

ADO500 Series

500 - 550 Watt 1/8 Brick DC-DC Converter

Data Sheet

Total Power: 500 & 550 Watt
(10.1 V @ 50/55 A)
Input Voltage: 45 - 56 Vdc
Single Output: 10.1 V full load



SPECIAL FEATURES

- 550 W continuous power (baseplate version)
- Ultra high efficiency: 96.5% @ 70% 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
- Power Good (PG) feature
- No minimum load requirement
- Remote control function
- Low ripple and noise
- Fixed switching frequency
- High capacitive load capability
- Pre-bias startup capability
- Excellent thermal performance
- High reliability
- RoHS 6 compliant
- UL94 V-0 materials
- Two-year warranty (consult factory for extended terms)

SAFETY

- EN60950; CSA; CE; UL

Electrical Specifications

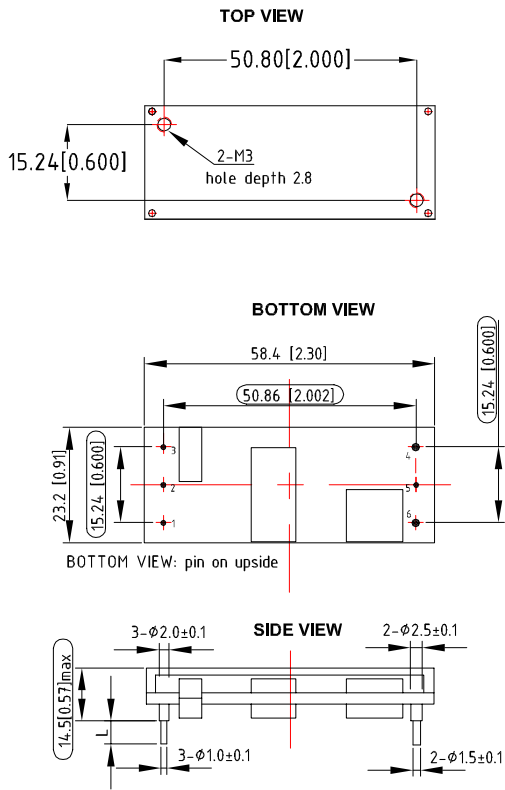
Input	
Input voltage	45 - 56 Vdc
Input surge	80 V / 100 mSec
Input UVLO	Turn-on: 41 Vdc typical Turn-off: 40 Vdc typical Hysteresis: 2 Vdc typical
I/O insulation	Functional insulation
I/O isolation	800 Vdc
Output	
Output voltage (Vin = 48 V)	10.26 V half load set point
Output current maximum	50 A for openframe version 55 A for baseplate version
Noise/ripple	150 mV pk-pk typical
Overtemperature protection	125 °C
Overvoltage protection method / OVP operation	11.8 - 15 V window / Hiccup auto restart
Overcurrent protection voltage method / OCP operation	55 - 72 A window / Hiccup and auto restart
Control	
Enable	TTL compatible (negative logic)
Switching frequency	185 KHz fixed frequency
Pre-bias start-up	0% Vout - 100% Vout full load
Parallel connection & droop share	Droop share

Ordering Information

Model number	Input voltage	Output voltage set point	Output current	Efficiency
ADO500-48S10-4L	45 - 56 Vdc	10.1 Vdc	50 A	96.5% (70% load)
ADO550-48S10B-4L	45 - 56 Vdc	10.1 Vdc	55 A	96.5% (70% load)

Default negative logic
 "B" = Baseplate
 "-4" = 4.6 mm pin length

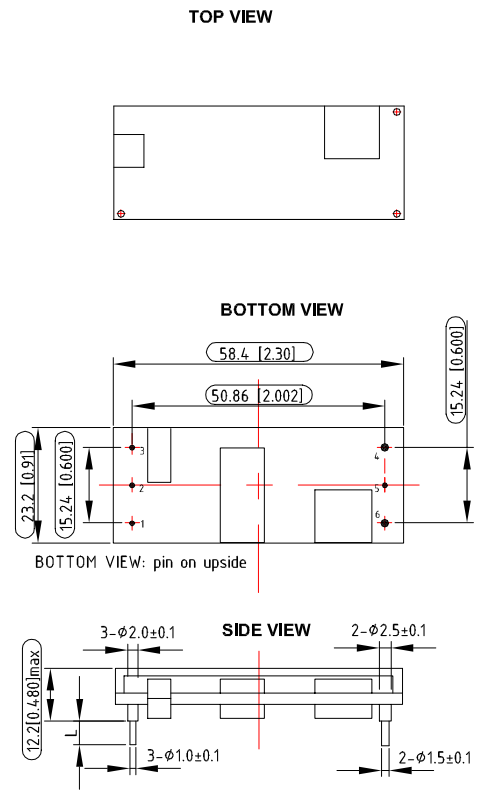
Mechanical Drawing - with Baseplate



UNIT: mm[inch] L=4.8 \pm 0.25mm
 TOLERANCE: X.Xmm \pm 0.5mm[X.XX in \pm 0.02in.]
 X.XXmm \pm 0.25mm[X.XXX in \pm 0.01in.]

Notes: Dimensions within the box are critical dimensions.

Mechanical Drawing - Open Frame



UNIT: mm[inch] L=4.8 \pm 0.25mm
 TOLERANCE: X.Xmm \pm 0.5mm[X.XX in \pm 0.02in.]
 X.XXmm \pm 0.25mm[X.XXX in \pm 0.01in.]

Notes: Dimensions within the box are critical dimensions.

Pin Assignments

Pin #	Name	Function
1	+Vin	Positive input voltage
2	Remote On/Off	Remote control (Enable)
3	-Vin	Negative input voltage
4	-Vo	Negative output voltage
5	PG	Power Good
6	+Vo	Positive output voltage


Pin Length Options

Device code suffix	Pin Length
-4	4.6 mm ± 0.25 mm
-6	3.8 mm ± 0.25 mm
-8	2.8 mm ± 0.25 mm
None	5.8 mm ± 0.25 mm

Environmental Specifications

Operating temperature	-20 °C to +85 °C
Storage temperature	-40 °C to +125 °C
MTBF	2 million hours

Intellectual Property

Patent reference	www.artesyn.com/ep-patents
QR code	 <p>Patented artesyn.com/IP</p>

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