

# AA10B

10 Watts

## AA10B Series

Total Power	10 Watts
Input Voltages	12V, 24V or 48V
# of Outputs	Single, Dual



## SPECIAL FEATURES

- Six-sided shielding
- 2:1 $\Delta$ /4:1 input ranges
- Telecom model (-048L models) feature thermal shutdown and overvoltage lockout to meet ETS 300 132-2 par. 4.6
- Small size 2.0" x 1.0" x 0.40"
- Meets EN55022A for conducted noise
- 5 year warranty
- Optional TTL enable feature

## ENVIRONMENTAL

Operating ambient temperature range:  
-40°C to +80°C (no derating)

Storage Temperature: -55°C to +105°C

Baseplate: 105°C Max

Humidity: 5% to 95% (Non-condensing)

EMI RFI Shielding: Six sided

MTBF: 398,000 hours (MIL HDBK-217) Bellcore  
>1.8 Mil hours. See notes.

## SAFETY

**UL** UL 1950 Recognized  
**CSA** CSA22.2-950 Certified  
**TUV** EN60950 Certified

## ELECTRICAL SPECIFICATIONS

### Input

Input range	9 to 36 VDC; 18 to 75 VDC; 36 to 75 VDC
Input capacitance	046L/048L Models 1.5uF typ 012L Models 2.7uF typ
Input reflected ripple (P-P)	<5MA
Input surge voltage	100V for 100mS: 046L/048L models 50V for 100mS: 012L model
Efficiency	83% typ
No load input power	350mW typ

### Control

Enable	on = 2.5 to 5.5Vdc or open circuit off = 0 to 0.8Vdc Ref. to -Vin. TTL compatible
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### Output

Voltage tolerance	$\pm 1\%$ (main) $\pm 2\%$ (aux)
Line regulation	$\pm 0.5\%$ max.
Load regulation	$\pm 1.0\%$ max. (10% load to FL) $\pm 1.0\%$ max. aux. (10% load to FL) (load regulation (duals) assumes a balanced load)
Noise/ripple	0.5% p-p typ (See Note 1)
Short circuit protection	Continuous Power Cycle
Over voltage protection	Zener clamp all outputs
Transient response	1.0 mS typical ; 50% step load change to within 1% Vout
Temperature coefficient	+0.02% °C max.
Switching frequency	375kHz (fixed, typ)

### Isolation

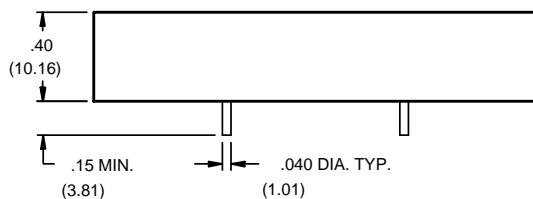
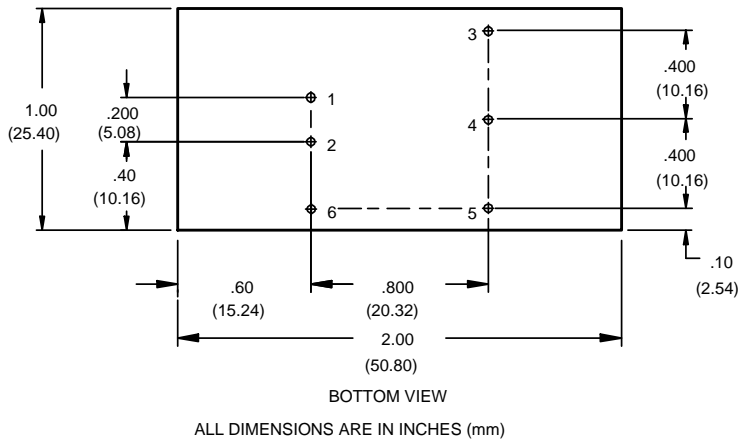
I/O isolation	1500 VDC
Isolation resistance	$1 \times 10^9$ (ohms)
Isolation capacitance	250pF (Max)

## ORDERING INFORMATION

Input Voltage	Output 1 Voltage	Output 2 Voltage	Maximum Power	Model Number
9-36V	3.3V @ 2.42A		8W	AA10B-012L-033S
9-36V	5V @ 2A		10W	AA10B-012L-050S
9-36V	12V @ 0.830A		10W	AA10B-012L-120S
9-36V	15V @ 0.670A		10W	AA10B-012L-150S
9-36V	5V @ 0.750A	-5V @ 0.750A	7.5	AA10B-012L-050D
9-36V	12V @ 0.375A	-12V @ 0.375A	9W	AA10B-012L-120D
9-36V	15V @ 0.300A	-15V @ 0.300A	9W	AA10B-012L-150D
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18-75V	3.3V @ 2.42A		8W	AA10B-046L-033S
18-75V	5V @ 2A		10W	AA10B-046L-050S
18-75V	12V @ 0.830A		10W	AA10B-046L-120S
18-75V	15V @ 0.670A		10W	AA10B-046L-150S
18-75V	5V @ 0.750A	-5V @ 0.750A	7.5W	AA10B-046L-050D
18-75V	12V @ 0.375A	-12V @ 0.375A	9W	AA10B-046L-120D
18-75V	15V @ 0.300A	-15V @ 0.300A	9W	AA10B-046L-150D
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36-75V	1.5V @ 3A		4.5W	AA10B-048L-015S <b>NEW</b>
36-75V	2.1V @ 3A		6W	AA10B-048L-021S
36-75V	3.3V @ 2.42A		8W	AA10B-048L-033S
36-75V	5V @ 2A		10W	AA10B-048L-050S
36-75V	12V @ 0.830A		10W	AA10B-048L-120S
36-75V	15V @ 0.670A		10W	AA10B-048L-150S
36-75V	5V @ 0.750A	-5V @ 0.750A	7.5W	AA10B-048L-050D
36-75V	12V @ 0.375A	-12V @ 0.375A	9W	AA10B-048L-120D
36-75V	15V @ 0.300A	-15V @ 0.300A	9W	AA10B-048L-150D

\*For remote enable option, add suffix "E" to the part number. For example: AA10B-048L-050SE= 48V in, 5V out with remote enable. Please contact Astec for information on other output voltages, power ranges and configurations.

## DIMENSIONS



Case Material: Metal  
Weight: 1.4 oz/40 grams

## PIN ASSIGNMENTS

### Single Output

1. +Vin (Case GND -48/-46 models)
2. -Vin (Case GND -12 models)
3. Output 1
4. No pin
5. COMM
6. Enable (E models only)

### Dual Output

1. +Vin (Case GND -48/-46 models)
2. -Vin (Case GND -12 models)
3. Output 1
4. Common
5. Output 2
6. Enable (E models only)

## NOTES

1. 20 MHz bandwidth. An external 0.1 uf ceramic capacitor is recommended to be placed from +V out to comm.
2. Meets EN55022 Class A (-150S/D require 2.2uf input capacitor). Consult factory for filter recommendations to meet FCC class B, VDE or EIC specifications.
3. All specifications are typical at nominal line, full load, and 25°C unless otherwise noted.
4. All specifications subject to change without notice.
5. Mechanical drawings are for reference only.
6. Calculated per MIL HDBK 217F, Ground benign at 25°C, full load. BELLCORE calculated per TR-NWT-000332 method 1 parts count, Case 1.