

M172 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

120'000 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 shut down

Passive transzorb on outputs.

Over temperature protection:

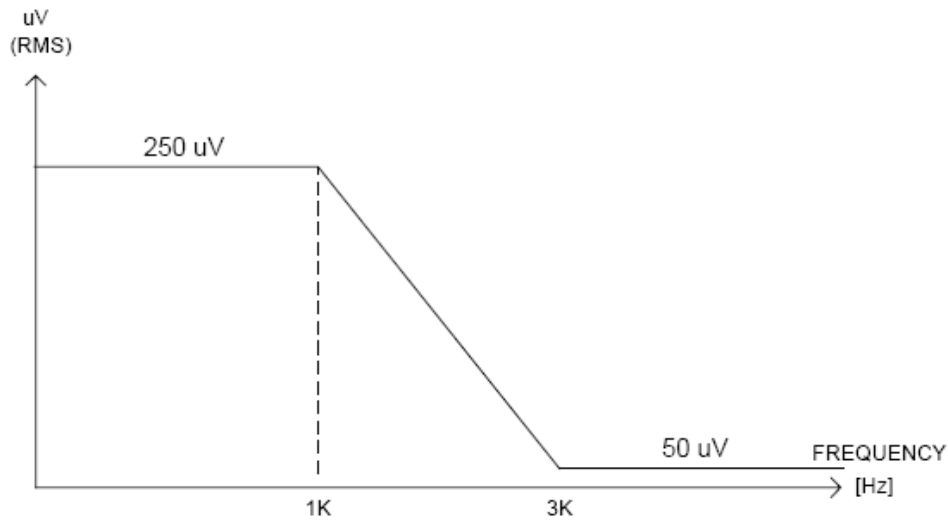
Indication at baseplate temperature of +90°C (±5°C)

Isolation:

500V between Output and Input

100V between Output and Case

OUTPUTS RIPPLE & NOISE



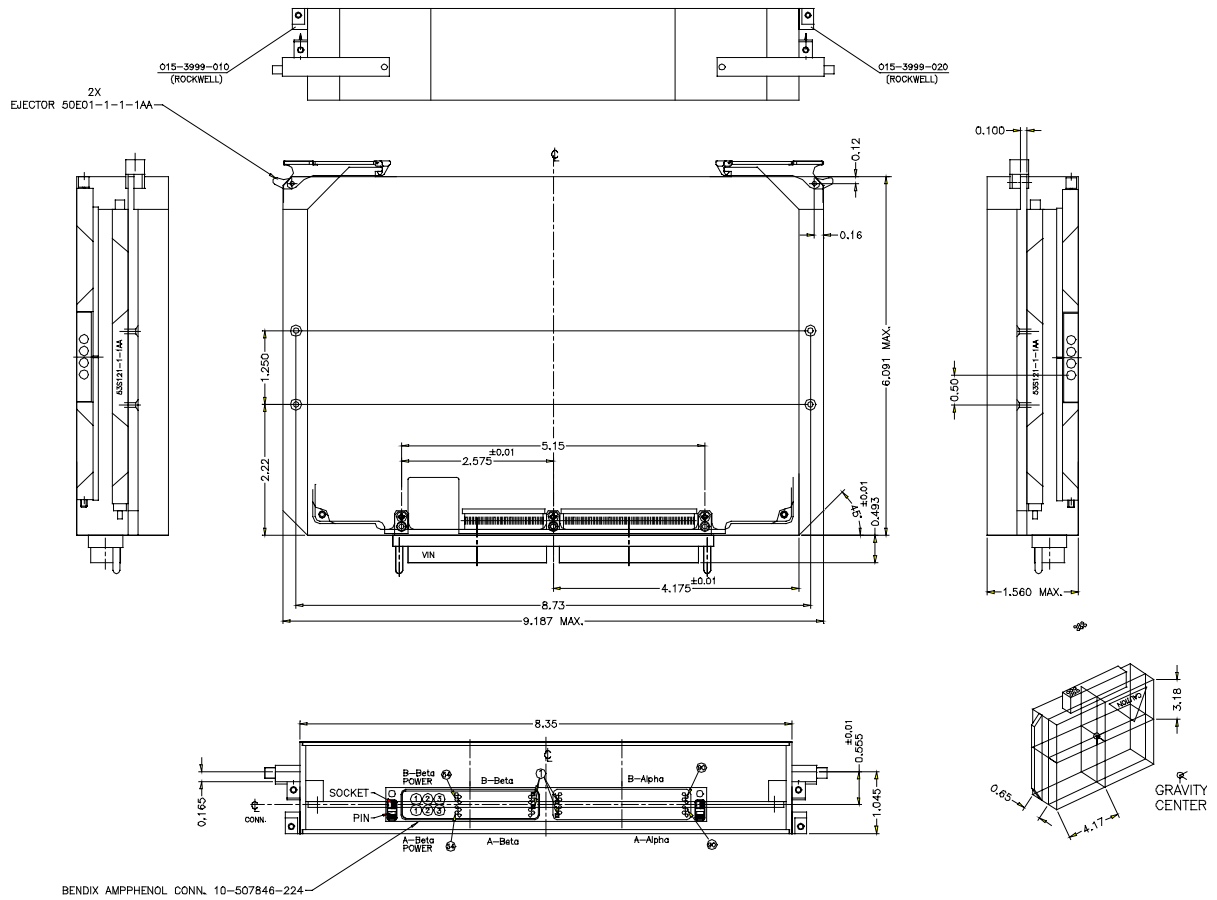
| Frequency Range | Resolution BW (Hz) | Limit (dBm) |
|------------------|--------------------|--------------------------|
| 20 Hz to 10 KHz | 100 | ≤ -59 (250 μ V) |
| 10 KHz to 10 MHz | 300 | ≤ -73 (50 μ V) |

PIN ASSIGNMENT

| Pin No. | | Pin Function |
|-----------|----------|-------------------------|
| A - Alpha | 19 to 33 | 9.1V / 22A |
| B - Alpha | 19 to 33 | |
| A - Beta | 18 to 33 | |
| B - Beta | 18 to 33 | |
| A - Alpha | 1 to 16 | 9.1V / 22A RTN |
| A - Beta | 1 to 16 | |
| B - Beta | 1 to 16 | |
| A - Beta | 35 | 9.1V / 22A SENSE |
| B - Beta | 35 | 9.1V / 22A SENSE RTN |
| A - Alpha | 37 to 51 | - 8.1V / 10A |
| B - Alpha | 37 to 51 | |
| A - Alpha | 53 to 67 | - 8.1V / 10A RTN |
| B - Alpha | 53 to 67 | |
| A - Alpha | 69 | Report BIT |
| A - Alpha | 70 | Report BIT RTN |
| A - Beta | 45 to 51 | +18.2V / 4A |
| B - Beta | 45 to 51 | |
| A - Beta | 37 to 43 | +18.2V / 4A RTN |
| B - Beta | 37 to 43 | |
| B - Alpha | 69 | Reserved |

| Pin No. | | Pin Function |
|-----------|--------------------------------------|------------------------|
| A - Alpha | 72 to 80 | +5.1V / 6.0A |
| B - Alpha | 72 to 80 | |
| A - Alpha | 82 to 90 | +5.1V / 6.0 RTN |
| B - Alpha | 82 to 90 | |
| A - Beta | 17, 34, 36 44, 52, 53, 54 | Spare |
| B - Beta | 17, 34, 36, 44 | Spare |
| A - Alpha | 17, 18, 34, 35 36, 52, 68, 71, 81 | Spare |
| B - Alpha | 18, 34, 35, 36 52, 68, 70, 71, 81 | 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 |

OUTLINE DRAWING



*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: 5.5 lb (2.5Kg)