Power Anytime, Anywhere

Tesla™ TI2000-440 Generator Set Interface

User Manual

Built Smart...Proven Tough

Tesla Industries, Inc.
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New Castle, DE 19720
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www.teslaind.com
www.tesla1.com

NOTE: All users must read this entire manual prior to operating the TI2000-440 Generator Set Interface.

The TI2000-440 Generator Set Interface is a limited maintenance-free and sealed unit. No repairs are authorized. Warranty will be voided if unit is tampered with in any way, or if unauthorized repairs are made. For technical support please contact:

TESLA™ INDUSTRIES INCORPORATED

101 CENTERPOINT BLVD.

CENTERPOINT INDUSTRIAL PARK, NEW CASTLE, DELAWARE 19720

PHONE: (302) 324-8910 FAX: (302) 324-8912

WEBSITE: www.teslaind.com ♦ www.tesla1.com EMAIL: tesla1@teslaind.com

⚠ CAUTION — Shock Hazard Potential

Improper use or failure to follow instructions in this user manual can result in unit damage and/or injury or death by electrical shock.

Any attempts to open or examine the inside of the unit via a tool or device (borescope, probe, etc.) can result in unit failure and/or injury by electrical shock. This GPU is maintenance free and should not be opened or disassembled for any reason.

Always protect the unit from short circuit.

Shipping Hazards: None.

All Ground Power Units, Micro Power Units (Aviation Batteries) and including, but not limited to, Battery Chargers/ Conditioners, manufactured by Tesla™ Industries, Inc., are able to safely and effectively charge any AGM, Lead Acid battery.

The Tesla™ GPU's and chargers are voltage and current regulated to 0.01% (dual loop). The charging voltage is calibrated, by Tesla™, to 28.6 volts and is pure dc (no power line ripple).

Maximum Charge Voltage by Battery Type

Type:	Charging Voltage / Cell	Charging Voltage / 12v	Charging Voltage / 24v
SLI/Flooded	2.366v to 2.416v	14.2v to 14.5v	28.4v to 29v
Lead Acid/Flooded	2.366v to 2.416v	14.2v to 14.5v	28.4v to 29v
Sealed Lead Acid	2.366v to 2.416v	14.2v to 14.5v	28.4v to 29v
VRLA	2.366v to 2.416v	14.2v to 14.5v	28.4v to 29v
AGM	2.433v to 2.466v	14.6v to 14.8v	29.2v to 29.6v
GEL	2.350v to 2.400v	14.1v to 14.4v	28.2v to 28.8v

*The only types of batteries we do NOT recommend using in conjunction with our units are:
Lithium ion
Nickel-cadmium

Table of Contents

Section 1 – Safety Review

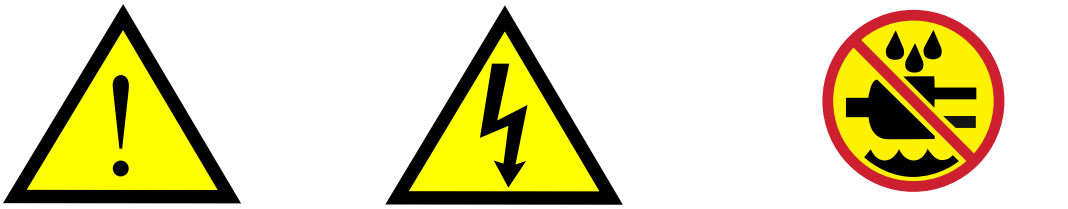
1.1 - Safety Notices

Safety notices appear throughout this manual to alert the user to important information regarding proper installation, operation, maintenance and storage of the unit. These notices, as illustrated below, contain a key word that indicates the level of hazard and a triangular icon that indicates the specific type of hazard.

⚠ WARNING	Indicates a condition, operating procedure or practice, which if not adhered to could result in serious injury or death.
⚠ CAUTION	Indicates a condition or operating procedure, which if not strictly adhered to could result in damage or destruction of equipment.
⚠ NOTE	Indicates a condition, operating procedure or practice, which is essential to highlight.

1.2 - Symbols

The following symbols will appear within the warning triangles to alert the user to the specific type of danger or hazard.



General Warning | Electrical Hazard | Guard from Moisture

Figure 1.2.1 – Different types of hazard and caution symbols

1.3 – Hazards

WARNING	Shock Hazard Potential

Severe injury or death from electrical shock may occur, if either user or the unit is wet, while the line cord in unit is connected to a power source. If the unit has come into contact with water, disconnect from the power source.

⚠ CAUTION	The use of unapproved or modified ac line cable or input plug may damage the unit. Do not use any type of ac voltage converter.

Section 2 – Product Overview

2.1 – Features and Overview

1. **60 Hz 3-Phase AC Input Receptacle** – Use for 60 Hz 3-Phase 208-240 Vac Input Power
2. **Circuit Breakers** - Enables/Disables the ac output receptacles
3. **AC Output Receptacles** - Provides 208-240V 15A when power is present and circuit breakers on
4. **LED Indicator Lights** - Light will turn on when circuit breaker is on and power is supplied

2.2 – Introduction

This manual contains the complete operating instructions, safeguards and procedures for the TI2000-440 Generator Set Interface. This unit is man-portable, maintenance free, and can be operated from any three phase power source.

Figure 2.2.1 – Handle to Reel

2.3 – General Specifications

Input: 208-240 volts 3Ø ac 15 amps

Output: 3Ø 208 Y 120

Size:

- 150.50”W x 16.22”H x 7.89”D
- 393.7mm x 421.0mm x 200.4mm

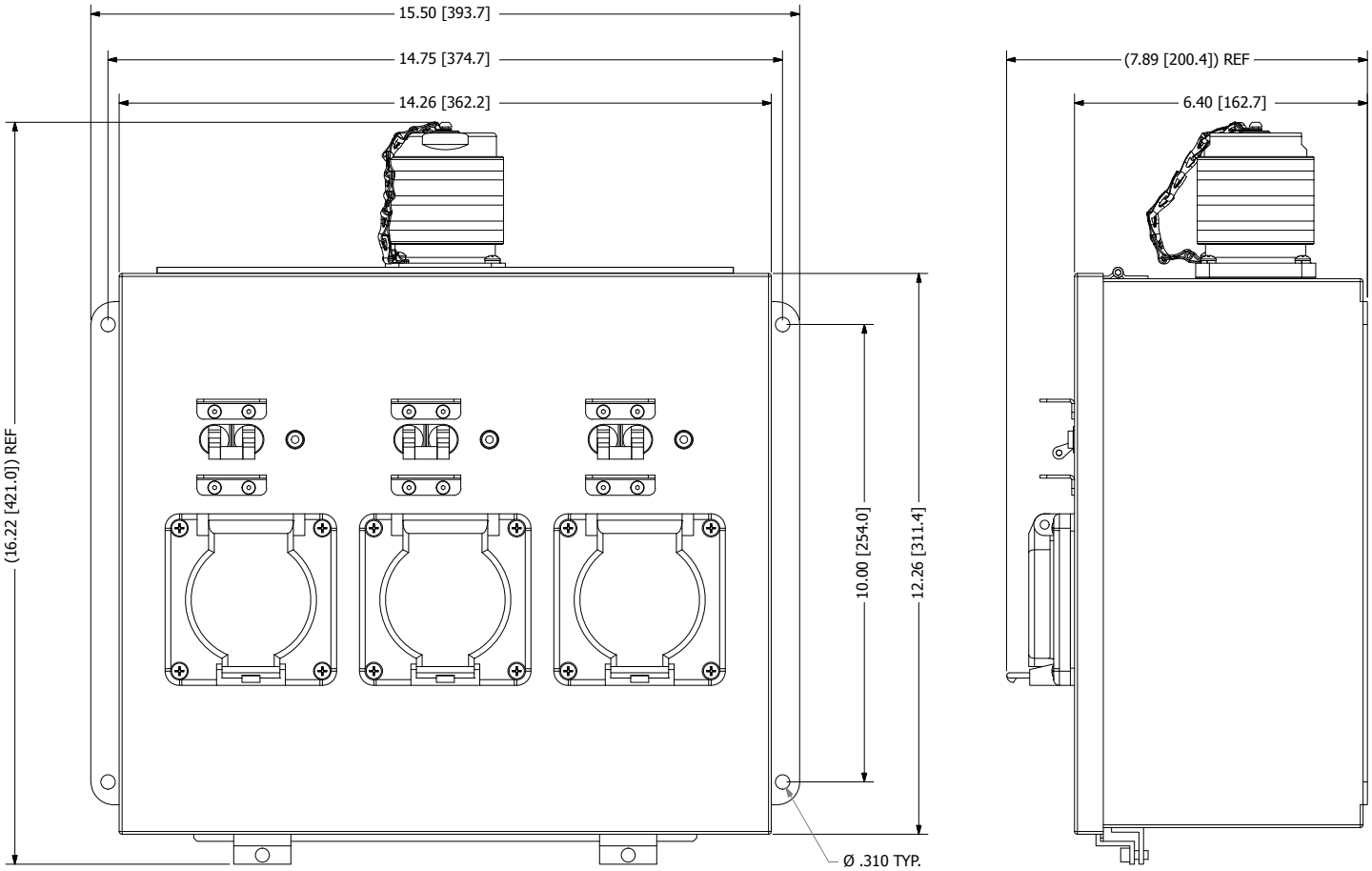
Weight

- 35 lbs (15.9 kg)

Warranty:

- 2 years (3 years optional)

2.4 – Physical Dimensions



Front View

Side View

* All dimensions are in inches [millimeters]

Section 3 – Operation Procedures

3.1 – Normal Function Test Procedures

This section involves “normal function” test procedures, and includes steps necessary to ensure that the unit operates within specified parameters prior to use. A digital multimeter (an example is shown in Figure 3.1.1) capable of measuring dc and ac voltage and resistance will be required to perform some of the tests. These functional test procedures should become routine.

Figure 3.1.1 – Digital Multimeter

1. Set your digital multimeter to measure ac voltage.
2. Connect the input cable to unit before it is connected to the power. Push in the cable in the unit’s ac input receptacle. Twist to lock until tight.
3. Make sure that the output circuit breakers are set to the OFF position.
4. Connect the input cable to a 3Ø 240V outlet.
5. Turn on the circuit breaker to the outlet you will be testing. The blue LED should light up.
6. Insert the Negative Probe (Black) and Positive Probe (Red) of the Digital Multimeter to the live slots in outlet (see Figure 3.1.2)

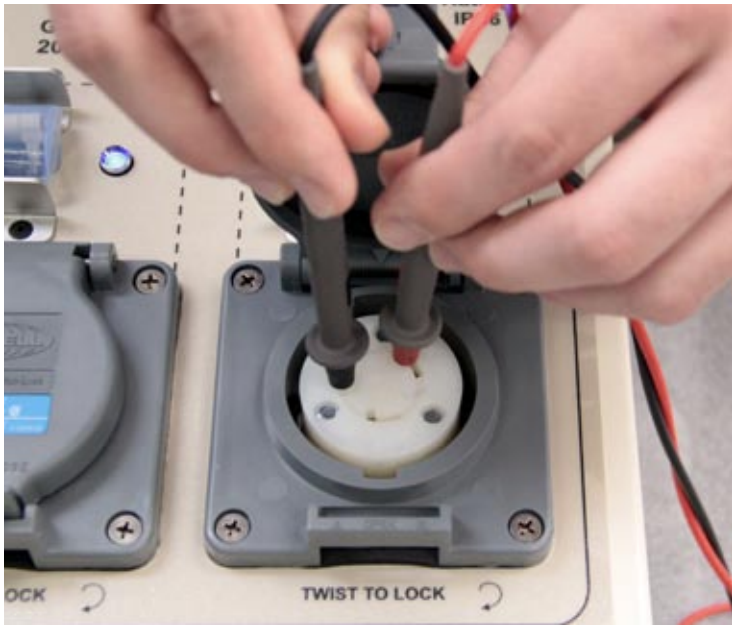


Figure 3.1.2 - Probes connected to the live feeds in the outlet.
The bottom slot is the ground.

7. The Multimeter should read between 208 and 240 V.
8. Continue to test the other two outlets, using steps 5 thru 7.

Figure 3.2.1

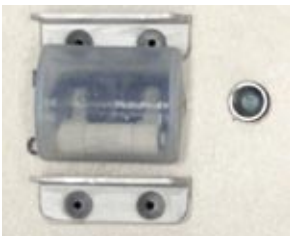


Figure 3.2.2

Figure 3.2.3

CAUTION

Before connecting the TI3000 GPU-24 to the Generator Set Interface make sure the Voltage Selector Switch on the TI3000 GPU-24 is set for 230V. If not, it may damage the unit.

3.2 – Connecting to TI3000 GPU-24 (with Extension Cable)

1. Connect the input cable to unit before it is connected to the power. Push the input cable in the unit's ac input receptacle. Twist to lock until tight. (See Figure 3.2.1)
2. Make sure that the output circuit breakers are set to the OFF position. (See Figure 3.2.2)
3. IMPORTANT: Before connecting the TI3000 GPU-24 to the Generator Set Interface make sure the Voltage Selector Switch on the TI3000 GPU-24 is set for 230V. If not, it may damage the unit. (See Figure 3.2.3)
4. Connect the TI3000 GPU-24 ac line cord to the Interface Box using the extension cable.
5. Flip the Circuit Breaker to the ON position. The associated blue LED light will light up. The TI3000 unit should turn on in about 3 seconds. You will hear the fans turn on and the bar graph will light up.
6. The TI3000 GPU-24 is ready to use. Refer to the TI3000 owner's manual for more info on the Ground Power Unit.

Figure 3.2.4

3.3 – Disconnecting the TI3000 GPU-24

1. Flip the Circuit Breaker on the Generator Set Interface to the OFF position. The blue LED light should turn off.

2. Locate the ac cord attached to the Interface box. Twist the ac connector counter clockwise and pull to disconnect the line cord.

3.4 – Unit Care

Keep unit clean and guard from moisture when not in use. Protect the unit from damage. Always inspect unit prior to use.

Section 4 - Unit Care and Maintenance

4.1– Unit Servicing

This unit is a maintenance-free, sealed unit. No repairs outside of Tesla™ are authorized. Warranty will be voided if unit is tampered with in any way including any damage to the WARRANTY VOID stickers located on the case (see Figure 4.1.1 below). If the unit requires maintenance, please contact Tesla™ Customer Service at (302) 324-8910. A Repair Request Form can be found in the back of this manual.

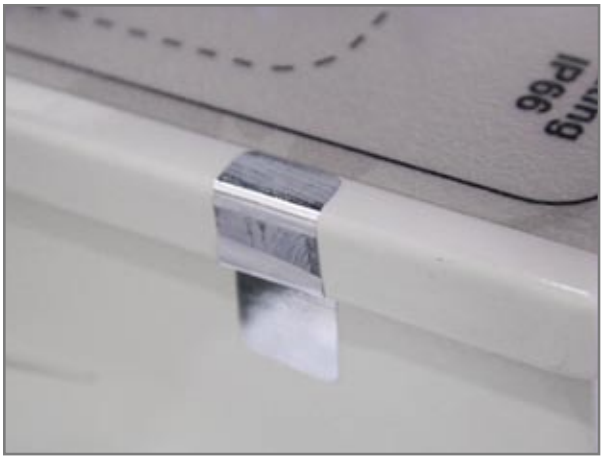


Figure 4.1.1 – Warranty Void stickers are on the sides of the unit

4.2 – Packaging and Shipping

Ensure proper packaging when returning the unit. Transport the unit only in a sturdy shipping crate. It is important to enclose the Repair Request Form. Seal the crate on all sides and return it to Tesla™ at the address listed below. Please contact Tesla™ Customer Service at (302) 324-8910 with any questions or concerns.

TESLA™ INDUSTRIES, INCORPORATED
101 CENTERPOINT BLVD.
CENTERPOINT INDUSTRIAL PARK
NEW CASTLE, DELAWARE 19720
PHONE: (302) 324-8910 FAX: (302) 324-8912
Website: www.teslaind.com
Email: Tesla1@teslaind.com

Repair Request Form

Please complete the information below to ensure prompt and accurate service. Include this form with the unit you are returning. Thank you.

Date of return: _____

Company name & _____

_____

_____

Billing address: _____

_____

_____

Contact person: _____

Phone #: _____ Fax #: _____

Email: _____

Purchase Order #: _____

Model #: _____ Serial #: _____

Model #: _____ Serial #: _____

Shipping method to Tesla™: _____

Description of shipping package: _____

Description of problem: _____

_____

_____

_____

Return to Tesla™

101 Centerpoint Boulevard, New Castle, DE 19720 Attention: Repair Department

WE GET THE MILITARY STARTED!

Tesla™

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