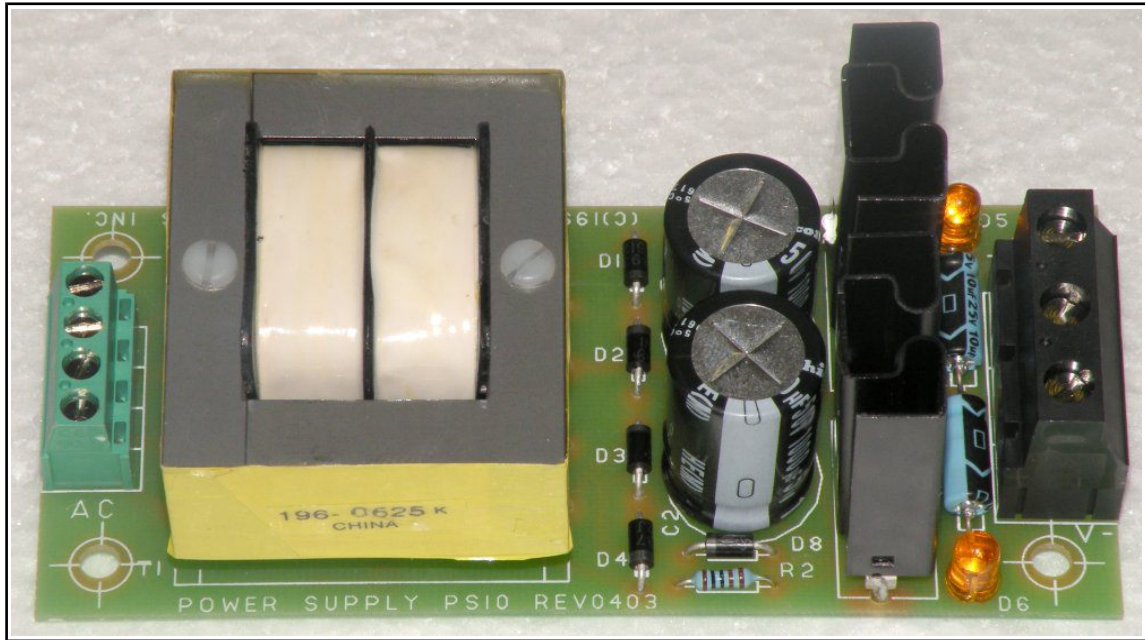




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Dual 15V Regulated Power Supply Model PS10



Users Manual

PS10 Dual 15 Volt Regulated Power Supply

The PS10 power supply provides +15 Volt and -15 Volt regulated DC power at up to 250 mA of current per output. The two outputs have a common ground connection. The outputs are short circuit proof. A thermal protection turns the outputs off when the circuit is overheated. A low input to output stray capacitance guaranties a low AC leakage current and makes it well suited in applications where low hum is important, such as low level pre-amplifiers and audio applications. A Light Emitting Diode at each output indicates proper output voltage.

SPECIFICATIONS:

Output voltage:	+/- 15 Volt, +/- 5%
Max continuous output current:	250 mA each channel
Output short circuit current:	1.5A, typ
Nominal input voltage:	115/230VAC, 50/60 Hz
Output voltage ripple:	less than 1mv, @ 60 Hz, 250 mA load
Output voltage regulation:	better then 10 mV
Input to Output capacitance:	50 pF Max.
Dimensions (L X W X H):	4.3" X 2.0" X 1.5"

DESCRIPTION

The circuit diagram of the power supply is shown in figure 2. The output of transformer T1 is converted from AC to DC with diodes D1,2,3,4 and filter capacitors C1 and C2. This raw DC voltage is then regulated to +15 volt and -15 volt with IC1 and IC2. C3 and C4 provide additional filtering of the output voltage. Diodes D7 and D8 protect against reverse Voltage on the outputs that could be caused by some loads during turn-on transients. Two LED indicators are used to show voltage on the output terminals. LED D5 is connected to the positive output through resistor R1 and LED R8 is connected to the negative output through resistor R2.

PS10 Parts List		
R1,R2	1K00	1% Metal Film
C1,C2	1000uF, 35V	35 or 50 WVDC, Aluminum Electrolytic
C3,C4	10uF, 25V	25 WVDC, Aluminum Electrolytic
D1-4, 7, 8	1N4937	1 Amp high efficiency diode
D5,D6	LED	LED (light emitting diode)
IC1	7815	or LM340T-15 positive regulator
IC2	7915	or LM320T-15 negative regulator
T1		Transformer 36VCT @ 0.35A
M1		Terminal block, 4 way, small
M2		Terminal block, 3 way, big
M3	5943B	Heatsink 5943B or 574902B03300
M5		Circuit board, 4.3" X 2.0"

Installation and Use.

Figure-1 shows the input and output connections for the power supply. The 117 Volt line voltage is connected to the 4 way terminal block. Use jumpers on the 4-position terminal block to select line voltage, as shown in figure 2.

Make sure that the wires do NOT touch the transformer core. The plus and minus 15 volt power voltages are available at the 3 way terminal block, as indicated on the circuit board. The ground is connected to the center connection. With power connected the Light Emitting Diodes will turn on when voltage

is present on the output terminals. D7, located next to the positive output, indicates the positive voltage. D8, located next to the negative output, indicates the negative voltage.

The power supply should be located so that sufficient airflow is available for cooling. In normal operation the regulators will be warm to the touch, but not burning. If the supply should overheat the output will automatically shut down, and come back up after cooling off.

The supply outputs are short circuit protected. If a short is present the output current will be limited to a safe value (approx 1.5A). Removal of the short will restore the output voltage.

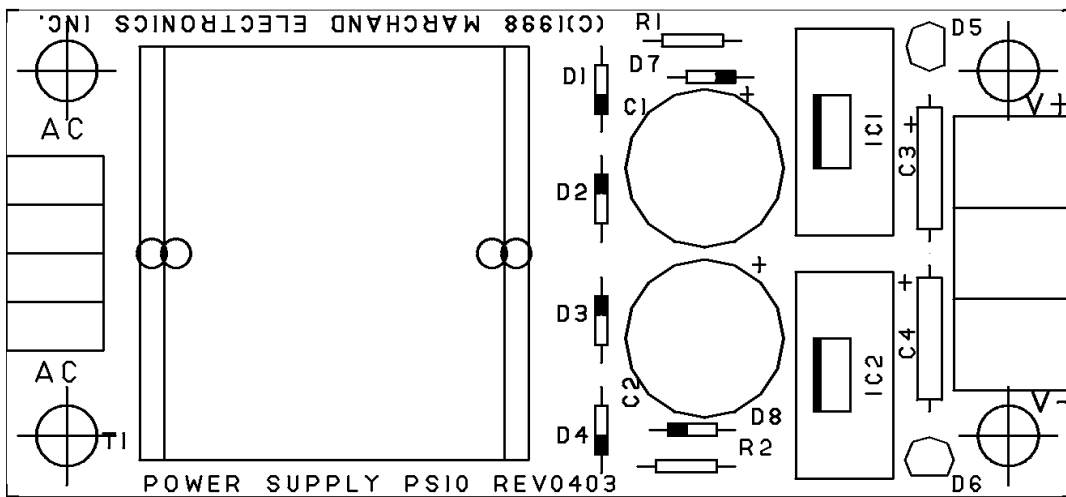


Figure 1. PS10 Silk screen and external connections.

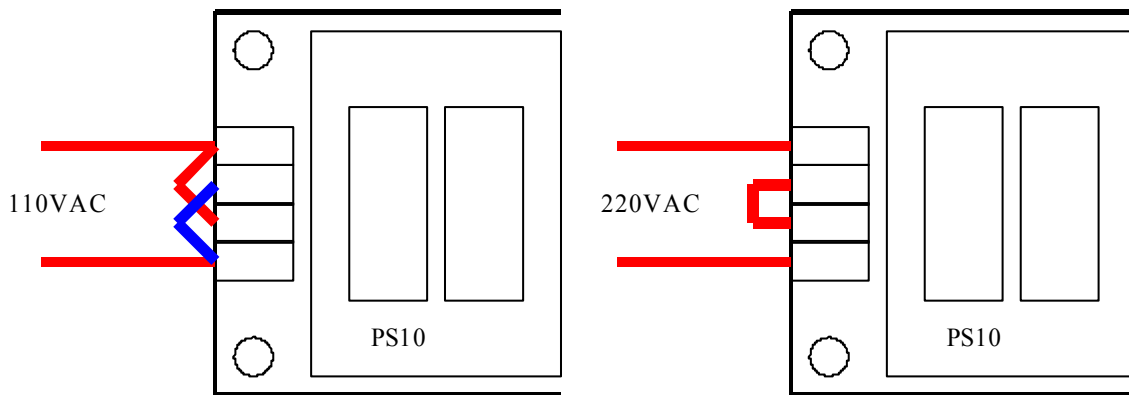


Figure 2. Line voltage selection.

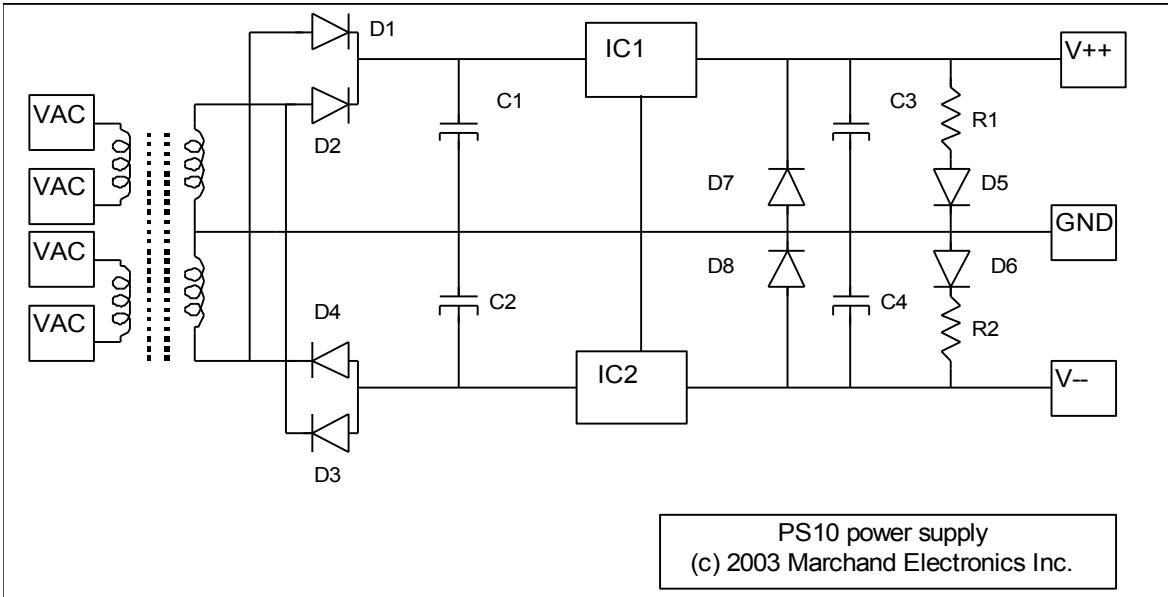


Figure 3. PS10 schematic diagram.