INTRODUCTION

OMEGA® 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, 47-420 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>
<thead>
<tr>
<th>OUTPUT</th>
<th>MODEL</th>
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<tbody>
<tr>
<td>V</td>
<td>mA</td>
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<tr>
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<td>150</td>
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<td>120</td>
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<td>15</td>
<td>150</td>
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<td>28</td>
<td>40</td>
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Figure 1. Dimensions For Pin Terminal Style

DIMENSIONS IN INCHES
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 ± 2% (1 to 9 volt models) or ± 1 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 0.015%/°C; 1 to 8 volts, 0.03%/°C
IMPEDANCE: 0.07 ohms at 1 kHz and 0.2 ohms at 10 kHz (approx.)
DIMENSIONS: See Figures 1 and 2

TABLE 2

<table>
<thead>
<tr>
<th>OUTPUT</th>
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<tr>
<td>V</td>
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<td>150</td>
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Figure 2. Dimensions For Screw Terminal Style

![Dimension Diagram](image)
OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of 13 months from the date of purchase. OMEGA’S WARRANTY adds an additional one (1) month grace period to the normal warranty 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.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by the company will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this warranty, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a “Basic Component” under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and OMEGA Engineerings, Inc. will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this warranty, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

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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.

OMEGA’s policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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