

# M712 SERIES

MINIATURE, HIGH DENSITY,  
DUAL/SINGLE OUTPUT  
DC/DC CONVERTERS  
(UP TO 60W)

## **APPLICATIONS**

Military, Ruggedized, Telecom, Industrial



## **SPECIAL FEATURES**

- Miniature size
- High efficiency
- Wide input range
- Up to 15 W/IN<sup>3</sup>
- Input / Output isolation
- Fixed switching frequency (250KHz)
- 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.

\* 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 50mSec) and  
MIL-STD-704A, MIL-STD-704D (80V for 0.1Sec)

Over-voltage shutdown with auto-recovery

Efficiency: up to 82%

EMI/RFI:

Design to meet or exceed MIL-STD-461C  
CE03, CE07, CS01, CS02, CS06, RE02, RS02, RS03

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 (Hiccup):

Continuous protection for unlimited time.

Over voltage protection:

Passive transzorb 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

## PIN ASSIGNMENT

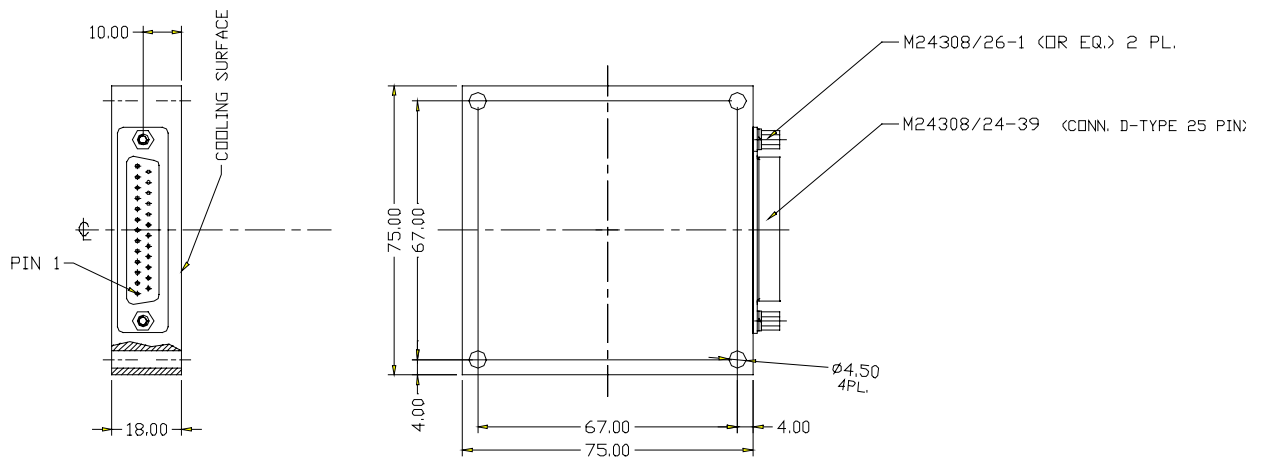
Pin No.	Pin Function
11, 23	+ VIN
10, 22	VIN RTN
12, 24	+ OUT 1
13, 25	- OUT 1
1, 14	+ OUT 2

Pin No.	Pin Function
2, 15	- OUT 2
3, 16	N.C.
4, 17	N.C.
5, 18	N.C.
6, 19	N.C.

Pin No.	Pin Function
7	SYN IN
8	SIGNAL RTN
9	INHIBIT
20	+ SENSE OUT 1
21	- SENSE OUT 1

MPS can customize this product to your requirements – Contact us!

## OUTLINE DRAWING



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### Notes

1. Dimensions are in Inches [mm]
2. Tolerance is:  
.XX  $\pm 0.02$  IN  
.XXX  $\pm 0.01$  IN
3. Weight: 5.3 Oz (150 gr)