



# CGD3.5K SERIES PURE-SINEWAVE DC-AC INVERTERS

» INCLUDES BUILT-IN AUTOMATIC TRANSFER SWITCH (ATS) WITH AC INPUT CIRCUIT BREAKER

» PARALLELEABLE FOR INCREASED POWER

» 3 PHASE WYE CONFIGURABLE

» 120/240 CT SPLIT PHASE CONFIGURABLE



3500W / 3500VA  
12 V, 24 V, 48 V INPUT  
SIX MODELS FOR  
110V 50/60 Hz & 220V 50/60 Hz OUTPUT



## APPLICATIONS

Nova Electric's CGD-Series inverters are intended for commercial and industrial applications wherever pure sinewave power is needed at 50 or 60 Hz. These inverters 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 – please consult the factory for proper sizing. These CGD models can also be optionally ruggedized against shock, vibration, and humidity for military applications including vehicle mounted, shipboard, submarine, aircraft, and ground fixed shelters.

COMPUTERS

SAIL BOATS

APPLIANCES

PRINTERS

PHOTO VOLTAIC

INSTRUMENTS

MONITORS

ELECTRIC TOOLS

RVs



For more information, please visit us at [www.novaelectric.com](http://www.novaelectric.com) or email us at [novales@theallpower.com](mailto:novales@theallpower.com)

## STANDARD FEATURES

- Microprocessor based design with absolutely accurate and stable frequency.
- Compact and light weight, yet rugged and vehicle rated.
- 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
- Suitable for vehicle or wall mounting
- Standard outputs 110V/60Hz, 230V/50Hz
- Switch selectable  $\pm 10V$  output change
- RS-232 communication (RJ11 Connector)
- Built in mechanical transfer switch (ATS)

## ELECTRICAL

**Input Voltage:** See Table  
**Output Voltage 110V model:** 100/110/120 VAC  
**Output Voltage 220V model:** 220/230/240 VAC  
**Output Frequency:** 50 or 60 HZ  $\pm 0.1\%$  Accuracy  
**Continuous Power Rating:** 3500W/3500VA  
**Peak Power (3 seconds):** 4500W  
**Surge Rating:** 6000W < 0.2 seconds  
**Efficiency:** 90% (12V, 24V/120), 91% (24V/220, 48V)  
**Output Waveform Sinewave:** <3% THD  
**Output Voltage Regulation:**  $\pm 3\%$   
**Protection:** Overload, Short Circuit, Reverse Polarity (Fuse), O.T, Over/Under Input Voltage, Fan Failure  
**Output Frequency Regulation:**  $\pm 0.1\%$   
**Synchronous Frequency:** 47-57 / 53 - 63 Hz  
**ATS:** Inverter to utility AC: 8 ~ 10ms.  
 Utility AC to inverter: 16 ~ 50 ms.

## SAFETY & EMC

**120V:** UL458\*; FCC Class B  
**220V:** EN60950-1; EN55014-1\*\*, EN55014-2\*\*;  
 EN61000-3-2, -3-3; EN61204-3;  
 EN61000-6-1, -6-2, -6-3, -6-4;  
 IEC61000-4-2, 3,4,5,6,8,11

## ENVIRONMENTAL

- Operating Temp.: -20° to +40°; + 60°C @ 40% Pwr Load
- Storage Temp. Range: -40° to +71°C
- Humidity: To 90% non-condensing

## INDICATORS, CONTROL & COMMUNICATIONS

- Input level, Fault Status
- Optional Remote Control
- Optional Ethernet Communications

\* UL-458 only support CGD2500W-12-120 and CGD2500W-24-120  
 \*\* EN55014-1, EN55014-2 Class B: output cable less than 6.5 ft (2 meters)

	12V - 120V	24V - 120V	48V - 120V	12V - 220V	24V - 220V	48V - 220V
<b>No Load Power Consumption</b>	@12VDC	@24VDC	@48VDC	@12VDC	@24VDC	@48VDC
<b>On Mode @ Save Mode</b>	1.4A	0.5A	0.5A	1.4A	0.5A	0.5A
<b>On Mode @ No Load Mode</b>	<2.9A	<1.4A	<0.8A	<3.6A	<1.8A	<1A
<b>Fuse</b>	40A x 12	20A x 12	20A x 6	40A x 12	20A x 12	20A x 6
<b>BAT. Low Alarm <math>\pm 3\%</math></b>	10.5 VDC	21.0 VDC	42.0 VDC	10.5 VDC	21.0 VDC	42.0 VDC
<b>BAT. Low Shut-down <math>\pm 3\%</math></b>	10.0 VDC	20.0 VDC	40.0 VDC	10.0 VDC	20.0 VDC	40.0 VDC
<b>BAT. Low Restart <math>\pm 3\%</math></b>	12.5 VDC	25.0 VDC	50.0 VDC	12.5 VDC	25.0 VDC	50.0 VDC
<b>BAT. High Alarm <math>\pm 3\%</math></b>	15.5 VDC	31.0 VDC	62.0 VDC	15.5 VDC	31.0 VDC	62.0 VDC
<b>BAT. High Shut-down <math>\pm 3\%</math></b>	16.0 VDC	32.0 VDC	64.0 VDC	16.0 VDC	32.0 VDC	64.0 VDC
<b>BAT. High Restart <math>\pm 3\%</math></b>	15.0 VDC	30.0 VDC	60.0 VDC	15.0 VDC	30.0 VDC	60.0 VDC

## MODEL SELECTION

INPUT VDC	120 V MODELS 50 Hz or 60 Hz	220 V MODELS 50 Hz or 60 Hz	DIMENSIONS (L" x W" x H") [mm]	WEIGHT
10 - 16 V	CGD3.5K-12-120	CGD3.5K-12-220	19.53 x 11.14 x 5.04 [496 x 283 x 128]	22 lbs [10 kg]
20 - 32 V	CGD3.5K-24-120	CGD3.5K-24-220	19.53 x 11.14 x 5.04 [496 x 283 x 128]	22 lbs [10 kg]
40 - 60 V	CGD3.5K-48-120	CGD3.5K-24-220	19.53 x 11.14 x 5.04 [496 x 283 x 128]	22 lbs [10 kg]

## MECHANICAL SPECIFICATIONS

