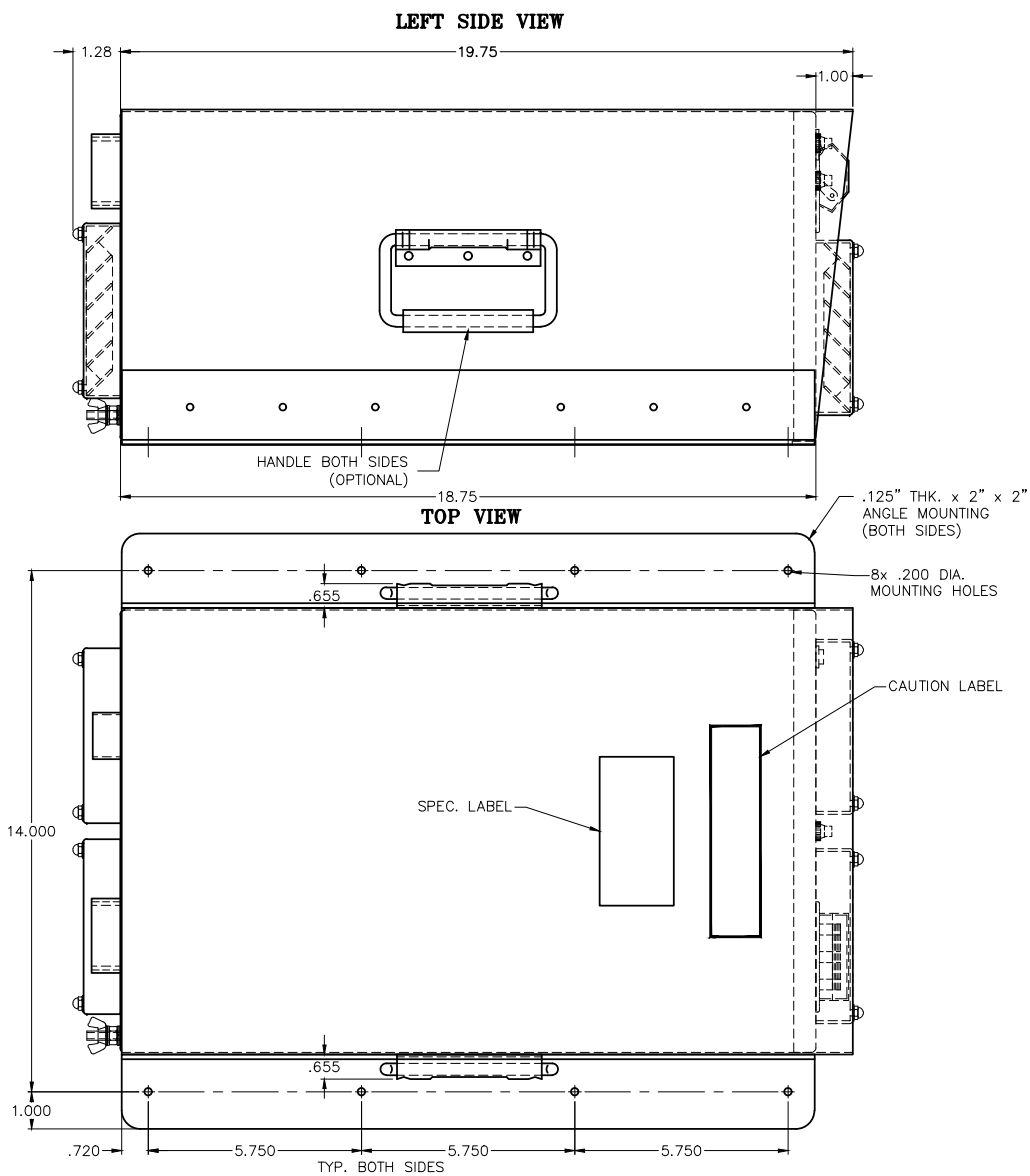
**Front View**



**Rear View**



OCGP SERIES RUGGED PORTABLE PURE SINE WAVE DC-AC INVERTERS



CONNECTORS PIN DESIGNATION

J1 DC INPUT

PIN	DESCRIPTION
A	DC+
B	DC+
C	DC-
D	DC-

J2 AC OUTPUT

PIN	DESCRIPTION
A	LINE
B	NEUTRAL
C	GROUND
-	-

- NOTES:
1. ALL DIMENSIONS ARE IN INCHES.
  2. ALL UNDIMENSIONED PICTORIAL CONFIGURATIONS ARE FOR REFERENCE ONLY.
  3. FRONT AND REAR MARKING FOR REFERENCE ONLY.
  4. FINISH: YELLOW IRRIDITE, THEN PRIME & PAINT ALL SURFACES AND ALL EDGES - OLIVE DRAB SEMI-GLOSS ENAMEL #24084 OF FED-STD-595.
  5. SILKSCREEN IN WHITE EPOXY INK.





# RUGGED AC POWER SYSTEMS

**SELECT UNITS QUALIFIED TO MIL-STD-810, MIL-S-901, MIL-STD-1399, MIL-STD-461, MIL-STD-167, MIL-STD-740, RTCA/DO-160, AND MORE**

## RUGGED TRUE ONLINE UPS



500 W – 500+ KW

*Rack Mount, Bulkhead Mount, and Freestanding*

*Single and Three Phase*

*50, 60, and 400 Hz.*

## PURE SINEWAVE DC-AC INVERTERS



100 W – 500+ KW

*Rack Mount, Bulkhead Mount, and Freestanding*

*Single and Three Phase*

*50, 60, and 400 Hz.*

## SOLID-STATE FREQUENCY CONVERTERS



100 W – 500+ KW

*Rack Mount, Bulkhead Mount, and Freestanding*

*Single and Three Phase*

*50, 60, and 400 Hz.*

## POWER DISTRIBUTION UNITS (PDUs)



*Basic, Switched, Auto-Transfer Switching, and Metered Configurations*

*Rack Mount, Bulkhead Mount, and Freestanding*

*Single and Three Phase*

## CUSTOM EMI FILTERS



*For MIL-STD-461 Compliance*

*Rack Mount, Bulkhead Mount, and Freestanding*

*Single and Three Phase*

## RUGGED PORTABLE TRANSFORMERS



100 W – 500+ KW

*Rack Mount, Bulkhead Mount, and Freestanding*

*Single and Three Phase*

## EXTERNAL MAINTENANCE BYPASS SWITCHES (MBSSs)



*Rack Mount, Bulkhead Mount, and Freestanding*

*Single and Three Phase*

## CUSTOM DESIGNS



*Designed & Built to Spec*

*Integrated AC & DC Capabilities*

*Multiple Outputs*

## RELIABLE AC POWER WHEN AND WHERE YOU NEED IT SEVERE ENVIRONMENT PRODUCTS



- AIRBORNE
- SHIPBOARD
- MOBILE
- RACK MOUNT & FREESTANDING

- 50, 60, AND 400 Hz
- AIR & WATER COOLED
- SINGLE AND THREE PHASE
- LIGHTWEIGHT DESIGNS

