ARTESYN AVQ100 WIDE INPUT

100 Watt Quarter Brick DC-DC Converter



Advanced Energy's Artesyn AVQ100-36S3V3 is a single output DC/DC converter with standard quarterbrick outline and pin configuration. It delivers up to 25A output current with 3.3V output voltage.

DATA SHEET

Total Power:

100 Watts
(3V3 @ 25 A)

Input Voltage:

18 - 36 V

# of Outputs:

Single
(3V3 nom)

SPECIAL FEATURES

- 100 W continuous power
- High efficiency: 90 %
- 18-60 Vdc wide range Telecom input range
- Baseplate optimised for contact cooling or heatsink mounting
- Open frame version optimised for aircooling
- Low ripple and noise
- Fixed switching frequency
- High capacitive load capability
- Pre-bias start-up capability
- High reliability
- RoHS 6/6 compliant
- UL94 V-0 materials
- DOSA footprint compliant
- Two year warranty (consult factory for extended terms)

SAFETY

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

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ELECTRICAL SPECIFICATIONS

Input	
Input range	18 - 60 VDC
Input surge	80 V / 100 mSec
Input UVLO	Turn-on: 17.7 Vdc nom Turn-off: 15.1 Vdc nom Hysteresis: 1.6 Vdc
Input currrent maximum	6 Amps
Efficiency (48 Vin, 25 °C ambient)	90% at 3V3 peak efficiency
I/O insulation I/O isolation	Basic insulation 1500 Vdc
Output	
Output voltage	3V3 nominal set point
Output voltage regulation	3V3 ± 1%
Output current maximum	25 A @ 3V3 output voltage
Noise & ripple	40 mV pk-pk max (@ 3V3)
Overtemperature protection	Baseplate: 110 °C baseplate Open frame: 130 °C hotspot
Overvoltage protection Method / OVP operation	4.2 V nominal Auto recovery
Overcurrent protection Method / OCP operation	35 A nominal Auto recovery hiccup mode
Control	
Enable	Positive or Negative option
Output voltage trim range	-20% to +10% Vout
Switching frequency	300 KHz

ENVIRONMENTAL SPECIFICATIONS

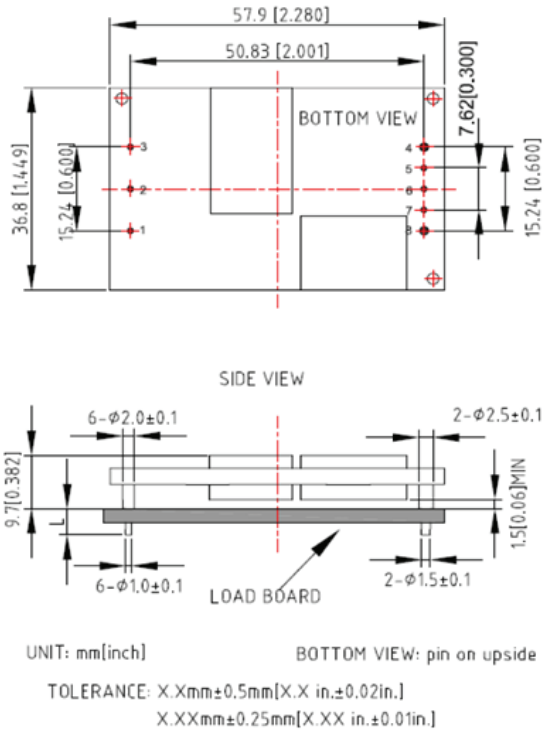
Storage temperature	-40 °C to +105 °C
Ambient temperature	-40 °C to +85 °C
Baseplate operating temperature	-40 °C to +100 °C (no power derating)
MTBF	1 million hours target

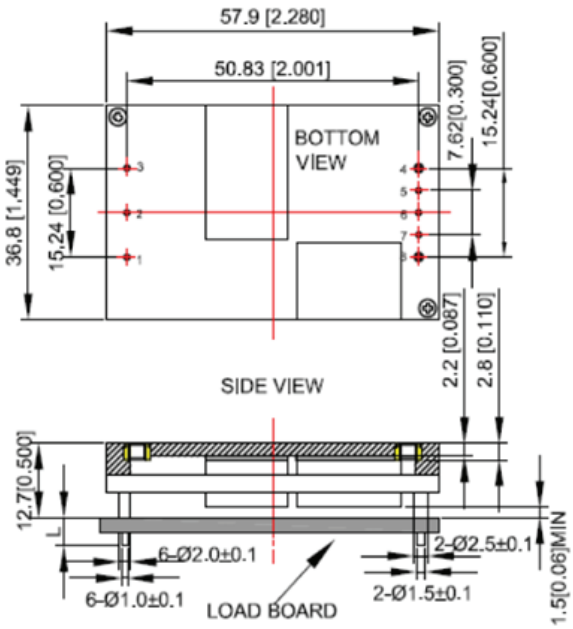
ORDERING INFORMATION

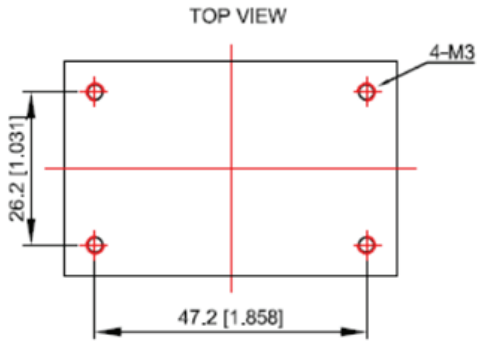
Model number	Input voltage	Output voltage set-point	Output Current	Efficiency
AVQ100-36S3V3-6L	18 - 60 Vdc	3V3 dc	25 A max	90% full load
AVQ100-36S3V3B-6L	18 - 60 Vdc	3V3 dc	25 A max	90% full load

"-6" = 3.8 mm pin length
"-L" = RoHS 6/6 compliant

MECHANICAL DRAWINGS







PIN LENGTH OPTION

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

PIN ASSIGNMENTS

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

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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