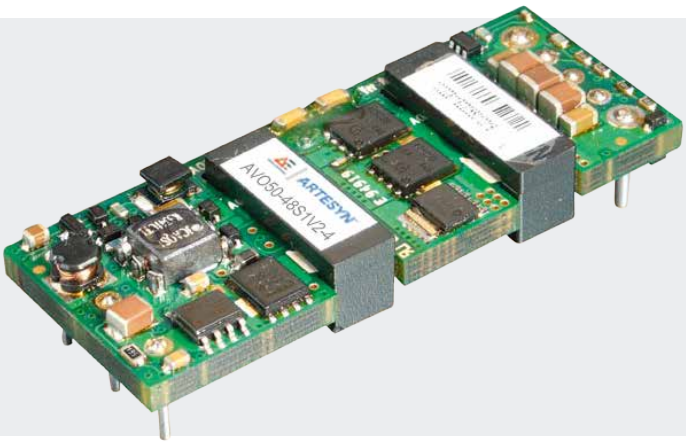
ARTESYN AVO50 SERIES

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

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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; 1.5 V, 5 V, 12 V: 55 mV; 1.8 V: 45 mV
Overvoltage protection Overtemperature protection	Auto-restart
Switching frequency	310 KHz
Temperature coefficient	±0.02 / °C
Isolation	
I/O isolation	1500 Vdc min.

ENVIRONMENTAL SPECIFICATIONS

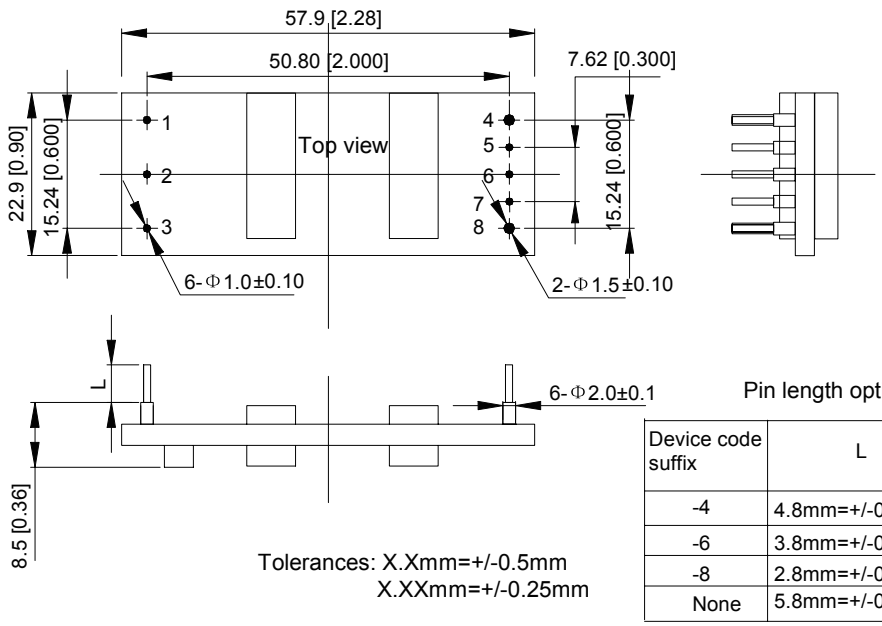
Operating ambient temperature range	-40 °C to +85 °C
Storage temperature	-55 °C to +125 °C
Humidity	5% to 95% (non-condensing)
MTBF	2.5 Million hours
RoHS compliant	

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



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. 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

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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ENG-AVO50-235-01 12.16