ARTESYN AVD85 SERIES

85 Watts 1/16 brick DC/DC Converter



Advanced Energy's Artesyn AVD85 series of sixteenth-brick isolated DC-DC converters comprises three single output models offering fully regulated voltages of 3.3 V, 5.0 V or 12 V, rated at 25 A, 17 A and 7 A respectively. All three converters 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. Rated at 85 watts, they employ an open-frame construction, offer up to 91% full load efficiency and accommodate an ambient operating temperature range of -40 to 85 °C. A baseplate option is available for enhanced thermal performance. The converters use 250 kHz fixed frequency switching to minimize the need for external EMI filtering.

AT A GLANCE

Total Power

85 Watts

Input Voltage

36 to 75 VDC

# of Outputs

Single

RoHS

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
- Pre-bias start-up capability
- Basic insulation system
- Through hole or SMT termination
- Openframe structure with baseplate option
- Output over current protection
- Two-year warranty

SAFETY

- TUV/CE 62368-1
- UL/cUL 60950-1
- CE and UKCA Mark

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ELECTRICAL SPECIFICATIONS

Input	
Input range	36 to 75 Vdc
Efficiency	91.5% @ 3.3 V; 93.5% @ 5 V; 92.5% @ 12 V
Output	
Output voltage	3.3 V, 25 A, 91.5% efficiency 5 V, 17 A, 91% efficiency 12 V, 7 A, 92% efficiency
Output voltage adjust	80% to 110% of Vout Nom
Voltage tolerance	+/-1.5%
Line regulation	0.2%
Load regulation	Single output: 0.5%
Noise/ripple	3.3 Vo: 120 mV
Over voltage protection Over temperature protection	Auto-restart
Switching frequency	250 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 Million hours
RoHS Compliant	3.0

PIN ASSIGNMENTS

Pin #	Function
1	+V in
2	Enable
3	-V in
4	-V out
5	- Sense
6	Trim
7	+Sense
8	+V out

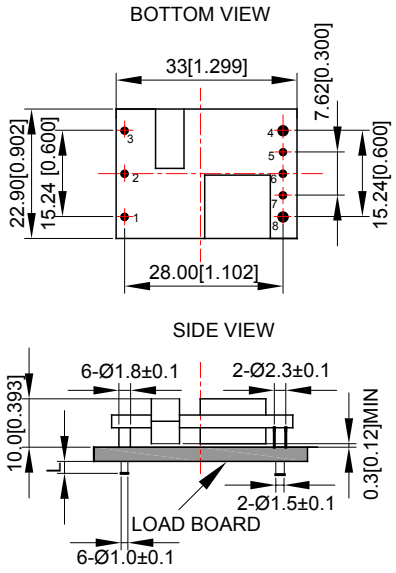
ORDERING INFORMATION

Model number	Input voltage	Output voltage	Power
AVD85-48S3V3-6L	36 to 75 VDC	3.3 V @ 25 A	82.5 W
AVD85-48S3V3TL	36 to 75 VDC	3.3 V @ 25 A	82.5 W
AVD85-48S3V3B-6L	36 to 75 VDC	3.3 V @ 25 A	82.5 W
AVD85-48S05-6L	36 to 75 VDC	5 V @ 17 A	85 W
AVD85-48S05B-6L	36 to 75 VDC	5 V @ 17 A	85 W
AVD85-48S05TL	36 to 75 VDC	5 V @ 17 A	85 W
AVD85-48S12TL	36 to 75 VDC	12 V @ 7 A	84 W
AVD85-48S12-6L	36 to 75 VDC	12 V @ 7 A	84 W
AVD85-48S12B-6L	36 to 75 VDC	12 V @ 7 A	84 W

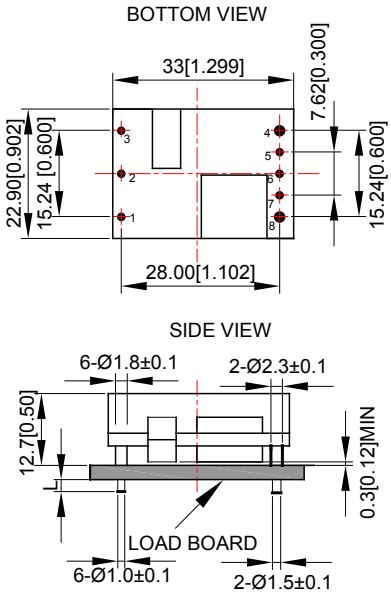
Notes:
Standard version is negative enable
-6 = 3.8 mm pin length
B = Baseplate version
T = Surface mount, reel tape package
L = RoHS 3.0 compliance
P = Positive enable

MECHANICAL DRAWINGS

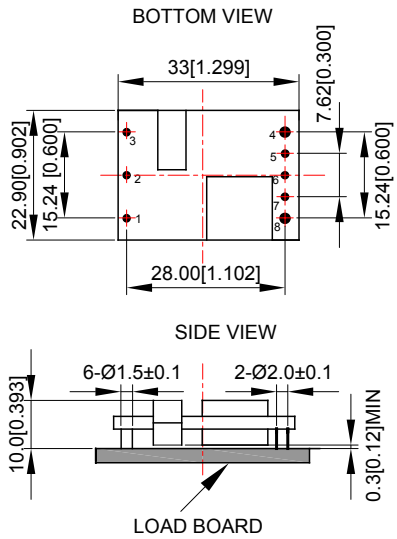
AVD85



AVD85/120-B



TL (Surface Mount)



UNIT: mm[inch]

BOTTOM VIEW: pin on upside

TOLERANCE: X.Xmm±0.5mm[X.XX in.±0.02in.]
X.XXmm±0.25mm[X.XXX in.±0.01in.]

Notes:
1. All specifications are subject to change without notice. Mechanical drawings are for reference only.
2. 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.

PRECISION | POWER | PERFORMANCE

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