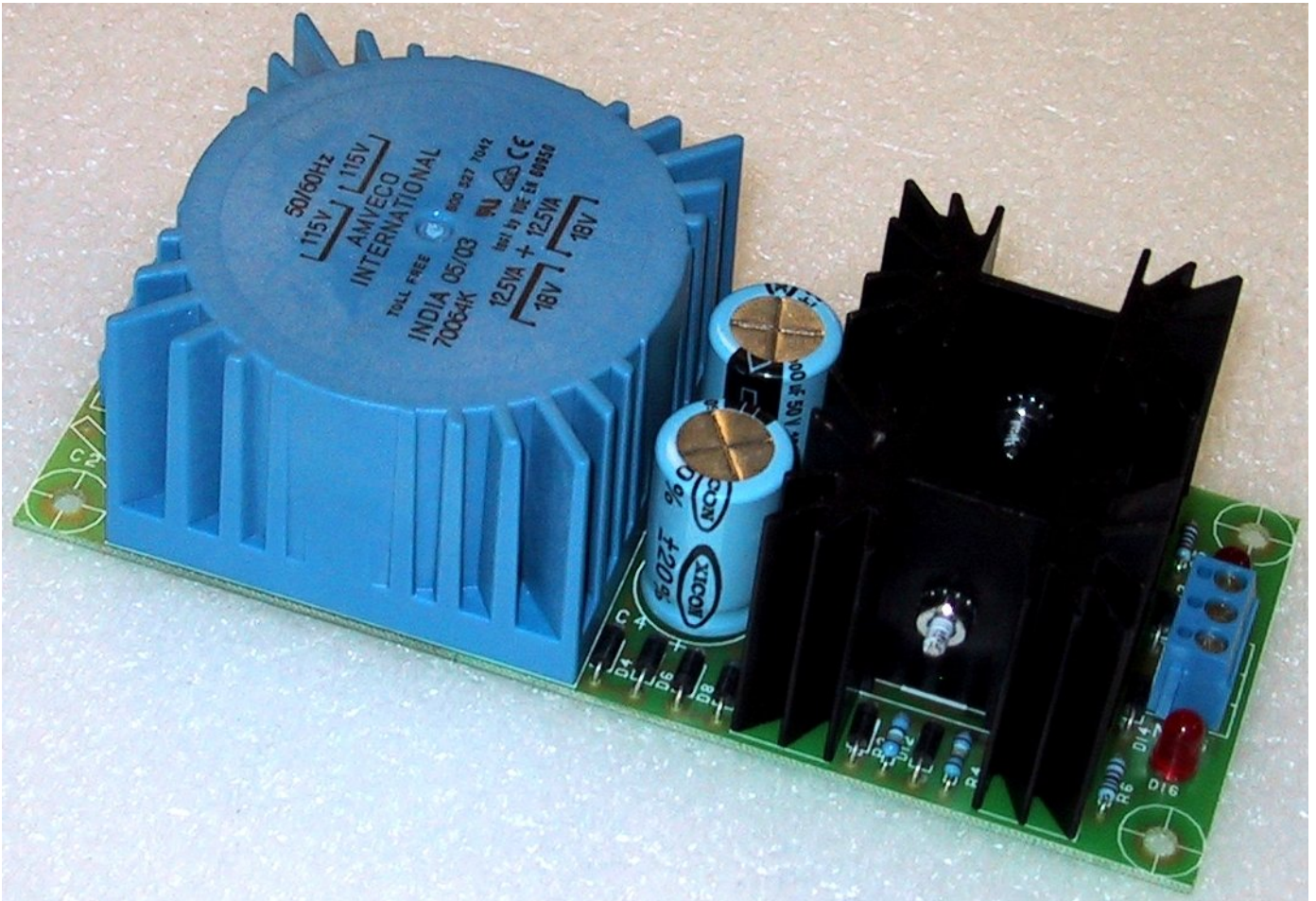


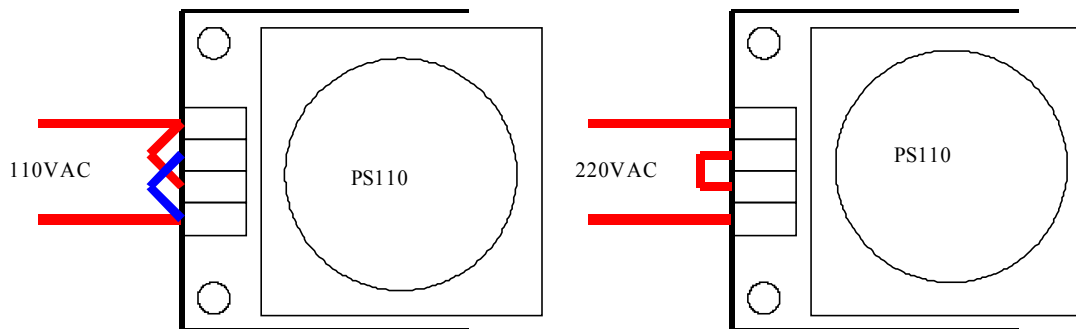
Marchand Electronics Inc.

PO Box 18099, Rochester, NY 14618
Tel:(585) 423 0462 Fax:(585) 423 9375
info@marchandelec.com www.marchandelec.com
(c)2002..09 Marchand Electronics Inc.

PS110 Instructions; Revision 1206



PS110 Jumper selection for 110 VAC or 220VAC operation

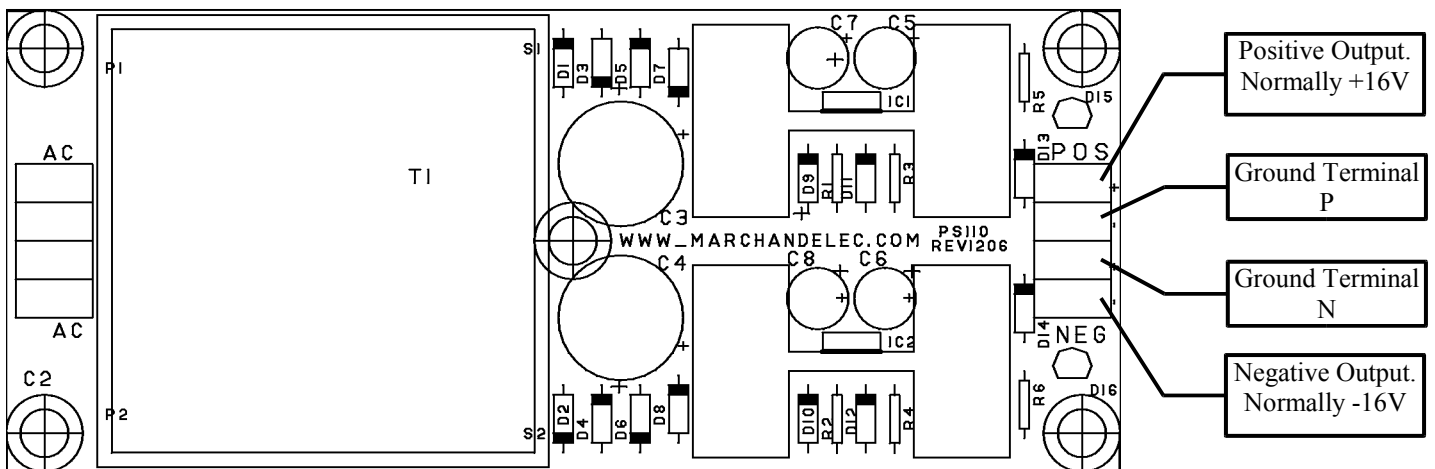


PS110/310 Part List

R1	249 Ohm	1%, 1/4W, Metal Film	D14	1N4937*	1A Diode
R2	249 Ohm	1%, 1/4W, Metal Film	D15		Red LED
R3	2.94K	1%, 1/4W, Metal Film	D16		Red LED
R4	2.94K	1%, 1/4W, Metal Film	IC1	LM317	Regulator
R5	10.0K	1%, 1/4W, Metal Film	IC2	LM317	Regulator
R6	10.0K	1%, 1/4W, Metal Film			
R7		not used	*		or equivalent
C1		not used			
C2		not used			
C3	2200 uF, 35V	Electrolytic			
C4	2200 uF, 35V	Electrolytic			
C5	47 uF, 50V	Electrolytic			
C6	47 uF, 50V	Electrolytic			
C7	47 uF, 50V	Electrolytic			
C8	47 uF, 50V	Electrolytic			
D1	1N4937*	1A Diode			
D2	1N4937*	1A Diode			
D3	1N4937*	1A Diode			
D4	1N4937*	1A Diode			
D5	1N4937*	1A Diode			
D6	1N4937*	1A Diode			
D7	1N4937*	1A Diode			
D8	1N4937*	1A Diode			
D9	1N4937*	1A Diode			
D10	1N4937*	1A Diode			
D11	1N4937*	1A Diode			
D12	1N4937*	1A Diode			
D13	1N4937*	1A Diode			

Contents of Kit

2	249 Ohm	1%, 1/4W, Metal Film
2	2.94K	1%, 1/4W, Metal Film
2	10.0K	1%, 1/4W, Metal Film
2	2200 uF, 35V	Electrolytic
4	47 uF, 50V	Electrolytic
14	1N4937	1A Hi Efficiency Diode
2		Red or Amber LED
2	LM317	Regulator
2	4/40*3/8 machine screw	
2	#4 locknut	
2	TO220 Heatsink	
1	Toroidal transformer, 18V+18V	
1	M4 x 10 metric screw for transformer	
1	#8 split lockwasher	
2	4 position terminal block	
1	Bag of heatsink compound	
1	PS110 circuit board	



Note: Ground terminal N and Ground terminal P are internally connected and are the same; use either one

Selecting output voltage.

The output voltage of the positive regulator is set by R3 and the output voltage of the negative regulator is set by R4. The value is calculated as follows:

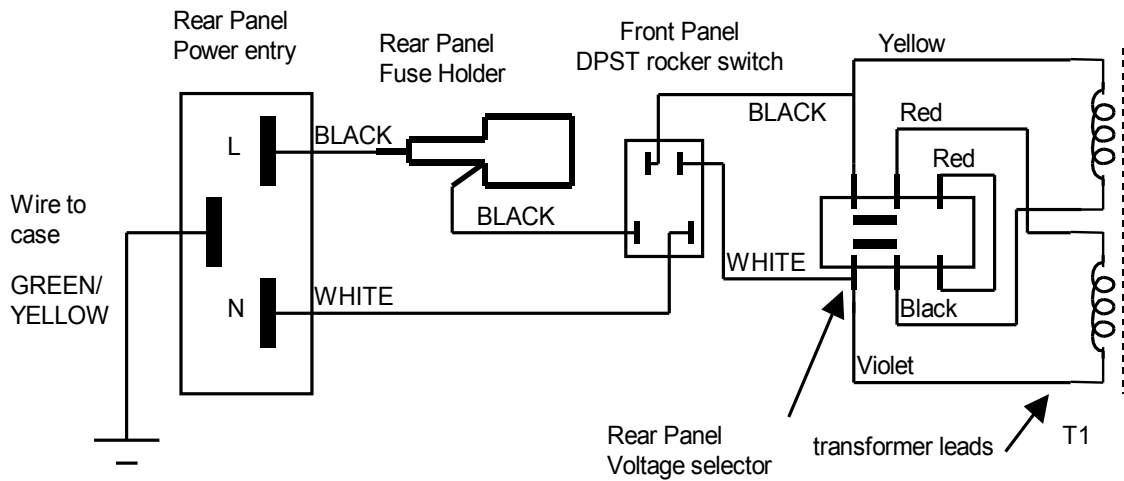
$$R3 = (V_{out} - 1.25) * R1 / 1.25$$

$$R4 = (V_{out} - 1.25) * R2 / 1.25$$

The table shows standard resistor values using the value of 249 Ohms for R1, R2
 *** transformer with 22V + 22V secondary needed.

Output voltage	R3(V+) or R4(V-)
24V ***	4K53
18V	3K34
16V	2K94
15V	2K74
14V	2K54
12V	2K15

Typical hookup of PS110 power supply w. voltage selector switch and fuse.



With the PS310 power supply board the transformer is not mounted on the circuit board itself. In a typical application (XM44) the primary transformer leads are connected as shown above.

The secondary leads from the transformer are connected to the blue terminal blocks as shown below:

