



NOVA ELECTRIC



POPULAR OPTIONS

- Ruggedization Against High Shock, Vibration and Humidity
- MS Connector Mates
- Chassis Slide Guides
- Electromechanical Transfer Switch
- High IP Protection for Front / Rear Panels (Typically IP32,) including Louvers on all Intake and Exhaust, as well as Fully Gasketed Breakers, Switches, and Indicators.
- Rugged Transit Cases and Custom Enclosures
- Environmental Stress Screening Services

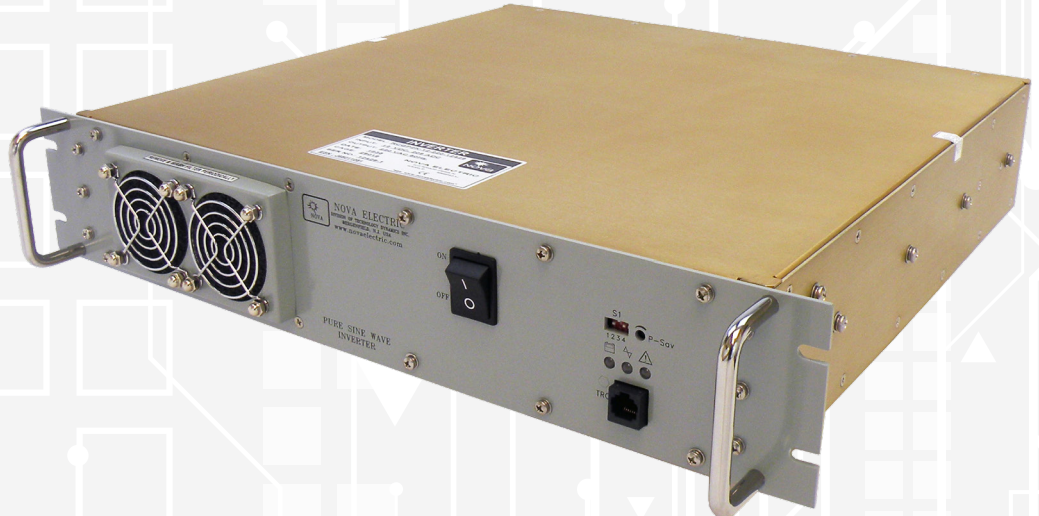
CONTACT

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RCGP-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 RCGP-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. Utilizing field proven technology, this family of rugged pure sinewave DC-AC Inverters is suitable for harsh environments applications including military, heavy-duty industrial applications, and demanding commercial applications.

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)

The Leader In Rugged Power Conversion Technology Since 1966

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SPECIFICATIONS

	2 KW	3 KW
Input Voltage	12, 24 or 48 VDC Nominal	24 or 48 VDC Nominal
Output Voltage 110V Model	100/110/120 VAC (User Selectable)	
Output Voltage 220V Model	220/230/240 VAC (User Selectable)	
Output Frequency	50 or 60 Hz (User Selectable with +/- 0.5% Accuracy)	
Continuous Power Rating	2000 W / 2000 VA	3000 W / 3000 VA
Surge Rating	<3500VA / 1 Second	<6000 VA / 1 Second
Efficiency 120V Model (Full Load)	92%-94%	90%-92%
Efficiency 220V Model (Full Load)	94%-95%	90%-94%
Output Waveform Sinewave 120V	<5%*	
Output Waveform Sinewave 220V	<3%**	
Output Regulation	±5% (120V), ±3% (220V)	
Protection	Overload, Short Circuit, Reverse Polarity (Fuse), Overtemp, Over/Under Input Voltage	
Operating Temperature	-20° to +60°C With Derating 2.5% / Degree, Above 40°C	
Storage Temperature	-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	
Humidity	per MIL-STD-810 to 95% Non-Condensing	
EMI	per MIL-STD-461 CE102, CS101, CS114, CS115, CS116, RE102, and RS103	
Size	3.50" H x 19" W x 16.5" L	
Weight	20 lb	25 lb

*Specifications subject to change without notice.

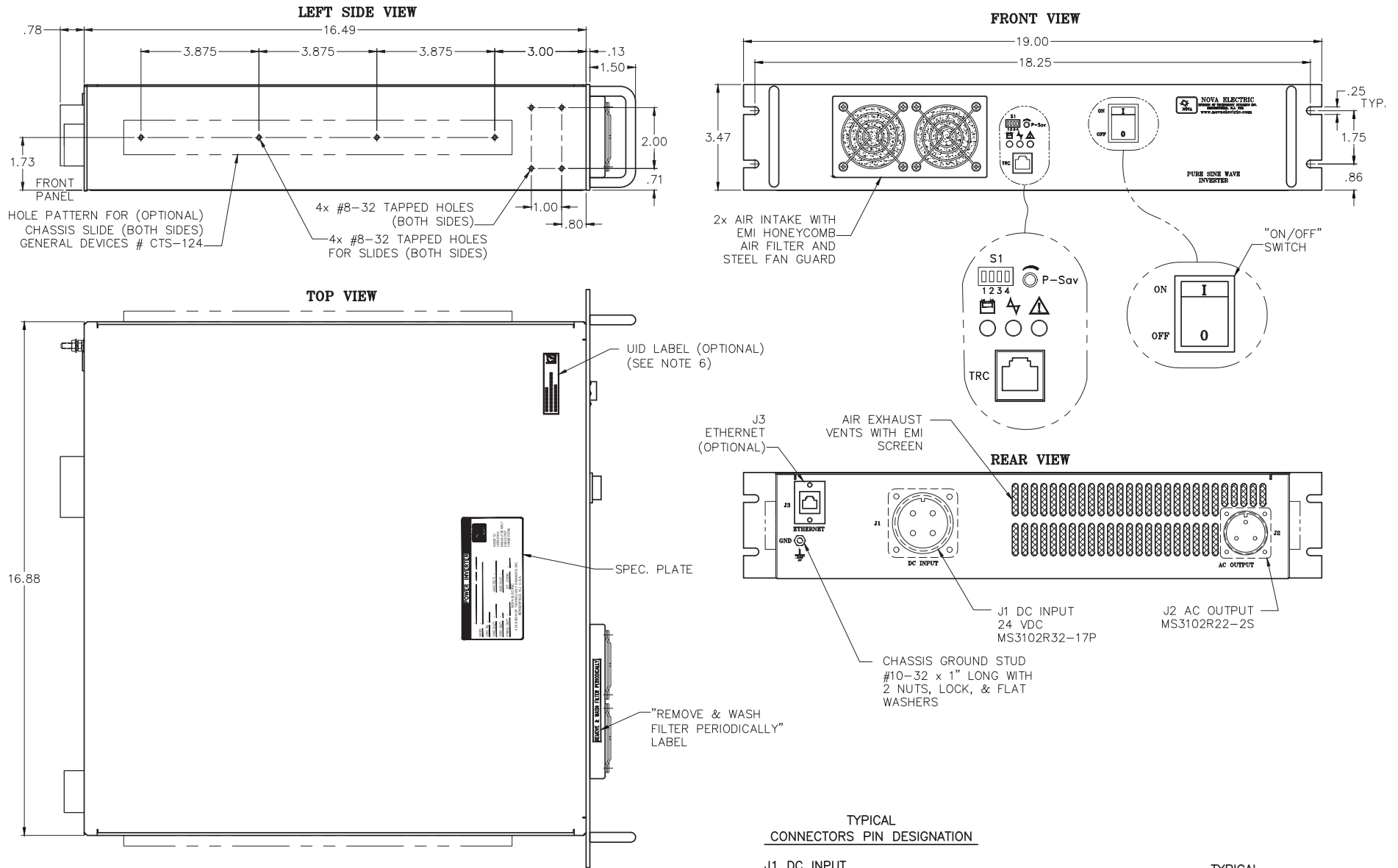
*Normal Condition: VDC in = 12.5/25/50 — VAC out = 100/110/115/120 @ 80% Full Load (PF = 1.0)

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

MODEL	INPUT RANGE VDC	OUTPUT VAC	OUTPUT FREQ. (Hz)	CONT. OUTPUT POWER	APPROX. WEIGHT (LB)	SIZE H x W x L
RCGP-2K-12-120	10.5-16.5	120	50 or 60	2 KW	20	3.50" x 19.00" x 16.90"
RCGP-2K-12-220	10.5-16.5	220	50 or 60	2 KW	20	3.50" x 19.00" x 16.90"
RCGP-2K-24-120	21-33	120	50 or 60	2 KW	20	3.50" x 19.00" x 16.90"
RCGP-2K-24-220	21-33	220	50 or 60	2 KW	20	3.50" x 19.00" x 16.90"
RCGP-2K-48-120	42-66	120	50 or 60	2 KW	20	3.50" x 19.00" x 16.90"
RCGP-2K-48-220	42-66	220	50 or 60	2 KW	20	3.50" x 19.00" x 16.90"
RCGP-3K-24-120	21-33	120	50 or 60	3 KW	25	3.50" x 19.00" x 16.90"
RCGP-3K-24-220	21-33	220	50 or 60	3 KW	25	3.50" x 19.00" x 16.90"
RCGP-3K-48-120	42-66	120	50 or 60	3 KW	25	3.50" x 19.00" x 16.90"
RCGP-3K-48-220	42-66	220	50 or 60	3 KW	25	3.50" x 19.00" x 16.90"

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RCGP SERIES RACK MOUNT PURE SINE WAVE INVERTER OUTLINE DRAWING



- NOTES:**
1. ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE SPECIFIED.
 2. ALL UN-DIMENSIONED PICTORIAL CONFIGURATIONS ARE FOR REFERENCE ONLY.
 3. FRONT, REAR, AND TOP MARKINGS FOR REFERENCE ONLY.
 4. FRONT PANEL PAINTED - ANSI #61 GRAY SEMI-GLOSS. ALL OTHER SURFACES ARE YELLOW IRRIDATED ALUMINUM.
 5. SILK-SCREEN IN BLACK EPOXY INK.
 6. IF CONTRACTUALLY REQUIRED, MIL-STD-130 UID LABEL IS PLACED HERE.

TYPICAL CONNECTORS PIN DESIGNATION

J1 DC INPUT

MS3102R32-17P	
PIN	DESCRIPTION
A	DC + (POS)
B	DC + (POS)
C	DC - (NEG)
D	DC - (NEG)

J2 AC OUTPUT

MS3102R22-2S	
PIN	DESCRIPTION
A	LINE
B	NEUTRAL
C	GROUND

TYPICAL RCGP INVERTER





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 (MBSs)



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

