



# Isolation Station











300VA – 3000VA

**Instruction Manual**

## INTRODUCTION

Thank you for your purchase of a POWERTRONIX Power Isolation Unit and congratulations on your choice. The **Isolation Station** series of power isolation units is ideal for applications where medical and dental devices require improved electrical isolation and/or reduced leakage current in order to comply with existing safety standards, and where sensitive electronic systems require protection from electrical power disturbances.

## SAFETY SYMBOLS

	Warning, dangerous voltage		Alternating Current/AC
	General warning sign		Direct Current/DC
	Caution		Equipotentiality
	Protective Earth (Ground)		Earth (Ground)
	Refer to Instruction Manual/booklet		"ON" and OFF (Power)
Indicator lights <b>GREEN, WHITE &amp; AMBER</b>	Indicator lights "Ready for Use"		

## INSPECTION

Remove the power isolation unit from the shipping container and inspect it for shipping damage. Do not install or operate the product if it appears to be damaged in any way. If the unit is damaged, notify the carrier, and the company that sold you the unit, IMMEDIATELY.

## ENVIRONMENTAL ISSUES







This power isolation unit has environmental requirements similar to other electronic equipment. It has been designed for indoor use only, in areas where it will not be exposed to excessive dust or moisture. Make certain there is adequate airflow around the unit. Do not place objects on top of or near the unit, which could obstruct the air vents.






This equipment may generate, use and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to other devices in the vicinity. If this equipment does cause harmful interference to other devices, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures. However, there is no guarantee that interference will not occur in an installation.

Only authorized personnel are allowed to operate the power isolation station

- Reorient or relocate the equipment.
- Increase the separation between the equipment.
- Connect the equipment into an outlet on a circuit different from that to which the other device (s) are connected.
- Consult the manufacturer or field service technician for help.

## WARNINGS

<p>WARNING:</p> 	<p>WARNING: TO PREVENT ELECTRICAL SHOCK, DO NOT REMOVE THE POWER ISOLATION UNIT COVER.</p> <p>To reduce the risk of electrical shock, do not open enclosure. There are no serviceable parts inside. Refer service to POWERTRONIX Corporation or its authorized agents only.</p>
<p>WARNING:</p> 	<p>This product requires convection cooling. Adequate ventilation is required. When installing this product, a minimum clearance of 2.0" must be provided to all sides with air ventilation holes, except the mounting surface.</p>
<p>WARNING:</p> 	<p>Risk of explosion exists if used in the presence of flammable anesthetics, or other flammable gases or liquids.</p>
<p>WARNING:</p> 	<p>Grounding continuity should be checked periodically.</p> <p>NOTE: USA and Canada, grounding reliability can only be achieved when this equipment is connected to a matching receptacle marked "Hospital Only", or "Hospital Grade".</p>
<p>WARNING:</p> 	<p>The top and bottom surfaces of the power supply enclosure are not intended to be touched while the power supply is in use. While the unit is in use, the top and bottom surfaces of the power supply enclosure may reach temperatures which cause discomfort when touched for more than 1 second. There is no user-accessible parts on the top and bottom surface of the power supply. Use only the front-panel and rear-panel switches, nobs and connectors – which are intended to be used while the power supply is in operation. [See the "Installation" and "Operation" sections of this instruction manual for additional information.]</p>
<p>WARNING:</p> 	<p>If the power isolation station provided with an equipotential or protective earth stud, where it connects to a potential equalization or protective earth conductor then the resulting medical electrical system should meet all applicable IEC60601-1 requirements.</p>

<p>WARNING:</p> 	<p>In an emergency, main electric supply to the unit may cut off by unplugging the power cord A] Either from the wall outlet or from the appliance coupler of the units supplied with an appliance coupler and B] from the wall outlet only for the units supplied with a non-detachable power cord. Some models are offered with an on/off switch. If you are using one of these unites, turn the power switch OFF.</p>
<p>WARNING:</p> 	<p>Do not expose to temperatures below 0° Celsius (32°F) or above 65° Celsius (149°F). Do not expose this apparatus to relative humidity more than 95% RH (non-condensing). Do not expose to pressure levels below 68.6 kPa or above 101.3 kPa.</p>
<p>WARNING:</p> 	<p>This apparatus is a Class 1 equipment.</p>
<p>WARNING:</p> 	<p>Do not modify Isolation Station unit at any time during its entire service life. If the Isolation Station unit is modified by any manner for any purpose during its service life, user needs to carry out an evaluation to the requirements of the IEC 60601-1 standard and relevant safety standards for the end application.</p>
<p>WARNING:</p> 	<p>This unit is a multiple socket outlet [MSO] device. When user connects load equipment to Isolation Station (MSO) the total system becomes a new ME System and user needs to carry out an evaluation to the requirements of IEC 60601-1 standard for the total system.</p>

**POWER CORD REQUIREMENTS**

**Input:** All power cords must be appropriately approved by testing agencies in the country where the **Isolation Station** is Used, such as UL/CSA/VDE/SEMKO, etc. For the US and Canadian market, a HOSPITAL GRADE plug is required for medical applications.

One end (plug) must be appropriate for the wall receptacle, while the other end is made to fit into the power inlet of the **Isolation Station**, this end must be of appliance type, IEC-320 female plug. All power cords must have grounding.

<u>POWER</u>	<u>AWG (NOMINAL CROSS-SECTIONAL AREA mm<sup>2</sup> Cu)</u>	<u>RECOMMENDED LENGTH</u>
300VA	AWG 18 (0.75mm <sup>2</sup> )	Less Than 12 Feet
600VA	AWG 18 (0.75mm <sup>2</sup> )	Less Than 12 Feet
800VA	AWG 16 (1.25mm <sup>2</sup> )	Less Than 12 Feet
1000VA	AWG 16 (1.25mm <sup>2</sup> )	Less Than 12 Feet
1150VA	AWG 14 (2.0mm <sup>2</sup> )	Less Than 12 Feet
1500VA	AWG 14 (2.0mm <sup>2</sup> )	Less Than 12 Feet
1800VA	AWG 14 (2.0mm <sup>2</sup> )	Less Than 12 Feet
2400VA	AWG 12 (3.0mm <sup>2</sup> )	Less Than 12 Feet
3000VA	AWG 10 (5.0mm <sup>2</sup> )	Less Than 12 Feet

## FUSE REQUIREMENTS

No modifications to power isolation station is allowed unless specified in the user manual

The **Isolation Station** series of power isolation units has been tested and deemed to be safe under certain conditions. The CIRCUIT BREAKERS or FUSES used with the power entry module or power inlet are protecting the **Isolation Station** from overload and short-circuit conditions. If the wrong fuses are used, there may be danger to the person(s) operating equipment connected to it, or, potential damage to equipment hooked up to the **Isolation Station**. The fuses must be UL and CSA approved and marked for North American use and VDE (and EN) approved and marked for European use. Use only SLOW BLOW type (T-type) fuses in the equipment.

<b>POWER</b>	<b>115V (120V) INPUT SETTING</b>	<b>230V (240V) INPUT SETTING</b>
300VA	2 x 5.00 AT (5x20mm)	2 x 3.15AT (5x20mm)
600VA	2 x 10.00 AT (5x20mm)	2 x 6.30AT (5x20mm)
800VA	2 x 10.00 AT (5x20mm)	2 x 6.30AT (5x20mm)
1000VA	2 x 10.00 AT (5x20mm)	2 x 6.30AT (5x20mm)
1150VA	2 x 15.00 AT (1/4"x 1.25")	2 x 10.0AT (1/4"x1.25")
1500VA	2 x 15.00 AT (1/4"x 1.25")	2 x 10.0AT (1/4"x1.25")
1800VA	2 x 20.00 AT (1/4" x 1.25")	2 x 15.0AT (1/4"x1.25")

Models above 1800 VA are protected ONLY by circuit breakers.

**DO NOT USE FUSES WITH HIGER CURRENT RATINGS**

## MOUNTING

The **Isolation Station** may be placed horizontally on any flat and stable surface, such as a floor or table top. For high traffic areas, carts and unstable surfaces, use of the mounting brackets for all mounting locations is recommended to ensure the stability of the **Isolation Station**. Some versions of the **Isolation Station** may also be vertically mounted to a wall.

For wall mounting, please use appropriate wall anchors unless fastened into wall stud(s) or other forms of enforcement available to support the weight of the enclosure. For dry wall mounting, use minimum 3.0" long 1/4"-20 Phillips Button-Head or Hex-Head Bolts and 1/4"-20 Toggle Bolts. User assumes all responsibility for the integrity of the installation.

Appropriate air clearance for ventilation of the **Isolation Station** is required (see the CAUTION paragraph on the previous page).

## PRODUCT SPECIFICATION

The sticker on the top cover, above the rear panel, lists the power isolation unit's operating voltages, frequencies and current ratings. Make sure the input current rating is not exceeded when connecting single and multiple loads to the power isolation unit receptacles.

Powertronix isolation series are available with power varying from 300VA - 3000 VA. Typical values of size and weight is mentioned in the table below. Please contact Powertronix for exact weight of each model.

SIZE	L x W x H	WEIGHT (LBS)
Tiny (T)	8.2" x 6.1" x 3.2"	10 - 20
Small (S)	11.75" x 8.20" x 3.48"	10 - 30
Medium(M)	15.75" x 11.70" x 3.48"	10 - 40
Large (L)	17.28" x 15.75" x 3.48"	10 - 50
Slim Line	15.50" x 15.50" x 2.0"	10 - 40

Parameter	Storage Conditions	Operating Conditions
Temperature	+32°F to +149°F (0°C to + 65°C)	+41°F to +104°F (+5°C to +40°C)
Humidity	10% to 95% RH (non-condensing)	10% to 95% RH (non-condensing)
Atmospheric Pressure	68.6 kPa to 101.3 kPa	69.1 kPa to 101.3 kPa

## INSTALLATION

Do not plug the Power Isolation Station into an AC power source until all installation instructions are read, understood and executed.

Power Isolation Station shall be installed and positioned so that the device can be easily disconnected.

Ensure that the unit's input and output voltage has been set accurately, and that the proper fuses have been installed on the input (see previous page for further details.)

Install the power isolation unit as close as possible to the load equipment. Do not use extension cords or surge or filtration devices with the power isolation unit.

Place all load equipment power switches in the OFF position. Plug the power isolation unit into an appropriately sized AC power source.

Plug the load equipment into the power isolation unit receptacles. The load equipment must be connected to the power isolation station unit with a three-conductor grounded power cord.

If in doubt about how to properly connect this power isolation unit, please consult the connection diagram shown at the end of this section

Some models are offered with an on/off switch. If you are using one of these unites, turn the power switch ON.

## OPERATION

Once the power isolation unit has been properly installed, the power switches of the load equipment may be turned ON.

Please note the power consumption of the **Isolation Station** equals the sum of power usage of each device connected to the **Isolation Station**, in simultaneous operation. It is important that the total power in use at one time does not exceed the maximum power rating of the **Isolation Station** as shown on the product identification label.

All **Isolation Station** models described in this document are intended for 100 / 115 / 200 / 215 / 230V AC input (50/60 Hz frequency), and 115 / 230V AC output. DO NOT USE OTHER VOLTAGES OR FREQUENCIES.

**DO NOT ATTEMPT TO CHANGE THE INPUT OR OUTPUT VOLTAGE SELECTOR SETTING WHILE THE POWER ISOLATION UNIT IS IN USE.**

**If fuses are used, check the fuse ratings after changing voltage selector settings!**

After shutting down the power isolation unit, it is recommended to let the **Isolation Station** "cool down" for approximately 1 minute. There may otherwise be a risk of blowing a fuse in the power inlet or possibly tripping the wall outlet circuit breaker.

In an emergency, main electric supply to the unit may cut off by unplugging the power cord either from the wall outlet or from the appliance coupler of the units supplied with an appliance coupler OR from the wall outlet for the units supplied with a non-detachable power cord.

### **LIMITED WARRANTY**

POWERTRONIX warrants its power isolation units (known hereafter as the "product") to be free from defects in materials and workmanship, under normal use, service, and maintenance, for a period of 24 months from the date of purchase and/or shipment.

During the warranty period, the product will be repaired or replaced (at POWERTRONIX's option) at no charge. (This warranty does not apply to fuses)

To obtain service under warranty you must obtain a returned material authorization (RMA) number from customer support. Products must be returned with transportation charges prepaid and must be accompanied by a brief description of the problem encountered, as well as a purchase receipt or other proof of date and place of purchase

Please keep your sales receipt or other document showing proof of purchase. Attach it to this owner's manual and keep both nearby. Also, keep the original box and packaging material, in case you need to return the product for repair work.

**This warranty is extended only to the original purchaser.**

After 24 months from the date of original purchase, or shipment of the product, the user must pay for the replacement or repair of all parts, and for all labor charges. All parts, including repaired or replaced parts are covered only for the original warranty period. When the warranty on the product expires, the warranty on all replaced and repaired parts also expires.

POWERTRONIX makes no warranties, expressed or implied, of merchantability, fitness for a purpose, performance, condition, capacity or otherwise. The manufacturer is not liable for any incidental or consequential damages, monetary loss, loss of sales or loss of business resulting from the use, failure or malfunction of the product.

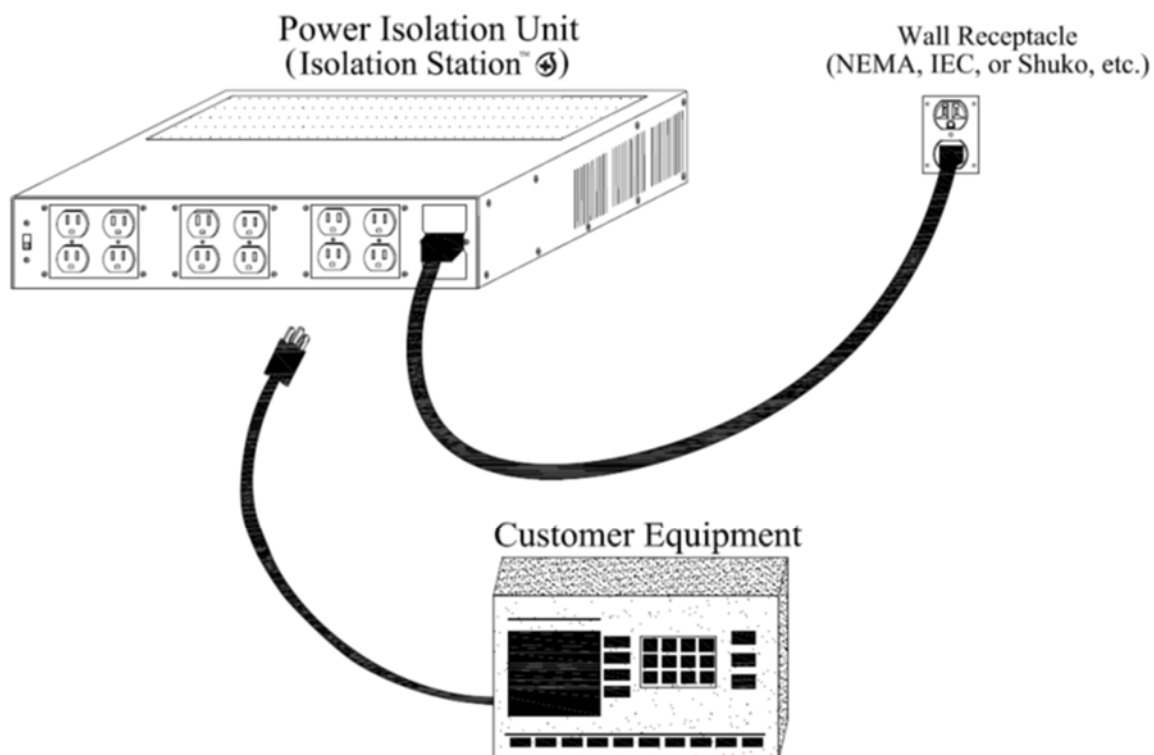
Warranty is void on any product that is misused, misapplied, abused, altered, repaired by unauthorized personnel, or where evidence of tampering exists. The foregoing constitutes the sole and exclusive remedy of the purchaser and is in lieu of all other warranties. No greater degree of liability is imposed on the manufacturer.

## MAINTENANCE

Clean the power isolation unit surface with a soft, slightly dampened, lint-free cloth. Do not use any cleaning agent as they may have a corrosive effect. Use a soft lint-free cloth or the dusting attachment or your vacuum cleaner to dust your power isolation unit.

Do not expose the power isolation unit to humidity, rain, sand or excessive heat (caused by heating equipment or direct sunlight).

## CONNECTION DIAGRAM





**PRODUCTION INFORMATION**

Date Purchased: \_\_\_\_\_

Part Number: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Where Purchased: \_\_\_\_\_



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