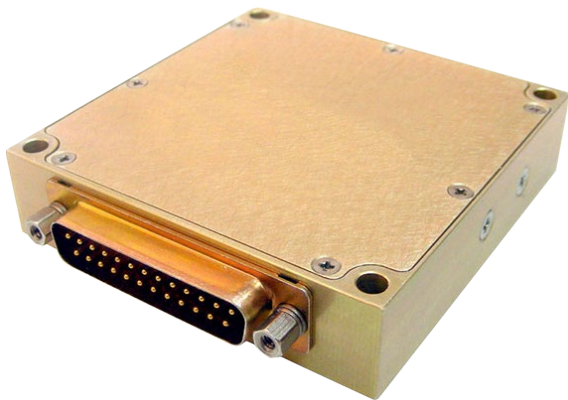


M712 SERIES

DC/DC POWER SUPPLY



PRODUCT HIGHLIGHTS

- MINIATURE, HIGH DENSITY
- DUAL OUTPUT
- UP TO 60 W
- DC/DC POWER SUPPLY



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Applications

Military, Ruggedized, Telecom, Industrial Power Supply

Special Features

- Miniature size
- High efficiency
- Wide input range
- Up to 9.9 W/in³
- Input / Output isolation
- Fixed switching frequency (250 kHz)
- TTL logic enable
- EMI filters included
- Indefinite short-circuit protection with auto-recovery
- Input over-voltage shutdown with auto-recovery
- Over-temperature shutdown with auto-recovery

Environmental Conditions

Designed to meet MIL-STD-810D

Temperature:

Operating: -55 °C to +85 °C (at baseplate)

Storage: -55 °C to +125 °C

Reliability

150,000 hours, calculated IAW MIL-HDBK-217F

Notice 2 at +85 °C baseplate, Ground Fix conditions.

Electrical Specifications

DC INPUT

DC Input range: 18 to 48 V_{DC} Input transient

protection:

All models meet or exceed (no damage)

MIL-STD-1275A (100 V for 50 ms) and

MIL-STD-704A, MIL-STD-704D (80 V for 0.1 s)

Over-voltage shutdown with auto-recovery Efficiency: Up to 82%

EMC:

Designed to meet MIL-STD-461F*

CE101, CE102, CS101, CS114, CS115, CS116, RE101, RE102, RS101, RS103

Isolation:

Input to Output: 200 V_{DC} Input to Case:

200 V_{DC}

DC OUTPUT (floating)

Line/Load regulation:

Less than 2% (no load to full load, -55 °C to +85 °C)

Ripple and Noise: 50 mV_{p-p}, typical (max. 1%) Current limiting (Hiccup):

Continuous protection for unlimited time Over-voltage

protection:

Passive transorb on output.

Over-temperature protection:

Shutdown if baseplate temperature rises above

+100 °C ± 5 °C. Automatic recovery when baseplate cools down to below +90 °C ± 5 °C.

Isolation:

Output to Case: 100 V_{DC}

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

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 \pm 10 kHz.

When this pin is left open (unconnected) the power supply will synchronize to its internal clock, set at 250 kHz \pm 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***.

Outputs Range

Output #	Voltage Range	Current Range	Power Range
1	1.8 to 50 V _{DC}	0 to 5 A	0 to 30 W
2	1.8 to 50 V _{DC}	0 to 5 A	0 to 30 W
Total			0 to 60 W

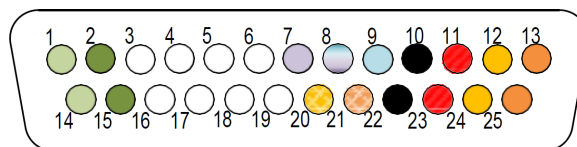
Pin Assignment

Connector type: M24308/24-39F or eq.

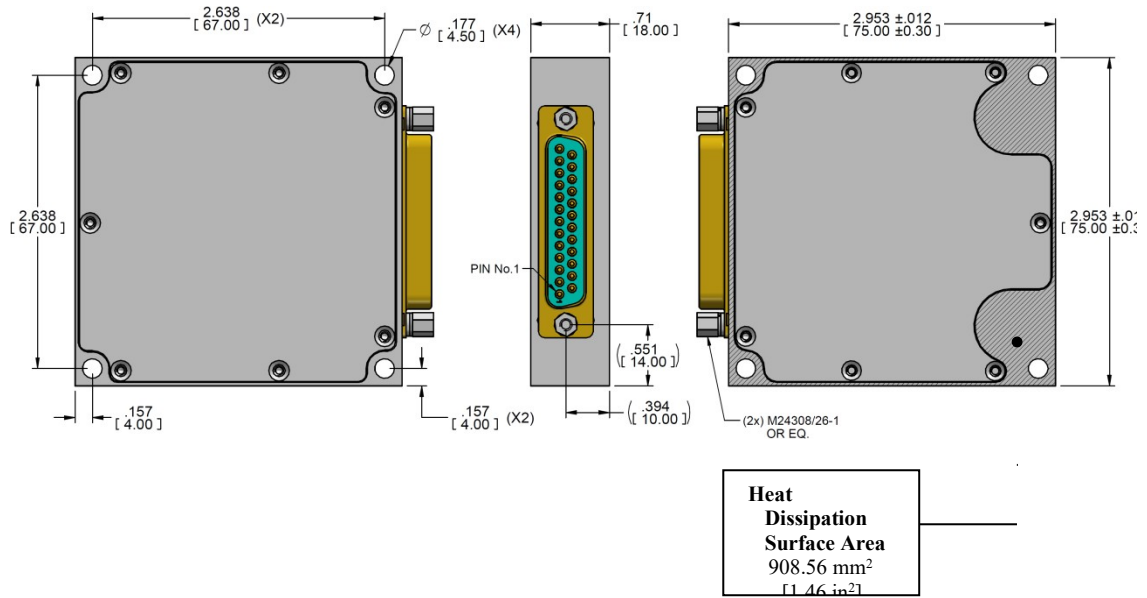
Mates with: M24308/2-3F or eq.

Pin No.	Function	P	
1	OUT 2	+	○
2	OUT 2 RTN	-	●
3	N/C		
4	N/C		
5	N/C		
6	N/C		
7	SYNC IN	+	○
8	SIGNAL RTN	-	○
9	INHIBIT	+	○
10	VIN RTN	-	●
11	VIN	+	●
12	OUT 1	+	●
13	OUT 1 RTN	-	●

Pin No.	Function	P	
14	OUT 2	+	○
15	OUT 2 RTN	-	●
16	N/C		
17	N/C		
18	N/C		
19	N/C		
20	SENSE 1	+	●
21	SENSE 1 RTN	-	●
22	VIN RTN	-	●
23	VIN	+	●
24	OUT 1	+	●
25	OUT 1 RTN	-	●



Outline Drawing



Notes

1. Dimensions are in mm
2. Tolerance is:
 .X ± .5 mm
 .XX ± .25 mm
3. Weight: Approx. 150 g [5.3 oz]

Note: Specifications are subject to change without prior notice by the manufacturer