

# M4242 SERIES

**MINIATURE, HIGH DENSITY,  
SINGLE OUTPUT,  
DC/AC CONVERTER**  
(60-100VA, 47-400Hz)



<b>Applications</b>		
Military (Airborne, ground-fix, shipboard), Ruggedized, Telecom, Industrial		
<b>Special Features</b>		
<ul style="list-style-type: none"> <li>• Miniature size</li> <li>• High efficiency</li> <li>• Wide input range</li> <li>• Input / Output isolation</li> </ul>	<ul style="list-style-type: none"> <li>• Not encapsulated</li> <li>• EMI/RFI filters included</li> <li>• Indefinite short circuit protection with auto-recovery</li> </ul>	<ul style="list-style-type: none"> <li>• Over-voltage shutdown with auto-recovery</li> <li>• Over temperature shutdown with auto-recovery</li> </ul>
<b>Electrical Specifications</b>		
<b><u>DC Input:</u></b> DC Input range: 18 to 36 Vdc, per MIL-STD-704A.	<b><u>AC Output – Single Phase:</u></b> Output range – 26V to 115V Output power – 100VA	<b><u>Isolation:</u></b> 200V between Input and Output 100V between Output and Case
<b><u>Line/Load regulation:</u></b> Less than 3% (no load to full load, -55°C to +90°C).	<b><u>Efficiency :</u></b> Up to 60-75% from 40% load	<b><u>EMI/RFI:</u></b> Design to meet MIL-STD-461C CS01, CS02, CS06, CE03, CE07, RS02, RS03
<b><u>Wave form:</u></b> Sinusoidal, with a maximum level of 3% total harmonic distortion into resistive, capacitate or inductive load		
<b>Protections *</b>		
<b><u>Input</u></b> <ul style="list-style-type: none"> <li>• Over voltage protection –</li> </ul>	<b><u>Output</u></b> <ul style="list-style-type: none"> <li>• <b>Electronic over voltage protection</b> – Electronic shutdown with automatic recovery and a passive transzorb on output</li> <li>• <b>Current limiting</b> – Continuous protection for unlimited time with Automatic recovery.</li> </ul>	<b><u>General</u></b> <ul style="list-style-type: none"> <li>• <b>Over temperature protection:</b> Shutdown at baseplate temperature of +95°C (±5°C) Automatic recovery at baseplate temperature lower than +90°C (±5°C)</li> </ul>

\* Thresholds and protections can be modified / removed – please consult factory.

### **Environmental**

Design to Meet MIL-STD-810F

#### **Temperature:**

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

Storage: -55°C to +125°C

#### **Humidity:**

Method 507.4 - Up to 95%.

#### **Altitude:**

Method 500.4, Procedure I & II, 30,000  
ft. and 70,000 ft. Operational

#### **Vibration and Shock:**

Shock – Saw-tooth, 20g peak, 11mS.  
Vibration - Figure 514.5C-17. General  
minimum integrity exposure. (1 hour per  
axis.)

#### **Salt Fog:**

Method 509-4

#### **Reliability**

150,000 hours, calculated per  
MIL-STD-217F at +85°C base plate,  
Ground fixed.

### **Environmental Stress Screening (ESS)**

Including random vibration and thermal cycles is also available. **Please consult factory for details.**

### **Pin Assignment**

<b>PIN No.</b>	<b>PIN Function</b>
1	+OUT, PHASE
2	+OUT, PHASE
3	N.C.
4	+OUT, NEUTRAL
5	N.C.

<b>PIN No.</b>	<b>PIN Function</b>
6	-VIN
7	+VIN
8	INHIBIT
9	+OUT, PHASE
10	N.C.

<b>PIN No.</b>	<b>PIN Function</b>
11	+OUT, NEUTRAL
12	+OUT, NEUTRAL
13	N.C.
14	-VIN
15	+VIN

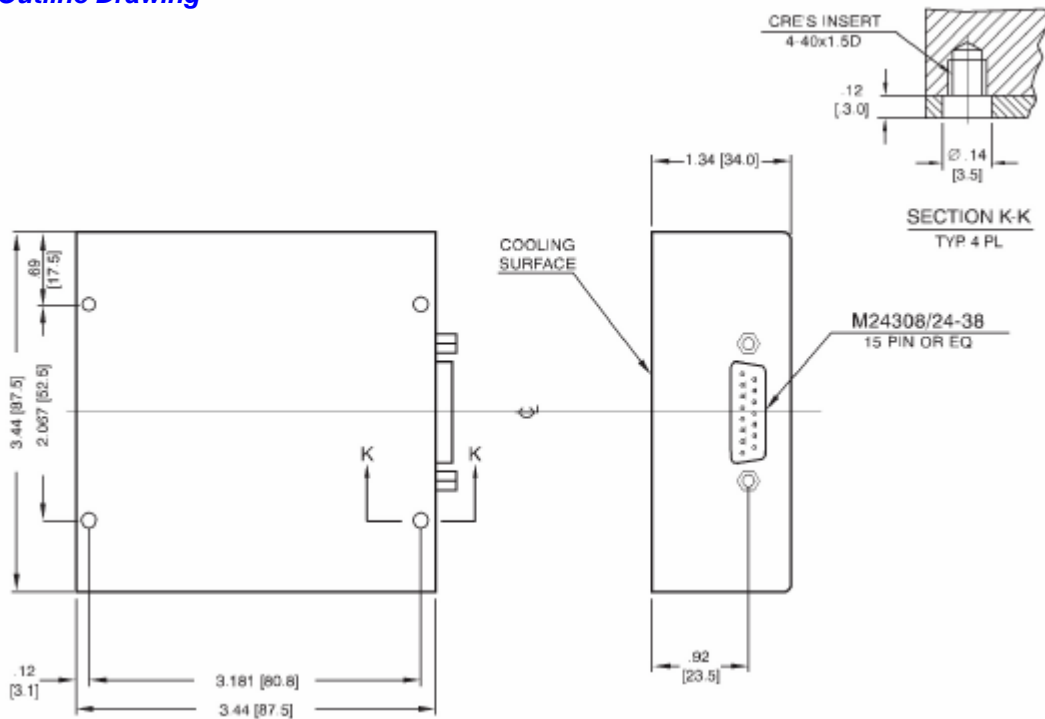
### **INHIBIT signal**

The INHIBIT signal is used to turn the power supply ON and OFF.

TTL “1” or OPEN – will turn on the power supply. (For normal operation leave the signal not connected.)

TTL “0” – will turn off the power supply.

## Outline Drawing



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

### Notes

1. Dimensions are in Inches [mm]
2. Tolerance is:  
 .XX ±0.01 IN  
 .XXX ±0.005 IN
3. Weight: 17.7 Oz (500gr)