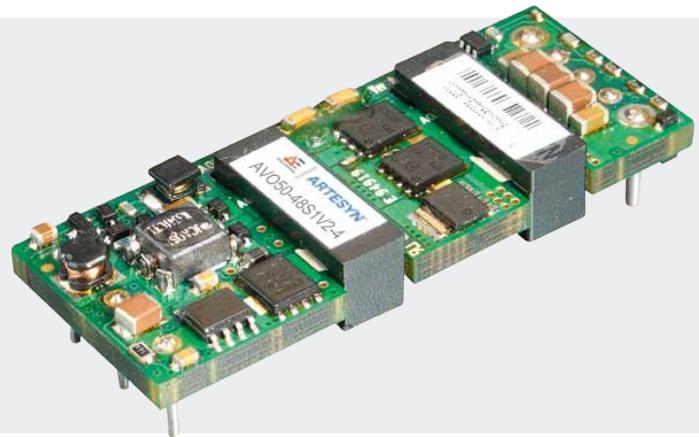


# ARTESYN AVO50 SERIES

50 Watts



Advanced Energy's Artesyn AVO50 series of eighth-brick isolated DC-DC converters comprises seven single output models offering fully regulated voltages of 1.2 V, 1.5 V, 1.8 V, 2.5 V, 3.3 V, 5.0 V or 12.0 V. These converters can deliver up to 20 amps and up to 50 watts, depending on the particular model. They have a wide 2:1 input range of 36 to 75 Vdc and are designed primarily for use with standard 48 V telecommunications equipment supplies.

## DATA SHEET

### Total Power:

50 Watts

### Input Voltage:

36 - 75 Vdc

### # of Outputs:

Single

## SPECIAL FEATURES

- 2:1 Wide input range
- Optimised for High density, small space applications
- Low ripple and noise
- Fixed switching frequency
- High efficiency
- High capacitive load capability
- Basic insulation system
- Pre-bias start-up capability
- Open-frame structure

## SAFETY

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

## ELECTRICAL SPECIFICATIONS

| Input  |   |
|--|---|
| Input range  | 36 - 75 Vdc   |
| Efficiency   | 91% @ 3.3 V, 5 V and 12 V   |
| Output   |   |
| Maximum power  | +/-1% to +/-1.6%  |
| Line regulation                                      | 5 V: 4 mV; 12 V: 9 mV; Others: 1 mV                                     |
| Load regulation                                      | 5 V and 12 V: 5 mV; Others: 1 mV  |
| Noise/ripple   | 1.2 V, 2.5 V, 3.3 V: 50 mV;<br>1.5 V, 5 V, 12 V: 55 mV;<br>1.8 V: 45 mV |
| Overvoltage protection<br>Overtemperature protection | Auto-restart  |
| Switching frequency                                  | 310 KHz   |
| Temperature coefficient                              | ±0.02 / °C  |
| Isolation  |   |
| I/O isolation  | 1500 Vdc min.   |

## ENVIRONMENTAL SPECIFICATIONS

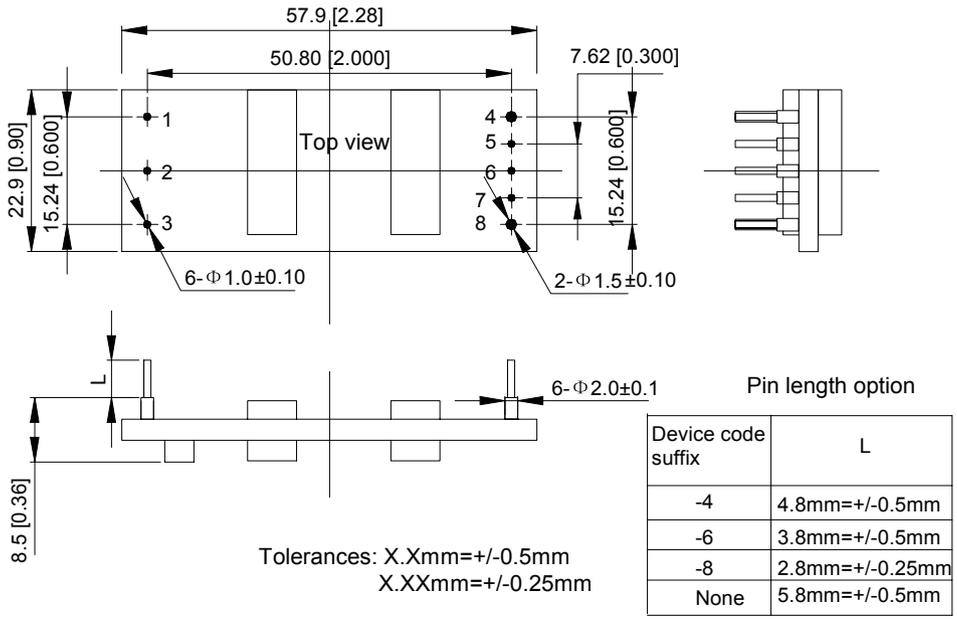
|                                     |                            |
|-------------------------------------|----------------------------|
| Operating ambient temperature range | -40 °C to +85 °C           |
| Storage temperature                 | -55 °C to +125 °C          |
| Humidity                            | 5% to 95% (non-condensing) |
| MTBF                                | 2.5 Million hours          |
| RoHS compliant                      |                            |

## ORDERING INFORMATION

| Model number      | Input voltage | Output voltage | Power  |
|-------------------|---------------|----------------|--------|
| AVO50-48S1V2-4    | 36 - 75 Vin   | 1.2 V @ 20 A   | 24 W   |
| AVO50-48S1V2P-4   | 36 - 75 Vin   | 1.2 V @ 20 A   | 24 W   |
| AVO50-48S1V5-4    | 36 - 75 Vin   | 1.5 V @ 20 A   | 30 W   |
| AVO50-48S1V5P-4   | 36 - 75 Vin   | 1.5 V @ 20 A   | 30 W   |
| AVO50-48S1V8-4    | 36 - 75 Vin   | 1.8 V @ 20 A   | 36 W   |
| AVO50-48S1V8P-4   | 36 - 75 Vin   | 1.8 V @ 20 A   | 36 W   |
| AVO50-48S2V5-4    | 36 - 75 Vin   | 2.5 V @ 20 A   | 50 W   |
| AVO50-48S2V5P-4   | 36 - 75 Vin   | 2.5 V @ 20 A   | 50 W   |
| AVO50C-48S3V3-6L  | 36 - 75 Vin   | 3.3 V @ 15 A   | 49.5 W |
| AVO50C-48S3V3P-6L | 36 - 75 Vin   | 3.3 V @ 15 A   | 49.5 W |
| AVO50-48S05-4     | 36 - 75 Vin   | 5 V @ 10 A     | 50 W   |
| AVO50-48S12-6L    | 36 - 75 Vin   | 12 V @ 4.2 A   | 50 W   |
| AVO50-48S12P-4    | 36 - 75 Vin   | 12 V @ 4.2 A   | 50 W   |

Notes:  
 - Standard version is negative enable  
 -6 = 3.8 mm pin length  
 -4 = 4.8 mm pin length  
 P = Positive enable

## MECHANICAL DRAWINGS



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.

## PIN ASSIGNMENTS

| Pin # | Function | Function                |
|-------|----------|-------------------------|
| 1     | +Vin     | Positive input voltage  |
| 2     | CNT      | Remote control          |
| 3     | -Vin     | Negative input voltage  |
| 4     | +Vout    | Positive output voltage |
| 5     | +Sense   | Positive remote sense   |
| 6     | Trim     | Output voltage trim     |
| 7     | -Sense   | Negative remote sense   |
| 8     | -Vout    | Negative output voltage |



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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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