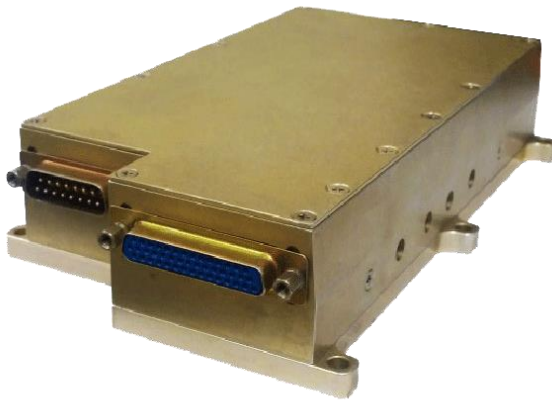


M167 SERIES

3-PHASE AC/DC
POWER SUPPLY



PRODUCT HIGHLIGHTS

- **COMPACT**
- **HIGH DENSITY**
- **HIGH EFFICIENCY**
- **SINGLE OUTPUT**
- **AC/DC POWER SUPPLY**
- **UP TO 1600 W**

M167 SERIES 3-PHASE AC/DC POWER SUPPLY

<p>Applications</p> <p>Military (Airborne, ground-fix, shipboard), Ruggedized, Telecom, Industrial</p>											
<p>Special Features</p> <ul style="list-style-type: none"> • High efficiency • Wide input range • Input / Output isolation • Limited Inrush Current • Fixed switching frequency • EMI filters included • Indefinite short circuit protection with auto-recovery • Over-voltage shutdown with auto-recovery • Over temperature shutdown with auto-recovery 											
<p>Electrical Specifications</p> <table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top; width: 33%;"> <p>AC Input Range: 115V/400 Hz (320-520Hz), 3-phase per MIL-STD-704A/D</p> </td> <td style="vertical-align: top; width: 33%;"> <p>DC Output: Voltage: 3.3V to 50V Current: Up to 55A Power: Up to 1.6kW</p> </td> <td style="vertical-align: top; width: 33%;"> <p>Isolation: 500V between Input and Output 500V between Input and Case 100V between Output and Case</p> </td> </tr> <tr> <td style="vertical-align: top;"> <p>Line/Load regulation: Less than 1% (no load to full load, -40°C to +71°C).</p> </td> <td style="vertical-align: top;"> <p>Efficiency: 85% - minimum (full load, room temperature)</p> </td> <td style="vertical-align: top;"> <p>EMC: Designed to meet MIL-STD- 461F at 45A: CE102, CS101, CS114, CS115, CS106, RE101, RE102, RS101, RS103</p> </td> </tr> <tr> <td style="vertical-align: top;"> <p>Ripple and Noise: 100÷150mV_{p-p}, typical (max. 1%) without external capacitance. When connected to system capacitance ripple drops significantly.</p> </td> <td style="vertical-align: top;"> <p>Turn on Transient No Voltage over shoot during power on.</p> </td> <td></td> </tr> </table>			<p>AC Input Range: 115V/400 Hz (320-520Hz), 3-phase per MIL-STD-704A/D</p>	<p>DC Output: Voltage: 3.3V to 50V Current: Up to 55A Power: Up to 1.6kW</p>	<p>Isolation: 500V between Input and Output 500V between Input and Case 100V between Output and Case</p>	<p>Line/Load regulation: Less than 1% (no load to full load, -40°C to +71°C).</p>	<p>Efficiency: 85% - minimum (full load, room temperature)</p>	<p>EMC: Designed to meet MIL-STD- 461F at 45A: CE102, CS101, CS114, CS115, CS106, RE101, RE102, RS101, RS103</p>	<p>Ripple and Noise: 100÷150mV_{p-p}, typical (max. 1%) without external capacitance. When connected to system capacitance ripple drops significantly.</p>	<p>Turn on Transient No Voltage over shoot during power on.</p>	
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* Thresholds and protections can be modified / removed – please consult factory.

M167 SERIES 3-PHASE AC/DC POWER SUPPLY

Environmental

Designed to meet MIL-STD-810E

Temperature:

Operating: -40°C to +71°C (at base plate)

Storage: -55°C to +125°C

Humidity:

Method 507.4 - Up to 95%.

Altitude:

Method 500.4, Procedure I & II, 40,000 ft. and 70,000 ft.

Operational

Vibration and Shock:

Shock - Sow-tooth, 20g peak, 11mS.

Vibration - method 514.6, proc. I. and method 519.6, proc. I

Salt Fog:

Method 509-4

Reliability

Min 50,000 hours, calculated per MIL-STD-217F at +70°C base plate, Ground fixed.

Note: at 100°C base plate MTBF will be lower

Environmental Stress Screening (ESS)

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

Pin Assignment (Input Connector)

Pin No.	Function	Pin No.	Function
1	CHASSIS	9	PHASE A
2	PHASE A	10	PHASE A
3	N.C.	11	N.C.
4	PHASE B	12	PHASE B
5	PHASE B	13	N.C.
6	N.C.	14	PHASE C
7	PHASE C	15	PHASE C
8	N.C.		

Pin Assignment (Output Connector)

Pin No.	Function	Pin No.	Function	Pin No.	Function	Pin No.	Function
1	- OUT	12	- OUT	23	+ OUT	34	+ OUT
2	INHIBIT	13	- OUT	24	- OUT	35	+ OUT
3	+ OUT	14	- OUT	25	- OUT	36	+ OUT
4	+ OUT	15	- OUT	26	- OUT	37	+ OUT
5	+ OUT	16	+ OUT	27	- OUT	38	+ OUT
6	+ OUT	17	+ OUT	28	- OUT	39	- OUT
7	+ OUT	18	+ OUT	29	- OUT	40	- OUT
8	+ OUT	19	+ OUT	30	- OUT	41	- OUT
9	- OUT	20	+ OUT	31	-INHIBIT	42	- OUT
10	- OUT	21	+ OUT	32	+ OUT	43	- OUT
11	- OUT	22	+ OUT	33	+ OUT	44	- OUT

- All output parallel pins should be connected together for best performance.

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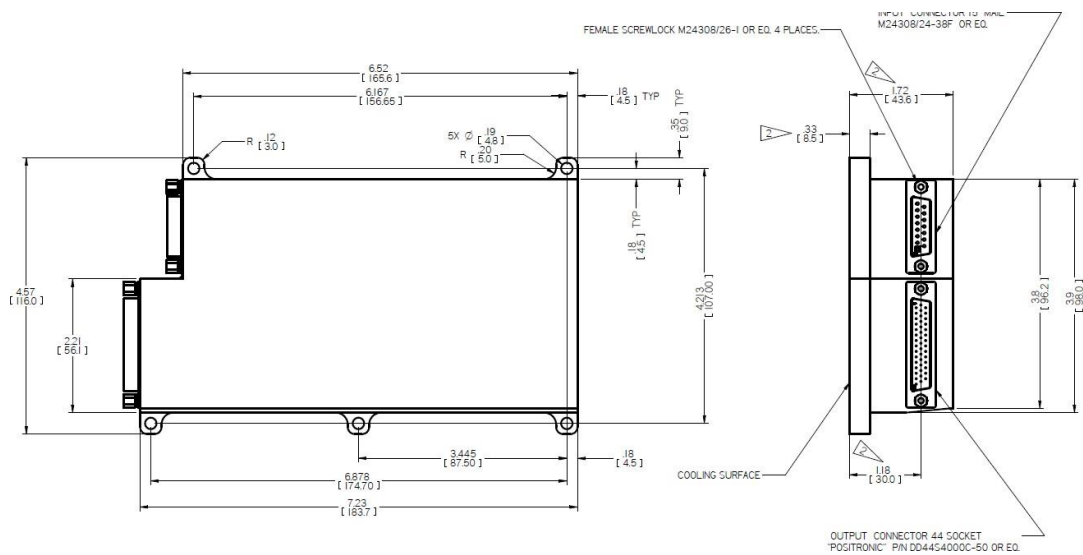
Functions and Signals

INHIBIT signal

The INHIBIT signal is used to turn the power supply ON and OFF. OPEN – will turn on the power supply.

SHORT – between pin 2 and pin 31 will turn off the power supply.

Outline Drawing



- Dimensions are in Inches [mm]
- Tolerance is:
XX ±.02 IN
.XXX ±.01 IN
- Weight: 1,600gr (preliminary)
- Parasolid 3D module is available

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