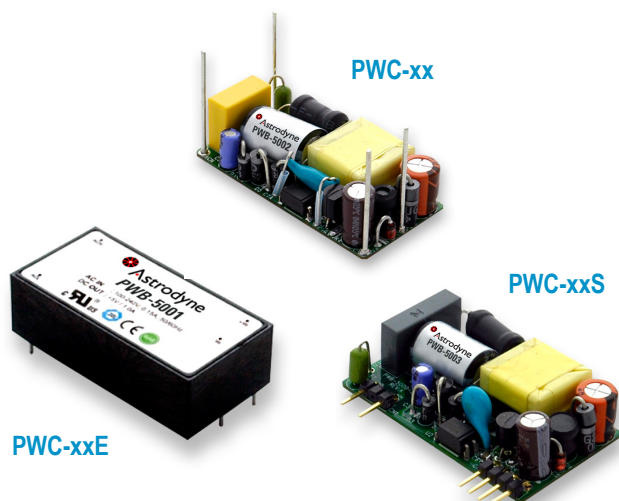




PowerBlock Micro-Miniature 5 Watt Switching Power Supplies

**PWC** series



- 5 Watts Output Power
- 3.3VDC to 24VDC Single Outputs
- Universal Input
- 3,000VAC Input to Output Isolation
- EN55022 Class B EMI
- Industrial Op. Temp ("E" Versions)



| Model Number                | Output Voltage | Output Amps | Output Watts | Size (inches)      | Efficiency |
|-----------------------------|----------------|-------------|--------------|--------------------|------------|
| <b>OPEN FRAME</b>           |                |             |              |                    |            |
| PWC-3.3                     | 3.3 VDC        | 1.25        | 4.1W         | 0.91 x 1.91 x 0.63 | 65%        |
| PWC-5                       | 5 VDC          | 1           | 5W           | 0.91 x 1.91 x 0.63 | 72%        |
| PWC-12                      | 12 VDC         | 0.42        | 5W           | 0.91 x 1.91 x 0.63 | 73%        |
| PWC-15                      | 15 VDC         | 0.34        | 5W           | 0.91 x 1.91 x 0.63 | 75%        |
| PWC-24                      | 24 VDC         | 0.23        | 5W           | 0.91 x 1.91 x 0.63 | 76%        |
| <b>SIP STYLE OPEN FRAME</b> |                |             |              |                    |            |
| PWC-3.3S                    | 3.3 VDC        | 1.25        | 4.1W         | 1.12 x 1.93 x 0.51 | 65%        |
| PWC-5S                      | 5 VDC          | 1           | 5W           | 1.12 x 1.93 x 0.51 | 72%        |
| PWC-12S                     | 12 VDC         | 0.42        | 5W           | 1.12 x 1.93 x 0.51 | 73%        |
| PWC-15S                     | 15 VDC         | 0.34        | 5W           | 1.12 x 1.93 x 0.51 | 75%        |
| PWC-24S                     | 24 VDC         | 0.23        | 5W           | 1.12 x 1.93 x 0.51 | 76%        |
| <b>ENCAPSULATED</b>         |                |             |              |                    |            |
| PWC-3.3E                    | 3.3 VDC        | 1.25        | 4.1W         | 1 x 2 x 0.6        | 65%        |
| PWC-5E                      | 5 VDC          | 1           | 5W           | 1 x 2 x 0.6        | 72%        |
| PWC-12E                     | 12 VDC         | 0.42        | 5W           | 1 x 2 x 0.6        | 73%        |
| PWC-15E                     | 15 VDC         | 0.34        | 5W           | 1 x 2 x 0.6        | 75%        |
| PWC-24E                     | 24 VDC         | 0.23        | 5W           | 1 x 2 x 0.6        | 76%        |



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#### INPUT SPECIFICATIONS

|                       |                         |
|-----------------------|-------------------------|
| Input Voltage (AC/DC) | 90-264VAC/110-340VDC    |
|                       | Nominal: 100-240VAC     |
| Input Frequency       | 47-440 Hz, 50-60Hz Nom. |
| Inrush Current        | 20A @ 115VAC, typ       |
|                       | 40A @ 200VAC, typ       |

#### OUTPUT SPECIFICATIONS

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Output Voltage/Current (Note 5) | See Model Chart                   |
| Preset Accuracy (Note 8)        | +/-1%, typ                        |
| Load Regulation (Note 6)        | 3.3V & 5V: +/-1%, max.            |
|                                 | 12V, 15V, & 24V: +/-0.5%, max.    |
| Line Regulation (Note 7)        | 3.3V & 5V: +/-1%, max.            |
|                                 | 12V, 15V, & 24V: +/-0.5%, max.    |
| Temperature Coefficient         | +/-0.03%/°C (0-50°C, typ.)        |
| Ripple/Noise(20Mhz BW)          | 150mV Pk-Pk, typ (Notes 1, 2 & 9) |
| Overvoltage Protection          | Clamp *                           |
| Hold Up Time                    | 10mS, typ                         |
| Short Circuit Protection        | Latching, Recovering *            |
| OverTemp Protection             | Latching, Recovering *            |

#### GENERAL SPECIFICATIONS

|                              |                     |
|------------------------------|---------------------|
| Input-Out Isolation (Note 3) | 3000VAC             |
| Output-Ground Isolation      | 1000VAC             |
| Input-Ground Isolation       | 2500VAC             |
| Switching Frequency          | 132 Khz, fixed, typ |
| Efficiency (@ Full Load)     | See Model Chart     |
| Safety                       | UL60950, EN60950    |
| EMI                          | EN55022             |

#### ENVIRONMENTAL SPECIFICATIONS

|                            |                                      |
|----------------------------|--------------------------------------|
| Oper. Temperature (Note 4) |                                      |
| PWC-xx, PWC-xxS            | -10 to +50°C FL                      |
| PWC-xxE                    | -25 to +65°C FL                      |
|                            | See Derate Curves                    |
| Relative Humidity          | 0-95%, Non-Condensing                |
| Storage Temperature        | -40 to +85°C *                       |
| MTBF                       | MIL-HDBK-217F, Notice 2, Parts Count |
|                            | 790890 Hrs                           |

#### PHYSICAL SPECIFICATIONS

|              |                             |
|--------------|-----------------------------|
| Construction | Open Frame or Encapsulated  |
| Weight       | Open Frame: 1.0 oz (28g)    |
|              | Encapsulated: 1.5 oz. (42g) |

#### Notes:

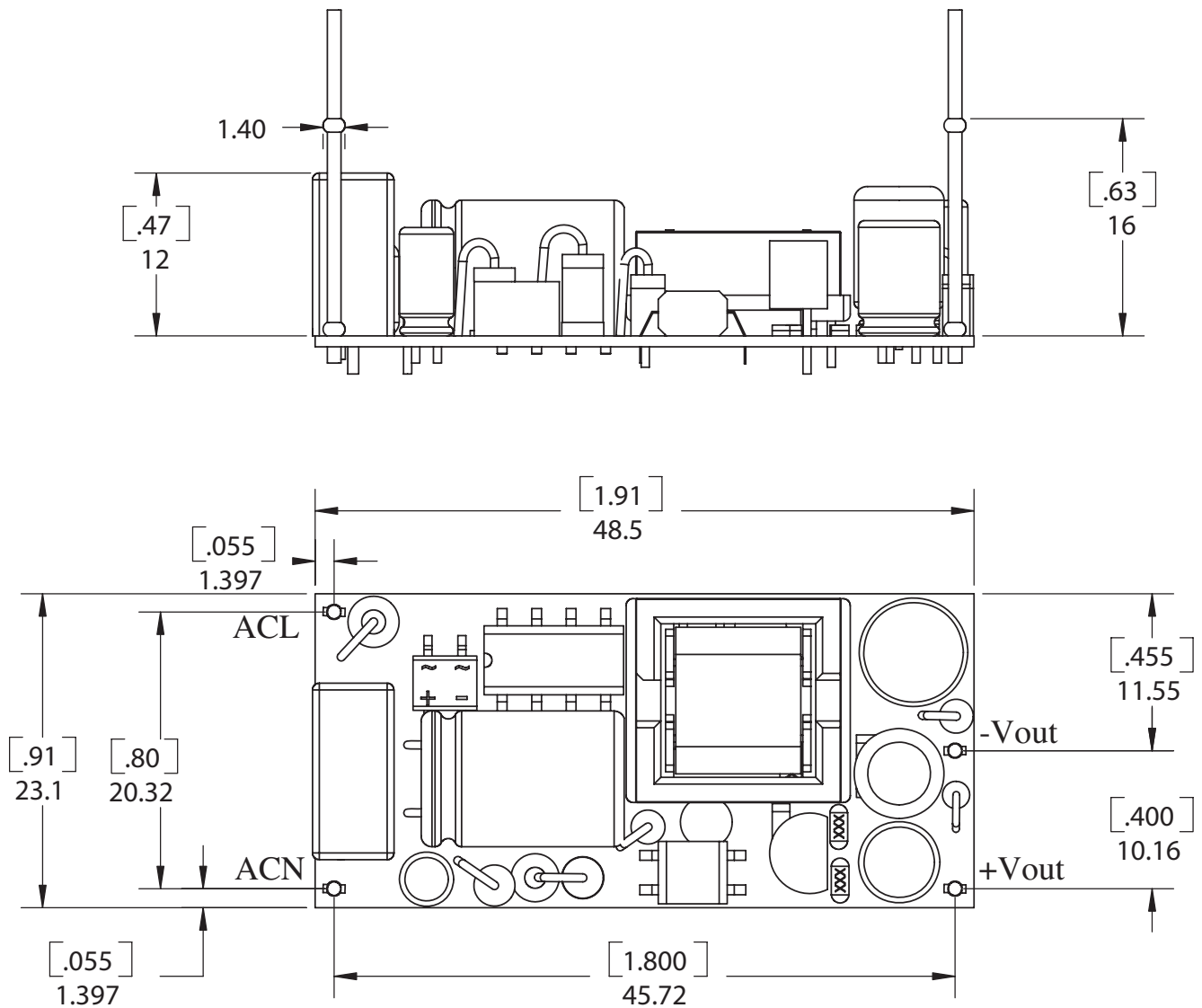
1. All measurements should be made directly at the terminals of the power supply
2. Ripple and noise dependent upon output voltage as specified per particular model.
3. Isolation for up to 1 minute duration.
4. Specified for free air convection cooling.
5. Minimum load is not required for proper operation.
6. Load Regulation is measured from 5% to Full Load.
7. Line Regulation measured from High Line to Low Line.
8. Preset Accuracy measured at nominal load, 120VAC input.
9. O/P Noise measured directly at the pins/terminals at nominal load, 0.1uF bypass and 47uF electrolytic, pk-pk @ 20MHz bandwidth.
10. 100% Production Tested

All specifications are typical at nominal input, full load, and 25DegC unless otherwise noted

\* These are stress ratings. Exposure of the devices to any of these conditions may adversely affect long term reliability. Proper operation under conditions other than the standard operating conditions is neither warranted nor implied.

**Astrodyne products are not authorized or warranted for use as critical components in life support systems, equipment used in hazardous environments, nuclear controls systems, or other mission-critical applications.**

**MECHANICAL SPECIFICATIONS - PWC OPEN FRAME**



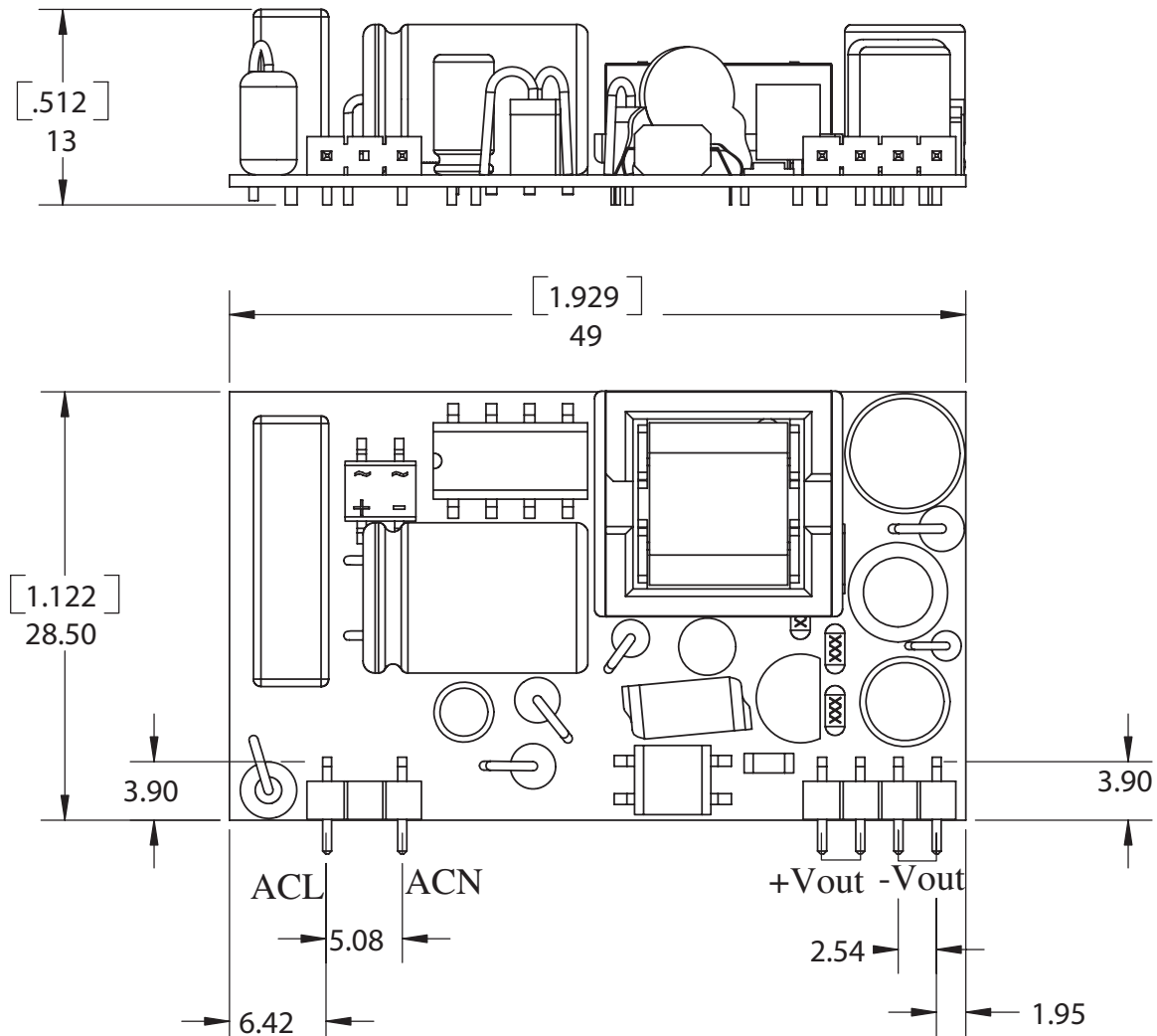
Unit : mm (in)



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**PWC** series

**MECHANICAL SPECIFICATIONS - PWC SIP STYLE**



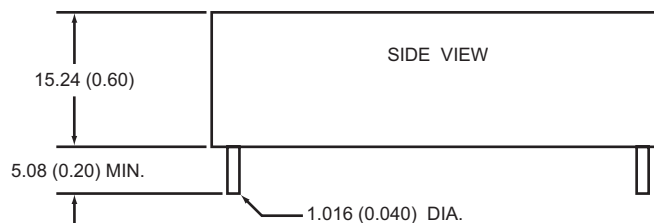
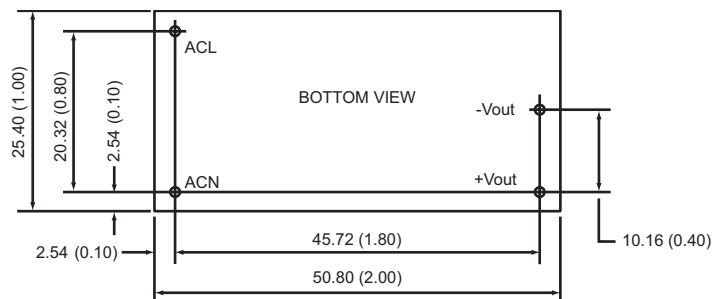
Unit : mm (in)



PowerBlock Micro-Miniature 5 Watt Switching Power Supplies

**PWC** series

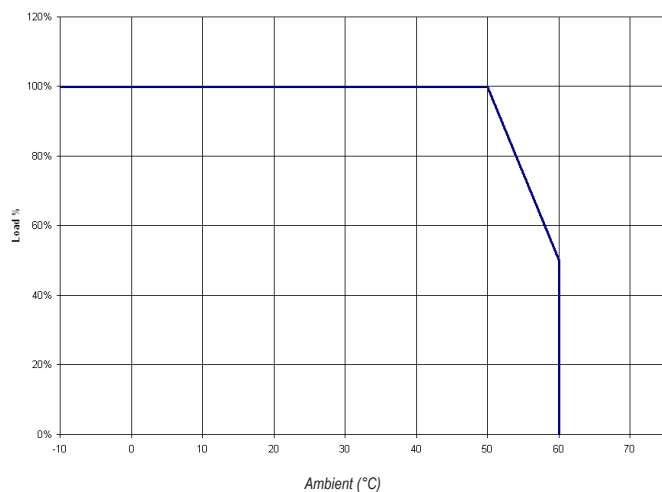
## MECHANICAL SPECIFICATIONS - PWC ENCAPSULATED



NOTES: DIMENSIONS ARE IN mm (INCH)

## DERATE CURVES

PWC-XX, PWC-XXS



PWC-XXE

