

M173 SERIES

MINIATURE, HIGH DENSITY
EXTREMELY LOW RIPPLE & NOISE
HIGH EFFICIENCY, LINEAR,
QUAD OUTPUT
AC/DC CONVERTERS
(UP TO 350W)



APPLICATIONS

Military, Ruggedized, Telecom, Industrial

SPECIAL FEATURES

High Efficiency linear power supply
Wide input range
Input / Output isolation
EMI/RFI filters included
Indefinite short circuit protection with
auto-recovery
Over temperature shutdown with
auto-recovery
Over-temperature indication

ENVIRONMENTAL

Meets or exceeds MIL-STD-810D

Temperature:

Operating -40°C to +55°C (wedglock)
Storage -55°C to +125°C

Higher temperatures available –
Please consult factory.

RELIABILITY

100'000 hours, calculated per
MIL-STD-217F at +55°C baseplate, AUF.

**MPS can customize this product
to your requirements –
contact us!**

ELECTRICAL SPECIFICATIONS

AC INPUT

AC input range: 115 ±6%VAC, 400Hz, 3-Phase

Efficiency: up to 75%
(Typical -65%, Minimum to Nominal Line)

EMI/RFI:

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

Input Transient Protection:

Meets or exceeds MIL-STD-704A

Isolation:

500V between Input and Output
500V between Input and Case

DC OUTPUT (floating)

Line /load regulation:

Less than 1% (no load to full load, -40°C to +71°C)

Ripple and noise: see on next page.

Current limiting (Hiccup):

Continuous protection for unlimited time.

Over-voltage electronic shutdown.

Passive transzorb on outputs.

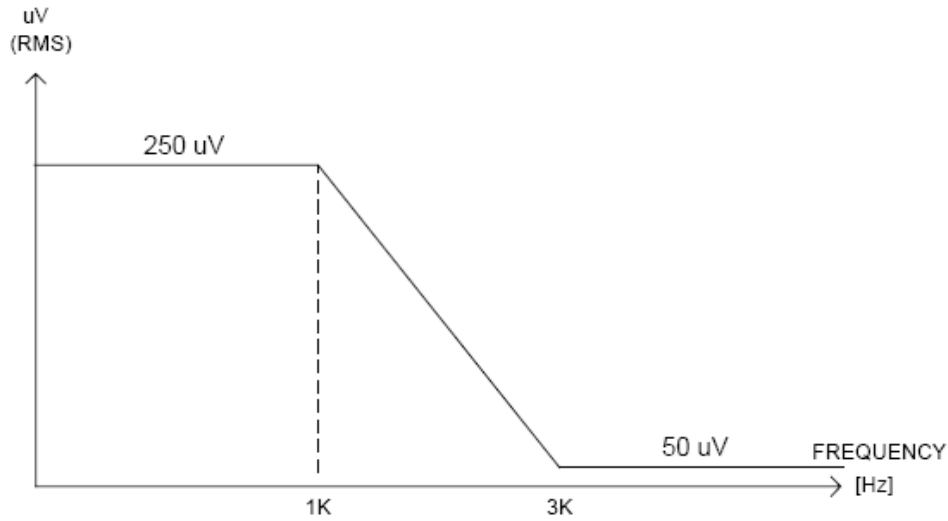
Over temperature protection:

Indication at baseplate temperature of +90°C (±5°C)

Isolation:

500V between Output and Input
100V between Output and Case

OUTPUTS RIPPLE & NOISE



Frequency Range	Resolution BW (Hz)	Limit (dBm)
20 Hz to 10 KHz	100	≤ -59 (250 μ V)
10 KHz to 10 MHz	300	≤ -73 (50 μ V)

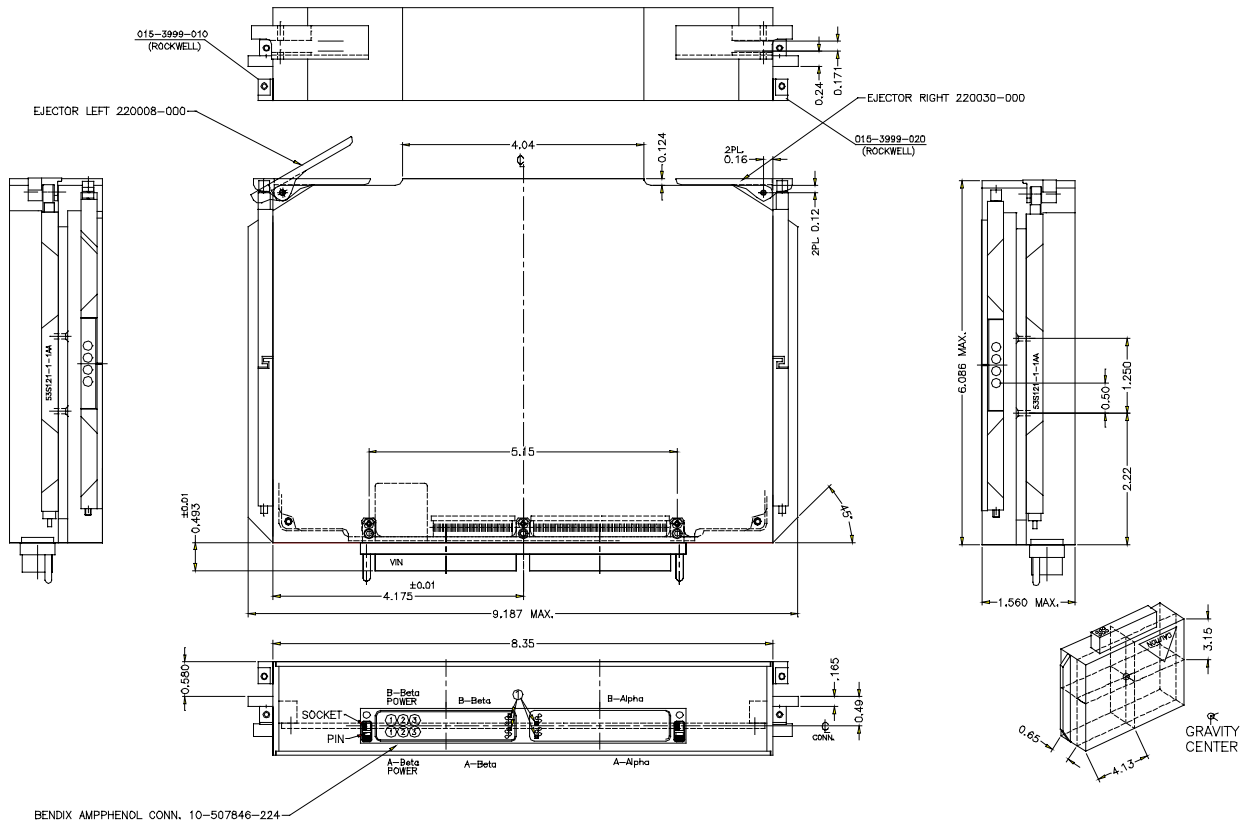
PIN ASSIGNMENT

Pin No.		Pin Function
A - Alpha	58 to 90	3.4V / 21A
B - Alpha	58 to 90	
A - Alpha	24 to 56	3.4V / 21A RTN
B - Alpha	24 to 56	
A - Alpha	22	3.4V / 21A SENSE
B - Alpha	22	3.4V / 21A SENSE RTN
A - Alpha	6 to 12	-5.3V / 3A
A - Alpha	14 to 20	-5.3V / 3A RTN
A - Alpha	4	Report BIT
A - Alpha	1	Report BIT RTN
A - Beta	1 to 11	+3.4V / 7.2A
B - Beta	1 to 11	
A - Beta	13 to 23	+3.4V / 7.2A RTN
B - Beta	13 to 23	
A - Beta	25	Reserved

Pin No.		Pin Function
A - Beta	41 to 55	+5.1V / 9.0A
B - Beta	40 to 53	
A - Beta	27 to 39	+5.1V / 9.0 RTN
B - Beta	25 to 38	
A - Alpha	1, 2, 3, 5 13, 21, 23, 57	Spare
B - Alpha	1, 2, 3, 5, 13, 18 19, 20, 21, 23, 57	Spare
A - Beta	12, 24, 26, 40, 54	Spare
B - Beta	12, 24, 39, 54	Spare
A - Beta	1	PHASE A
A - Beta	2	PHASE B
A - Beta	3	PHASE C
B - Beta	1	Chassis
B - Beta	2	Neutral
B - Beta	3	Spare

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OUTLINE DRAWING



Notes

1. Dimensions are in Inches [mm]
2. Tolerance is:
 .XX ±0.02 IN
 .XXX ±0.01 IN
3. Weight: 5.5 lb (2.5Kg)

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