ARTESYN ADO500 SERIES

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



ADO500/550 series eighth-brick isolated DC-DC converters produce a single fully regulated 10 V output. Rated at 500/550 watts, these converters can deliver up to 55 amps output current and have no minimum load requirement. They have an input voltage range of 45 to 56 V and are primarily designed for use with standard 48 V supplies in computing and server applications, as well as regulated 48V supplies in communications equipment.

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

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

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ELECTRICAL SPECIFICATIONS

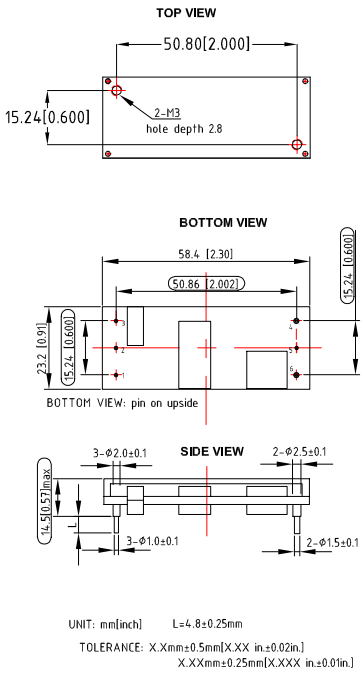
Input	
Input voltage	45 - 56 Vdc
Input surge	80 V / 100 mSec
Input UVLO	Turn-on: 41 Vdc typical Turn-off: 40 Vdc typical Hysteresis: 2 Vdc typical
I/O insulation	Functional insulation
I/O isolation	800 Vdc
Output	
Output voltage (Vin = 48 V)	10.26 V half load set point
Output current maximum	50 A for 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)

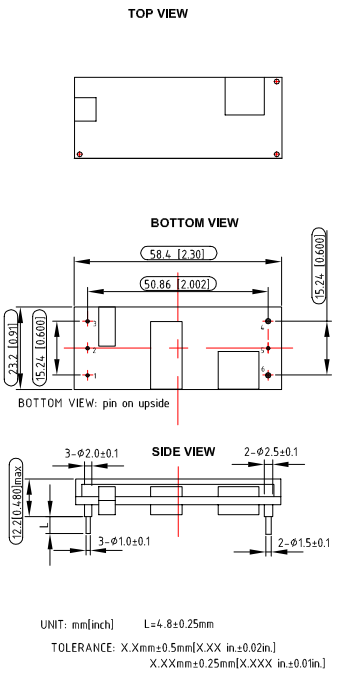
Default negative logic
"B" = Baseplate
"-4" = 4.6 mm pin length

MECHANICAL DRAWING - WITH BASEPLATE



Notes: Dimensions whitin the box are critical dimensions.

MECHANICAL DRAWING - OPEN FRAME



Notes: Dimensions whitin the box are critical dimensions.

PIN ASSIGNMENTS

Pin #	Name	Funtion
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

ENVIRONMENTAL SPECIFICATIONS

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

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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