

MODULAR LIGHT WEIGHT RUGGED DC TO AC INVERTERS

50 Hz 60 Hz 400 Hz

MIL-SPEC COMPLIANT
120 VA - 4500 VA
3Ø OUTPUT OPTION



ISO 9001:2008



120 VA
(FRONT PANEL)



1200 VA
(FRONT PANEL)



2500 VA
(FRONT PANEL)



4500 VA
FRONT PANEL



(REAR PANEL)

24 VDC - 270 VDC MODELS

APPLICATIONS

Shelters
Tactical Systems
Shipboard Power
HMMWVs
Mobile Systems
Ground Support
Aircraft

COMPLIANCE

BY TEST OR SIMILARITY

MIL-STD-810
MIL-STD-1275 (1)
MIL-STD-461 (2)
MIL-STD-167
MIL-STD-704
MIL-S-901 (3)

NOTE: (1) May require additional external module. (2) May require external EMI Filter. (3) Requires external shock absorbers.

Modular Inverter for Naval • Ground • Airborne Applications

APPLICATIONS

The NGL modular inverters are intended for industrial or military applications wherever standard generator or utility-like power is needed at 50 Hz, 60 Hz or 400 Hz. These inverters are intended for running electronic loads such as computers, monitors, printers, telecom systems and radios from 12-270 VDC nominal derived from batteries and field generators. They can also be used for properly scaled hand tools, motors and air conditioner units. These units can be further ruggedized against shock, vibration and humidity to meet tough military special applications.

Utilizing field proven technology, this family of rugged pure sinewave DC-AC Inverters is suitable for harsh environments and can be optionally customized for unique sizes. Combining 3 inverters to form a 3 phase power system is optional. In this configuration, a 3 phase and neutral line is generated with precise synchronization.

- MILITARY SHELTERS
- GROUND SUPPORT
- MOBILE SYSTEMS
- TACTICAL SYSTEMS
- SHIP APPLICATIONS
- COMMUNICATIONS

FEATURES

- Crystal Controlled Frequency
- Compact and light weight, yet rugged and vehicle rated.
- 86-88% efficient.
- Tightly regulated output voltage and freq.
- Able to supply inrush current.
- Factory set to 50 Hz, 60 Hz or 400Hz output.
- Capable of driving highly reactive loads such as motors and AC.
- Capable of driving highly capacitive loads such as non PFC switching power supplies.
- Very low harmonic distortion, THD<3%.
- Suitable for vehicle mounting.
- Fan cooled with air filter.
- Can be wired to form 3Ø output.

ELECTRICAL

Input Voltage: 12, 24, 36, 48, 72, 120, 155 or 270 VDC
Output Voltage 120V model: 100/110/120 VAC
Output Voltage 230V model: 220/230/240 VAC
Output Frequency: 50 Hz, 60 Hz or 400 Hz
Surge Rating: 120% 5 minutes
Efficiency (full load): 120V model 86%
Efficiency (full load): 230V model 88%
Output Waveform Sinewave: <3% THD
Output Regulation: ± 2.5%
MTBF: over 100,000 hours per field data
MTTR: 30 minutes

PROTECTIVE FEATURES

- Overload
- Overvoltage
- Overtemperature

ENVIRONMENTAL

Operating Temperature: -20°C to +50°C
Storage Temperature: -40°C to +71°C
Shock: 20g / 11mS per MIL-STD-810
Vibration: per MIL-STD-810 Surface Vehicle or MIL-STD-167 Shipboard
Humidity: per MIL-STD-810 to 95% non condensing
EMI: per MIL-STD-461
(May require additional external EMI filter.)

POPULAR OPTIONS

- MS Connector and Mates
- Rack Mount Enclosure
- Mounting Bracket
- Internal Electromechanical Transfer Switch



Modular Inverter for Naval • Ground • Airborne Applications

Partial Single Phase Model Selection - 100W - 3KW in 50, 60, and 400 Hz

MODEL	KW / VA	OUTPUT FREQ (Hz) <i>See "XX" in Model</i>	Nominal Input (VDC) <i>See "YY" in Model</i>	Output Voltage (VAC) <i>See "ZZZ" in Model</i>	Weight (Lb. / Kg.)	DIMENSIONS <i>(H x W x L - In. / mm.)</i>
NGL10XX-YY-ZZZ	100W / 120VA	Choose 50, 60, or 400 Hz. Specialty frequencies also available consult factory	Select 12, 24, 36, 48, 72, 120, 155, or 270 VDC Nominal. Specialty inputs also available consult factory	Select 115, 120, 220, 230, or 240 VAC. Specialty outputs also available consult factory	2.4 / 1.1	2.68" x 4.50" x 7.75" 68mm x 114mm x 197mm
NGL1KXX-YY-ZZZ	1KW / 1.2 KVA				6.4 / 2.9	2.60" x 5.00" x 10.00" 66mm x 127mm x 254mm
NGL2KXX-YY-ZZZ	2KW / 2.5 KVA				14 / 6.4	5.00" x 8.00" x 12.50" 127mm x 203mm x 318mm
NGL3KXX-YY-ZZZ	3KW / 4.5 KVA				16.3 / 7.4	5.00" x 8.00" x 14.77" 127mm x 203mm x 375mm

Partial Three Phase Model Selection - 300W - 9KW in 50, 60, and 400 Hz

MODEL	KW / VA*	OUTPUT FREQ (Hz) <i>See "X" in Model</i>	Nominal Input (VDC) <i>See "YY" in Model</i>	Output Voltage (VAC) <i>See "ZZZ" in Model</i>	Base Modular Weight (Lb. / Kg.)	DIMENSIONS
NGL303/X-YY(ZZZ/ZZZ)	300W / 360VA	Choose 50, 60, or 400 Hz. Specialty frequencies also available optionally consult factory	Select 12, 24, 36, 48, 72, 120, 155, or 270 VDC Nominal. Specialty inputs also available optionally consult factory	Select 115/200, 120/208, 220/380, 230/400, or 240/415 VAC. Specialty outputs also available optionally consult factory	7.2 / 3.3	Three-Phase systems are available in individual freestanding single-phase modules, 19" rack mount, wall mount, bulkhead mount, and many other packaging configurations. Please consult factory for details on sizes available.
NGL3K3/X-YY(ZZZ/ZZZ)	3KW / 3.6 KVA				19.2 / 8.7	
NGL6K3/X-YY(ZZZ/ZZZ)	6KW / 7.5 KVA				42 / 19.2	
NGL9K3/X-YY(ZZZ/ZZZ)	9KW / 13.5 KVA				48.9 / 22.2	

MODEL SELECTION

NGL- - - -

1 2 3 4

1.	POWER IN WATTS
2.	OUTPUT FREQUENCY
3.	INPUT VOLTAGE SELECTION
4.	OUTPUT VOLTAGE SELECTION

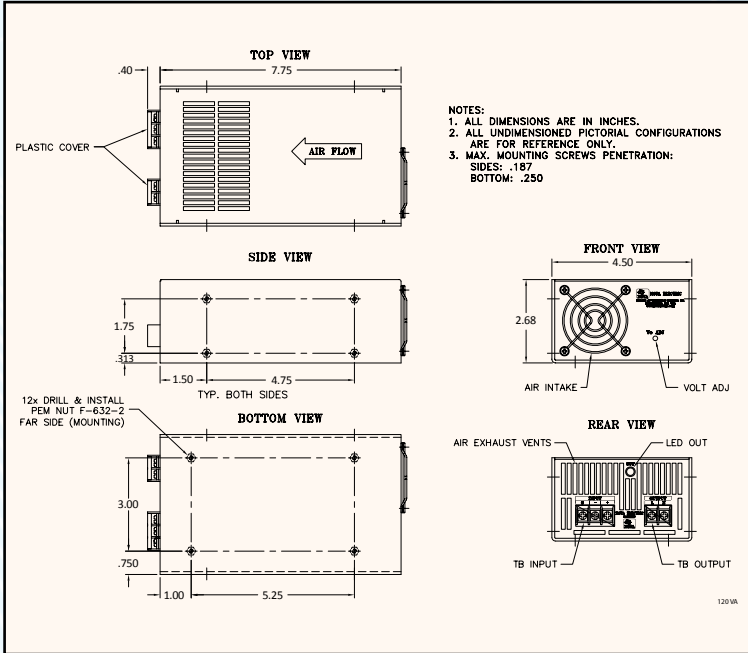
INPUT VOLTAGE SELECTION	
NOMINAL	RANGE
12	10-16
24	22-32
36	32-44
48	42-56
72	64-88
120	105-150
155	120-205
270	240-300

NGL	1K	-	60	-	24	-	120
Inverter Style	Power in WATTS		Output Frequency		Input Voltage Selection		Output Voltage Selection

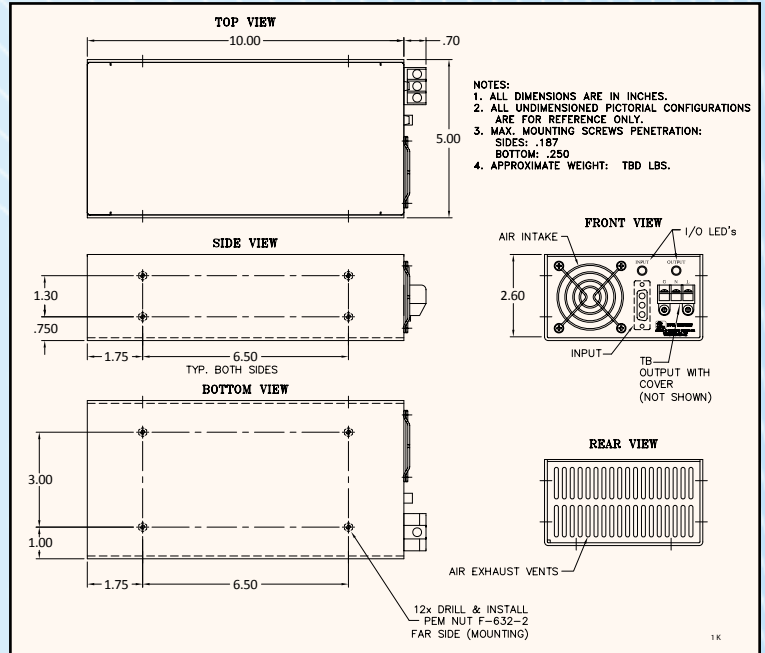
Modular Inverter for Naval • Ground • Airborne Applications

OUTLINE DRAWINGS

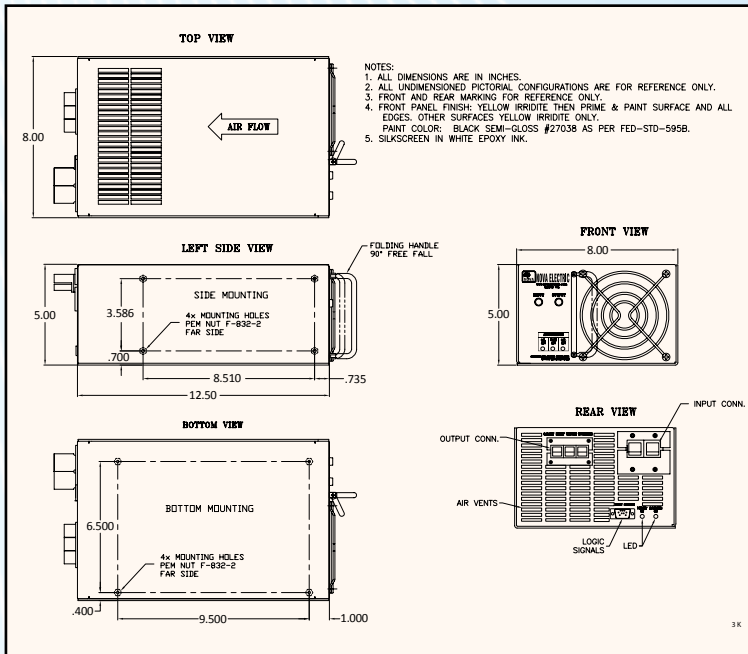
100 W



1 KW



2 KW



3 KW

