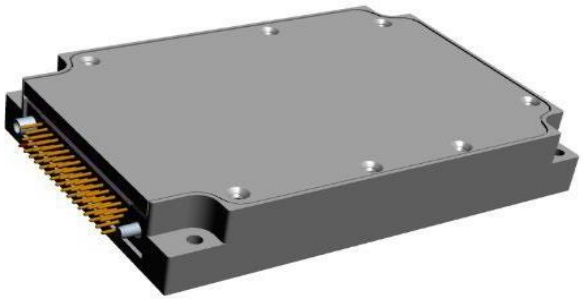
M8108 SERIES

DC/DC POWER SUPPLY



PRODUCT HIGHLIGHTS

- MINIATURE
- HIGH DENSITY
- EIGHT OUTPUTS
- DC/DC CONVERTER
- UP TO 80W

John Tucci • Phone: (607) 563-5388 • Email: jtucci@amphenol-aao.com
• www.amphenol-aerospace.com

Amphenol
MILITARY HIGH SPEED

M8108 SERIES DC/DC POWER SUPPLY

APPLICATIONS

Military, Ruggedized, Telecom, Industrial

SPECIAL FEATURES

- Miniature size
- High efficiency
- Wide input range
- Up to 80W, higher output available – please contact us.
- Input / Output isolation
- Fixed switching frequency (250 kHz)
- EMI/RFI filters included
- Indefinite short circuit protection with auto-recovery
- Input over-voltage shutdown with auto-recovery
- Over temperature shutdown with auto-recovery

ENVIRONMENTAL

Temperature:
Operating: –55°C to +85°C
(cooling surface)
Storage: –55°C to +125°C

RELIABILITY

150,000 hours, calculated per
MIL-STD-217F at +85°C cooling surface,
ground fixed.

* Specifications are subject to change without prior notice by the manufacturer

ELECTRICAL SPECIFICATIONS

DC INPUT

DC Input range:

18 to 48 VDC

Input transient

protection:
All models meet or exceed (no damage) MIL-STD-1275A (100V for 50 mSec) and MIL-STD-704D (80V for 0.1 Sec)

Input over-voltage shutdown with auto-recovery

Efficiency: Up to 80%

Design to meet or exceed MIL-STD-461F (5µH LISN): CE102, CS101, CS114, CS115, CS116

DC OUTPUT (floating)

Line/Load regulation:
Less than ±1% up to ±3%
According to output level voltage
(no load to full load, –55°C to +85°C)

Ripple and Noise:
Typically: less than 50mVp-p (max.1%p).
Measured across a 0.1µF capacitor and 10µF capacitor on load at Input Voltage of 18V-36V, all Temperature Range

Current limiting: Continuous protection for unlimited time

Over temperature protection:
Shutdown at cooling surface temperature of +95°C (±5°C)
Automatic recovery at baseplate temperature lower than +80°C (±5°C)

Isolation:
Over 20 MΩ at test voltage: 200V between Input and Output, 200V between Input and Case, 100V between Output and Case

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OUTPUTS RANGE

Output #	Voltage Range	Current Range	Power Range
1	2 to 5 V_{DC}	0 to 1 A	0 to 2W
2	1 to 5 V_{DC}	0 to 3 A	0 to 15 W
3	1 to 5 V_{DC}	0 to 3 A	0 to 11 W
4	1 to 5 V_{DC}	0 to 3 A	0 to 4 W
5	5 to 15 V_{DC}	0 to 0.7 A	0 to 10.5 W
6	-5 to -15 V_{DC}	0 to 0.7 A	0 to 10.5 W
7	-2 to -5 V_{DC}	0 to 1 A	0 to 5 W
8	5 V_{DC}	0 to 4 A	0 to 20 W
Total			0 to 80 W

PIN ASSIGNMENT

PIN No.	PIN Function
13, 14, 28, 29, 44, 45	+ VIN
15, 16, 30, 31, 46, 47	VIN RTN
7, 17, 23, 33, 34, 35, 36, 37, 38, 39, 40	B_GROUND

PIN No.	PIN Function
1, 2, 18	+5V/3A (out2)
3, 4, 19, 20	+5V/4A (out8)
8, 24, 41	+3.7V/3A (out3)
9, 25, 42	+1.4V/3A (out4)
10	+2.2V/1A (out1)

PIN No.	PIN Function
11	(-)5V/1A (out7)
26	+15V/0.7A (out5)
32	(-)15V/0.7A (out6)
5, 6, 21, 22	A_GROUND

* Note: A_GROUND is the return for the +5V/4A (out8) Output. All other outputs are referenced to B_GROUND

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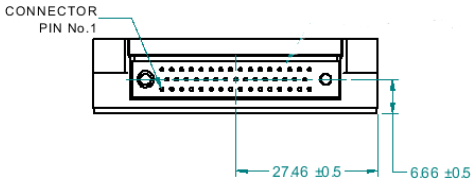
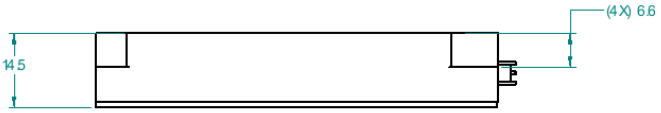
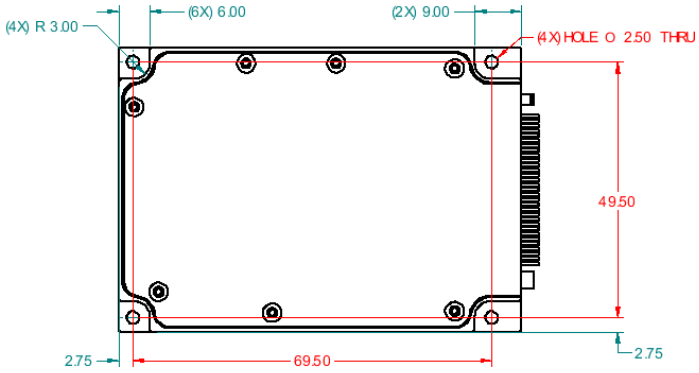
OUTLINE DRAWING







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Notes

1. Dimensions are in millimeters
2. Tolerance is:
   .X ±0.3mm
   .XX ±0.15mm
3. Weight: Approx. 140 gr

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