

ML/MN SERIES: BULK POWER FRONT ENDS

800 & 1000 Watts: 24, 28 & 48 VDC with PFC



KEY FEATURES

- Cost Effective
- Active Power Factor Correction
- Meets EN61000-3-2
- Up to 6 Watts / Cu. Inch
- Class B Input EMI Filter
- Single-Wire Current Share
- No Minimum Load
- 85% Efficiency
- Remote Inhibit
- Remote Output Voltage Adjust
- Overvoltage Protection
- Overload & Short Circuit Protection
- Thermal Protection
- AC Power Fail & DC Power Good
- 12V, 500mA Standby Output
- 5V, 100mA Standby Output



TWO-YEAR WARRANTY

STANDARD MODELS

(Other Outputs Available, Consult Factory)

| MAX. OUTPUT POWER | OUTPUT VOLTAGE | OUTPUT CURRENT | PFC | MINIMUM LOAD | TOTAL REGULATION | AC INPUT RANGE | MODEL NUMBER |
|-------------------|----------------|----------------|-----|--------------|------------------|----------------|--------------|
| 800W | 24VDC | 33A | ✓ | 0A | 1% | 85-264VAC | ML5000 |
| 800W | 28VDC | 29A | ✓ | 0A | 1% | 85-264VAC | ML6000 |
| 800W | 48VDC | 16.7A | ✓ | 0A | 1% | 85-264VAC | ML7000 |
| 1000W | 24VDC | 42A | ✓ | 0A | 1% | 85-264VAC | MN5000 |
| 1000W | 28VDC | 36A | ✓ | 0A | 1% | 85-264VAC | MN6000 |
| 1000W | 48VDC | 21A | ✓ | 0A | 1% | 85-264VAC | MN7000 |

SAFETY CERTIFICATIONS

| AGENCY | STANDARD |
|--------|------------------|
| UL | UL1950 |
| CUL | CSA22.2, No. 950 |

SPECIFICATIONS, ML/MN SERIES

Typical at Nominal 115/230VAC Line, Full Load and 25°C Unless Otherwise Noted.

OUTPUT SPECIFICATIONS

| | |
|------------------------------------|---------------------------|
| Voltage Adjustment Range | ±5% |
| Total Regulation ¹ | 1.0% |
| Ripple & Noise, Pk-Pk ² | 1% |
| Holdup | 15mS |
| Dynamic Response ³ | 300µS |
| Temperature Coefficient | ±0.02%/°C |
| Minimum Load | 0A |
| Overload Protection | Constant Current Limiting |
| Overvoltage Protection | Power Shutdown |
| Remote Sense | Up to 0.25V Per Wire |

INPUT SPECIFICATIONS

| | |
|-----------------------------|---|
| Input Voltage Range | 85-264VAC, Single Phase |
| Power Factor | 0.99 |
| Input Frequency | 47-63Hz |
| Inrush Limiting | 30A Peak |
| Input Current, Full Load | |
| 800W | 7.9A, 120VAC; 4.1A, 230VAC |
| 1000W | 9.9A, 120VAC; 5.2A, 230VAC |
| Input EMI Filter, Conducted | EN55022 Curve B FCC20780 pt. 15J Curve B |
| Harmonic Distortion | EN61000-3-2 |
| Input Immunity, Conducted | |
| Fast Transients, Line-Line | ±2kV (EN61000-4-4 Level 3) |
| Surges, Line-Line | ±2kV (EN61000-4-5 Level 2) |
| Surges, Line-Ground | ±2kV (EN61000-4-5 Level 3) |
| Input Protection | Internal Fuse |

GENERAL SPECIFICATIONS

| | |
|---------------------------------|---|
| Efficiency | 85% at Full Load |
| Switching Frequency | 150kHz Nominal |
| Isolation, class 1 ⁴ | 3000VAC Input - Output >1500VAC Input - Ground >50VDC Output - Ground |
| Safety Standards | EN60-950, UL1950, CSA22.2-950 |

ENVIRONMENTAL SPECIFICATIONS

| | |
|-----------------------|----------------------------|
| Operating Temperature | 0°C to 70°C Ambient |
| Derating | 2.5% / °C, 50°C to 70°C |
| Storage Temperature | -40°C to +85°C |
| Cooling | Integral Ball Bearing Fans |

PHYSICAL SPECIFICATIONS

| | |
|------------------------|---|
| Case Material | Aluminum |
| Dimensions, Inches(mm) | 3.25 H x 5 W x 10.5 D (82.6 x 127 x 267) |

NOTES:

- No load to full load, including line regulation and load regulation.
- Whichever is greater, 20MHz bandwidth. Measured with 0.1µF ceramic and 10µF tantalum capacitors in parallel across the output.
- <4% deviation recovering to within 1% for 25% load change.
- Input - output isolation figure is for isolation components only. 100% production Hipot tested.

J1 CONTROL & SUPERVISORY SIGNALS

| PIN | FUNCTION | PIN | FUNCTION |
|-----|---------------|-----|----------------|
| 1 | +Sense | 6 | DC Power Good |
| 2 | -Sense | 7 | Inhibin (N.O.) |
| 3 | Remote Adjust | 8 | Not Used |
| 4 | Not Used | 9 | AC Power Fail |
| 5 | Current Share | 10 | Control Common |

| J2: 12V, 500mA STANDBY SUPPLY | |
|----------------------------------|------------|
| PIN | FUNCTION |
| 1 | 12V Return |
| 2 | +12VDC |

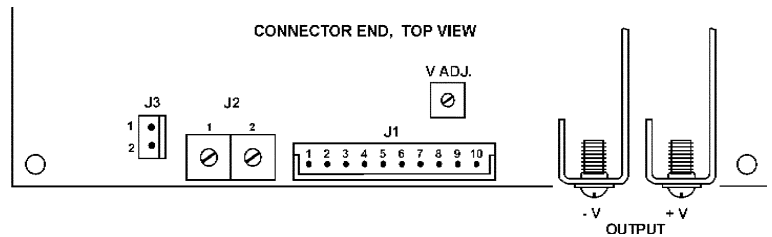
| J3: 5V, 100mA STANDBY SUPPLY | |
|---------------------------------|-----------|
| PIN | FUNCTION |
| 1 | +5VDC |
| 2 | 5V Return |

CONNECTORS

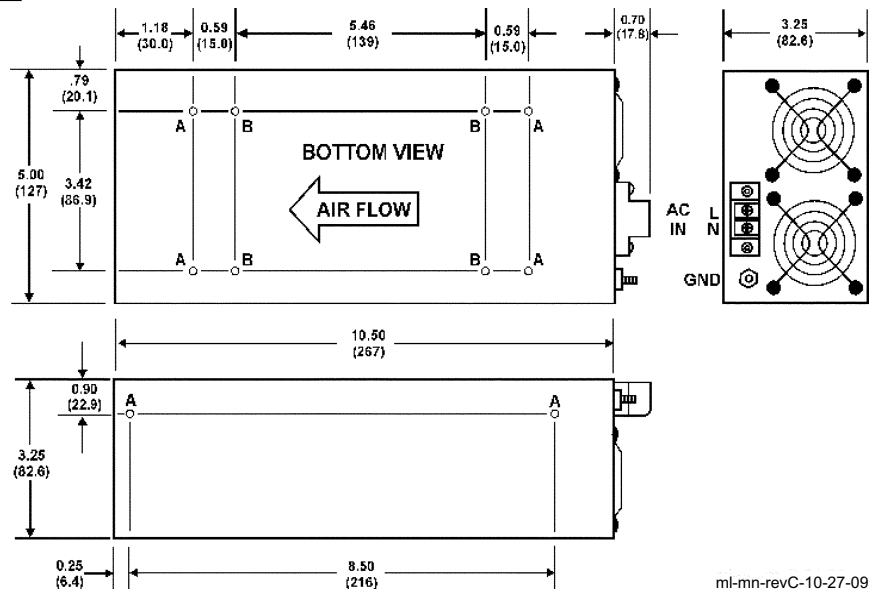
| | |
|---------------------|--------|
| J1: AMP 173981-0 | 10-PIN |
| J2: LMI 9105.102.02 | 2-PIN |
| J3: AMP 171825-2 | 2-PIN |

MATING CONNECTOR KIT

Kit provides mating connectors for all ML and MN Series models.
Order Kit No.: 775-1417-000



CASE OUTLINE



NOTE:

"A" Mounting holes are No. 6-32 threaded inserts. "B" mounting holes are M3 threaded inserts. Max. penetration is 0.25" (6.4mm).

ALL DIMENSIONS IN INCHES (mm).

All specifications subject to change without notice.

ml-mn-revC-10-27-09