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## **PSP and PST Series**

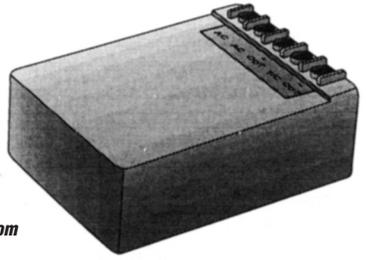
**Power Supplies**

INSTRUCTION  
SHEET

**M0252/0707**

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## **INTRODUCTION**

OMEGA<sup>®</sup> Power Supplies have outputs ranging from 5 to 28 volts, and from 40 mA to 500 mA (Refer to Tables 1 and 2). All styles feature excellent regulation and ripple parameters, and are short circuit protected. Rugged encapsulated construction and generously derated components insure years of reliable operation.

Two case styles are available for your installation needs. The pin terminal style can either be soldered into a printed circuit board or plugged into a phenolic accessory socket board with gold plated Teflon insulated contacts. The barrier strip type case is designed to be mounted to a bulkhead or chassis using four 4-40 screws.

## **FEATURES**

### **Pin Terminal Style**

- No Derating or Heat Sinking Required
- Short Circuit Protected
- Small, Lightweight
- Completely Sealed Case
- Only 7 oz.

### **Screw Terminal Style**

- 4-40 Screw Terminations and Mounting Inserts
- Floating Output
- Efficient
- Rugged
- 15 oz.

## OPERATING INSTRUCTIONS

**INPUT VOLTAGE:** AC input models operate on 105-125 VAC, 47-420 Hz. (Models with an input of 210-250 VAC, 47420 Hz are available on special order).

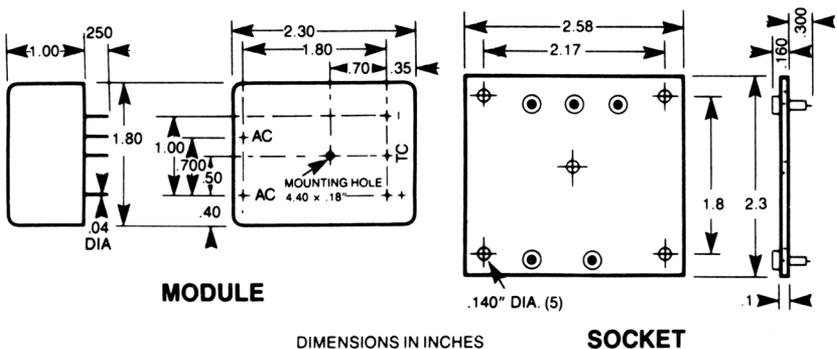
**OUTPUT VOLTAGE ADJUSTMENT:** Output(s) factory set to within +1% of the nominal output voltage rating. (AC input models having outputs of 1 to 9 volts, within 2%.) If necessary, outputs can be more precisely calibrated by the use of an external trim resistor connected between the T/C pin and one of the output pins. With certain units, connecting the resistor from the T/C pin to the (+) output pin increases voltage, and connecting to the (-) output pin decreases it; with other units, the reverse applies. Begin trimming with approximately 1 megohm resistance, and decrease resistance until calibration is attained. Do not use a resistance value of less than 20 K. Trimming the output to a voltage other than the nominal rating may adversely affect performance and may result in damaging the supply.

**SHORT CIRCUIT PROTECTION:** All OMEGA miniaturized power supplies are of rugged construction and designed to withstand substantial overloads or short circuits for reasonable lengths of time. Prolonged operation under overloaded or shorted conditions is not recommended.

**TABLE 1**

OUTPUT		MODEL
V	mA	
5	250	PSP-5
8	150	PSP-8
10	120	PSP-10
15	150	PSP-15
28	40	PSP-28

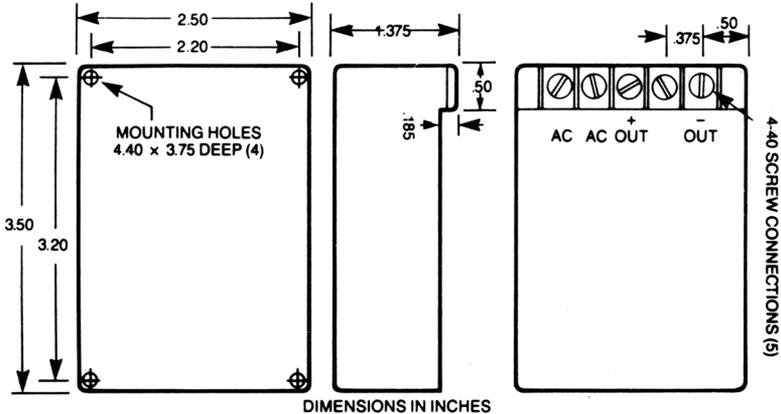
**Figure 1. Dimensions For Pin Terminal Style**



**TABLE 2**

OUTPUT		MODEL
V	mA	
5	500	PST-5
8	300	PST-8
10	240	PST-10
15	200	PST-15
15	300	PST-A15
15	500	PST-B15
18	270	PST-18
28	150	PST-28

**Figure 2. Dimensions For Screw Terminal Style**



## COMMON POWER SUPPLY SPECIFICATIONS

- INPUT VOLTAGE:** 105-125 V ac, 47 to 420 Hz, single phase
- OUTPUT:** See tables 1 and 2
- REGULATION:** 0.05% line, 0.05% load
- RIPPLE:** 0.5 mV rms
- OUTPUT VOLTAGE TRIM ADJUSTMENT:** Output is factory preset to  $\pm 2\%$  (1 to 9 volt models) or  $\pm 1\%$  (10 to 75 volt models) of nominal output voltage. Output may be trimmed to the nominal voltage rating with an external trim resistor.
- POLARITY:** Output is floating. Either positive or negative terminal may be grounded.
- AMBIENT OPERATING TEMPERATURE:** -20 to +71°C. No derating required.
- STORAGE TEMPERATURE:** -55 to +85°C
- TEMPERATURE COEFFICIENT:** From 9 to 75 volts, approximate TC is 0.15%/°C; 1 to 8 volts, .03%/°C
- IMPEDANCE:** 0.07 ohms at 1 kHz and 0.2 ohms at 10 kHz (approx.)
- DIMENSIONS:** See Figures 1 and 2



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**WARNING:** These products are not designed for use in, and should not be used for, human applications.



## WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

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## RETURN REQUESTS / INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

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