



MP2102

0-5VDC VARIABLE OUTPUT DC/DC CONVERTER



- MIL-STD-1275A Input Compliant
- MIL-STD-461 EMI Filtering
- External Voltage Trim 0 to +5VDC
- NAVMAT Component Derating
- Qualified to MIL-STD-810 Requirements
- Output Over-Voltage, And Over-Current Protection
- Variable Output Voltage With Extended Trim
- Full Military Temperature Operation

DESCRIPTION:

The MP2102 DC/DC Converter was designed for use in a military Armored Personnel Carrier, but can be used in any rugged military application. This DC/DC converter is fully qualified to MIL-STD-810 environmental requirements. The DC/DC converter was designed using NAVMAT guidelines for component derating. The MP2102 DC/DC Converter is easily modifiable for different output voltages, and power requirements. Please consult Sales@Prime-Power.com if this is a requirement for your power supply.

GENERAL SPECIFICATIONS	
INPUT VOLTAGE	+16-38VDC
FREQUENCY RANGE	N/A
OUTPUT VOLTAGE	0-5VDC VARIABLE
OUTPUT CURRENT	0-8 AMPS
PHYSICAL SIZE	4.60 X 2.40 X 1.30
WEIGHT	<1 LB.
MTBF	>100,000 hrs.

PHYSICAL CHARACTERISTICS	
MAXIMUM CASE SIZE	4.60 X 2.40 X 1.30
COOLING METHOD	CONDUCTION
ENCAPSULATION	SILICONE POTTING
ENCLOSURE FINISH	YELLOW CHROMATE
BASEPLATE FINISH	YELLOW CHROMATE
INPUT/OUTPUT TERMINATION	D-SUB CONNECTOR
MOUNTING	4X #6 (1.5" MIN) MACHINE SCREW
WEIGHT	<1 LB.

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PRIME POWER INC: (603) 329-4675.
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HAMPSTEAD NH, 03841.



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<u>ELECTRICAL SPECIFICATIONS</u>	
LINE REGULATION (LO LINE TO HI LINE)	1%
LOAD REGULATION (1/2-FL W/SENSE)	1%
PARD (RIPPLE NOISE) DC-20MHZ	150mV p-p
OVERCURRENT SETPOINT	150% OF OUTPUT CURRENT TYP.
OVERVOLTAGE SET	+6.2VDC ±5%
TURN-ON OVERSHOOT	1% TYP.
EFFICIENCY (MIN)	70%
ISOLATION	N/A
EMI FILTERING	MIL-STD-461, CE03,CS01,CS02,CS06
OUTPUT POWER	35 WATTS

<u>ENVIRONMENTAL SPECIFICATIONS</u>		
ALTITUDE	MIL-STD-810F	Method 500.1, Procedure 1
HIGH TEMPERATURE	MIL-STD-810F	Method 501.4 Procedure 1 & 2
LOW TEMPERATURE	MIL-STD-810F	Method 502.4 Procedure 1 & 2
HUMIDITY	MIL-STD-202G	Method 103B
FUNGUS	MIL-STD-810F	Method 508, Condition A
SALT FOG	MIL-STD-202G	Method 101 E, Test Condition A
SAND AND DUST	MIL-STD-810F	Method 501.4, Procedure 1 & 2
EXPLOSIVE ATMOSPHERE	MIL-STD-810F	Method 511, Condition A
ACCELERATION	MIL-STD-810F	Method 513.5, Procedure 1 & 2
VIBRATION	MIL-STD-810F	Method 514.2
SHOCK	MIL-STD-883	Method 2002.4

<u>TEMPERATURE SPECIFICATIONS</u>	
OPERATING TEMPERATURE	-46°C to +85°C
STORAGE TEMPERATURE	-55°C to +125°C
TEMPERATURE COEFFICIENT	.02%/°C



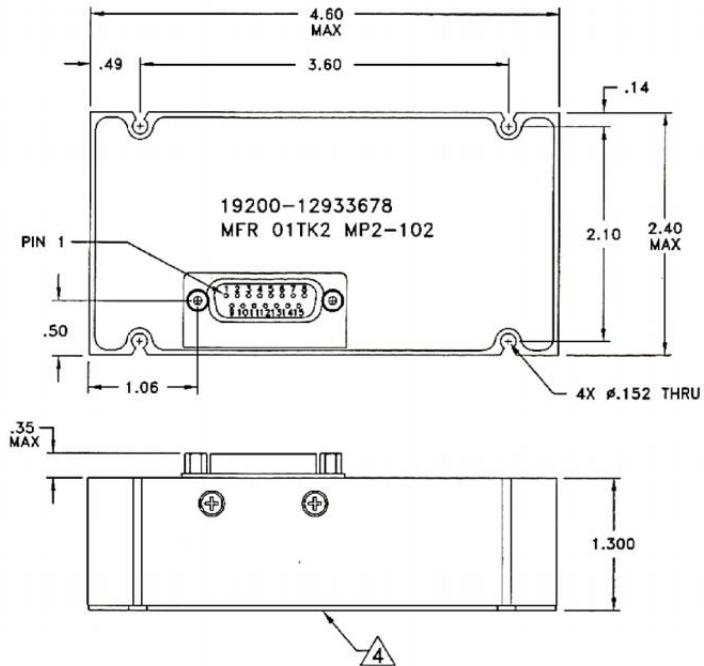
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NOTES:

- 1. CASE MATERIAL: 6063-T6 ALUMINUM.
- 2. CASE FINISH: YELLOW CHROMATE PER MIL-C-5541, CLASS 3.
- 3. CASE OPERATING TEMPERATURE NOT TO EXCEED 85°C.
- 4. DO NOT OPERATE WITHOUT ATTACHING TO A GROUNDED HEAT SINK.
- 5. CONNECTOR: ITT CANNON P/N DAMAME15P (M24308/4-2) OR EQUIV., POST NUMBER: M24308/26-1, 2 PLACES.



CONNECTOR FUNCTIONS M24308/4-2	
PIN	SIGNAL DESCRIPTION
1	
2	INPUT RETURN
3	
4	
5	EXTERNAL PROGRAMMING RETURN
6	LAMP TEST
7	OUTPUT RETURN
8	
9	
10	15 TO 60 VDC INPUT
11	
12	
13	EXTERNAL PROGRAMMING
14	4.5VDC MAXIMUM OUTPUT
15	

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