

## 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          | 17A            | ✓   | 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 <sup>1</sup> .....      | 1.0%                      |
| Ripple & Noise, Pk-Pk <sup>2</sup> ..... | 1%                        |
| Holdup .....                             | 15mS                      |
| Dynamic Response <sup>3</sup> .....      | 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 <sup>4</sup> ..... | 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:

1. No load to full load, including line regulation and load regulation.
2. Whichever is greater, 20MHz bandwidth. Measured with 0.1µF ceramic and 10µF tantalum capacitors in parallel across the output.
3. <4% deviation recovering to within 1% for 25% load change.
4. 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<br>STANDBY SUPPLY |            |
|----------------------------------|------------|
| PIN                              | FUNCTION   |
| 1                                | 12V Return |
| 2                                | +12VDC     |

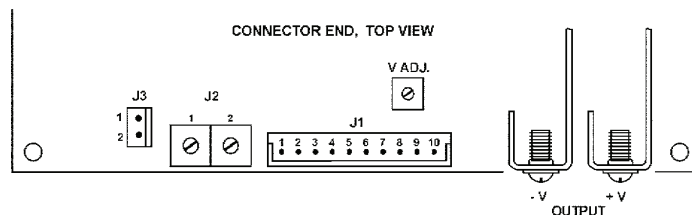
| J3: 5V, 100mA<br>STANDBY SUPPLY |           |
|---------------------------------|-----------|
| PIN                             | FUNCTION  |
| 1                               | +5VDC     |
| 2                               | 5V Return |

### CONNECTORS

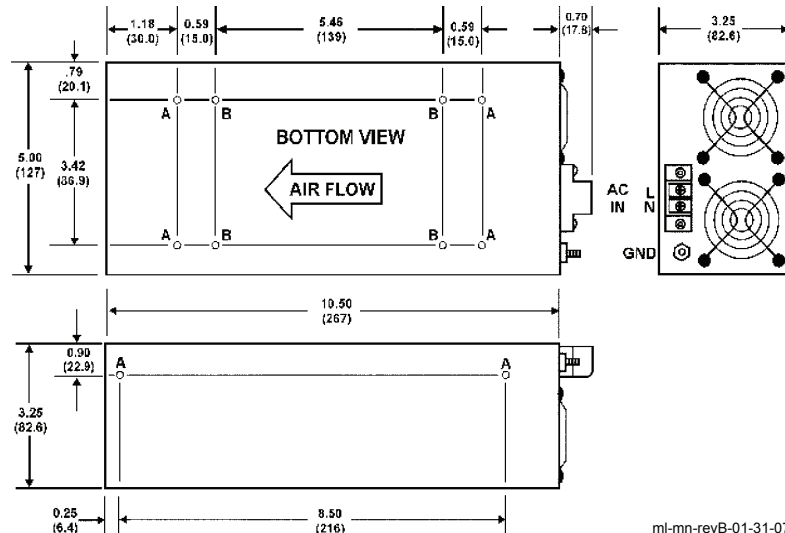
|                     |        |
|---------------------|--------|
| J1: AMP 173981-0    | 10-PIN |
| J2: LMI 9105.102.02 | 2-PIN  |
| J3: AMP 171825-2    | 2-PIN  |

### 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.

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