



NOVA ELECTRIC



POPULAR OPTIONS

- Ruggedization Against High Shock, Vibration and Humidity
- Custom Output Frequency For Rail – 25, 91.66, 100, 200, and 250 Hz. Available
- MS Connector Mates
- Shock Mounts
- Floor Mounts
- Internal Transfer Switch
- High IP Protection Including Louvers on all Intake and Exhaust, as well as Fully Gasketed Breakers, Switches, and Indicators
- Custom Markings
- Environmental Stress Screening Services

CONTACT

100 School Street,
Bergenfield, NJ 07621 USA
(201) 385-0500
novaelectric.com
info@novaelectric.com



Galaxy Series Floor / Wall Mount 600 VDC Nominal Input / 1-35 KVA Pure Sine Wave DC-AC Inverters



- *Pure Sine Wave Output*
- *High Reliability*
- *Overload, Overvoltage, and Overtemp Protected*
- *Transformer-Isolated For High Inrush Loads*
- *Extremely Rugged Construction*
- *Conformal Coated PCBs*
- *Custom Voltages and Frequencies Available*
- *All Hardware Is Stainless Steel*

The Leader In Rugged Power Conversion Technology Since 1966

Rev C-June-10-2020



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GENERAL OVERVIEW

The transformer-isolated Galaxy Series Rugged Inverters are designed for harsh environment rail, work train, and trolley applications. They feature an optional advanced Internal Suppression Filter Network (ISFN) to suppress the significant transients usually associated with these types of conditions, and can be built to meet MIL-STD-810, MIL-S-901, MIL-STD-1472, MIL-STD-461, MIL-STD-167 and other military environmental standards optionally. Transformer-isolated topology makes these Inverters suitable for very high inrush loads, such as motors and compressors. Custom output frequencies for rail (25, 91.66, 100, 200, and 250 Hz.) are available optionally.

These models utilize the most durable components offering maximum field-proven reliability, and are the units of choice for Siemens, Amtrak, WMATA (Washington DC,) Portland Oregon Trolley, RN Utility, Mass Bay Transit Authority (MBTA,) Long Island Rail Road (LIRR,) New Orleans Trolley, New Jersey Transit, Toronto Transit Commission, Mexico City Metro, and many other rail contractors. Typical applications include:

Work Train Applications

Nova Inverters in various sizes are currently utilized by such customers as Amtrack and the MBTA for powering equipment on third rail 450-750 VDC Work Train Applications. Everything from hand tools to lighting run on Nova inverters. Even on-board electric toilets are powered by our inverters!

Trolley Applications

Nova has supplied specialized inverters for many custom Trolley Applications. In addition to our other custom designs, we have designed and built special inverters modified to accept 900 VDC continuous input at the customer's request. Nova inverters are also used to power lighting on Historic Trolley Systems across the country. The next time you see a restored trolley, remember that the lights are probably powered by Nova!

Subway Applications

Our durable 600 VDC inverters are currently being used by such customers as Chicago Transit Authority and Long Island Railroad for such various applications as providing emergency power from the third rail. Quite often, it is cheaper and more pragmatic to install an inverter in a hut (shed) on a siding than to run AC power from a distant location.

Custom Applications

Nova offers an almost infinite combination of custom cabinets and configurations to satisfy almost any application! Mobile applications, as well as outdoor applications subject to rain, snow, ice, wind, etc. are our specialties! Our inverters are extremely rugged by design, and feature an advanced Internal Suppression Filter Network to suppress the significant transients usually associated with these applications. Please don't hesitate to contact the factory for additional information on custom capabilities.

SPECIFICATIONS

Electrical

INPUT VOLTAGE	450 - 750 VDC (Extended Range Available)
OUTPUT VOLTAGE	See Table
FREQUENCY	50 Hz, 60 Hz, 400 Hz (±0.5%)
FREQUENCY REGULATION	±0.5% N.L. to F.L.
VOLTAGE REGULATION	±1.5% N.L. to F.L.
EFFICIENCY	Approximately 80% (Depending On Model)
REACTIVE LOAD	0.75 Lead to 0.75 Lag
DISTORTION	5% THD, 3% Single Harmonic
OVERLOAD	125% for 5 Minutes
OVERLOAD PROTECTION RANGE	Automatic Overload & Short Circuit Protection
SYNC & PHASE LOCK RANGE	±3 Hz, Typical (50/60 Hz models)
TRANSIENT RESPONSE	Approx. 1/4 Cycle Recovery to 95% of Nominal

Environmental & Mechanical

OPERATING TEMP.	-20°C to +50°C Standard -40°C to +71°C Optional
COOLING	By Internal DC Brushless Fan
VIBRATION	Normal Shipping and Handling
SHOCK	20g, 11 mS Half Sinewave
HUMIDITY	to 95% RH Non-Condensing
EMI	Designed to Meet FCC Part 15, Class A, Can Meet MIL-STD-461 with Additional Filtering

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PARTIAL 60 Hz MODEL SELECTION – SPECIALTY VOLTAGES AND FREQUENCIES AVAILABLE UPON REQUEST

MODEL	OUTPUT VAC	OUTPUT FREQ. (Hz)	CONT. OUTPUT POWER	SIZE (HxWxL)	APPROX. EFFICIENCY
GH1K60-600	120	60	1 KVA	30" x 24" x 8"	90%
GH2K60-600	120	60	2 KVA	30" x 24" x 8"	90%
GH3K60-600	120	60	3 KVA	30" x 24" x 12"	90%
GH5K60-600	120	60	5 KVA	30" x 24" x 12"	90%
GH7.5K60-600	120	60	7.5 KVA	36" x 36" x 16"	90%
GH10K60-600	120	60	10 KVA	36" x 36" x 16"	90%
GH15K60-600	120	60	15 KVA	48" x 30" x 16"	90%
GH20K60-600	120	60	20 KVA	48" x 30" x 16"	90%
GH25K60-600	120	60	25 KVA	54" x 36" x 16"	90%
GH30K60-600	120	60	30 KVA	54" x 36" x 16"	90%
GH35K60-600	120	60	35 KVA	54" x 36" x 16"	90%

PARTIAL 50 Hz MODEL SELECTION – SPECIALTY VOLTAGES AND FREQUENCIES AVAILABLE UPON REQUEST

MODEL	OUTPUT VAC	OUTPUT FREQ. (Hz)	CONT. OUTPUT POWER	SIZE (HxWxL)	APPROX. EFFICIENCY
GH1K50-600(220)	220	50	1 KVA	30" x 24" x 8"	90%
GH2K50-600(220)	220	50	2 KVA	30" x 24" x 8"	90%
GH3K50-600(220)	220	50	3 KVA	30" x 24" x 12"	90%
GH5K50-600(220)	220	50	5 KVA	30" x 24" x 12"	90%
GH7.5K50-600(220)	220	50	7.5 KVA	36" x 36" x 16"	90%
GH10K50-600(220)	220	50	10 KVA	36" x 36" x 16"	90%
GH15K50-600(220)	220	50	15 KVA	48" x 30" x 16"	90%
GH20K50-600(220)	220	50	20 KVA	48" x 30" x 16"	90%
GH25K50-600(220)	220	50	25 KVA	54" x 36" x 16"	90%
GH30K50-600(220)	220	50	30 KVA	54" x 36" x 16"	90%
GH35K50-600(220)	220	50	35 KVA	54" x 36" x 16"	90%

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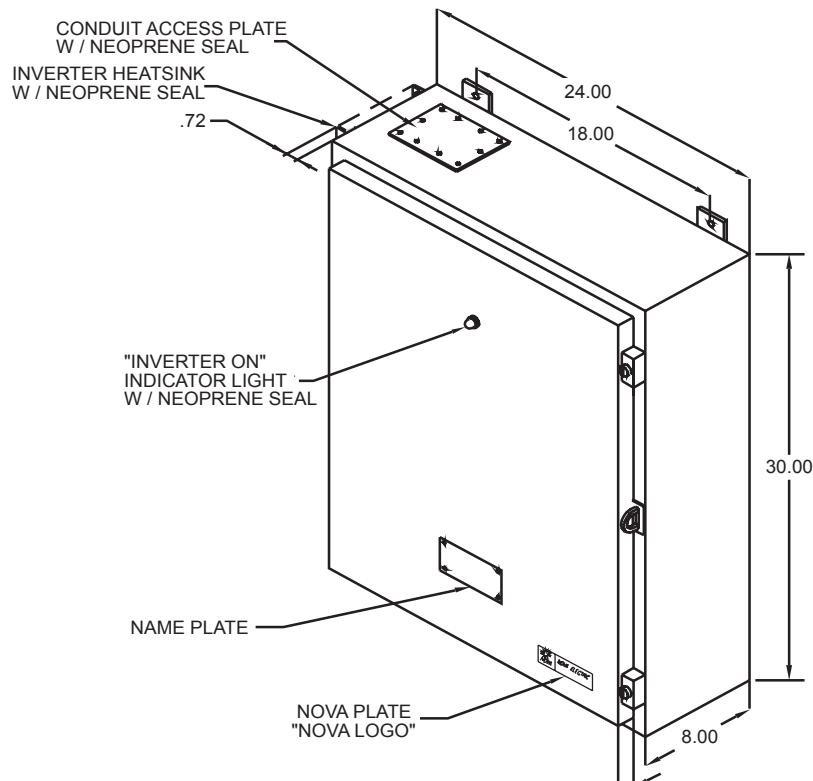


PARTIAL 3 PHASE MODEL SELECTION – SPECIALTY VOLTAGES AND FREQUENCIES AVAILABLE UPON REQUEST

MODEL	OUTPUT VAC	OUTPUT FREQ. (Hz)	CONT. OUTPUT POWER	SIZE (HxWxL)
GH1.5K3/6-600	120/208	60	1.5 KVA	C/F
GH1.5K3/5-600	220/380	50	1.5 KVA	C/F
GH1.5K3/4-600	115/200	400	1.5 KVA	C/F
GH3K3/6-600	120/208	60	3 KVA	C/F
GH3K3/5-600	220/380	50	3 KVA	C/F
GH3K3/4-600	115/200	400	3 KVA	C/F
GH4.5K3/6-600	120/208	60	4.5 KVA	C/F
GH4.5K3/5-600	220/380	50	4.5 KVA	C/F
GH4.5K3/4-600	115/200	400	4.5 KVA	C/F
GH6K3/6-600	120/208	60	6 KVA	C/F
GH6K3/5-600	220/380	50	6 KVA	C/F
GH6K3/4-600	115/200	400	6 KVA	C/F
GH9K3/6-600	120/208	60	9 KVA	C/F
GH9K3/5-600	220/380	50	9 KVA	C/F
GH9K3/4-600	115/200	400	9 KVA	C/F
GH15K3/6-600	120/208	60	15 KVA	C/F
GH15K3/5-600	220/380	50	15 KVA	C/F
GH15K3/4-600	115/200	400	15 KVA	C/F
GH20K3/6-600	120/208	60	20 KVA	C/F
GH20K3/5-600	220/380	50	20 KVA	C/F
GH20K3/4-600	115/200	400	20 KVA	C/F
GH25K3/6-600	120/208	60	25 KVA	C/F
GH25K3/5-600	220/380	50	25 KVA	C/F
GH25K3/4-600	115/200	400	25 KVA	C/F
GH30K3/6-600	120/208	60	30 KVA	C/F
GH30K3/5-600	220/380	50	30 KVA	C/F
GH30K3/4-600	115/200	400	30 KVA	C/F
GH35K3/6-600	120/208	60	35 KVA	C/F
GH35K3/5-600	220/380	50	35 KVA	C/F
GH35K3/4-600	115/200	400	35 KVA	C/F

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TYPICAL 2 KVA WALL / FLOOR MOUNT GALAXY SERIES 600 VDC PURE SINE WAVE DC-AC INVERTER OUTLINE DRAWING



NOTES:

1. INVERTER CABINET HAS (4) MTG EARS THE BOTTOM (2) CANNOT BE SEEN IN THIS VIEW
2. FINISH: ANSI #61 GREY, SEMIGLOSS
3. ENCLOSURE TYPE: NEMA 12



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

