

Power-Suppress 100



Contents

Description	Page
Certification standards2
General description2
Electrical specifications2
Environmental specifications2
Mechanical specifications2
Cabinet dimensions3
Notes10



Powering Business Worldwide

Certification standards

- ANSI/IEEE® C57.12.91 transformer test code
- ANSI C62.41 Category B-3
- NFPA® 70—National Electric Code®
- FCC Class A limits, 47 C.F.R. Part 15, Subparts A, B
- UL® listed to Standard 1012, power supplies—general purpose
- cUL® listed to CSA® Standard C22.2, No. 107.1-01
- NEMA® PE 1 (National Electric Manufacturers Association)
- NEMA 250 (National Electric Manufacturers Association)
- Enclosures for electrical equipment (1000V maximum)
- ISO® 9001:2008
- Occupational Safety & Health Administration (OSHA)

General description

The overall function of the Power-Suppress™ 100 is to attenuate transients and noise that originate on incoming power lines and to provide a newly derived, isolated power source.

The Power-Suppress 100 is used to protect sensitive electronic equipment and computers from power-line noise and transients. There are common disturbances on power lines caused by lightning, motor starting and stopping, utility network switching, and general electrical noise, which will adversely affect sensitive electronic equipment, especially computers.

The Power-Suppress 100 utilizes a unique method of shielding and isolation that provides low capacitive coupling between input and output circuits. This low capacitance, together with a highly effective filter circuit, results in ultra-high common mode and normal mode noise attenuation.

Electrical specifications

- **Input voltage**
120, 240, 480 Vac—depending on model.
- **Common mode noise attenuation**
140 dB @ 100 KHz.
- **Normal mode noise attenuation**
65 dB @ 100 KHz.
- **Overload capacity**
600% for 1 cycle, 300% for 30 seconds.
- **Dielectric strength**
2500 Vac minimum.
- **Frequency**
60 Hz ±5%.
- **Impedance**
3–6%, depending on size.
- **Efficiency**
93–97%, depending on size.
- **Input voltage range**
Nominal voltage ±10%.
- **Load regulation**
2–5%, no load to full load at unity power factor.
- **Harmonic distortion**
Adds less than 1% THD, under linear loading.
- **Coil insulation**
200°C.
- **Temperature Rise**
115°C max rise above a 40°C ambient.
- **Electro-magnetic interference**
Less than 0.2 gauss @ 3 feet.

Environmental specifications

- **Audible noise**
Less than 50 dB measured @ 3 feet.
- **Operating temperature**
0–40°C.
- **Storage temperature**
-20° to +50°C.
- **Operating altitude**
5000 feet (without derating).
- **Operating humidity**
95% relative (non-condensing).

Mechanical specifications

Rating	Input plug	Output receptacles (NEMA)
500 VA–1 kVA	5-15P	5-20R2
1.8 kVA	L5-20P	2 x 5-20R2
2.4 kVA	L5-30P	2 x 5-20R2

Cabinet dimensions**Table 1. Cabinet standard dimensions and weights with plugs and receptacles**

Catalog number	Input/output voltages ①	Output VA ②	I/O interface (NEMA)	H x W x D, in. (mm)	Weight, lbs (kg)
T100R-0500	120–120	500	5-15P/(1) 5-20R2	6.49 x 6.10 x 12.00 (164.8 x 154.9 x 304.8)	22 (10)
T100R-0750	120–120	750	5-15P/(1) 5-20R2	6.49 x 6.10 x 12.00 (164.8 x 154.9 x 304.8)	28 (13)
T100R-1000	120–120	1000	5-15P/(1) 5-20R2	6.49 x 6.10 x 12.00 (164.8 x 154.9 x 304.8)	31 (14)
T100R-1800	120–120	1800	L5-20P/(2) 5-20R2	10.49 x 11.10 x 17.00 (266.4 x 281.9 x 431.8)	54 (24)
T100R-2400	120–120	2400	L5-30P/(2) 5-20R2	10.49 x 11.10 x 17.00 (266.4 x 281.9 x 431.8)	58 (26)

① Input and output voltages can be field configured for either 120 Vac or 240 Vac, 240 Vac or 480 Vac, as indicated above.

② 500 VA to 7500 VA hardwired models will ship configured to 120V input and output voltage.

Table 2. Cabinet standard dimensions and weights, hardwired

Catalog number	Input/output voltages ①	Output VA ②	I/O interface	H x W x D, in. (mm)	Weight, lbs (kg)
T100H-0500	120/240–120/240	500	Hardwired	6.42 x 6.10 x 12.00 (163.1 x 154.9 x 304.8)	22 (10)
T100H-0750	120/240–120/240	750	Hardwired	6.42 x 6.10 x 12.00 (163.1 x 154.9 x 304.8)	28 (13)
T100H-1000	120/240–120/240	1000	Hardwired	6.42 x 6.10 x 12.00 (163.1 x 154.9 x 304.8)	31 (14)
T100H-1800	120/240–120/240	1800	Hardwired	10.28 x 11.10 x 17.00 (261.1 x 281.9 x 431.8)	54 (24)
T100H-2500	120/240–120/240	2500	Hardwired	10.28 x 11.10 x 17.00 (261.1 x 281.9 x 431.8)	58 (26)
T100H-5000	120/240–120/240	5000	Hardwired	10.28 x 11.10 x 17.00 (261.1 x 281.9 x 431.8)	86 (39)
T100H-5001 ③	240/480–120/240	5000	Hardwired	10.49 x 11.10 x 17.00 (266.4 x 281.9 x 431.8)	92 (42)
T100H-7500	120/240–120/240	7500	Hardwired	10.28 x 11.10 x 17.00 (261.1 x 281.9 x 431.8)	116 (53)
T100H-7501 ③	240/480–120/240	7500	Hardwired	10.28 x 11.10 x 17.00 (261.1 x 281.9 x 431.8)	111 (50)

① Input and output voltages can be field configured for either 120 Vac or 240 Vac, 240 Vac or 480 Vac, as indicated above.

② 500 VA to 7500 VA hardwired models will ship configured to 120V input and output voltage.

③ Models T100H-5001 and T100H-7501 will ship configured to 240V input and output voltage.

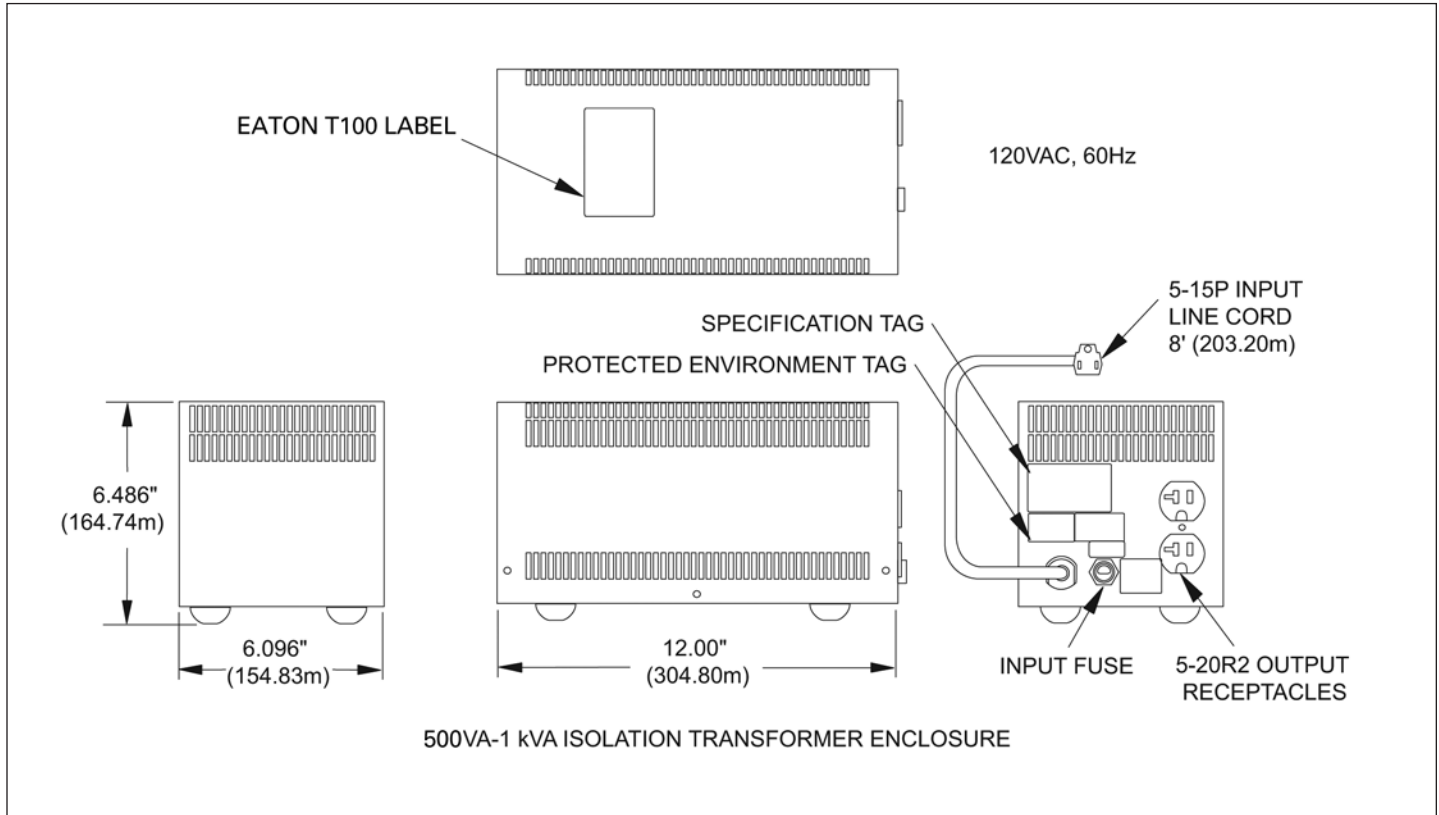


Figure 1. 500 VA-1 kVA isolation transformer enclosure, line cord model

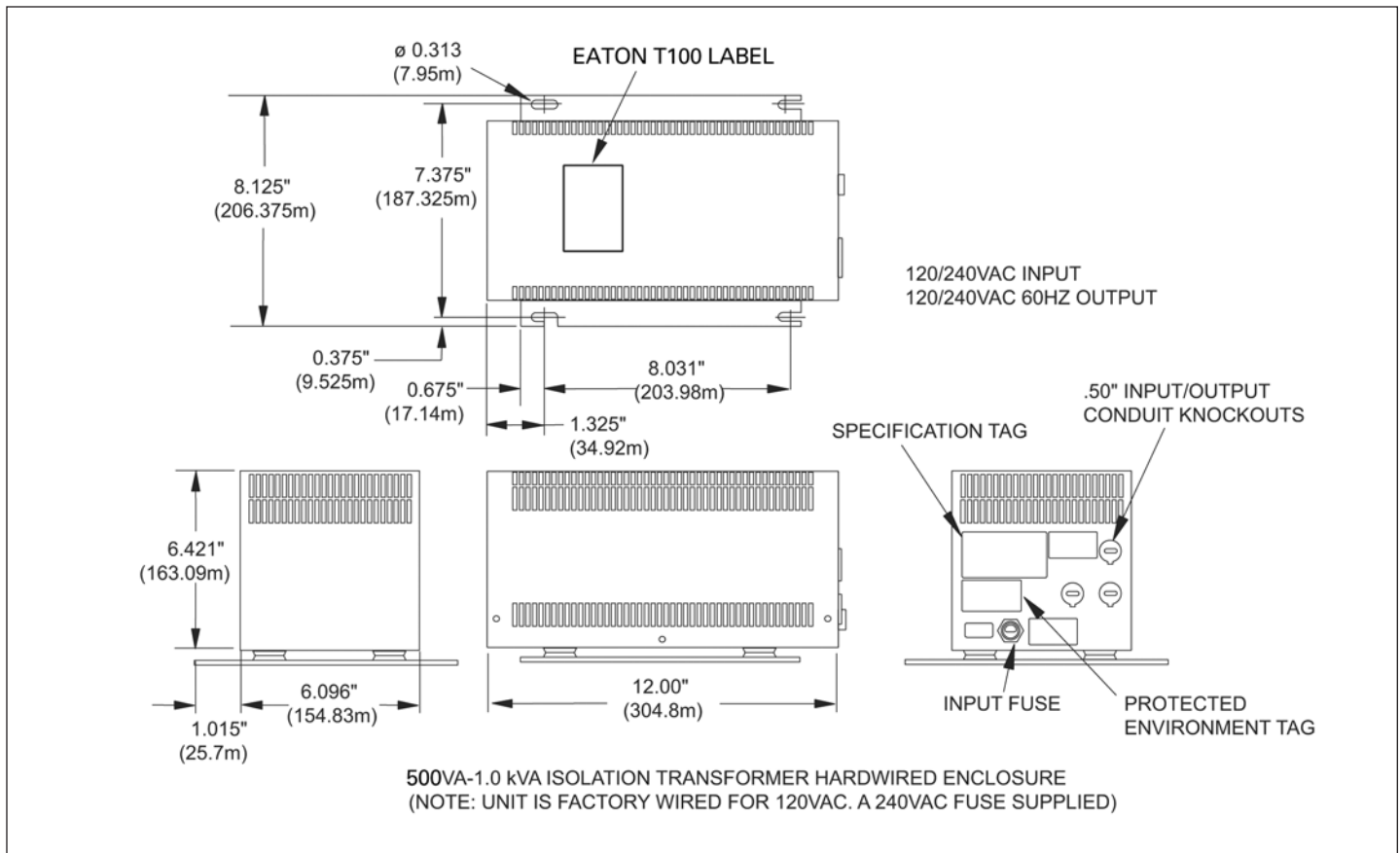


Figure 2. 500 VA-1 kVA isolation transformer hardwired enclosure

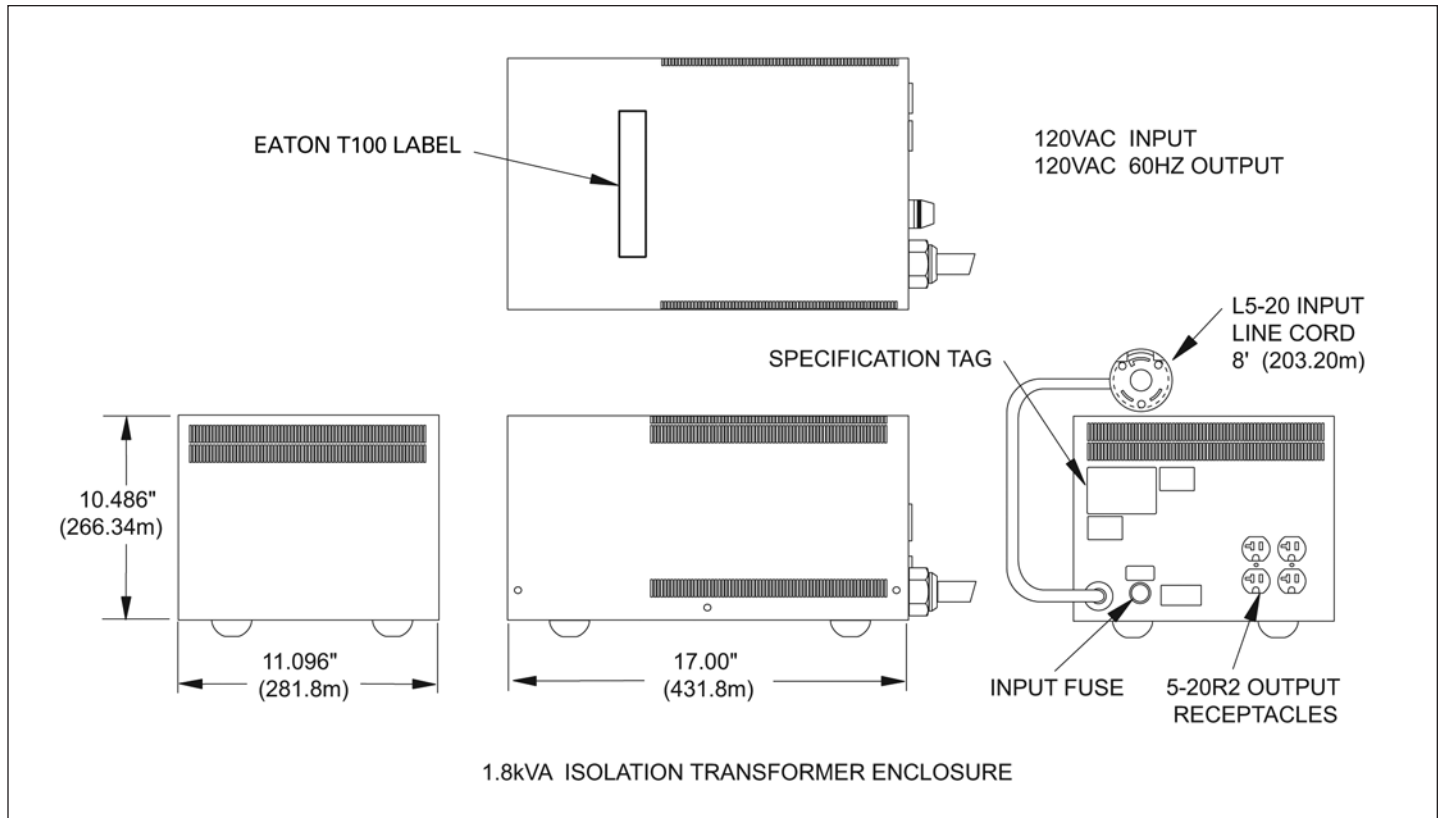


Figure 3. 1.8 kVA isolation transformer enclosure, line cord model

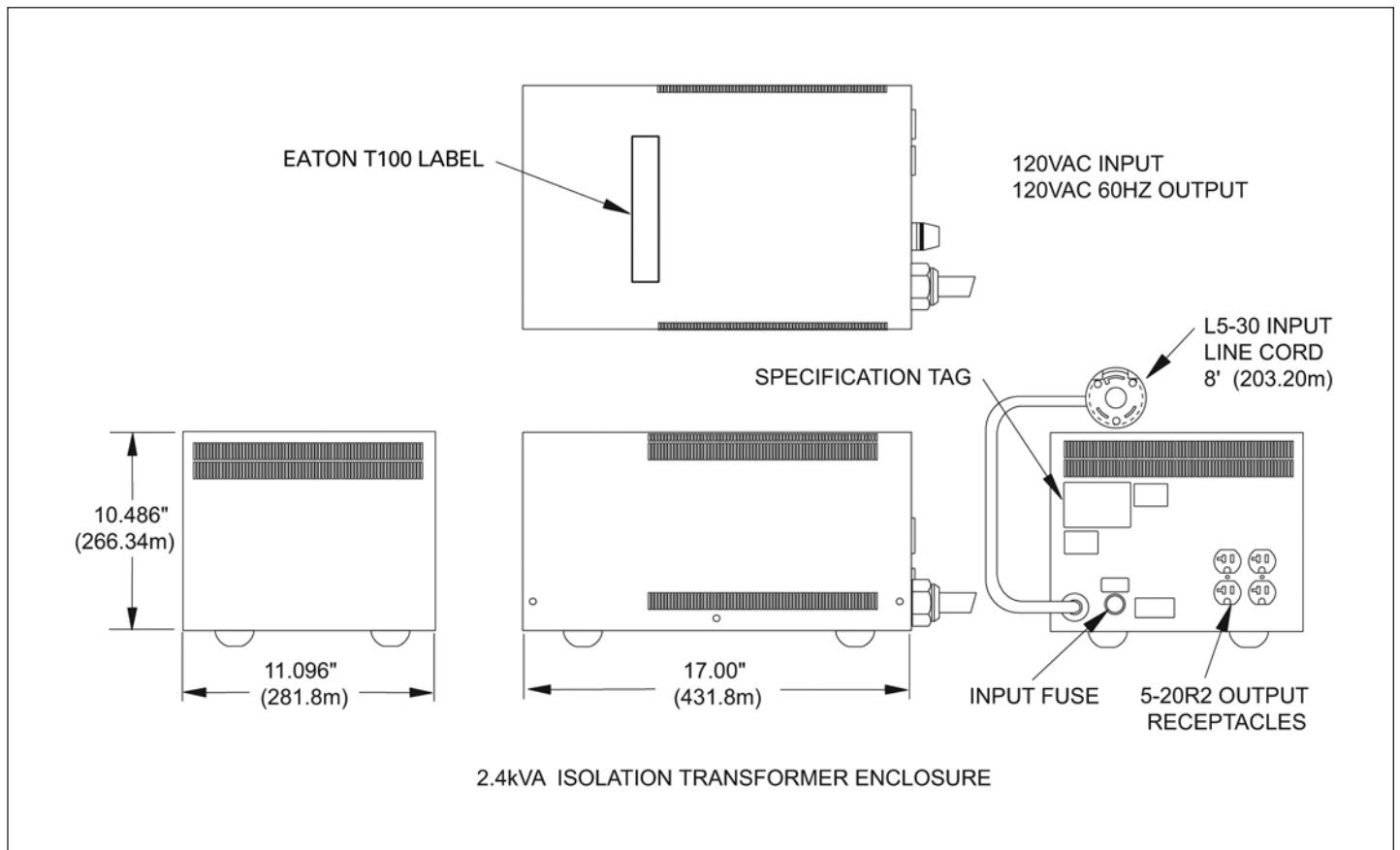


Figure 4. 2.4 kVA isolation transformer enclosure, line cord model

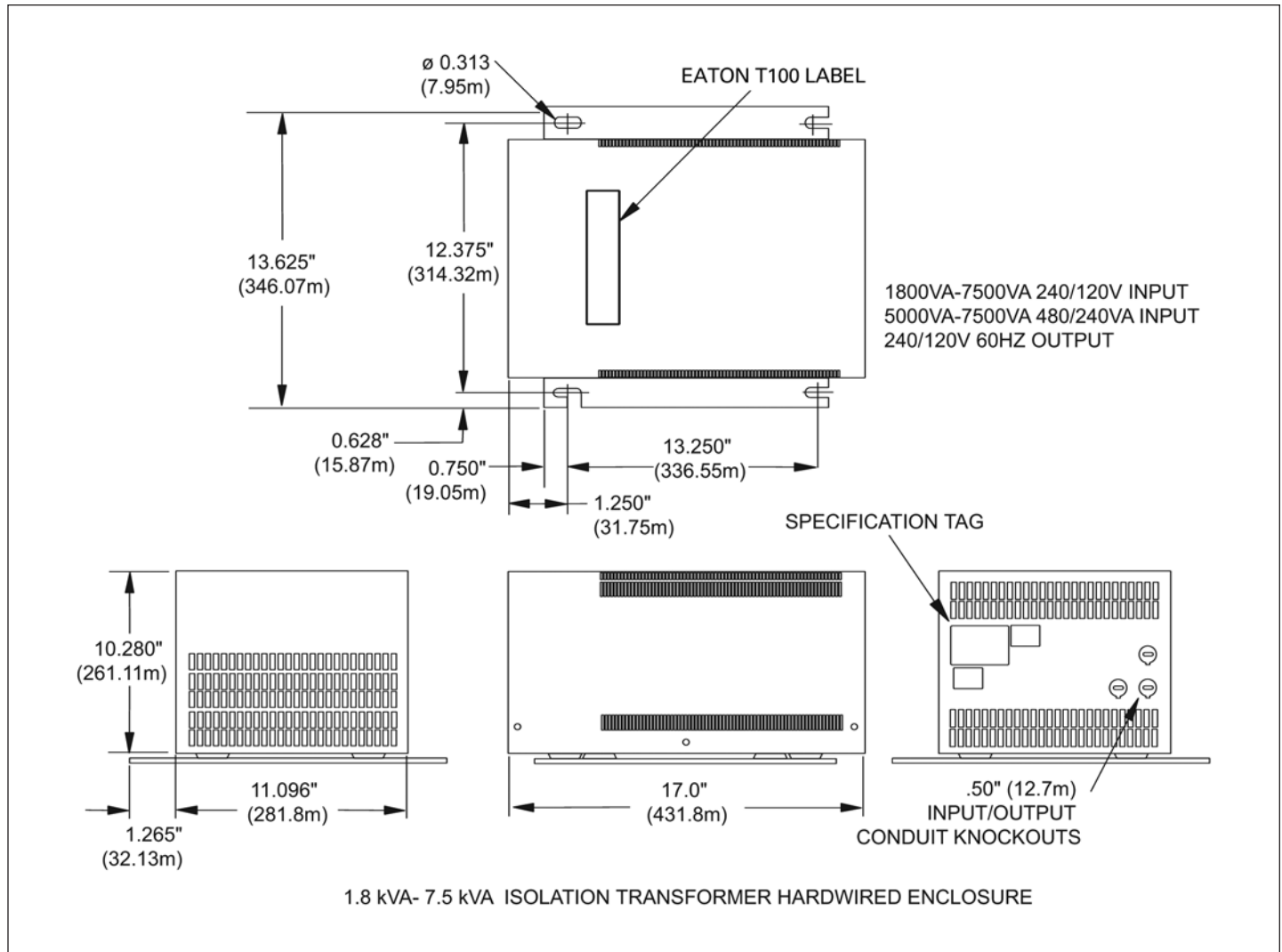


Figure 5. 1.8-7.5 kVA isolation transformer hardwired enclosure

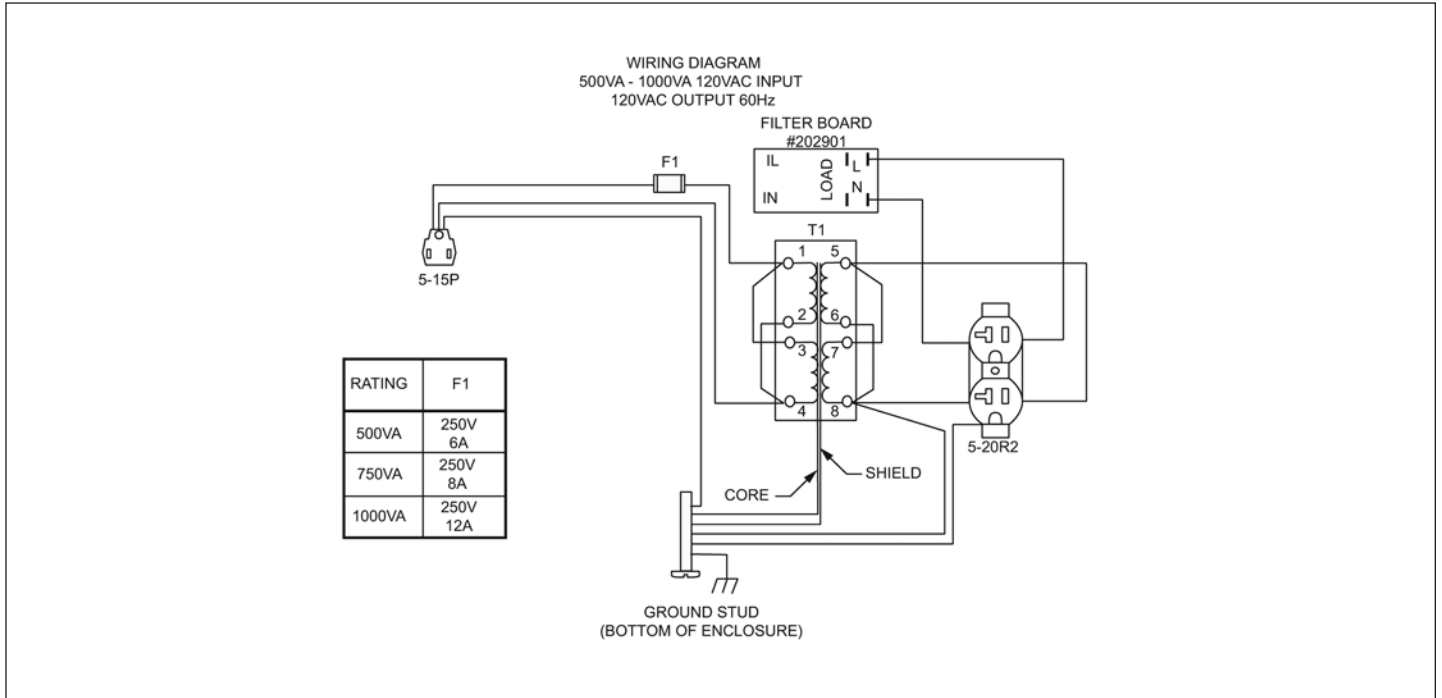


Figure 6. Wiring diagram for 500–1000 VA 120 Vac input

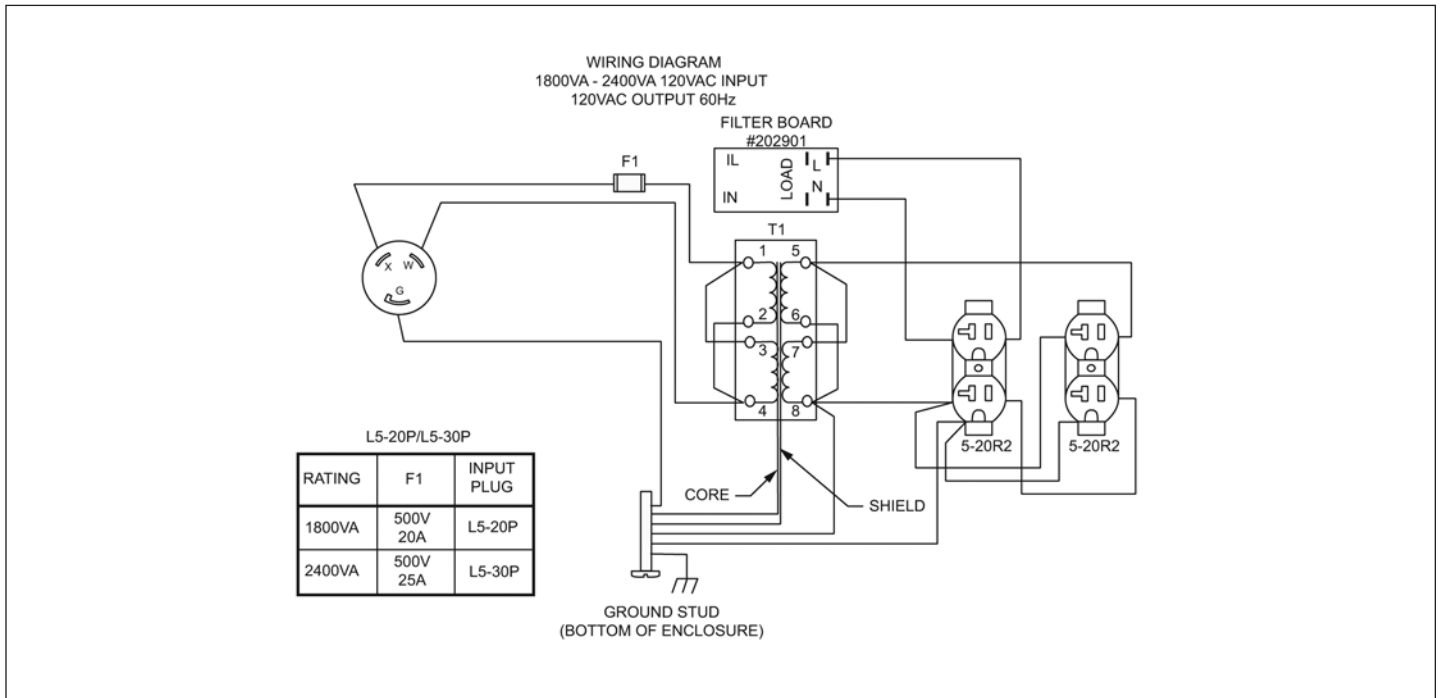
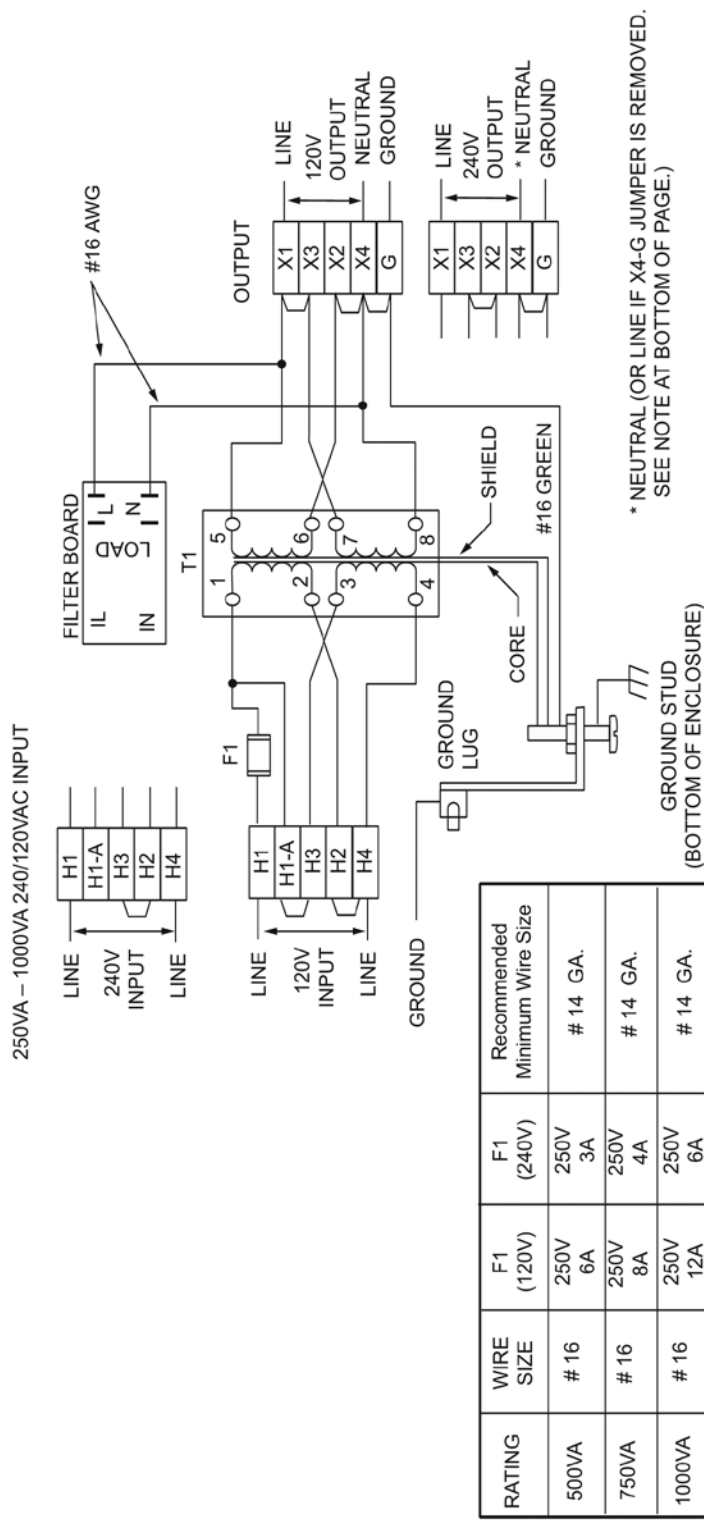


Figure 7. Wiring diagram for 1800–2400 VA 120 Vac input

HARDWIRE CONNECTION DIAGRAM
 240/120VAC OUTPUT 60Hz



* NEUTRAL (OR LINE IF X4-G JUMPER IS REMOVED.
 SEE NOTE AT BOTTOM OF PAGE.)

NOTE: UNIT FACTORY WIRED FOR 120VAC INPUT AND OUTPUT.
 CHANGING FROM AN INPUT OF 120VAC TO AN INPUT OF 240VAC
 ON MODELS RATED AT 1000VA AND BELOW, REQUIRES THAT THE
 INPUT FUSE BE CHANGED AS INDICATED. A FUSE RATED AT 240VAC
 AND THE CORRECT AMPERAGE HAS BEEN PROVIDED WITH THE
 POWER-SUPPRESS 100.

NOTE: IF YOU DESIRE TO HAVE THE OUTPUT NEUTRAL UNGROUNDED, THE BONDING JUMPER CONNECTOR BETWEEN OUPUT TERMINAL
 X4 AND GROUND MAY BE REMOVED. NOTE HOWEVER, THAT THIS WILL SIGNIFICANTLY REDUCE THE COMMON-MODE NOISE ATTENUATION
 OF THE ULTRA-ISOLATOR. REMOVING THIS BOND WILL ALLOW FOR 240VAC LINE-TO-LINE APPLICATIONS AND PROVIDE ISOLATION.

Figure 8. Circuit diagram for 500–1000 VA 240/120 Vac input

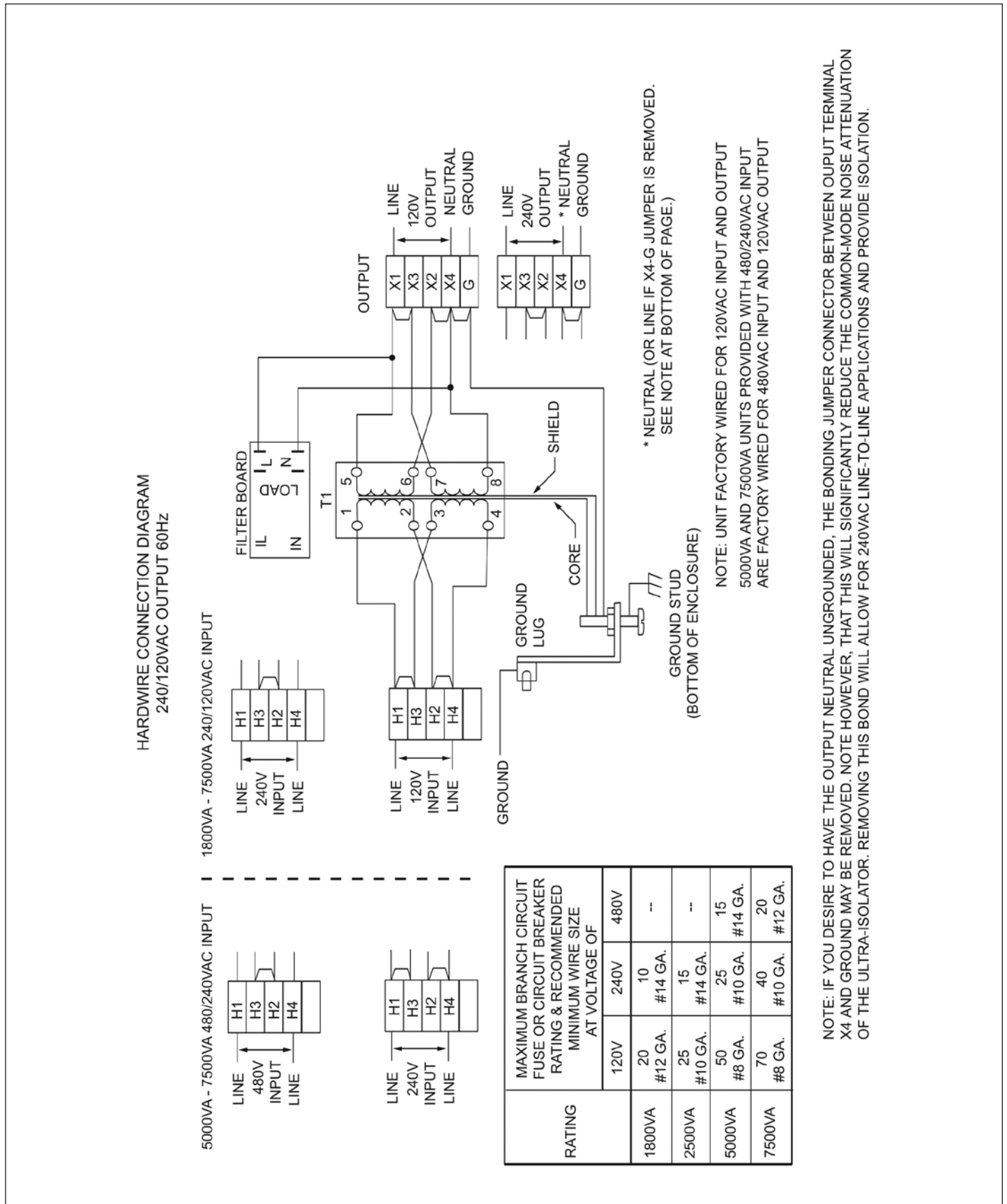


Figure 9. Circuit diagram for 1800–7500 VA 240/120 Vac input

Eaton is dedicated to ensuring that reliable, efficient and safe power is available when it's needed most. With unparalleled knowledge of electrical power management across industries, experts at Eaton deliver customized, integrated solutions to solve our customers' most critical challenges.

Our focus is on delivering the right solution for the application. But, decision makers demand more than just innovative products. They turn to Eaton for an unwavering commitment to personal support that makes customer success a top priority. For more information, **visit powerquality.eaton.com**.

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