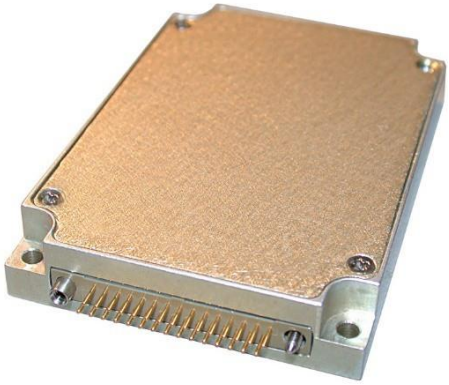
M8149 SERIES

DC/DC POWER SUPPLY



PRODUCT HIGHLIGHTS

- MINIATURE
- HIGH DENSITY
- QUAD OUTPUT
- UP TO 60W

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Amphenol
MILITARY HIGH SPEED

M8149 Series– DC/DC Power Supply

APPLICATIONS

Military, Ruggedized, Telecom, Industrial

SPECIAL FEATURES

- Miniature size
- High efficiency
- Wide input range
- Input / Output isolation
- Fixed switching frequency (250 kHz)
- TTL logic enable
- 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

Meets or exceeds MIL-STD-810D

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

RELIABILITY

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

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

Over-voltage shutdown with auto-recovery

Efficiency: Up to 80%

EMC:
Designed to meet MIL-STD-461F*
CE101, CE102, CS101, CS114, CS115,
CS116, RE101, RE102, RS101, RS103

Isolation:
200V between Input and Output
200V between Input and Case

DC OUTPUT (floating)

Line/Load regulation:
Less than ±2% (no load to full load, –55°C to +85°C)

Ripple and Noise: 50mVp-p, typical (max. 1%)

Current limiting:
Continuous protection for unlimited time

Over voltage protection:
Passive tranzorb on output.

Over temperature protection:
Shutdown at baseplate temperature of +100°C (±5°C)
Automatic recovery at baseplate
temperature lower than +90°C (±5°C)

Isolation:
200V between Output and Input
100V between Output and Case

* EMC compliance achieved when tested with 5 µH LISNs, shielded harness and static resistive load.

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Functions and Signals

INHIBIT
The ***INHIBIT*** signal is used to turn the power supply ON and OFF.
TTL “1”or OPEN – Power supply is ON (For normal operation, leave this pin unconnected.) TTL “0” or SHORT to ***SIGNAL RTN*** – Power supply is OFF.

SYNC
The ***SYNC*** signal is used to allow the power supply's switching frequency to sync with the system clock. The external clock's frequency can be 250 kHz ± 10 kHz.
When this pin is left open (unconnected) the power supply will synchronize to its internal clock, set at 250 kHz ± 10 kHz.

SIGNAL RTN
The ***SIGNAL RTN*** is used as a return path for the ***SYNC*** and ***INHIBIT*** signals. This pin is referenced to ***VIN RTN***.

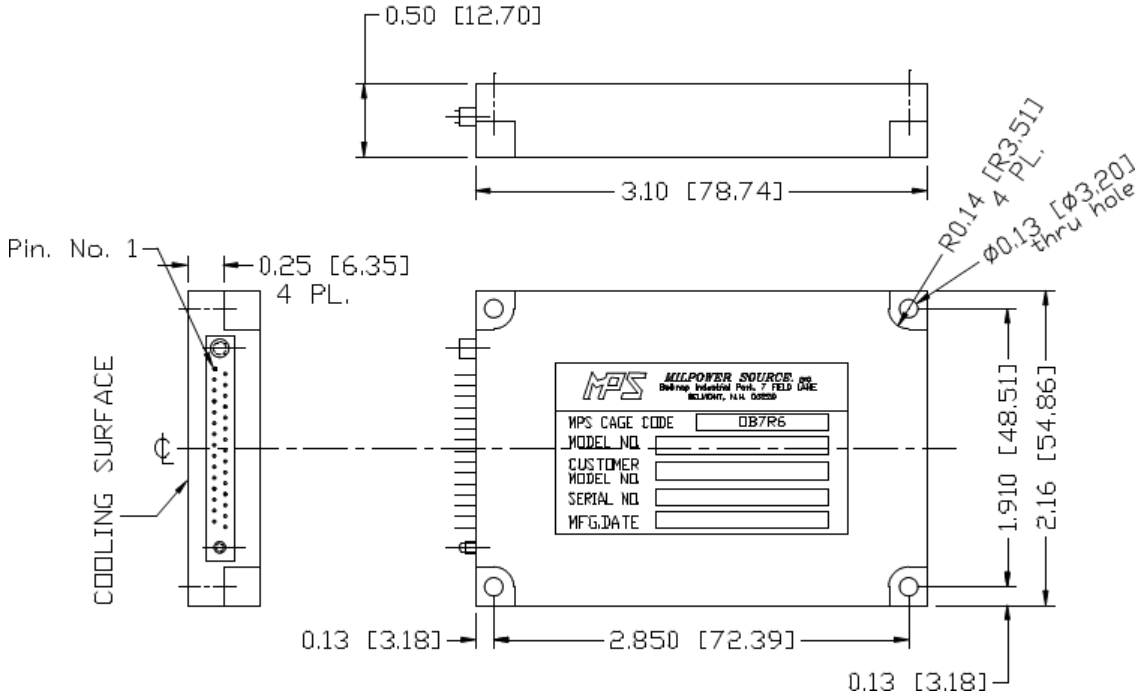
PIN ASSIGNMENT

PIN No.	PIN Function
10, 11, 24, 25, 26	+ VIN
7, 8, 9, 22, 23	VIN RTN
29, 30	+ OUT 1
14, 15	- OUT 1
4, 19	+ OUT 2

PIN No.	PIN Function
3, 18	- OUT 2
12, 27	+ OUT 3
13, 28	- OUT 3
5, 20	+ OUT 4
6, 21	- OUT 4

PIN No.	PIN Function
16	SYN IN
17	SIGNAL RTN
1	INHIBIT
2	CHASSIS

OUTLINE DRAWING



Connector Type: RM272-030-312-2900 or Eq.

Notes

1. Dimensions are in Inches [mm]
2. Tolerance is:
   .XX ± 0.01IN
   .XXX ± 0.005 IN
3. Weight: Approx. 3.5 oz (100 g.)

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