



TORUS
POWER™

Owner's Manual



**Power Conditioners
Audio / Video Power Isolation Units
Cabinet, Wall Mount**

Model Number	Description	Input	Output
WM 45 BAL	Balanced 45A	240V or 208V	3 x 120V 15A

Warning:

User is responsible for installing this unit in accordance with all local, provincial/state and federal electrical code requirements. The installation of this unit requires inspection and approval by local electrical safety authority. This wall mount unit is not equipped with a power safety interlock.

Important Safety Instructions



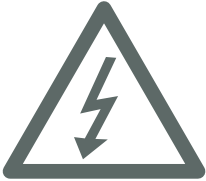
CAUTION! To reduce the risk of electric shock and fire, do not remove the cover of this device. There are no user serviceable parts inside. Please refer all servicing to licensed service technicians.

CAUTION! The international symbol of a lightning bolt inside a triangle is intended to alert the user to uninsulated "dangerous voltage" within the device's enclosure. The international symbol of an exclamation point inside a triangle is intended to alert the user to the presence of important operating, maintenance and servicing information in the manual accompanying the device.

CAUTION! To reduce the risk of electrical shock, do not expose this equipment to rain or moisture.

CAUTION! To reduce the risk of electrical shock, ensure the voltage selector switch is selected to the appropriate supply voltage.

CAUTION! To reduce the risk of electrical shock, ensure the fuses are replaced with the appropriate fuse according to the unit markings.



1. Read Instructions—All safety and operating instructions should be read before operating the device.
2. Retain Instructions—The safety and operating instructions should be retained for future reference.
3. Heed Warnings—All warnings on the device and in the operating instructions should be adhered to.
4. Follow Instructions—All operating and safety instructions should be followed.
5. Water & Moisture—The device should never be used in, on or near water for risk of fatal shock.
6. Ventilation—The device should always be located in such a way that it maintains proper ventilation. It should never be placed in a built-in installation or anywhere that may impede the flow of air through its ventilation slots.
7. Heat—Never locate the device near heat sources such as radiators, floor registers, stoves or other heat-generating devices.
8. Cleaning—The device should be cleaned in accordance with manufacturer's instructions.

9. Dangerous Entry—Care should be taken that no foreign objects or liquids fall or are spilled inside the device.
10. Damage Requiring Service—The device should be serviced by licensed technicians when:

- Objects have fallen or liquid has spilled inside the device.
- The device has been exposed to moisture.
- The device does not appear to be operating properly or exhibits a marked change in performance.
- The device has been dropped or the enclosure becomes damaged.

10. Service—The device should always be serviced by licensed technicians. Only replacement parts specified by the manufacturer should be used. The use of unauthorized substitutions may result in fire, shock, or other hazards.

11. If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

12. **CAUTION** Units in this series are heavier than 55 kg (121.2 lb). Use safe practices when lifting.



≥55 kg (121.2 lb)



Description

Torus Power PIUs (Power Isolation Units) combine the best surge suppression with unique toroidal transformer technologies from PLITRON to provide the ultimate in AC power conditioning and protection for sensitive audio and video equipment applications.

Balanced input power from two 120V phases provides high input power and noise cancellation. Using balanced input power provides the benefits of symmetrical power without the requirement to use GFCI (ground-fault circuit interruption) outlets. GFCIs are prone to nuisance-trips. The toroidal isolation transformer steps-down the 240V input to 120V to power equipment. (Where 240V balanced input is unavailable, units may be configured for 208V operation.)

PIUs use ZeroSurge® patented series-mode surge removal filters to absorb dangerous voltage surges and safely dissipate them without using failure-prone MOVs (metal oxide varistors). Also, unlike MOV-based protection, voltage surges

are not shunted to ground.

Isolation is combined with proven proprietary technologies from PLITRON in the over-sized toroidal transformer. NBT works as a low pass filter using the controlled leakage inductance and capacitances within the transformer to cancel common mode and differential mode noise. LoNo technology has been used for years by high-end audio companies who demand silent transformers. Imin technology reduces inrush currents. UST provides additional common mode filtering using a highly efficient faraday screen.

Low-impedance output with balanced high-power primary input provides the most unconstrained, yet protected, energy source available to your equipment.

Shipping Carton & Packing Material

Please keep the original shipping box and all packing material. This will ensure the PIU is protected in future transport.

In the unlikely event you have a problem and must return it for service you must use the proper packing material.

Ship the PIU only in the original packing material, as the unit is not insurable by carriers otherwise.

Placement & Ventilation

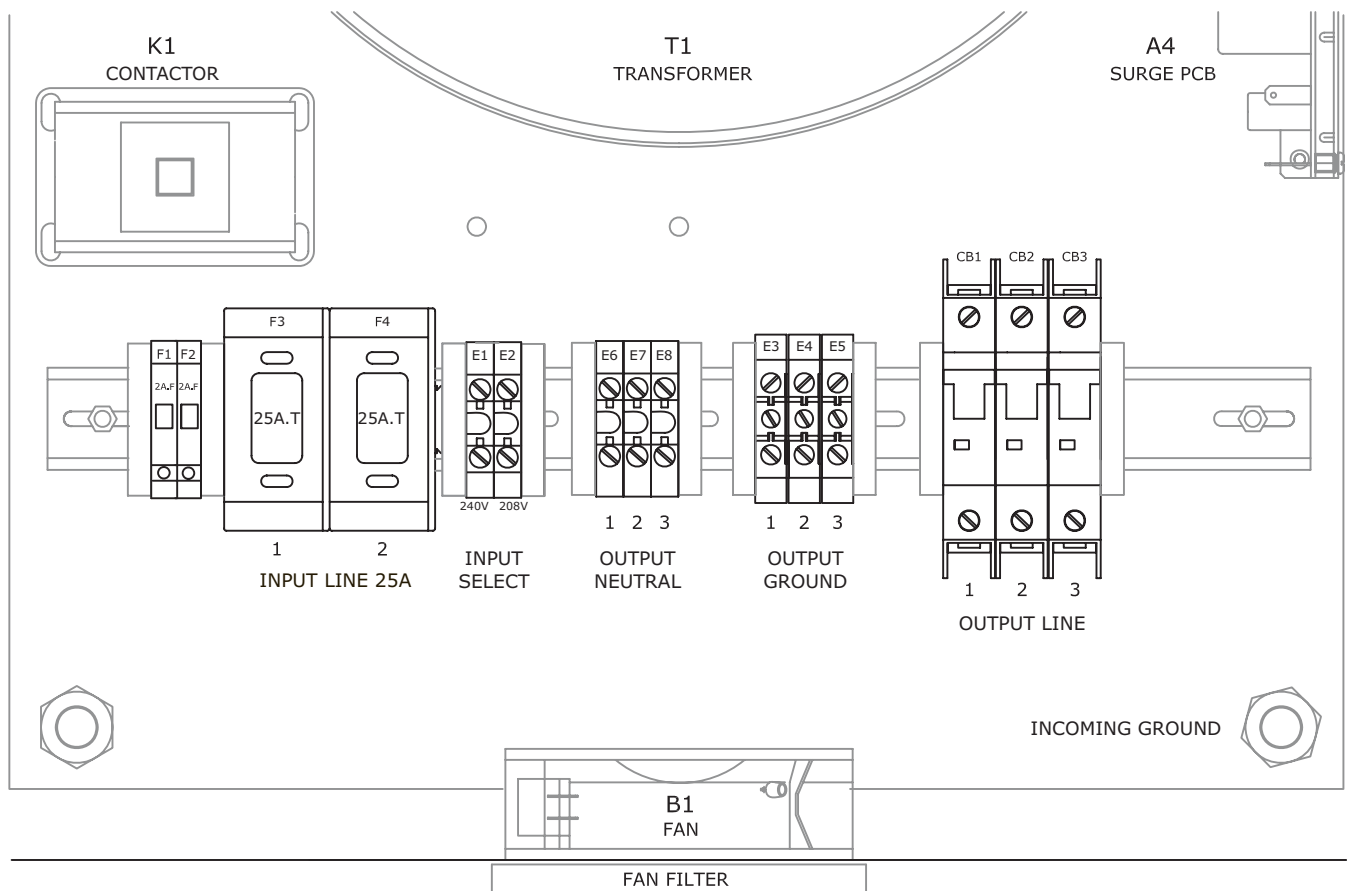
Torus Power PIUs are extremely efficient devices, however, they are also very high-power devices, and must be adequately cooled.

Cabinet, Wall Mount PIUs have an on-demand fan (temperature controlled) on the bottom of the unit and ventilation slots on the side panels near the top of the unit. Maintain at least 5" distance from each of these surfaces to anything else.

Do not install the PIU directly above heat-generating equipment.



Interior Detail



Power-Sharing Outputs

Each output circuit breaker protects an individual circuit. However, all three circuits share a single winding (output) on the isolation transformer. This "Power-Sharing" allows huge excursions of current, up to and beyond the full power of the unit, to be available at any individual circuit, for instantaneous bursts of power.

Thermal Protection

Torus PIUs will shut-down if internal unit temperature reaches excessive levels.

Cabinet Wall-mount PIUs also use forced-air cooling as necessary. A thermal switch activates the fan as required.

Warning

Installation by qualified electrician required.

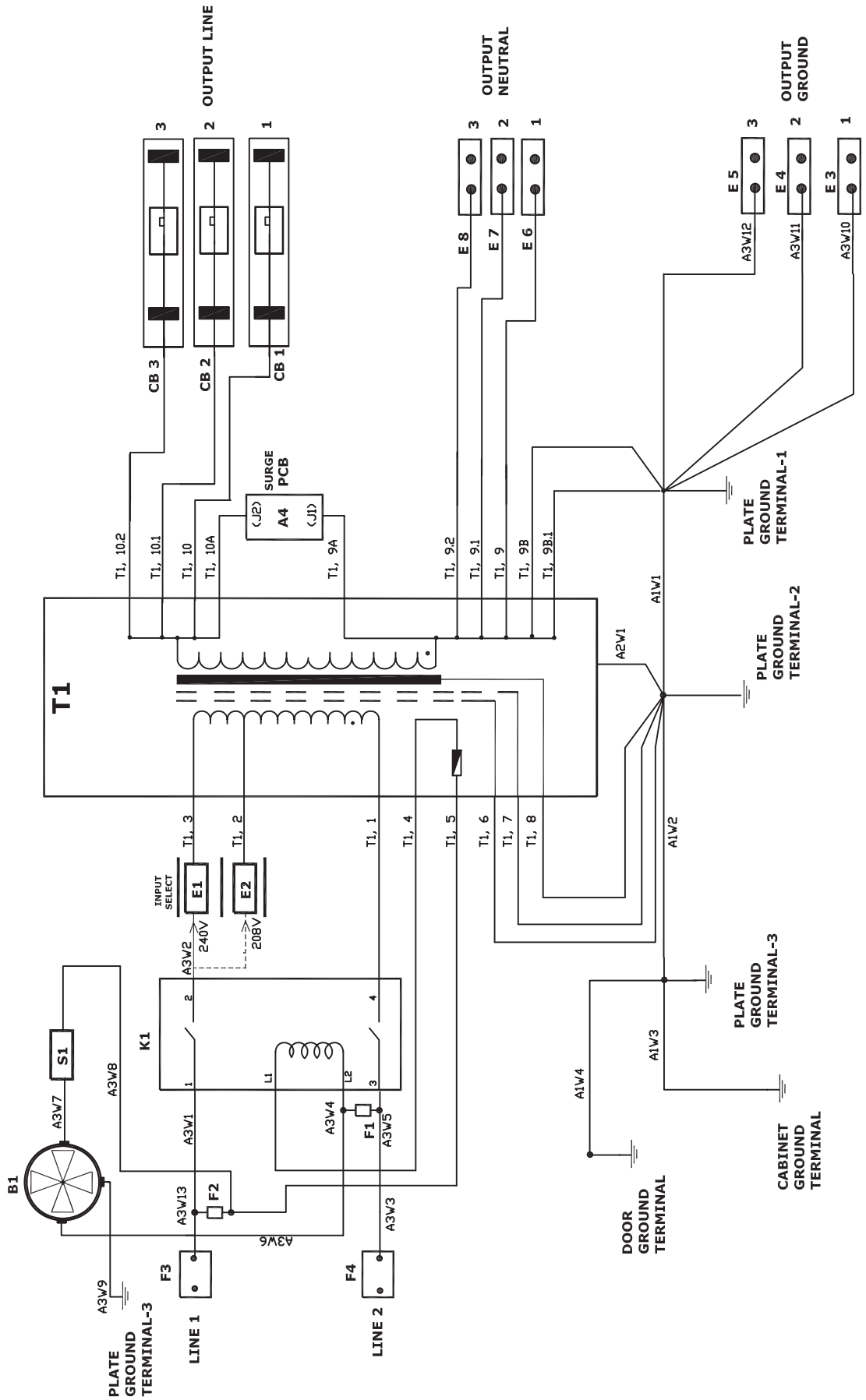
These units are designed for fixed, hard-wiring of input and output. Installation and wiring of these units, or any household or facility wiring, should be performed by a licenced electrician to local codes. The final installation should also be inspected and passed by a qualified electrical inspector prior to use.

Electrical Specifications

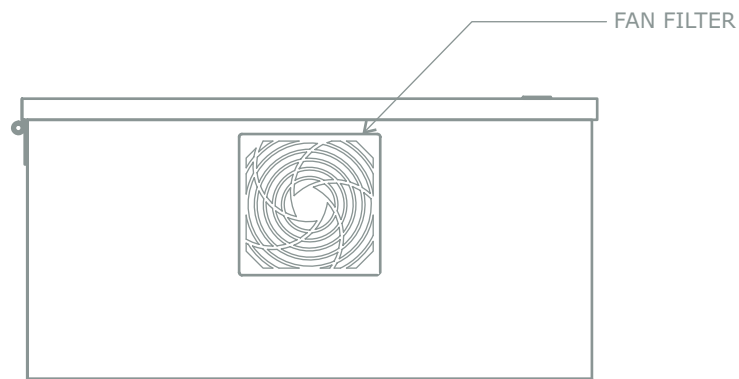
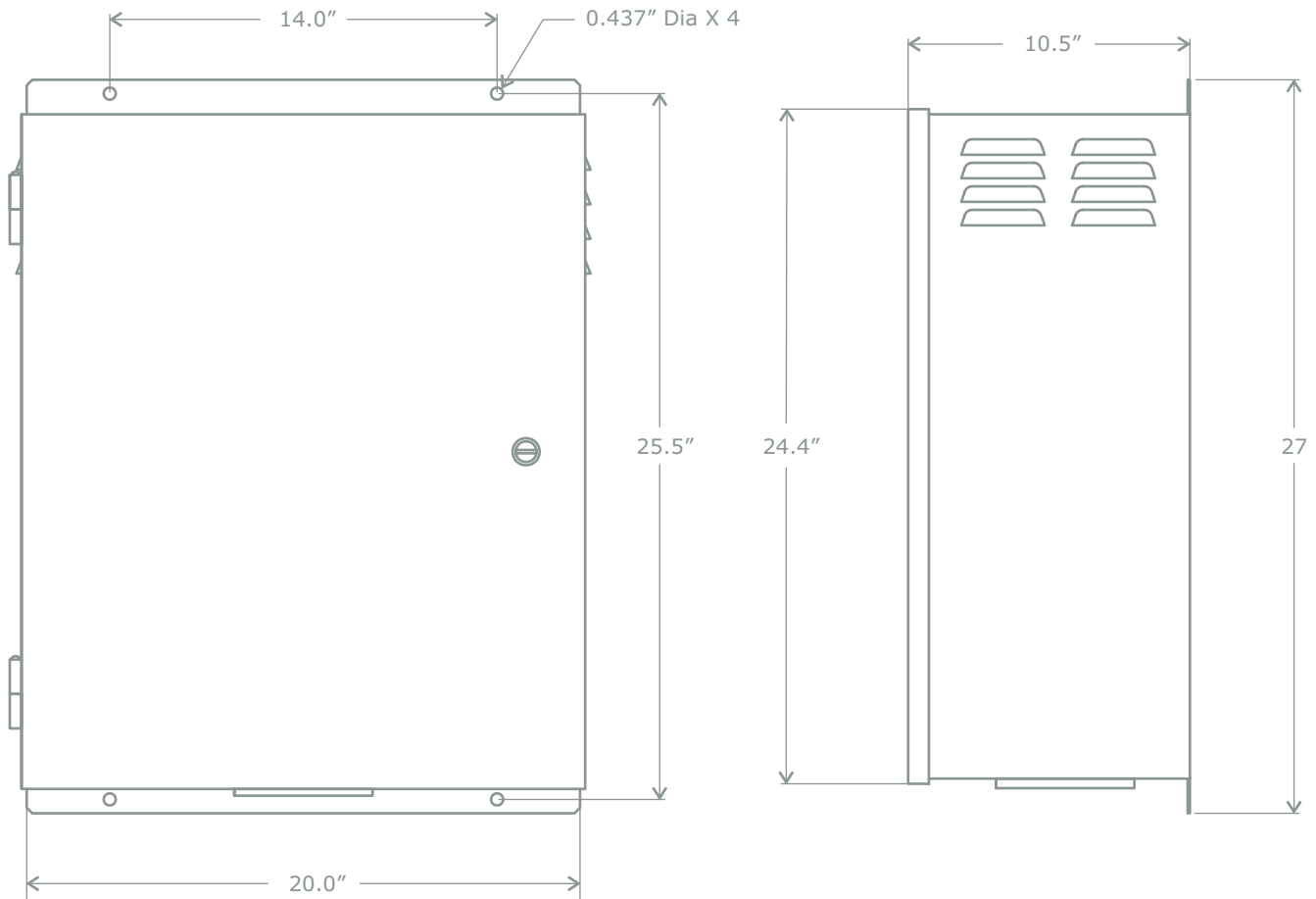
Model Number	Input Voltage Nominal	Input Current	Output Rating	Load Regulation	Over-current Protection
WM 45 BAL	Selectable 240VAC (2 x 120VAC, balanced) or 208VAC. Factory wired for 240VAC 60Hz Range +/- 10% voltage 57-63Hz	22.5A	Three Circuits each: 15A	1.5%	Input: 25A time-delay fuses (2) Output: 15A circuit breakers (3)



Schematic



External Layout



Conduit

Wiring conduit holes should be added as required to the bottom and lower side surfaces of the chassis.

Mechanical Specifications

Model Number	Construction	Weight	Size (w" x d" x h")
WM 45 BAL	NEMA 1 Enclosure 16 gauge steel Black Powder-Coat Slip hinges enable door removal 1/4 turn latch	148 lbs.	27 x 20.5 x 10.5



Warranty

Torus Power products are warranted to be free from manufacturing defects for a minimum of five years from the original date of sale. This includes parts, labour and return shipping to the first registered owner and all subsequent registered owners. Warranty coverage is extended to applicable products registered or having proof-of-purchase (sales invoice, etc.).

In the event of a defect or malfunction, Torus Power will remedy the problem by repair or replacement, as we deem necessary, to restore the product to full performance.

This warranty is considered void if the defect, malfunction or failure of the product or any component part was caused by damage (not resulting from a defect or malfunction) or abuse while in the possession of the customer. Failure to fully comply with Torus Power operating instructions, voids the warranty.



Torus Power products are marketed worldwide through Bryston Limited. For sales contact jamestanner@bryston.ca www.bryston.ca



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