

# M168 SERIES

**MINIATURE, HIGH DENSITY  
HIGH POWER FACTOR  
SINGLE OUTPUT  
1000W  
AC/DC CONVERTERS**

## **APPLICATIONS**

Military, Ruggedized, Telecom, Industrial



## **SPECIAL FEATURES**

Miniature size  
High efficiency  
Wide input range  
High power factor (0.99)  
Input / Output isolation  
Fixed switching frequency (250KHz)  
External synchronization capability  
EMI/RFI filters included  
Indefinite short circuit protection with auto-recovery  
Over-voltage shutdown with auto-recovery  
Over temperature shutdown with auto-recovery

## **ENVIRONMENTAL**

Meets or exceeds MIL-STD-810D

Temperature:  
Operating -40°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.

## **ELECTRICAL SPECIFICATIONS**

### **AC INPUT**

AC input range: 85 to 265VAC L-N, 50/60/400Hz,  
Single Phase

Efficiency: 85%, Typical

EMI/RFI:

Design to meet or exceed MIL-STD-461D  
CE102, CS101, CS114, CS115,  
CS116, RE101, RE102, RS101, RS103

Isolation:

1500V between Input and Output  
1500V between Input and Case

### **DC OUTPUT (floating)**

Line /load regulation:  
Less than ±1% (no load to full load, -40°C to +85°C)

Ripple and noise: 100÷150mVp-p, typical (max. 1%)

Current limiting ( Hiccup):

Continuous protection for unlimited time.

Electronic over voltage protection.

Passive transzorb on outputs.

Under voltage protection (Hiccup).

Over temperature protection:

Shutdown at baseplate temperature of +105°C (±5°C)  
Automatic recovery at baseplate temperature lower than +95°C (±5°C)

Isolation:

1500V between Output and Input  
200V between Output and Case

## PIN ASSIGNMENT (INPUT)

PIN No.	PIN Function
1	PHASE
2	PHASE
3	PHASE
4	N.C.
5	NEUTRAL
6	NEUTRAL
7	N.C.
8	CHASSIS

PIN No.	PIN Function
9	PHASE
10	PHASE
11	N.C.
12	NEUTRAL
13	NEUTRAL
14	NEUTRAL
15	N.C.

## PIN ASSIGNMENT (OUTPUT)

Pin No.	Pin Function
1	- SENSE
2	+SENSE
3	+OUT
4	+OUT
5	+OUT
6	+OUT
7	+OUT
8	+OUT
9	+OUT
10	- OUT

Pin No.	Pin Function
11	- OUT
12	- OUT
13	- OUT
14	- OUT
15	- OUT
16	- OUT
17	- OUT
18	+ SYN OUT
19	+OUT
20	+OUT

Pin No.	Pin Function
21	+OUT
22	+OUT
23	+OUT
24	+OUT
25	+OUT
26	+OUT
27	- OUT
28	- OUT
29	- OUT
30	- OUT

Pin No.	Pin Function
31	- OUT
32	- OUT
33	- OUT
34	- SYN OUT
35	+OUT
36	+OUT
37	+OUT
38	+OUT
39	+OUT
40	+OUT

Pin No.	Pin Function
41	+OUT
42	+OUT
43	- OUT
44	- OUT
45	- OUT
46	- OUT
47	- OUT
48	- OUT
49	- OUT
50	- OUT

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

### Notes

1. Dimensions are in Inches [mm]
2. Tolerance is:  
.XX ±.02 IN  
.XXX ±.01 IN
3. Weight: 4.25 lb (1922gr)

# OUTLINE DRAWING

