# ARTESYN AVO75 SERIES

75 Watts




Advanced Energy's Artesyn AVO75 series of eighth-brick isolated DC-DC converters comprises six single output models offering fully regulated voltages of 1.2 V, 1.8 V, 2.5 V, 3.3 V, 5.0 V or 12.0 V. These converters can deliver up to 25 amps and up to 75 watts of output power, 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:**

75 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
- High efficiency
- High capacitive load capability
- Basic insulation system
- Pre-bias start-up capability
- Open-frame structure

## SAFETY

- TUV/CE 62368-1
- UL/cUL 60950-1

RoHS 6/6 COMPLIANT

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## ELECTRICAL SPECIFICATIONS

| | |
|---|---|
| **Input** | |
| Input range: | 36 - 75 VDC |
| Efficiency[2]: | 91% @ 12V |
| **Output** | |
| Voltage tolerance: | +/-1.2% to +/-1.6% |
| Line regulation: | 5V: 4mV; 12V: 9mV; Others: 1mV |
| Load regulation: | 5V and 12V: 5mV; Others: 1mV |
| Noise/ripple: | 3.3 Vo: 1.2V, 2.5V, 3.3V: 50mV; 5V,<br>5.0 Vo: 12V: 55mV; 1.8V: 45mV |
| Over voltage protection:<br>Over temperature protection: | Auto-restart |
| Switching frequency: | 310 KHz |
| Temperature coefficient: | ±0.02/°C |
| **Isolation** | |
| I/O isolation | 2000 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 | |

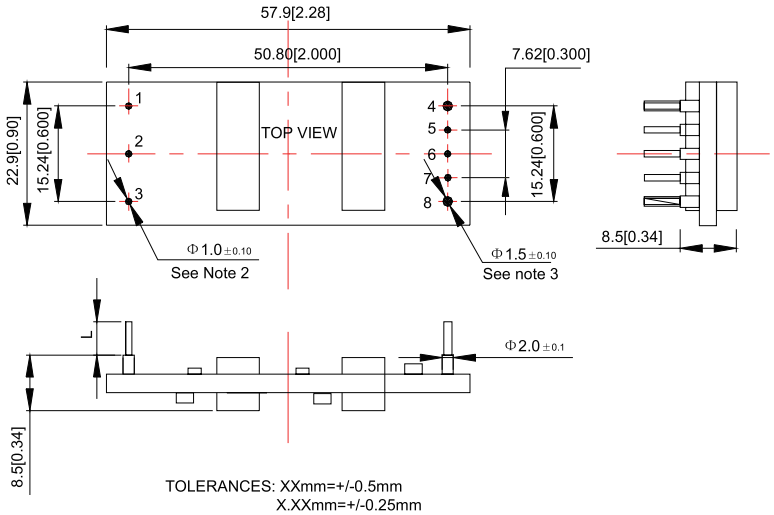
## ORDERING INFORMATION

| Model number | Input voltage | Output voltage | Power |
|---|---|---|---|
| AVO75-48S1V2-4 | 36 - 75 Vin | 1.2V @ 25A | 30W |
| AVO75-48S1V2P-4 | 36 - 75 Vin | 1.2V @ 25A | 30W |
| AVO75-48S1V8-4 | 36 - 75 Vin | 1.8V @ 25A | 45W |
| AVO75-48S1V8P-4 | 36 - 75 Vin | 1.8V @ 25A | 45W |
| AVO75-48S2V5-4 | 36 - 75 Vin | 2.5V @ 25A | 62.5W |
| AVO75-48S2V5P-4 | 36 - 75 Vin | 2.5V @ 25A | 62.5W |
| AVO75-48S3V3-4 | 36 - 75 Vin | 3.3V @ 20A | 66W |
| AVO75-48S05-4 | 36 - 75 Vin | 5V @ 15A | 75W |
| AVO75-48S05-6 | 36 - 75 Vin | 5V @ 15A | 75W |
| AVO75-48S05P-4 | 36 - 75 Vin | 5V @ 15A | 75W |
| AVO75-48S12P-4 | 36 - 75 Vin | 12V @ 6.3A | 75W |

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

## MECHANICAL DRAWINGS

### Top & pin side view



## PIN LENGTH OPTION

| Device Code Suffix | L |
|---|---|
| -4 | 4.8mm+/-0.5mm |
| -6 | 3.8mm+/-0.5mm |
| -8 | 2.8mm+/-0.25mm |
| NONE | 5.8mm+/-0.5mm |

Notes:
1. Un-dimensioned components are for visual reference only.
2. Pins 1~3, 5~7 are 1.0mm diameter with 2.0mm diameter standoff shoulders.
3. Pins 4, 8 are 1.5mm diameter with no standoff shoulders.

## PIN DESIGNATIONS

| Pin No. | Function | Pin No. | Function |
|---|---|---|---|
| 1 | +Vin | 5 | +Sense |
| 2 | CNT | 6 | Trim |
| 3 | -Vin | 7 | -Sense |
| 4 | +Vo | 8 | -Vo |

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.

## 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.

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