

AVQ100 Wide Input

100 Watt Quarter Brick DC-DC Converter

Data Sheet

Total Power: 100 Watts
(3V3 @ 25 A)
Input Voltage: 18 - 60 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

- EN60950
- CSA
- CE
- UL

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 current maximum	6 Amps
Efficiency (48 Vin, 25 °C ambient)	90% at 3V3 peak efficiency
I/O insulation	Basic insulation
I/O isolation	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

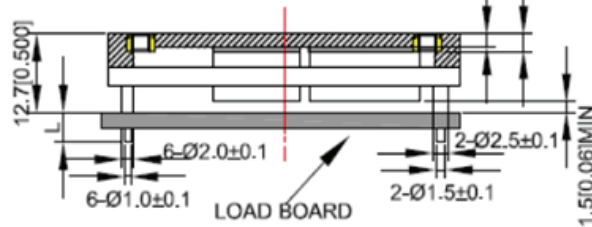
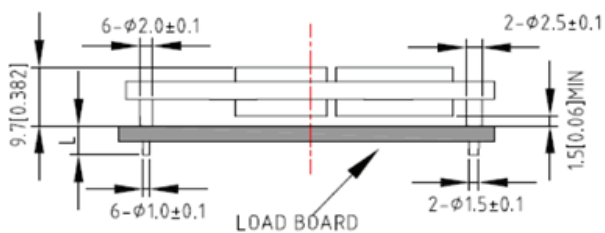
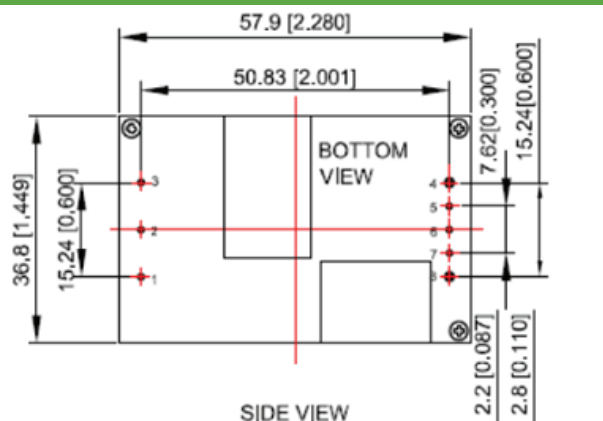
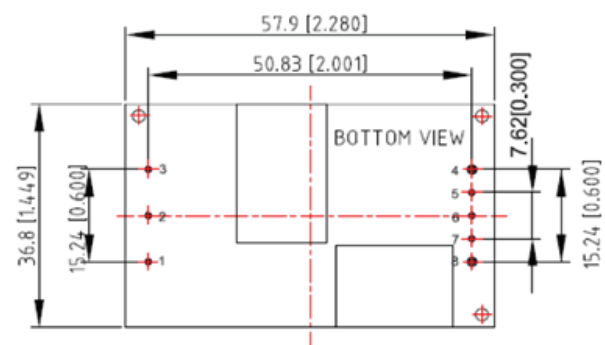
Ordering Information

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



UNIT: mm[inch]

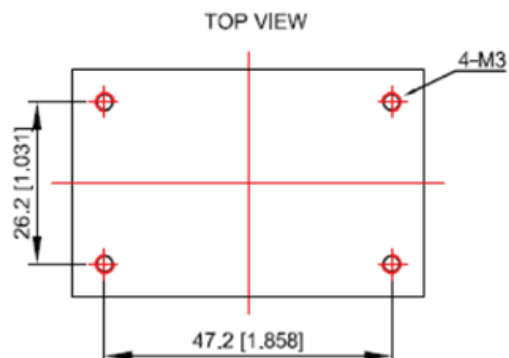
BOTTOM VIEW: pin on upside

TOLERANCE: X.Xmm±0.5mm[X.X in.±0.02in.]

X.XXmm±0.25mm[X.XX in.±0.01in.]

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.

WORLDWIDE OFFICES

Americas

2900 S.Diablo Way
 Tempe, AZ 85282
 USA
 +1 888 412 7832

Europe (UK)

Waterfront Business Park
 Merry Hill, Dudley
 West Midlands, DY5 1LX
 United Kingdom
 +44 (0) 1384 842 211

Asia (HK)

14/F, Lu Plaza
 2 Wing Yip Street
 Kwun Tong, Kowloon
 Hong Kong
 +852 2176 3333



www.artesyn.com

Artesyn Embedded Technologies, Artesyn and the Artesyn Embedded Technologies logo are trademarks and service marks of Artesyn Embedded Technologies, Inc. All other names and logos referred to are trade names, trademarks, or registered trademarks of their respective owners. © 2015 Artesyn Embedded Technologies, Inc. All rights reserved. For full legal terms and conditions, please visit www.artesyn.com/legal.

For more information: www.artesyn.com/power
 For support: productsupport.ep@artesyn.com