



Modular Block (MB1) Series Up To 50 Watts

The Power Professionals

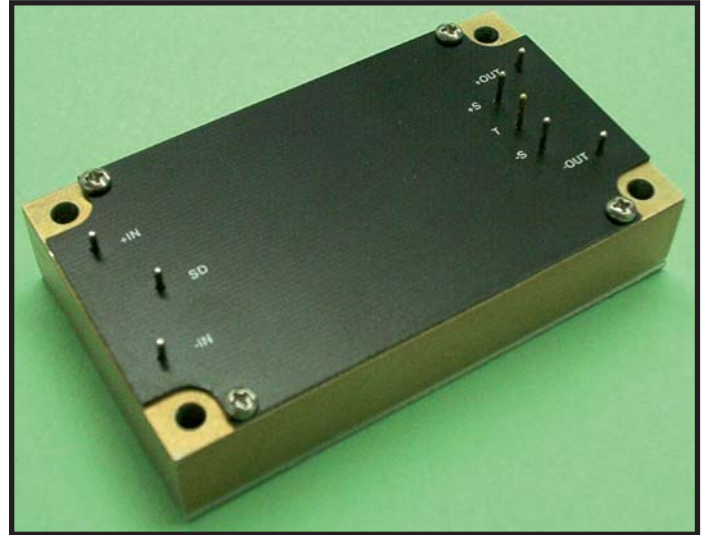
Power Conversion Products



Features

- Full military temperature range
- Low thermal resistance
- High M.T.B.F. numbers
- Fixed frequency
- Over current and voltage protection

The Modular Block (MB1) Series of DC/DC converters are designed for military and aerospace applications but can be used in ruggedized industrial systems as well. The DC/DC converters can be PC board mounted or used with Prime Power's modular

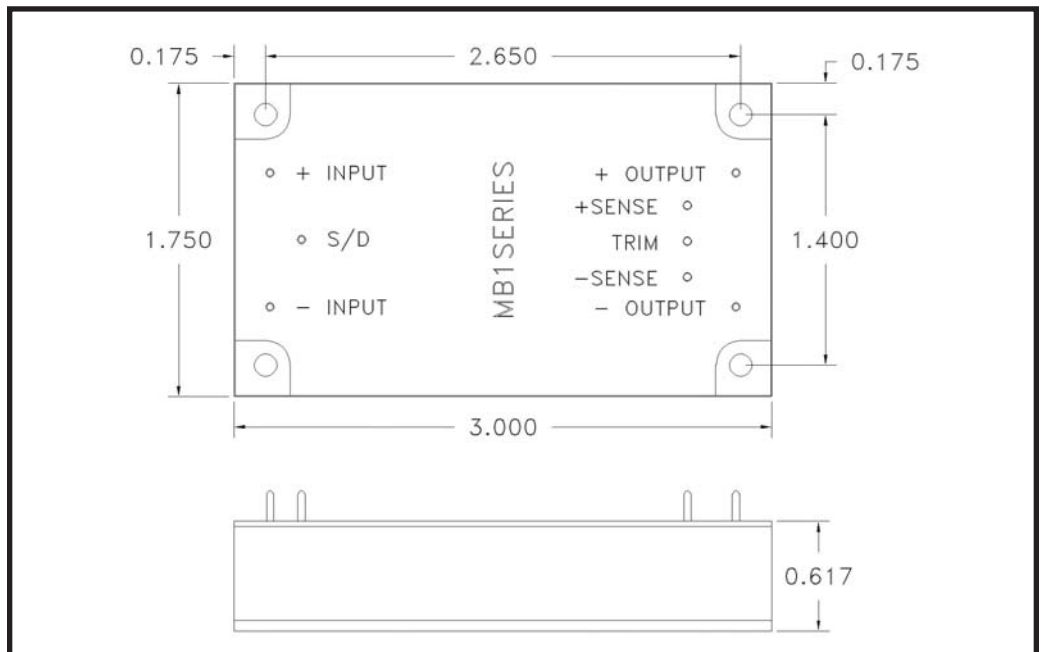


systems for a turn-key solution. The converters are a fixed frequency technology along with a single ended forward converter topology employing fewer component enhanced reliability with higher M.T.B.F. numbers. Conduction cooling allows for higher density system architecture.

Mechanical Drawing



Prime Power reserves the right to change design and specifications at any time without prior notice. It is Prime Power's policy to improve product as new technologies and components become available.



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Features

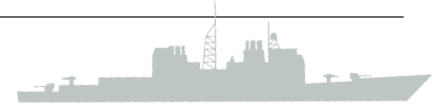
- 28/48/300 Vdc input
- Meets full military requirements
- Ruggedized needs MIL-STD-810
- PC board mount
- Modified standards upon request

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Technical Data

Input Characteristics

Voltage: 28 Vdc (18-40 Vdc)
48 Vdc (36-72 Vdc)
300 Vdc (220-400 Vdc)

MIL-STD-704 meets normal and abnormal operation; MIL-STD-1275A, with battery support

Isolation

Input/Output Isolation: 1000 Vdc
Input/Baseplate Isolation: 1000 Vdc
Output/Baseplate Isolation: 100 Vdc

Output Characteristics (Typical)

Set Point Accuracy: $\pm 1\%$, no load
Load Regulation: .02%
Line Regulation: .02%
Ripple: 1-3% typical, DC to 20 MHz
Trim Range: $\pm 10\%$
Remote Sense Compensation: 0.5 V total
OVP (non shutdown auto recovery): 130% typical; F.L.
Current Limit (auto recovery): 130% of rated load typical
Transient Response: 200 μ s, for 25% load changes.
Temperature Drift: .02%/ $^{\circ}$ C
Efficiency: 80% typical

Environmental

Temperature: -55 to +85 $^{\circ}$ C, Baseplate; -60 to +100 $^{\circ}$ C, Storage.
Altitude: to 70,000 feet
Shock: MIL-STD-901C, Grade A impact shock
Vibration: MIL-E-5400, curve IVA, 5Hz to 2000 Hz
Salt Spray: MIL-STD-810C, method 509, procedure 1

Model Specifications

Single Outputs (non-standards upon request)

Part no.	Output Voltage	Output Current
MB1A 50/3.3	3.3V	15A
MB1A 50/5	5V	10A
MB1A 50/12	12V	4.16A
MB1A 50/15	15V	3.3A
MB1A 50/24	24V	2.1A
MB1A 50/28	28V	1.8A

Mechanical

Weight: 5 oz. typical
Size: 3 x 1.75 x .6

(Dimensions are in inches)



Ordering Information

MB1	A	50	3.3
MODEL	INPUT VOLTAGE	POWER	OUTPUT VOLTAGE
	A = 28 Vdc	(in watts)	(in volts)
	B = 48 Vdc		
	C = 300 Vdc		