

ADQ600 Series

10 Volt, 600 Watt 1/4 Brick DC-DC Converter

Data Sheet

Total Power: 600 Watts
Input Voltage: 45 - 56 V
of Outputs: Single

SPECIAL FEATURES

- 625 W continuous power
- Ultra high efficiency 97% @ 80% load
- 45-56 Vdc Datacomm input range
- Baseplate for contact cooling or heatsink mounting
- Excellent thermal performance
- Parallel and Droop current sharing
- Remote output sense
- Fully regulated output voltage
- No minimum load requirement
- Remote control function
- Low ripple and noise
- Fixed switching frequency
- High capacitive load capability
- Pre-bias start-up capability
- Excellent thermal performance
- High reliability
- RoHS compliant
- UL94 V-0 materials
- Two year warranty (Consult factory for extended terms)

SAFETY

- EN60950
- CSA
- CE
- UL



Electrical Specifications

Input	
Input voltage	45 - 56 Vdc
Input surge	80 V / 100 mSec
Input UVLO	Turn-on: 45 Vdc typical Turn-off: 42.5 Vdc typical Hysteresis: 2 Vdc typical
Efficiency (48 Vin, 25 °C ambient)	96.9% @ 100% load 97% @ 80% load
I/O insulation	Functional insulation
I/O isolation	750 Vdc
Output	
Output voltage (Vin = 48 V)	10.1 V
Output current maximum	63 A
Noise & ripple	150 mV pk-pk typical
Overtemperature protection	140 °C
Overvoltage protection method / OVP operation	12 - 14 V window / Hiccup auto restart
Overcurrent protection method / OCP operation	69.3 - 88 A window / Hiccup and auto restart
Control	
Enable	TTL compatible (negative logic)
Switching frequency	160 KHz fixed frequency
Prebias startup	0% Vout - 100% Vout full load
Parallel connection & droop share	Droop share

Environmental Specifications

Operating ambient temperature range	-20 °C to +90 °C
Storage temperature	-55 °C to +125 °C
Humidity	5% to 95% (non-condensing)
MTBF	2 Million hours
RoHS Compliant	RoHS 6

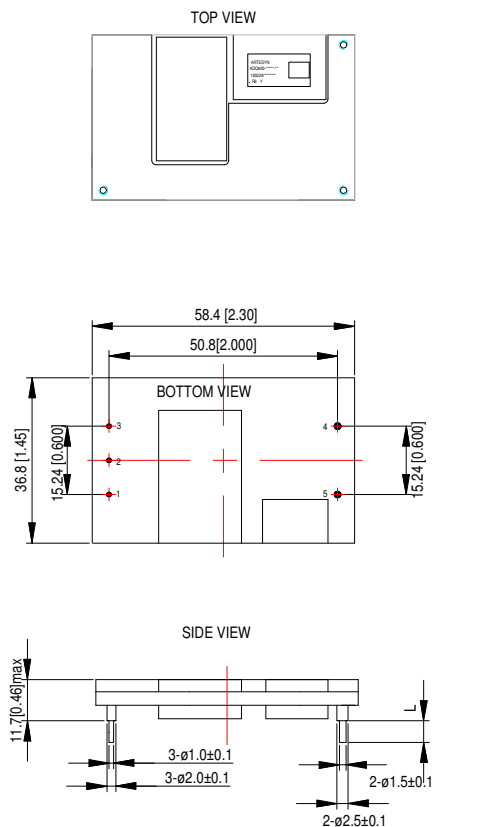
Ordering Information

Model number	Input voltage	Output voltage	Efficiency
ADQ600-48S10-4L	45 - 56 V	10.1 V @ 63 A	97% (80% load)
ADQ600-48S10B-4L	45 - 56 V	10.1 V @ 63 A	97% (80% load)

- “-4” = 4.6 mm ± 0.25 mm pin length
- “-6” = 3.8 mm ± 0.25 mm pin length
- “-8” = 2.8 mm ± 0.25 mm pin length
- None = 5.8 mm ± 0.25 mm pin length
- “-L” = RoHS 6 compliance
- “B” = Baseplate

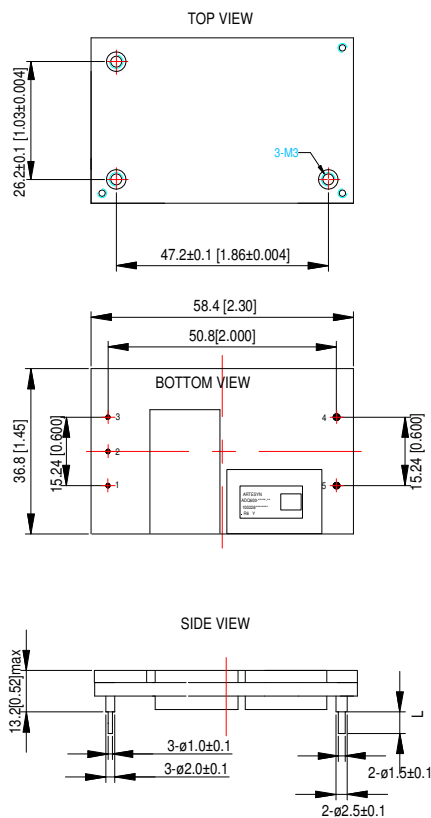
Mechanical Drawings

ADQ600-48S10-4L



UNIT: mm[inch] BOTTOM VIEW: pin on upside L=4.60mm
 TOLERANCE: X.Xmm±0.5mm[X.XX in.±0.02in.]
 X.XXmm±0.25mm[X.XXX in.±0.01in.]

ADQ600-48S10B-4L



UNIT: mm[inch] BOTTOM VIEW: pin on upside L=4.60mm
 TOLERANCE: X.Xmm±0.5mm[X.XX in.±0.02in.]
 X.XXmm±0.25mm[X.XXX in.±0.01in.]

Pin Assignments

Pin #	Function
1	+Vin
2	Remote On/Off
3	-Vin
4	-Vout
5	+Vout

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.

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