



## LI24 Series

### 24W, SINGLE OUTPUT DIN-RAIL POWER SUPPLIES

LI24 is a series of DIN-Rail green power supplies with high efficiency and excellent price/performance ratio provided by MORNSUN. This series provide stability and high immunity against electrical disturbance for loads in industrial process controls, machine tools and other equipment exposed to a difficult industrial environment. Compact size, light weight, standard Din Rail installation(35mm) are other features of these power supplies, which saves a lot of space for your design. Build-in large capacitor provides for you enough hold-up time.

### PRODUCT FEATURES

- |   |   |
|---|---|
| 1 Standard Din Rail installation                      | 8 Efficiency: 85% typ                         |
| 2 AC and DC all in one (input from the same terminal) | 9 Heat dissipation: natural                   |
| 3 Universal input voltage:85VAC to 264VAC             | 10 Switching frequency: 60-100kHz             |
| 4 Output voltage adjustable                           | 11 MTBF>200,000 hours                         |
| 5 Low ripple & noise                                  | 12 Meet product standards of industrial class |
| 6 Input under voltage lockout                         | 13 Redundancy Module                          |
| 7 Overload and short-circuit protection               | 14 3-year product warranty                    |

### MODEL LIST

| Model      | Output power | Input voltage range                      | Output voltage/current (Vo/Io) | Ripple & noise | Efficiency |
|------------|--------------|--|--------------------------------|----------------|------------|
| LI24-10B05 | 24W          | 100 - 240VAC<br>(85 - 264VAC)<br>50/60Hz | 5V/4000mA                      | 50mV           | 75         |
| LI24-10B12 |              |  | 12V/2000mA                     |                | 85         |
| LI24-10B24 |              |  | 24V/1000mA                     |                | 87         |

#### Notes:

- Ripple and Noise were measured by a method with twisted-pair wires;
- Unless otherwise specified, all specifications above are measured at rated input voltage and rated output load, TA=25°C, humidity < 75%.;
- All specifications stated in this datasheet are subject to the above listed models only. For specifications of non-standard models, please contact our technical support team directly.

### GENERAL SPECIFICATIONS

|                         |   |   |
|-------------------------|---|---|
| Temperature             | operating:<br>storage:<br>power derating above 55°C:  | -10°C to +70°C max<br>-25°C to +85°C max<br>3.75% /°C   |
| humidity                |   | 95% max   |
| Temperature coefficient |   | 0.02%/ °C   |
| Switching frequency     |   | 60 - 100KHZ   |
| Efficiency              |   | 85% typ.  |
| Isolation voltage       |   | Input/Output 3000VAC  |
| MTBF                    |   | 200,000h @ 25°C   |
| EMI                     |   | EN55022, level B    FCC Part 15, level B  |
| EMS                     | --- Electrostatic discharge ESD<br>--- RF field susceptibility<br>--- Electrical fast transients/bursts on mainsline<br>--- Surge | IEC/EN 61000-4-2 4kV/8kV<br>IEC/EN 61000-4-3 3V/m<br>IEC/EN 61000-4-4 1kV<br>IEC/EN 61000-4-5 level 3 1kV/2kV |
| Safety standards        |   | UL 60950, IEC 60950, EN 60950   |
| Safety approval         |   | UL 60950, IEC 60950, EN 60950   |
| Safety class            |   | Class 1   |
| Case protection         |   | IP 20   |
| Mounting                |   | 35mm DIN-Rail   |

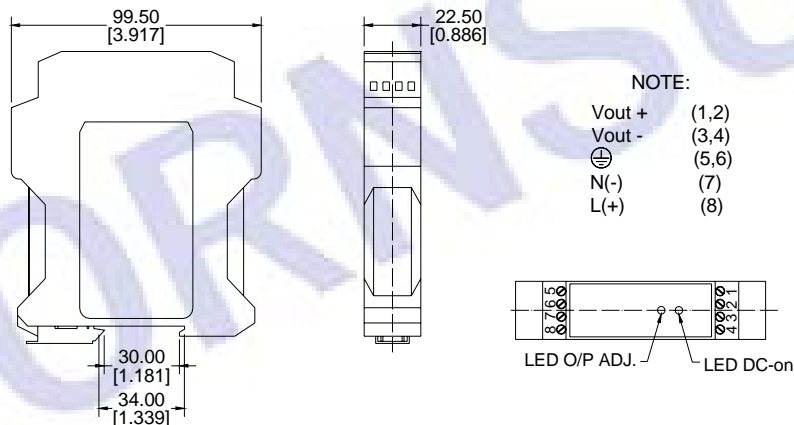
## INPUT SPECIFICATIONS

|                             |   |                 |
|-----------------------------|---|-----------------|
| Input voltage range         | 100 - 240VAC(85 - 264VAC)<br>140 - 340VDC(120 - 370VDC) |                 |
| Input frequency             | 47 - 63Hz   |                 |
| Input current(full load)    | 115VAC<br>450mA   | 230VAC<br>220mA |
| Inrush(<2ms)                | 115VAC<br>16A   | 230VAC<br>30A   |
| Input under voltage lockout | 80VAC (±10%)  |                 |
| External fuse(recommended)  | 3.15A/250V slow blow                                    |                 |

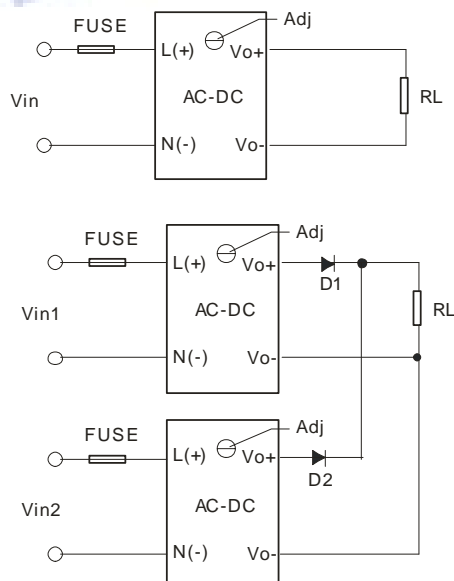
## OUTPUT SPECIFICATIONS

|  |  |  |
|--|--|--|
| Output voltage                                 | LI24-10B05<br>LI24-10B12<br>LI24-10B24 | Regulate range(TYP.)<br>5.0 - 5.5VDC<br>12 - 14VDC<br>24 - 28VDC |
| Load variation (10% - 90%)                     | ±1%                                    |  |
| Output ripple & noise(peak-peak) 20M Bandwidth | 50mV typ.                              |  |
| Short circuit protection                       | Continuous and auto resume             |  |
| Over current protection                        | LI24-10B05<br>LI24-10B12<br>LI24-10B24 | 4.4A typ.<br>2.4A typ.<br>1.3A typ.                              |
| Over voltage protection                        | LI24-10B05<br>LI24-10B12<br>LI24-10B24 | 6.5V max<br>20V max<br>30V max                                   |
| Hold-up time Vin=230Vac                        | 80ms typ.                              |  |

## OUTLINE DIMENSIONS (Unit:mm)



## TYPICAL APPLICATION



### General Application

1. Vin: 85 - 264VAC or 120 - 370VDC;
2. Adj: Adjusting terminal of output voltage. Users can adjust any load freely within the range of output voltage according to your own need.

### Parallel connection Application

1. Two same Din Rail power supplies are in use of parallel connection application, Vin1 and Vin2 are both 85-264VAC or 120-370VDC;
2. Adj: Adjusting terminal of output voltage. Users can adjust any load freely within the range of output voltage according to your own need.
3. When AC-DC2's output voltage is a little lower than AC-DC1's, AC-DC2 is becoming a spare power supply for load, as Vin1 is off or AC-DC1 is in fault.
4. When Vin1 and Vin2 are supplying power to Din Rail power supply alternately, Din Rail power supply will work alternately and supply power to load sostenuto.