BRYSTON

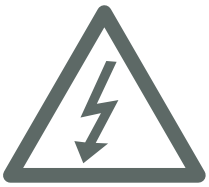
POWER ISOLATION PRODUCTS

BIT

Owner's Manual

BIT-5
BIT-15
BIT-20

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 prevent electrical shock, match wide blade of plug to wide slot, fully insert.

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. Carts & Stands—The device should only be used on carts or stands recommended by the manufacturer.

7. 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.

8. Heat—Never locate the device near heat sources such as radiators, floor registers, stoves or other heat-generating devices.

9. Power Cord Protection—Power cables should be routed so they are not likely to be stepped on or crushed by items placed on them or against them. Special attention should be paid to areas where the plug enters a socket or fused strip and where the cord exits the device.

10. Cleaning—The device should be cleaned in accordance with manufacturer's instructions.

11. Periods Of Non-Use—The device should be unplugged when not being used for extended periods.

12. Dangerous Entry—Care should be taken that no foreign objects or liquids fall or are spilled inside the device.

13. Damage Requiring Service—The device should be serviced by licensed technicians when:

- The plug or power supply cord has been damaged.
- 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.

14. 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.

15. Do not position the equipment so that it is difficult to operate the disconnecting device (power cord).

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

17. It is recommended that component power switch remains in the "off" position when connecting or disconnecting from a Bryston Isolation Transformer.

18. **CAUTION** Some of the units in this series are heavier than 18 kg (39.7 lb). Use safe practices when lifting.

≥32 kg (70.5 lb)

≥55 kg (121.2 lb)

Description

Bryston 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.

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

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

PIUs have ventilation slots on the base, side panels and the cover. Maintain at least 2.5cm distance from each of these surfaces to anything else. Should your installation conditions be constricted, additional forced air-cooling may be necessary.

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

Maintain at least 15cm behind the PIU for adequate wiring space.

Warranty

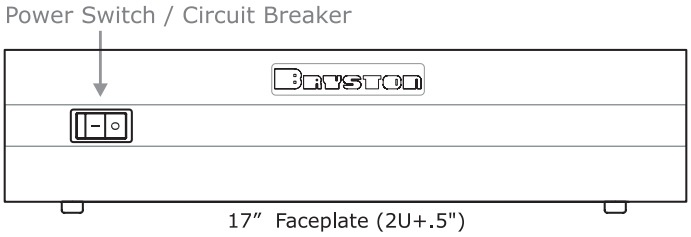
Bryston BIT power isolation products are warranted to be free from manufacturing defects for a minimum of five years from the original date of sale. This includes parts, labour and return shipping to the first registered owner and all subsequent registered owners. Warranty coverage is extended to applicable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

In the event of a defect or malfunction, BIT 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 BIT Power operating instructions, voids the warranty.

BIT-5 OWNER'S MANUAL

Front Panel Layout



Circuit Protection

The front panel power switch is also a circuit breaker. As a circuit breaker, it prevents excessive current from entering the PIU.

When the power is on, the switch is illuminated. When the breaker trips, the switch returns to its "off" position.

Thermal Protection

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

Input Current Rating

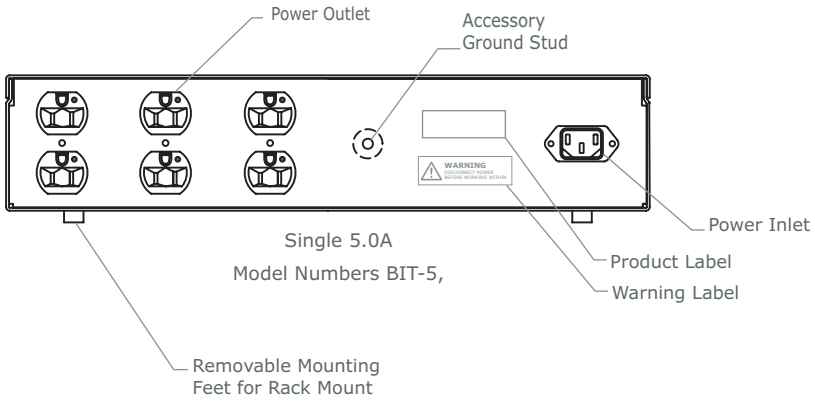
Per UL, CSA and National Electrical codes, devices with line cords and plugs must not consume more than 80% of a branch circuit's rating.

While Bryston Power Isolation Units are designed to handle well beyond these limits, they must be marked with a maximum input current that satisfies the requirements.

Electrical Specifications

Model Number	Input Voltage Nominal	Input Current Limiting	Load Current Capability ½ cycle	1 second	10 seconds	Input Current Rating (see note above)
BIT-5 (Torus CS-5-S)	120VAC, 60Hz Range +/- 10% voltage 57-63Hz	5.0A Circuit Breaker Front Panel	50A	40A	15A	5.0A

Rear Panel Layout



Wall Receptacles

Bryston PIUs are high-power products. The outlets they are plugged into should be sufficient to provide the current to operate them without tripping circuit breakers within your junction panel.

Mechanical Specifications

Model Number	Input Connector (Rear Panel)	Line Cord (included)	Suggested Wall Receptacle	Output Connector (Rear Panel)	Weight	Size, mm (w x d x h)
BIT-5	IEC 15A Inlet	N5/15, 14AWG C13, 15A/125V	Standard outlet NEMA 5-15R 15A - 125V	Qty 3 (6 outlets) Medical-grade	13.5 kg	483 x 286 x 102
					13.0 kg	483 x 268 x 105

Height includes removable rubber mounting feet.

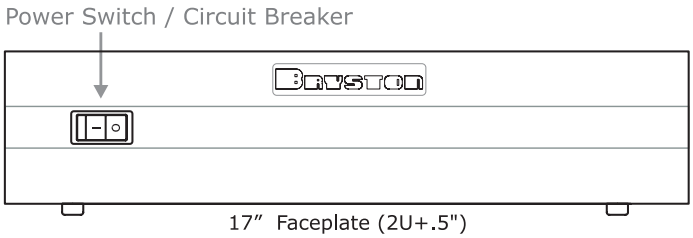
Line Cords

Standard 15A 120V

Equipment end: IEC C13
Plug: 5-15P, Straight Blade, 2 pole, 3-wire grounding, 15A 125V
Cord: 3 x 14AWG
Length: 2.5 m

BIT-15 OWNER'S MANUAL

Front Panel Layout



Circuit Protection

The front panel power switch is also a circuit breaker. As a circuit breaker, it prevents excessive current from entering the BIT.

When the power is on, the Switch is illuminated. When the breaker trips, the switch returns to its "off" position.

Thermal Protection

Bryston Isolation Transformers will shut-down if internal unit temperature reaches excessive levels.

Input Current Rating

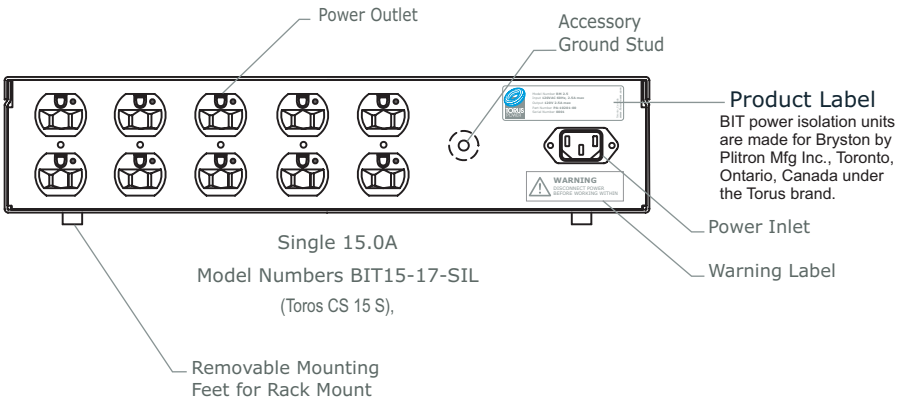
Per UL, CSA and National Electrical codes, devices with line cords and plugs must not consume more than 80% of a branch circuit's rating.

While Bryston Isolation Transformers are designed to handle well beyond these limits, they must be marked with a maximum input current that satisfies the requirements.

Electrical Specifications

Model Number	Input Voltage Nominal	Input Current Limiting	Load Current Capability			Input Current Rating
			½ cycle	1 second	10 seconds	(see note above)
BIT15-17-SIL (Torus CS 15-S)	120VAC, 60Hz Range +/- 10% voltage 57-63Hz	16A Circuit Breaker Front Panel	300A	150A	75A	12A

Rear Panel Layout



Wall Receptacles

Bryston Isolation Transformers are high-power products. The outlets they are plugged into should be sufficient to provide the current to operate them without tripping circuit breakers within your junction panel.

Mechanical Specifications

Model Number	Input Connector (Rear Panel)	Line Cord (included)	Suggested Wall Receptacle	Output Connector (Rear Panel)	Weight	Size, mm (w x d x h)
BIT15-17-SIL (Torus CS 15 S)	IEC-320 c14 Inlet	N5/15, 14AWG C13, 15A/125V	Standard outlet NEMA 5-15R 15A - 125V	Qty 5 (10 outlets) Medical-grade duplex 15A	20.2 kg	483 x 268 x 105

Height includes removable rubber mounting feet.

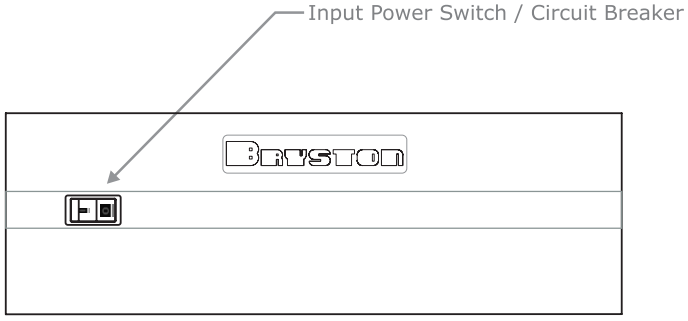
Line Cords

Standard 15A 120V

Equipment end: IEC C13
Plug: 5-15P, Straight Blade, 2 pole, 3-wire grounding, 15A 125V
Cord: 3 x 14AWG
Length: 2.5 m

BIT-20 OWNER'S MANUAL

Front Panel Layout



17" Faceplate (3U + .5")

Circuit Protection

The front panel power switch is also a circuit breaker. As a circuit breaker, it prevents excessive current from entering the BIT20.

When the power is on, the Switch is illuminated. When the breaker trips, the switch returns to its "off" position.

Thermal Protection

Bryston Isolation Transformers will shut-down if internal unit temperature reaches excessive levels.

Input Current Rating

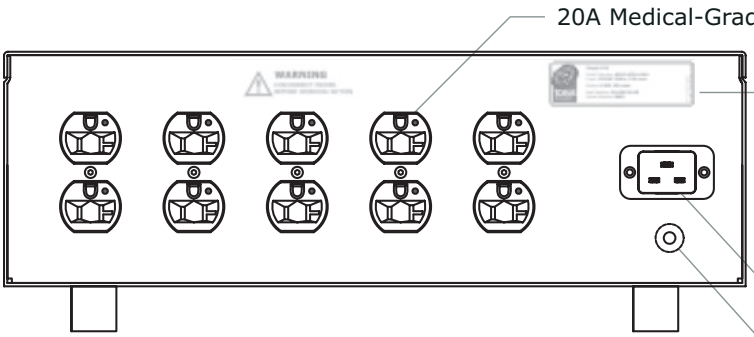
Per UL, CSA and National Electrical codes, devices with line cords and plugs must not consume more than 80% of a branch circuit's rating.

While Bryston Isolation Transformers are designed to handle well beyond these limits, they must be marked with a maximum input current that satisfies the requirements.

Electrical Specifications

Model Number	Input Voltage Nominal	Input Current Limiting	Load Current Capability ½ cycle	1 second	10 seconds	Input Current Rating (see note above)
BIT20-BAL (Torus CS 20 BAL)	Selectable 240VAC (2 x 120VAC, balanced) or 208VAC. Factory wired for 240VAC 60Hz Range +/- 10% voltage 57-63Hz	10A Circuit Breaker Front Panel	600A	300A	150A	10A
BIT-20 (Torus CS 20)	120VAC, 60Hz Range +/- 10% voltage 57-63Hz	20A Circuit Breaker Front Panel	400A	200A	100A	16A

Rear Panel Layout



Balanced 20A, Model Numbers BIT20-BAL-17-SIL,
Single 20A, Model Numbers BIT20-17-SIL,

Line Cords

Standard 15A 240/208V

Used on: Model Numbers BIT20-BAL,
Equipment end: IEC C19
Plug: 6-15P, Straight Blade, 2 pole, 3-wire grounding, 15A 250V
Cord: 3 x 14AWG
Length: 2.5 m

Standard 20A 120V

Used on: Model Numbers BIT20,
Equipment end: IEC C19
Plug: 5-20P, Straight Blade, 2 pole, 3-wire grounding, 20A 125V
Cord: 3 x 12AWG
Length: 2.5 m

Wall Receptacles

Bryston Isolation Transformers are high-power products. The outlets they are plugged into should be sufficient to provide the current to operate them without tripping circuit breakers within your junction panel.

Dedicated circuits are recommended. Balanced input products, 240VAC, require dual 120V phases (2 pole, 3-wire). Wall outlets for 240VAC are rated at 250V and will likely require special installation. Dedicated outlets, or any household or facility wiring should be installed by a licenced electrician to local codes.

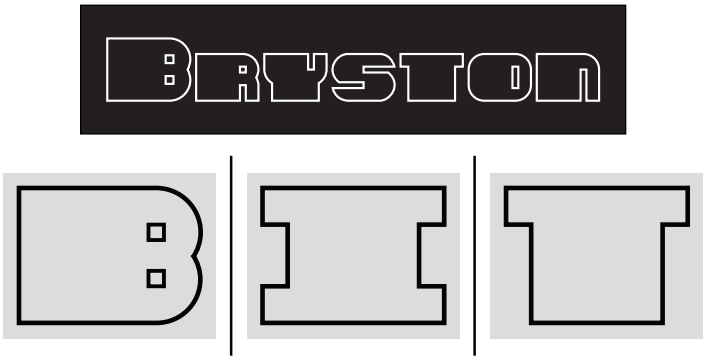
Pictured below are suggested receptacle types for installation.

NEMA 6-15R
for Balanced 20A unit

NEMA 5-20R
for Single 20A unit

Mechanical Specifications

Model Number	Input Connector (Rear Panel)	Line Cord (included)	Suggested Wall Receptacle	Output Connectors (Rear Panel)	Weight	Size mm (w x d x h)
BIT20-BAL-17-SIL (Torus CS 20 BAL S)	IEC-320 C20	N6/15, 14AWG C19, 15A/250V	NEMA 6-15R 15A - 250V	Qty 5 (10 outlets) Medical-grade duplex 20A	39.5kg	432 x 402 x 162
BIT20-17-SIL (Torus CS 20 S)	IEC-320 C20	N5/20, 12AWG C19, 20A/125V	NEMA 5-20R 20A - 125V	Qty 5 (10 outlets) Medical-grade duplex 20A	42.2kg	432 x 402 x 162



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