



EXELTECH

7317 Jack Newell Blvd North
Fort Worth, Texas 76118-7100
817.595.4969 voice, 817.595.1290 fax
800.886.4683 toll free
website www.exeltech.com



January 2008.
Power Inverter, 4Kw, 6Kw
931-X0*M*-*00



Table of Contents

| | |
|-----------------------------------|----------------------------|
| Warnings / Cautions/ Notes: | <i>page 3</i> |
| Safety/ Health (installation): | <i>page 4</i> |
| DC to AC Power Inverter features: | <i>page 5</i> |
| Operating Instructions: | <i>page 6 - 7</i> |
| Specifications: | <i>page 8</i> |
| System Part Number: | <i>page 9</i> |
| Mechanical Drawings: | <i>page 10 - 11</i> |

Copyright © 2008 Exeltech Inc. All rights reserved. This Document may not be copied, photocopied, reproduced, translated or converted to any electronic or machine-readable form in whole or in part without prior written approval of Exeltech Inc.

Exeltech
7317 Jack Newell Blvd North
Fort Worth, Texas 76118-7100

Warnings / Cautions/ Notes:

CAUTION: It is essential to read and understand all Warnings, Cautions, and Notes before any connections are made to the Unit or System. If further assistance is needed call (817) 595-4969 and ask for Customer Service.

WARNING: The inverter is designed to operate from a Battery. Performance cannot be guaranteed when a charger or power supply is used without a battery in the circuit.

WARNING: Inverter Chassis and Neutral AC output lead will be connected together. The unit will be shipped with this connection. If this connection is removed, it must be provided somewhere else in the system. Either one of the Battery connections should be connected to Ground or Chassis to comply with most code requirements.

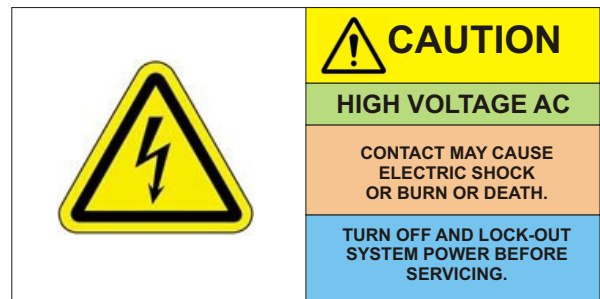
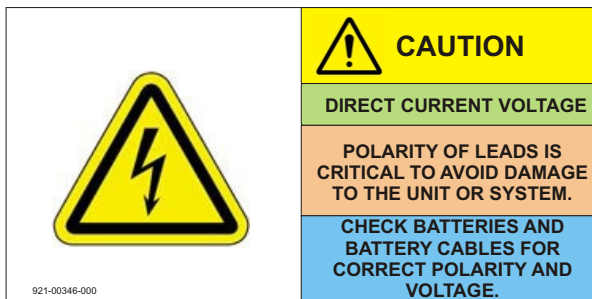
CAUTION: Before any connections are made to the Unit or System, be sure to disconnect the grounded battery terminal. Reconnect this lead when work is finished.

CAUTION: Polarity of leads is critical to avoid damage to the unit or system. Check batteries and battery cables for correct polarity and voltage.

CAUTION: Observe all National and Local Electric Codes when connecting AC Power Connections. All wiring should be copper and must follow the NEC, local or other codes in effect at the installation, regardless of suggestions in this document.

CAUTION: The inverter is a ruggedized piece of electronic equipment. However, gasses emanating from the battery can be corrosive and highly flammable. Therefore, the inverter should be isolated from the battery bank as much as possible.

CAUTION: Unit requires 6 inch minimum clearance from each side of the system to provide adequate ventilation.



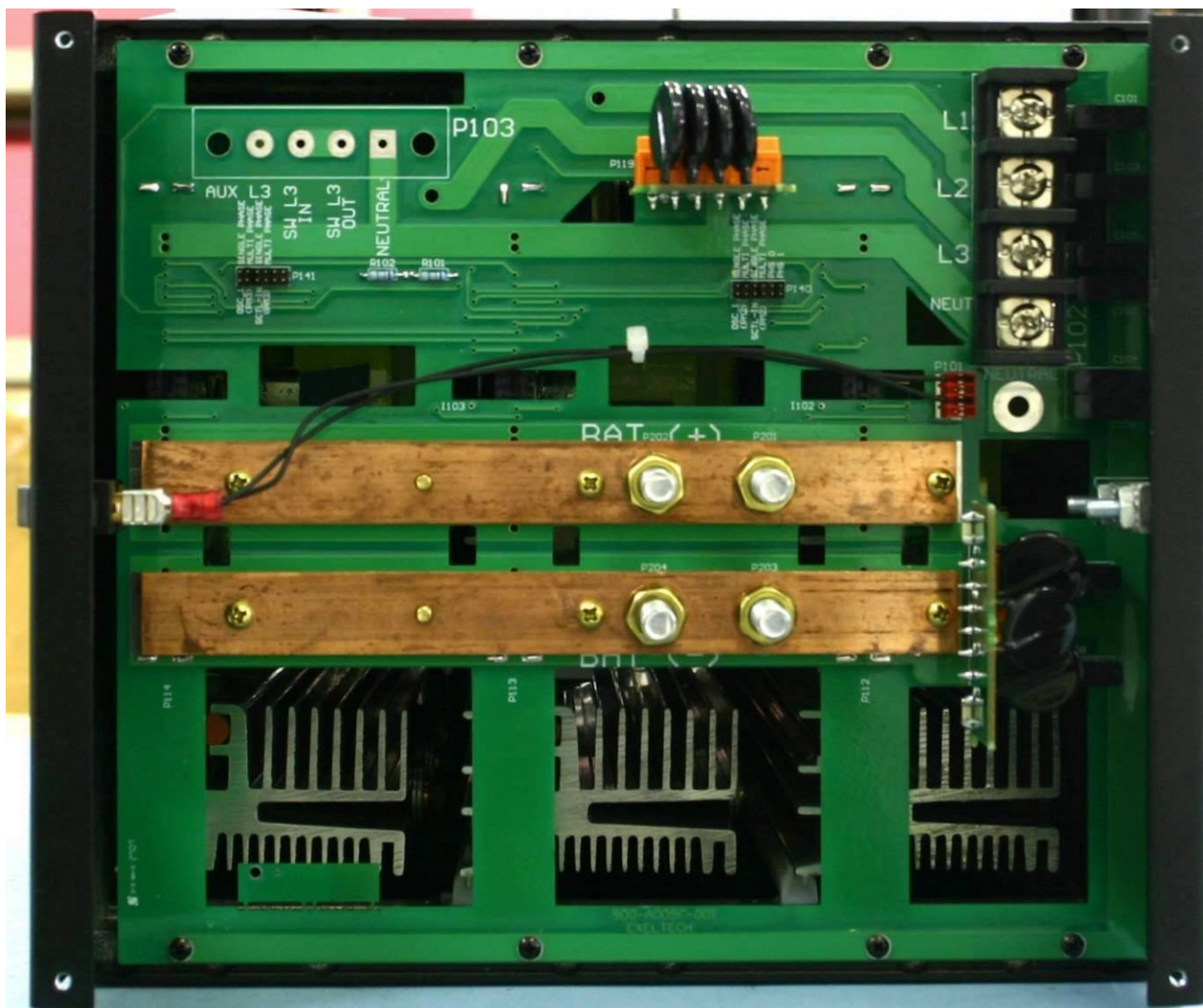
Safety/ Health: (Installation)

1. The inverter requires adequate ventilation for cooling. With proper cooling the inverter will operate efficiently and meet its published ratings.
2. The inverter should be mounted as close to the battery as possible. Shorter lengths of wire have less resistance, which translates to increased efficiencies.

An in line fuse may be desired to protect the battery and wiring to the inverter. This fuse should be located very close to the battery positive (+) terminal.

DC INPUT CONNECTIONS: Positive (+) and Negative (-) input terminals are 5/16" studs with brass hardware. They are provided under the Rear Access Cover. Choose appropriate gauge wire for your specific model and distance from the battery.

1. Disconnect **negative (-)** terminal of the battery and make sure the inverter is OFF.
2. Make DC input connections to the inverter as illustrated.
3. Load AC voltage connection will be hard wired as illustrated.
4. Re-connect **negative (-)** terminal of the battery.



DC to AC Power Inverter features

Features

The inverter is a stand-alone unit.

Size

Mechanical dimensions: 4KW - 9 inches High X 18 inches Deep X 8 inches Wide
6KW - 9 inches High X 18 inches Deep X 11 inches Wide

Connections

Input and Output

Input connections: 2- 5/16" lugs on 1" centers (BATT + and BATT -)

Output connections: 4 pole connector strip. 4KW unit up to 8 ga.; 6KW unit up to 6ga.

Ground connection: Ground chassis connector up to 6ga.

Controls

"On" / "Off" switch.

Electrical input

The inverter operates on DC power.

Electrical Output

The inverter is capable of converting DC to AC, 120Vac (4KW and 6KW systems), 120/240Vac (4KW system) or 120/208Vac (6KW system). True sine wave.

Power

The inverter has an output capacity of 4,000 Watts (4KW system) or 6,000 Watts (6KW system) during continuous operation in ambient air temperatures. At extreme temperatures of -25°C to +50°C, the power output will not drop more than 660W (4KW system) and 1,000 Watts (6KW system).

Protective Features

Low voltage

The inverter provides a low voltage light to warn the operators of steady-state input voltage drops below minimum voltage level Vdc. To allow for momentary voltage drops, the low-voltage sensing circuit incorporates a delay of 10 seconds. The inverter has a manual reset after shutting down for low voltage, and draws no current until the reset is activated. The inverter draws no current after being manually switched off.

Thermal Overload

The inverter provides automatic high temperature shut down capability when the internal temperature exceeds safe limits.

Electrical Overload

The inverter has an output overload protection circuit.

Status Indication

The inverter has Light-emitting Diodes (LED) to indicate inverter power, low input voltage, overload, and high temperature.

Moisture

The inverter circuit boards are conformal coated.

Moisture

5 to 95% humidity non-condensing.

Physical hazard control

The inverter does not present any uncontrolled safety or health hazards.

Preparation for Use and installation:

Operating Instructions:

LED Functions:

Each module has its own Indication Led. (Located in the face plate of every Power Module)

Solid Green.....Unit OK

Solid Red.....Overload Warning

Flashing Red.....Overload

Solid Amber.....Temperature warning

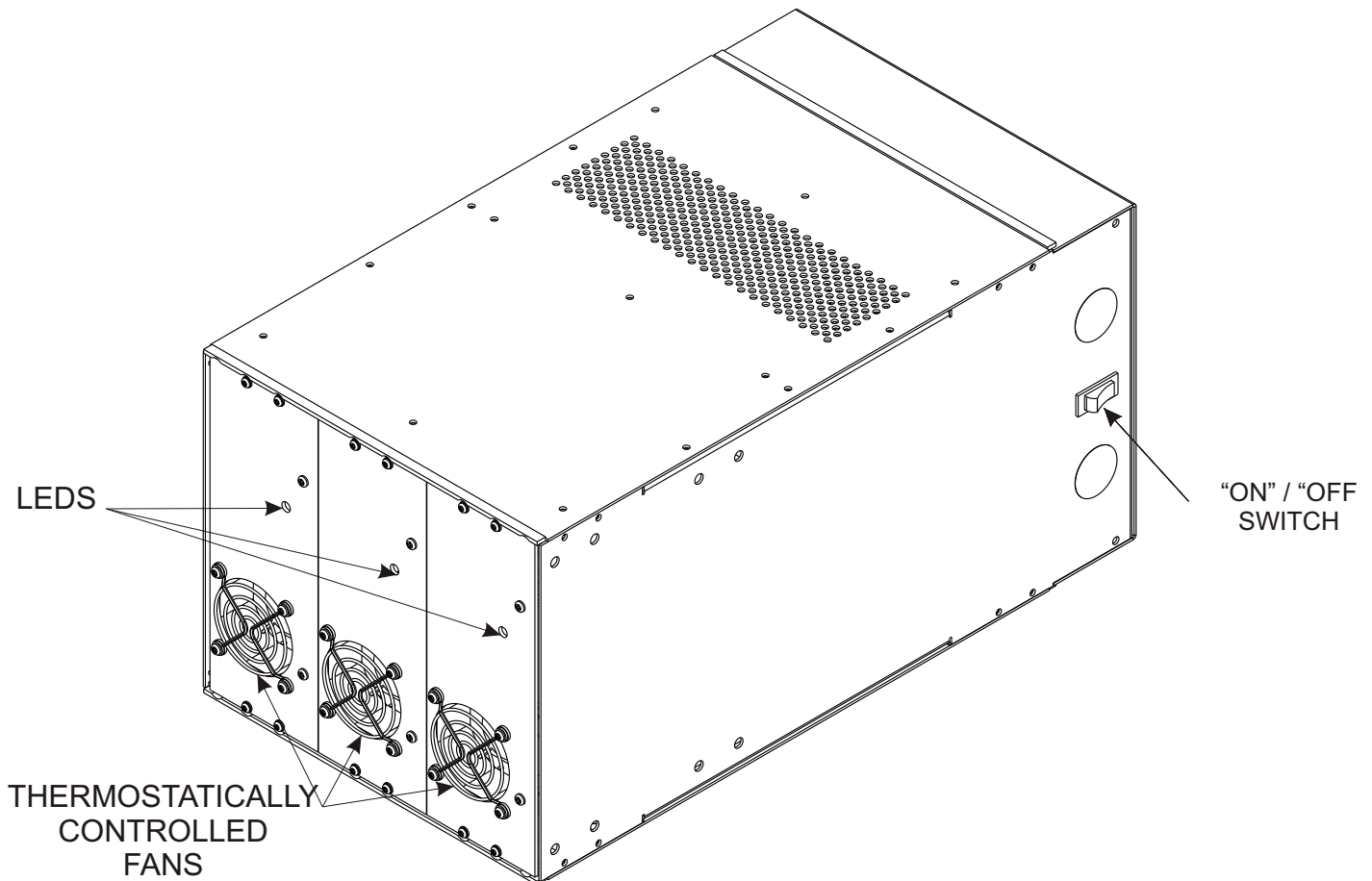
Flashing Amber.....Over temperature

Alternating Red and Green.....Engineering use only (VG+ Protection)

* Overload Warning means the unit is in surge and will only stay in this condition for a max of 6 seconds before going into overload

* Warning means the unit is with in a few degrees of maximum allowed operational temperature. The Unit can stay in the condition indefinitely as long as the temperature does not continue to increase.

* VG+ Protection is mainly for engineering but if in this condition there will be no output.



ON – this button will turn the inverter “ON”.

OFF – This button will turn the inverter “OFF”.

Note: “Reset” is accomplished by: PRESS “OFF” THEN PRESS “ON”

Maintenance and Servicing Instructions (preventive and corrective):

Make sure ventilation is not obstructed.

Periodically check torque on DC connections [90lbs-in max.] and AC connections [4.5 lbs-in max.] (every 6 month or as part of routine maintenance).

Storage: Storage temperature -25°F to +120°F (-32°C to +49°C)

PACKAGING

If you have to return unit for repair, send it back in the same double box or equivalent to protect it from shipping damage.

NOTES:

POWER INVERTER SPECIFICATIONS

OUTPUT POWER

| CONTINUOUS POWER | SURGE POWER | NO LOAD POWER | OUTPUT VOLTAGE | OUTPUT CURRENT per KW | WEIGHT LBS. |
|------------------|-------------|---------------|----------------|-----------------------|-------------|
| 2000W | 4000W | 12W | 1 | 8.3 A | 15 |
| 4000W | 8000W | 24W | 1, 2 | 8.3 A | 28.6 |
| 6000W | 12000W | 35W | 1, 3 | 8.3 A | 37 |

1 Single phase 100Vac, 120Vac +/- 2%
 2 Bi-phase 100/200Vac, 120/240Vac +/- 2%
 3 3 phase 100/173Vac, 120/208Vac +/- 2%

PROTECTION CIRCUITRY

| | |
|----------------|--|
| Over Voltage: | Shutoff at maximum input voltage, per input table. |
| Under Voltage: | Shutoff at minimum input voltage, per input table. |
| Thermal: | 105 C internal temperature. |
| Output Short: | Unit shuts off: electronically limited. Manual reset required. |

INPUT

| MODEL VOLTAGE | MINIMUM (TYPICAL) | SYSTEM (TYPICAL) | MAXIMUM (TYPICAL) | TYPICAL EFFICIENCY @ FULL POWER | PEAK EFFICIENCY @ 1/2 POWER |
|---------------|-------------------|------------------|-------------------|---------------------------------|-----------------------------|
| 24V | 21V | 27.6V | 30V | > 88% | > 90% |
| 48V | 42V | 55.2V | 60V | > 88% | > 90% |
| 66V | 57.8V | 75.9V | 82.5V | > 88% | > 90% |

ENVIRONMENTAL

| | |
|--------------|--|
| Temperature: | -25°C to +25°C full power, derated -17% @ 50°C then 20% per 10°C above 50°C. |
| Humidity: | 5 to 95% non-condensing |
| Cooling: | Thermostatically controlled variable speed forced air |
| Finish: | Powder coated |
| Warranty: | Two years parts and labor. |

GENERAL

| CONDITIONS | MINIMUM | TYPICAL | MAXIMUM |
|-----------------|---------|------------|---------|
| WAVEFORM | - | SINUSOIDAL | - |
| LINE REGULATION | - | .1% | 2% |
| LOAD REGULATION | - | 1% | 2% |
| DISTORTION | - | 1.5% | 2% |
| FREQUENCY | -.1% | 60Hz | +.1% |

MECHANICAL

| | |
|------------|--|
| Case size: | 7" Case HOLDS UP TO 2 MODULES 9 inches High 18 inches Deep 7 inches Wide Weight: 28 lbs. |
| | 9" Case HOLDS UP TO 3 MODULES 9 inches High 18 inches Deep 9 inches Wide Weight: 37 lbs. |



7317 Jack Newell Blvd North
 Fort Worth, Texas 76118-7100
 817.595.4969 voice, 817.595.1290 fax
 800.886.4683 toll free
 website www.exeltech.com

XO SERIES SYSTEM PART NUMBER

EXELTECH XO SERIES MODEL NUMBER



STEP # 1 Model number always starts with XO

STEP # 2 Cage assembly

| | |
|-------|-------|
| 7 | 9 |
| 7" XO | 9" XO |

STEP # 3 Configuration

| | | |
|---------|---------|---------|
| 1 phase | 2 phase | 3 phase |
| B | E | F |

STEP # 4 Enter three asterisks (*)

STEP # 5 Character assigned by EXELTECH to represent changes or revisions levels.

STEP # 6 To designate power level, enter the number of modules required. (* if none used)

STEP # 7 Enter from the following character code
Q = 100Vac, M = 120Vac, O = 230Vac

STEP # 8 To designate input voltage, enter the single character from the VDC voltage chart below:

| VDC INPUT VOLTAGE CHART | | | |
|-------------------------|----|----|----|
| DC VOLTS | 24 | 48 | 66 |
| DESIGNATION | 2 | 4 | E |

STEP # 9 Output frequency is designated by using the first number of the frequency. 5 for 50Hz, 6 for 60Hz, 4 for 400Hz

STEP # 10 Character assigned by EXELTECH to represent revision level of Power Modules.

STEP # 11 For options, enter two digit code. If no option, enter (00).

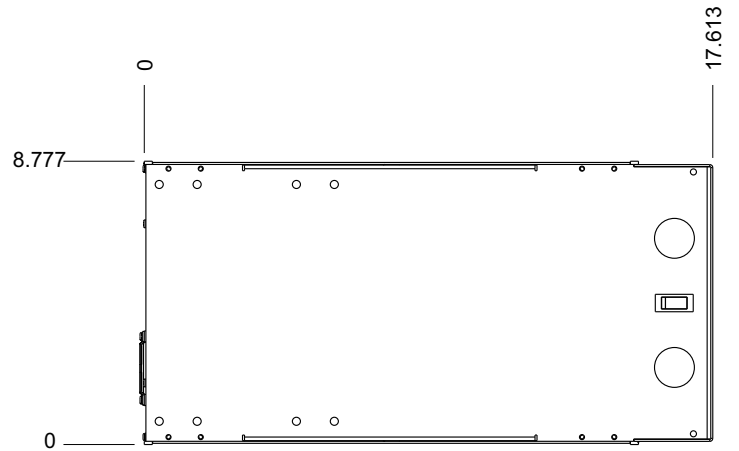
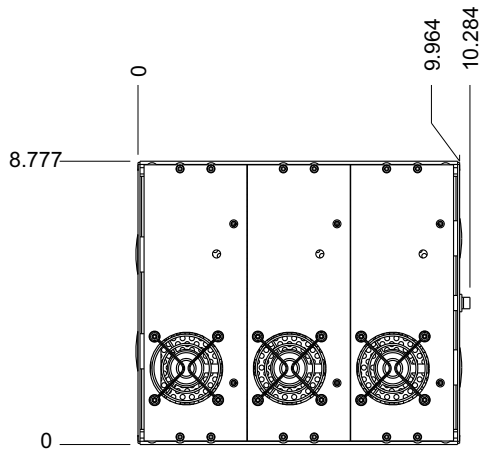
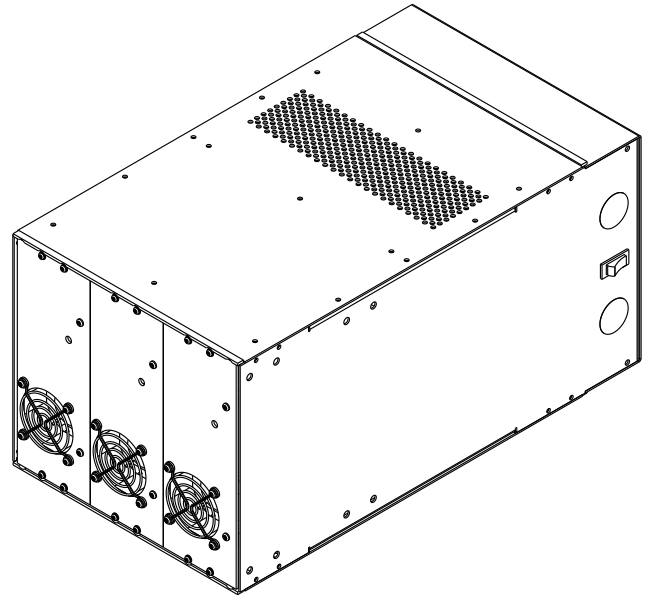
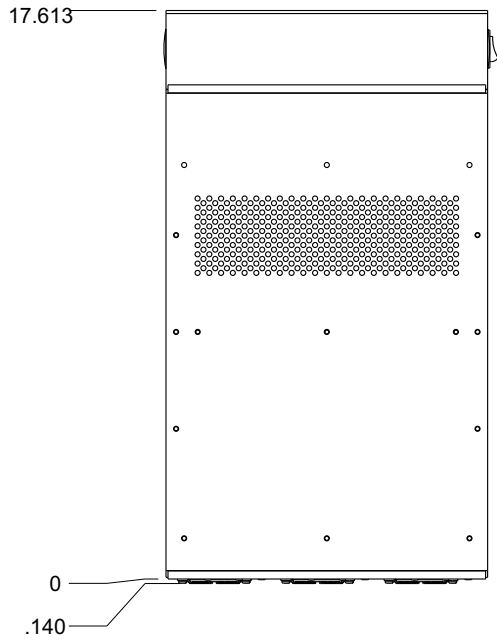
Example: XO9B***-3ME6-01



7317 Jack Newell Blvd North
Fort Worth, Texas 76118-7100
817.595.4969 voice, 817.595.1290 fax
800.886.4683 toll free
website www.exeltech.com

Made in the USA

MECHANICAL DRAWINGS - 6KW



Made in the USA

MECHANICAL DRAWINGS - 4KW

