

# ARTESYN AVE600 SERIES

600 Watts



Advanced Energy's Artesyn AVE600 series half-brick isolated DC-DC converter provides a single regulated low noise 12 Vdc output that can deliver up to 50 amps. It has a wide 2:1 input range of 36 to 75 Vdc and is designed primarily for use with standard 48 V telecommunications equipment supplies. This converter is normally used in designs with a distributed power architecture (DPA), where one or more downstream non-isolated DC-DC converters meet the needs of lower voltage semiconductor devices.

## DATA SHEET

### Total Power:

600 Watts

### Input Voltage:

36 - 75 V

### # of Outputs:

Single

### SPECIAL FEATURES

- 2:1 Wide input range
- Optimised for high density, small space applications
- Low ripple and noise
- Fixed switching frequency
- Super high efficiency
- High capacitive load capability
- Basic insulation system
- Aluminium substrate design

### SAFETY

- TUV/CE 60950-1
- UL/cUL 60950-1



**ELECTRICAL SPECIFICATIONS**

| Input                        |                      |
|------------------------------|----------------------|
| Input range:                 | 36 - 75 VDC          |
| Efficiency <sup>2</sup> :    | 95.6%                |
| Output                       |                      |
| Voltage tolerance:           | +/-1%                |
| Line regulation:             | ±0.33%               |
| Load regulation:             | ±0.2%                |
| Noise/ripple:                | 200 mV               |
| Over voltage protection:     | Hiccup: Auto-restart |
| Over temperature protection: | Auto-restart         |
| Switching frequency:         | 140 kHz              |
| Temperature coefficient:     | ±0.02/°C             |
| Isolation                    |                      |
| I/O isolation:               | 1500 VDC min.        |

**ENVIRONMENTAL SPECIFICATIONS**

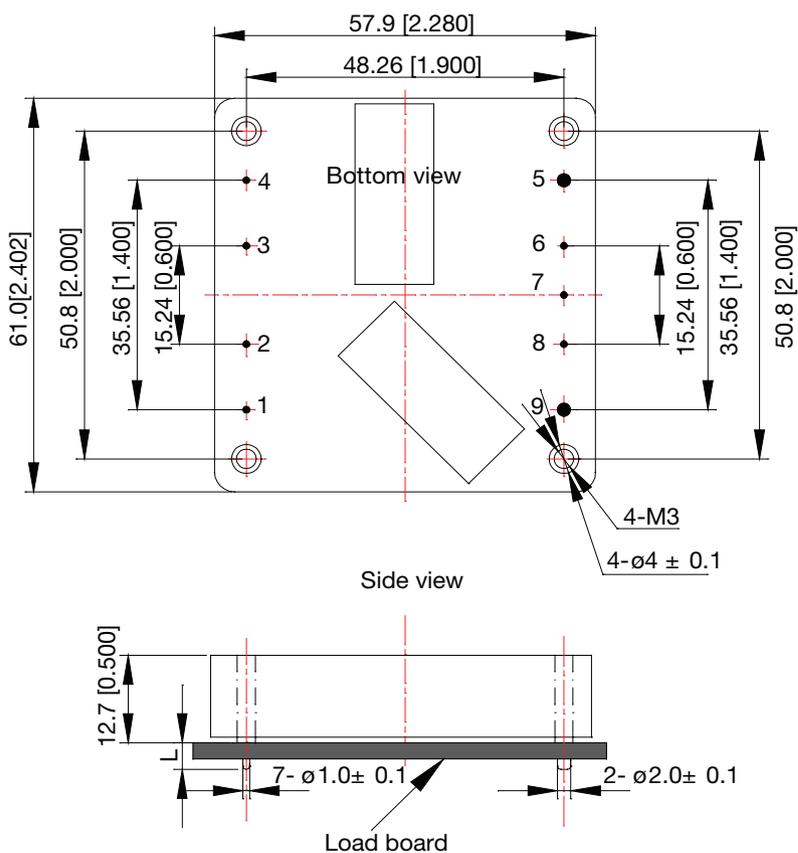
|                                      |                            |
|--------------------------------------|----------------------------|
| Operating ambient temperature range: | -40 °C to +85 °C           |
| Storage temperature:                 | -55 °C to +125 °C          |
| Humidity:                            | 5% to 95% (non-condensing) |
| MTBF:                                | 1.5 Million hours          |
| RoHS Compliant                       |                            |

ORDERING INFORMATION

| Model number     | Input voltage | Output voltage | Power |
|------------------|---------------|----------------|-------|
| AVE600-48S12B-4L | 36 - 75 Vin   | 12 V @ 50 A    | 600 W |

- Standard version is negative enable
- "-L" = Rohs6 compliance
- "-4" = 4.8mm pin length
- "-B" = Baseplate

MECHANICAL DRAWINGS



Unit: mm[inch] Bottom view: pin on upside

Tolerance: X.Xmm ± 0.5mm[X.X in. ± 0.02in.]

X.XXmm ± 0.25mm[X.XX in. ± 0.01in.]

Base plate

**PIN LENGTH OPTION**

| Device code suffix | L             |
|--------------------|---------------|
| -4                 | 4.8mm ± 0.5mm |
| -6                 | 3.8mm ± 0.5mm |
| -8                 | 2.8mm ± 0.5mm |
| None               | 5.8mm ± 0.5mm |

**PIN DESIGNATIONS**

| Pin No. | Name          | Function                   |
|---------|---------------|----------------------------|
| 1       | $V_{in+}$     | Positive input terminal    |
| 2       | Remote ON/OFF | ON/OFF control terminal    |
| 3       | Case          | Pin connected to baseplate |
| 4       | $V_{in-}$     | Negative input terminal    |
| 5       | $V_{o-}$      | Negative output terminal   |
| 6       | Sense-        | Negative remote sense      |
| 7       | Trim          | Output voltage trim        |
| 8       | Sense+        | Positive remote sense      |
| 9       | $V_{o+}$      | Positive output terminal   |

Notes:

1. All specifications are subject to change without notice. Mechanical drawings are for reference only.
2. Warranty: 2 years
3. Label and logo appearance may vary from what is shown on mechanical drawings.



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## ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than three decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

Our products enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial, manufacturing, telecommunications, data center computing, and medical. With deep applications know-how and responsive service and support across the globe, we build collaborative partnerships to meet rapid technological developments, propel growth for our customers, and innovate the future of power.

PRECISION | POWER | PERFORMANCE

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