

SURESTEP™
STEPPING SYSTEM
POWER SUPPLIES



CHAPTER
5

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Features

- Models available with 32V@4A, 48V@5A, 48V@10A, & 70V@5A DC unregulated step motor power
- 5VDC \pm 5% at 500 mA regulated logic power (electronic overload)
- Screw terminal AC input and DC output connectors
- 120 or 240 VAC, 50/60 Hz power input, switch selectable
- Power ON LEDs
- Integrated input and output fusing
- Matched to SureStep drives for maximum voltage

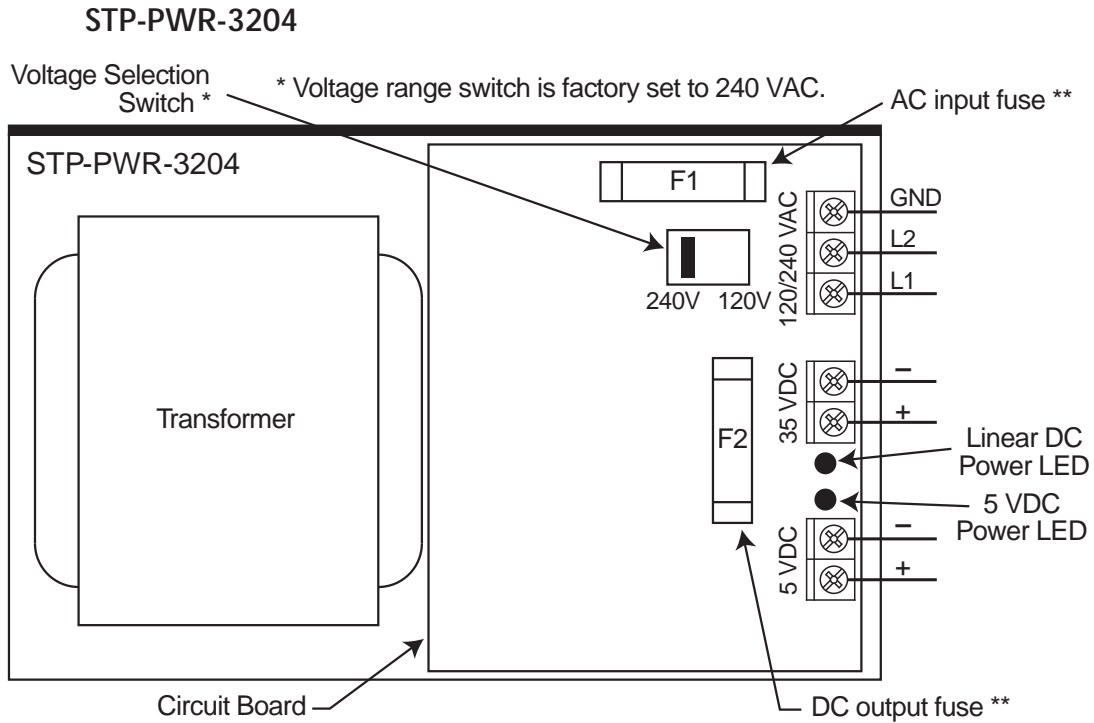


The stepping system power supplies can supply power for multiple SureStep STP-DRV-xxxx microstepping motor drives, depending on step motor size and application requirements.

Specifications

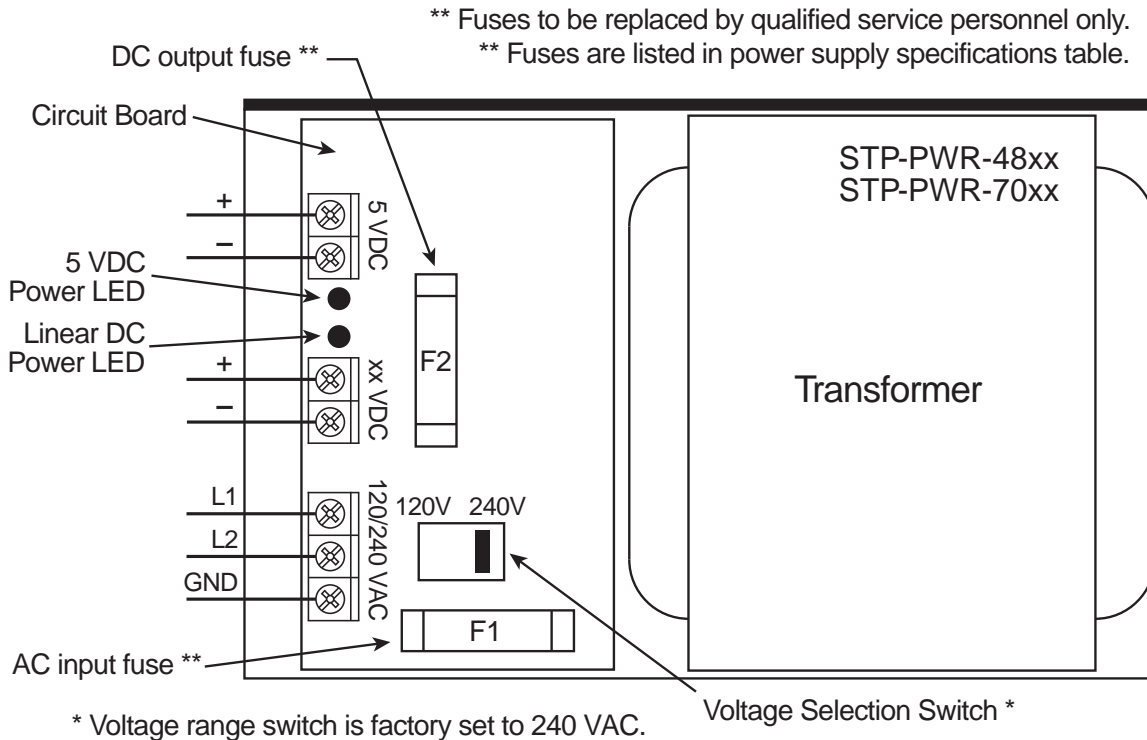
SureStep™ Power Supply Specifications				
Part Number	STP-PWR-3204	STP-PWR-4805	STP-PWR-4810	STP-PWR-7005
Input Power (fuse protected) ¹⁾	1-phase, 120/240 VAC, 50/60 Hz, 150 VA Fuse ¹⁾ : 3A	1-phase, 120/240 VAC, 50/60 Hz, 350 VA Fuse ¹⁾ : 5A	1-phase, 120/240 VAC, 50/60 Hz, 650 VA Fuse ¹⁾ : 8A	1-phase, 120/240 VAC, 50/60 Hz, 500 VA Fuse ¹⁾ : 7A
Input Voltage	120/240 VAC ±10% (switch selectable; voltage range switch is set to 240 VAC from factory)			
Inrush Current	120 VAC < 12A 240 VAC < 14A	120 VAC < 20A 240 VAC < 24A	120 VAC < 40A 240 VAC < 50A	
Motor Supply Output (linear unregulated, fuse protected ¹⁾ , power on LED indicator)	32 VDC @ 4A (full load) 35 VDC @ 1A load 41 VDC @ no load Fuse ¹⁾ : 6A	46.5 VDC @ 5A (full load) 52 VDC @ 1A load 57.5 VDC @ no load Fuse ¹⁾ : 8A	46.5 VDC @ 10A (full load) 50 VDC @ 1A load 57.5 VDC @ no load Fuse ¹⁾ : 15A	70 VDC @ 5A (full load) 79 VDC @ 1A load 86.5 VDC @ no load Fuse ¹⁾ : 8A
SureStep Drive Compatibility ²⁾	STP-DRV-4035 (STP-DRV-4850) (STP-DRV-80100)	STP-DRV-4850 (STP-DRV-80100)		STP-DRV-80100
Logic Supply Output	5VDC ±5% @ 500 mA (regulated, electronically overload protected, power on LED indicator)			
Operating Temperature	0 to 50 °C (32 to 122 °F) full rated; 70 °C (158 °F) maximum Derate current 1.1% per degree above 50 °C			
Storage Temperature	-55 to 85 °C -67 to 185 °F			
Humidity	95% (non-condensing) relative humidity maximum			
Cooling Method	Natural convection (mount power supply to metal surface if possible)			
Dimensions (in [mm])	4.00 x 7.00 x 3.25 [101.6x177.8x82.6]	5.00 x 8.10 x 3.88 [127.0x205.7x98.6]	5.62 x 9.00 x 4.62 [142.7 x 228.6 x 117.3]	
Mounting	Use four (4) #10 screws to mount on either wide or narrow side.			
Weight (lb [kg])	6.5 [2.9]	11 [4.9]	18 [8.3]	16 [7.2]
Connections	Screw Terminals			
Agency Approvals	UL (file # E181899), CSA, CE			
<p>1) Fuses to be replaced by qualified service personnel only. Use (1-1/4 x 1/4 in) ceramic fast-acting fuses (Edison type ABC from AutomationDirect, or equivalent).</p> <p>2) Caution: Do not use a power supply that exceeds the input voltage range of the drive. Using a lower voltage power supply with a higher voltage drive is acceptable, but will not provide full system performance.</p>				

Power Supply Terminal & Component Layout



** Fuses are listed in power supply specifications table.
 ** Fuses to be replaced by qualified service personnel only.

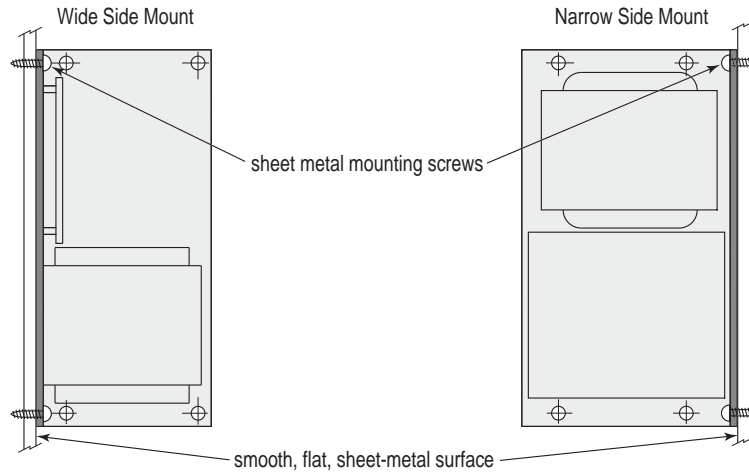
STP-PWR-4805, STP-PWR-4810, STP-PWR-7005



Mounting the Power Supply

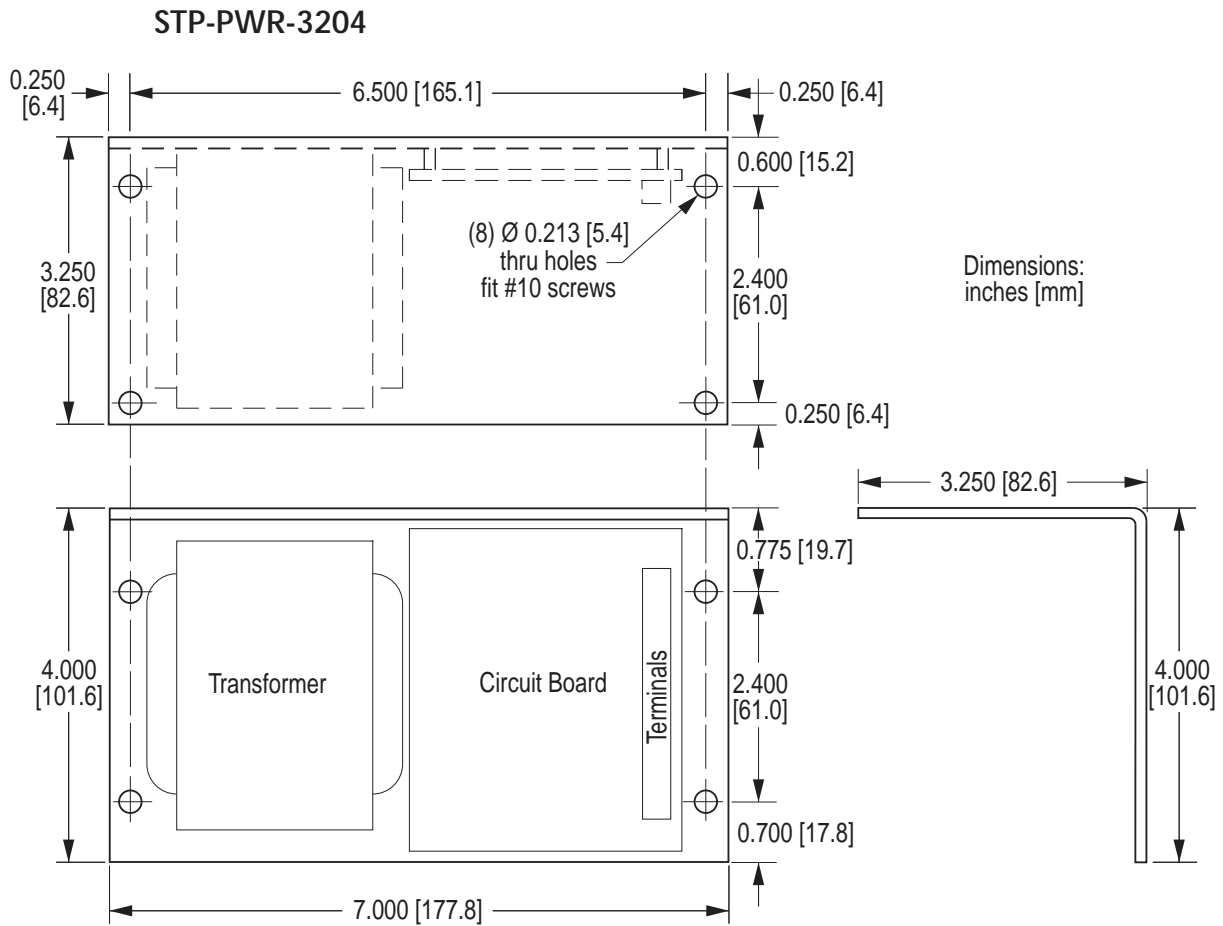
STP-PWR-xxxx power supplies can be mounted on either the bottom (wide) side, or the back (narrow) side of the chassis. Either orientation contains mounting holes for machine screws. Use #10 screws for STP-PWR-3204 and -4805, or 1/4" screws for STP-PWR-4810 and -7005.

Since power supplies generate heat, they should be mounted in a location that allows air flow. They also should be securely fastened to a smooth, flat metal surface that will dissipate heat.



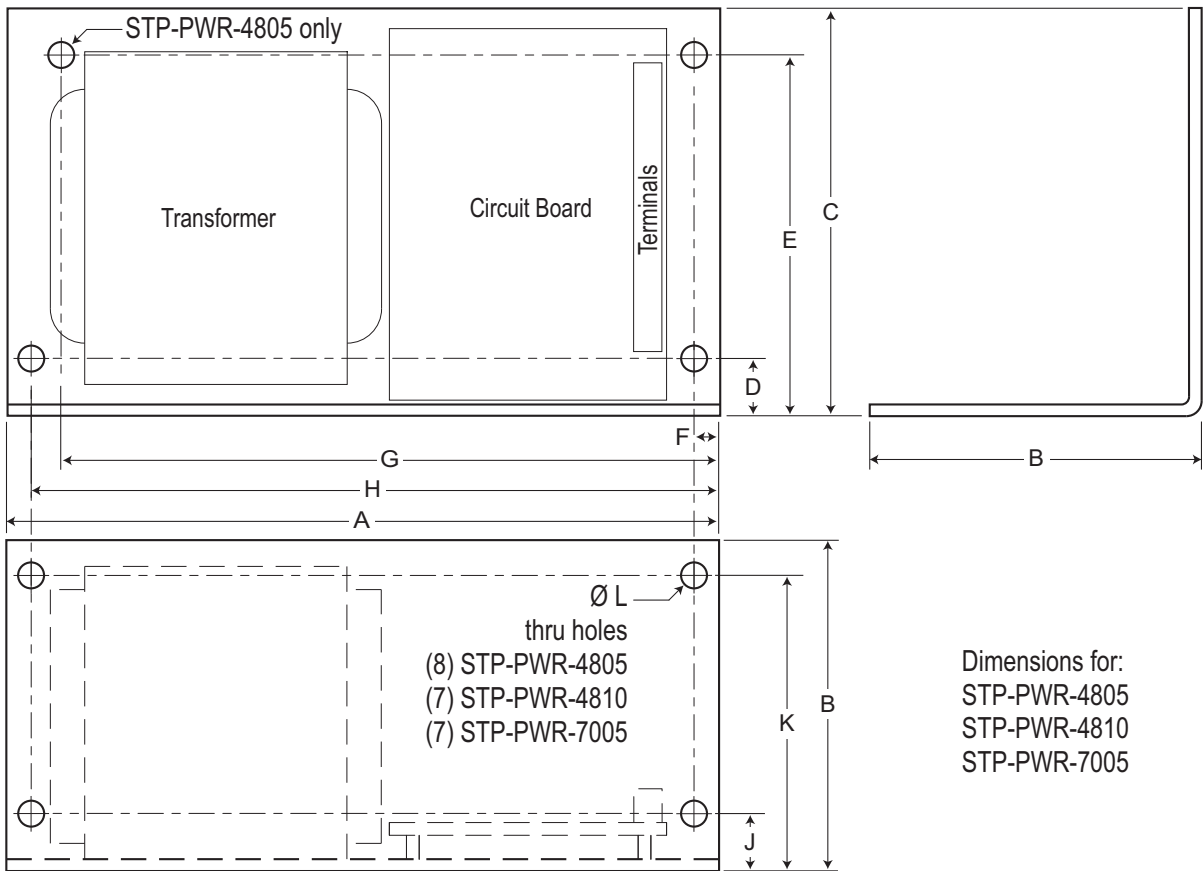
Warning: Never use the power supply in a space where there is no air flow, or where the surrounding air temperature is greater than 70 °C.

Dimensions



Dimensions (continued)

STP-PWR-4805, -4810, -7005



SureStep™ Series Dimensions – 48V & 70V Power Supplies			
Dimensions* (in [mm]*)	Power Supply Part Number		
	STP-PWR-4805	STP-PWR-4810	STP-PWR-7005
A	8.10 [205.7]	9.00 [228.6]	
B	3.88 [98.6]	4.62 [117.3]	
C	5.00 [127.0]	5.62 [142.7]	
D	0.87 [22.1]	1.56 [39.6]	
E	4.67 [118.6]	4.06 [103.1]	
F	0.25 [6.4]	0.35 [8.9]	
G	7.15 [181.6]	n/a	
H	7.75 [196.9]	8.59 [218.2]	
J	0.50 [12.7]	0.50 [12.7]	
K	3.53 [89.7]	4.27 [108.5]	
L	0.200 [5.1]	9/32 [7.1]	
Mtg Screw	#10	1/4	

** mm dimensions are for reference purposes only.*