



NOVA ELECTRIC



FEATURES

- Microprocessor Based Design With Absolutely Accurate And Stable Frequency
- Compact And Light Weight, Yet Very Rugged
- Tightly Regulated Output Voltage And Frequency
- Switch Selectable 50 Or 60 Hz Output, All Models
- Capable Of Driving Highly Reactive Loads Such As Electric Tools And Appliances
- Capable Of Driving Highly Capacitive Loads Such As Switching Power Supplies
- Very Low Harmonic Distortion, THD<3%
- Standard DC Input 20-32VDC
- Standard Outputs 110V/60Hz or 230V/50Hz
- Switch Selectable $\pm 10V$ Output Change
- Below 1W Consumption In Sleep Mode

CONTACT

100 School Street,
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CGLUPS Series 2 KW Rugged 24 VDC Input UPS System



GENERAL OVERVIEW

Nova Electric's rugged CGLUPS-Series DC Input UPS is intended for military applications wherever pure sinewave battery-backed AC power is required directly from a DC input source. 28 VDC from Aircraft buss or Land Vehicle alternator feeds the CGLUPS and charges the batteries via diode isolation module, which blocks the batteries from feeding back onto the 28 VDC source. If the DC source is lost, the DC UPS continues powering the load using its internal batteries for approximately 5 minutes at full load, 0.8PF.

Nova's CGLUPS-Series DC Input UPS systems are high-reliability power sources specifically designed for demanding applications in high shock, vibration, humidity, and EMI environments. These rugged, military UPS systems can be built to meet MIL-STD-810, MIL-S-901, MIL-STD-1472, MIL-STD-461, and other standards optionally. These models utilize the most durable componentry, offering maximum field-proven reliability for severe, harsh environments and high reliability applications such as:

- 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

The Leader In Rugged Power Conversion Technology Since 1966

Specifications subject to change without notice. Some optional equipment shown.

Rev A-June-18-2020



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SPECIFICATIONS

Electrical

INPUT VOLTAGE	20-32 VDC
OUTPUT VOLTAGE 110V MODEL	100 / 110 / 120 VAC
OUTPUT VOLTAGE 220V MODEL	220 / 230 / 240 VAC
OUTPUT FREQUENCY	50 or 60 HZ User Selectable $\pm 0.05\%$ Accuracy
SURGE RATING	4KW for 2KW Continuous Models
EFFICIENCY (FULL LOAD)	110V Model 83%
EFFICIENCY (FULL LOAD)	220V Model 86%
NO LOAD CURRENT	<1.0W Sleep Mode
OUTPUT WAVEFORM SINEWAVE	<3% THD
OUTPUT REGULATION	-10% / +4% All Models
PROTECTION	Overload, Short Circuit, Reverse Polarity (Fuse), O.T., Over / Under Input Voltage
MTBF	30,000 Hours per MIL-HDBK-217
MTTR	30 Minutes by Qualified Personnel

Environmental

AMBIENT OPERATING TEMPERATURE RANGE	-20° to +50° C
STORAGE TEMPERATURE RANGE	-40° to +60° C (With Optional Premium Batteries) For best results, batteries must be kept at 25° C ambient temperature. Extreme low temperatures will result in reduced run time, while extreme high temperatures result in significantly reduced battery lifespan
HUMIDITY	to 95% RH Non-Condensing – Designed to meet MIL-STD-810. All boards conformal coated with Acrylic MIL-I-46058 Type R
SHOCK	20g, 11 mS Half Sinewave – Designed to Meet MIL-STD-810 Optionally
EMI	Designed to Meet FCC Part 15, Class A. Designed to Meet MIL-STD-461 with Optional Additional Filtering
ELEVATION	Operating: 15,000 ft. (4,572 m) Non-Operating: 40,000 ft. (12,192 m) (For Batteries, Please Follow Battery Manufacturer Instructions Regarding Recommended Elevation Parameters)
AUDIBLE NOISE	Less than 55 dBA at 5 ft. (1.5 m)
TRANSPORTATION AND HANDLING	MIL-STD-810
PROTECTIVE FEATURES	Circuit Breakers: DC Input & Battery Breakers

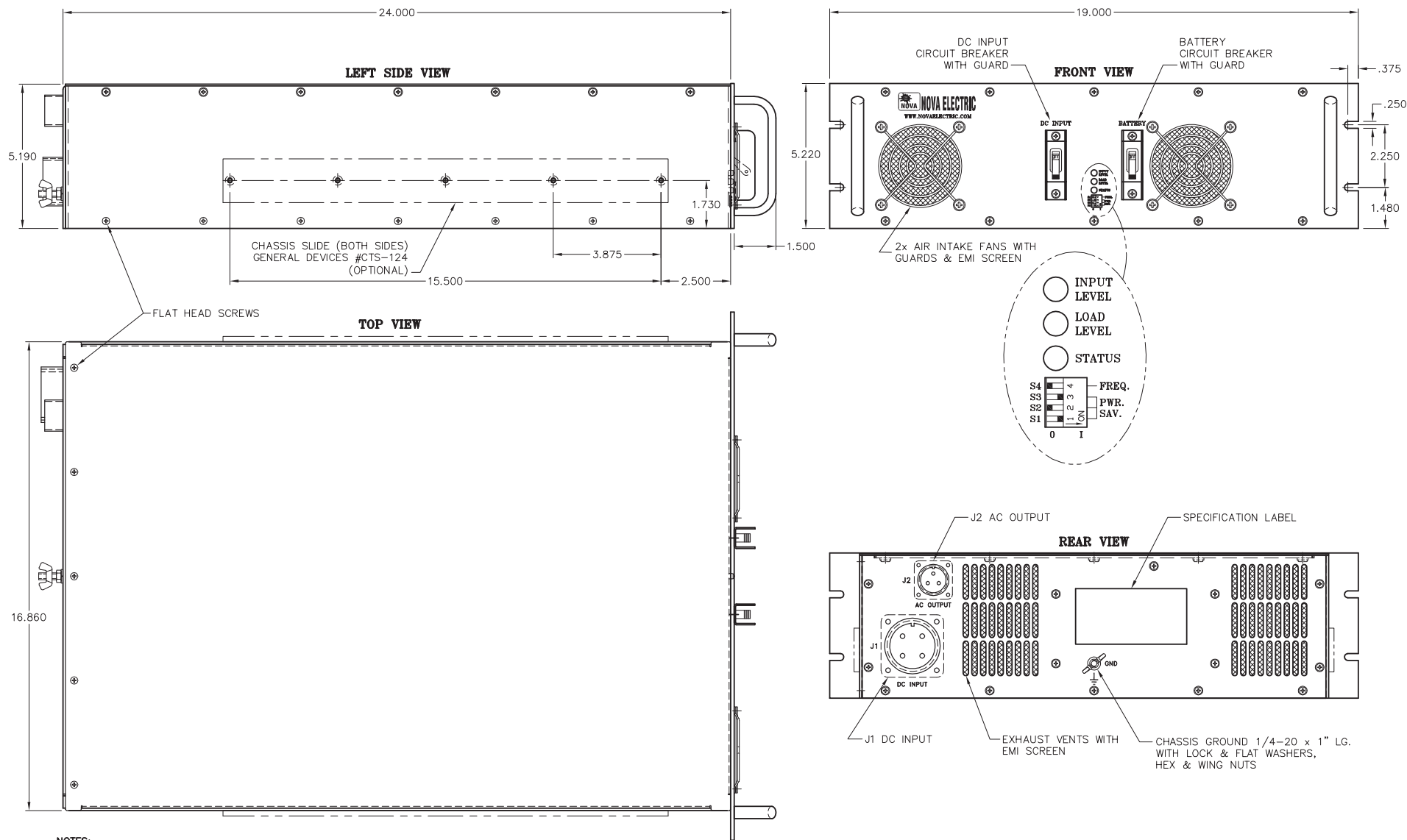
MODEL	INPUT RANGE VDC	OUTPUT VAC	OUTPUT FREQUENCY (Hz)	CONTINUOUS OUTPUT POWER	APPROX. WEIGHT (LBS.)	SIZE IN. (H x W x L)	RUN TIME
CGLUPS- 2K-24-120	20-32	120	50 or 60	2KW	75	5.25 x 19 x 24	4 Min
CGLUPS- 2K-24-220	20-32	220	50 or 60	2KW	75	5.25 x 19 x 24	4 Min

POPULAR OPTIONS

- Ruggedization Against High Shock, Vibration & Humidity (MIL-STD-810)
- MS Connector Mates
- Premium batteries With Up To 10 Year Life
- Rugged Transit Cases & Custom Enclosures
- Environmental Stress Screening Services

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CGLUPS SERIES OUTLINE DRAWING



- 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. FRONT PANEL FINISH: YELLOW IRRIDITE, THEN PRIME & PAINT FRONT SURFACE AND ALL EDGES- ANSI #61 GRAY SEMI-GLOSS
 5. ALL OTHER SURFACES ARE IRRIDITED (ALUMINUM)
 6. FRONT PANEL SILKSCREEN IN BLACK EPOXY INK.
 7. MS CONNECTOR MATES - OPTIONAL
 8. UNIT THOROUGHLY RUGGEDIZED.
 9. APPROXIMATE WEIGHT: 75 LBS.

CONNECTOR PIN DESIGNATIONS

J1 DC INPUT		J2 AC OUTPUT	
MS3102R32-17P		MS3102R18-22S	
PIN	DESCRIPTION	PIN	DESCRIPTION
1	DC + (POS)	L	LINE
2	DC + (POS)	N	NEUTRAL
3	DC- (NEG)	G	GROUND
4	DC- (NEG)		

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TOLERANCES UNLESS OTHERWISE SPECIFIED

.XX = ± .02

.XXX = ± .005

ANGLE = ± 1/2°

WWW.NOVAELECTRIC.COM

THIRD ANGLE PROJECTION

DRAWN RL 04/27/15

CHECKED BT 04/27/15

APPROVED AL 04/27/15

DATE

NOVA ELECTRIC

A DIV. OF TECHNOLOGY DYNAMICS INC.

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OUTLINE DRAWING,

CGLUPS2K-SERIES

9981080

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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

