

AA10U

10 Watts

AA10U Series

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



SPECIAL FEATURES

- Unencapsulated
- Wide 4:1 input range
- 5 year warranty
- 1.0" x 2.0" x 0.38" case
- Meets EN55022A for conducted noise

ENVIRONMENTAL

Operating ambient temperature range:
-40°C to +75°C (no derating)

Baseplate: 105°C Max.

Storage Temperature: -55°C to +125°C

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

EMI/RFI Shielding: Five-Sided

MTBF: 361,000 hours (MIL-HDBK-217)

SAFETY

UL	UL 1950 Recognized CAN22.2-950 Recognized
TUV	EN60950 Certified

NOTES:

In order to comply with safety regulations, it is recommended that a fuse of the following rating be fitted at the module's input.

ELECTRICAL SPECIFICATIONS

Input

Input range 9 to 36 VDC; 18 to 75 VDC

Input capacitance	48 models	1.5uF typical
	24 models	2.7uF typical

No load input power 150mW typical

Input reflected ripple (P-P)	48 Models	4mA
	24 Models	10mA see Note 2

Efficiency 82% (typ)

Output

Voltage tolerance $\pm 1.0\%$ (main); $\pm 2.0\%$ (aux)
(factory set-point)

Line regulation $\pm 0.5\%$ max (main); $\pm 0.5\%$ (aux)

Load regulation $\pm 0.5\%$ (10% load to full load (singles))
 $\pm 1.0\%$ (10% load to full load (duals))

Noise/ripple 1% p-p (See Note 1)

Short circuit protection Continuous Power Cycle

Overvoltage protection Zener clamp

Transient response 1mS 50% Step load change to
within 1% Vout

Switching frequency All models 380kHz except
150S & 150D Models 300kHz (typ.)

Temperature coefficient $\pm 0.02\%/^{\circ}\text{C}$ max.

Isolation

I/O isolation 1500 VDC min

Insulation resistance 50 M ohm

Insulation capacitance 220pF

Fuse024 - 2.25A/250V
048 - 1A/250V

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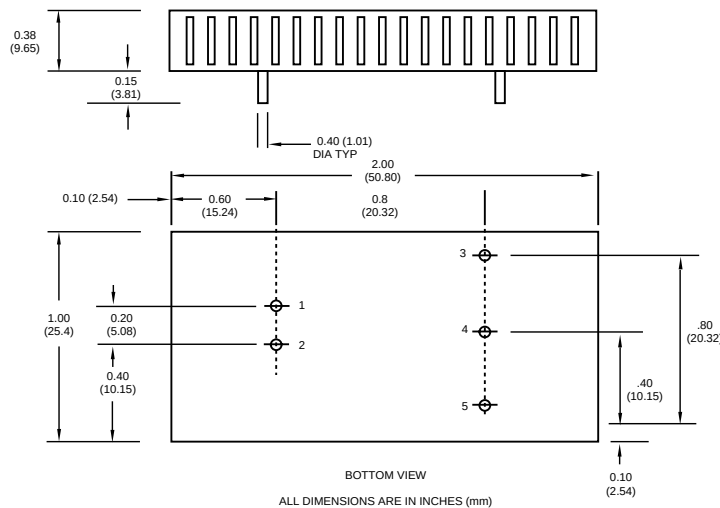
DCDC
POWER

ORDERING INFORMATION

Input Voltage	Output 1 Voltage	Output 2 Voltage	Maximum Power	Model Number
9-36V	3.3V @ 2.42A		8W	AA10U-024L-033S
9-36V	5V @ 2.00A		10W	AA10U-024L-050S
9-36V	12V @ 0.830A		10W	AA10U-024L-120S
9-36V	15V @ 0.670A		10W	AA10U-024L-150S
9-36V	5V @ .750A	-5V @ .750A	7.5W	AA10U-024L-050D
9-36V	12V @ .375A	-12V @ 0.375A	9W	AA10U-024L-120D
9-36V	15V @ .300A	-15V @ 0.300A	9W	AA10U-024L-150D
18-75V	3.3V @ 2.42A		8W	AA10U-048L-033S
18-75V	5V @ 2.00A		10W	AA10U-048L-050S
18-75V	12V @ 0.830A		10W	AA10U-048L-120S
18-75V	15V @ .670A		10W	AA10U-048L-150S
18-75V	5V @ .750A	-5V @ 0.750A	7.5W	AA10U-048L-050D
18-75V	12V @ 0.375A	-12V @ 0.375A	9W	AA10U-048L-120D
18-75V	15V @ 0.300A	-15V @ 0.300A	9W	AA10U-048L-150D

Please contact Astec for information on other output voltages, power ranges and configurations.

DRAWINGS



PIN ASSIGNMENTS

Single Output	Dual Output
1. +Vin	1. +Vin.
2. -Vin	2. -Vin
3. Output 1	3. Output 1
4. No pin	4. COMM
5. COMM	5. Output 2

NOTES

- 20MHz bandwidth. An external 0.1uf ceramic capacitor is recommended to be placed from +V out to -V out.
- Meets FCC class A and ETS300-386-1 requirements for conducted noise. Consult factory for filter recommendations to meet FCC class B, VDE or EIC specifications.
- All specifications are typical at nominal line, full load, and 25°C unless otherwise noted.
- All specifications subject to change without notice. Mechanical drawings are for reference only.
- Calculated per MIL HDBK 217F, Ground Benign at 25°C, full load.

Note: Pins 0.040 in Dia x 0.15 in min

Case material: Anodized aluminum and plastic
Weight: 0.60 oz/17 grams