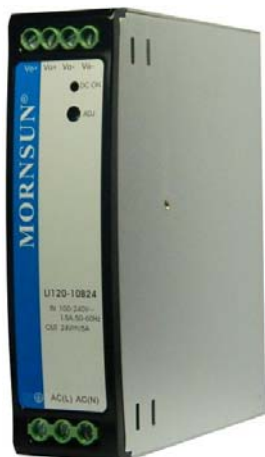


120W, AC-DC converter



FEATURES

- Universal input range:85~264VAC/120~370VDC
- AC and DC all in one (input from the same terminal)
- Low standby power consumption, high efficiency, 3000VAC safe isolation
- low ripple and noise
- Protection of input under-voltage, output short circuit, output over-current, output over-voltage over-temperature Protection, and Remote control
- Perfect EMC performance, and EFT, surge meet level 4
- Meet IEC61000, UL60950and IEC60950 standards

LI120— 120W converter offered by Mornsun. It features Cost-effective, standard rail mounting, energy efficient. It offers stability and high noise immunity for industrial control equipment, machinery and other harsh environments of industrial equipment. The converter is small, light weight, compact structure, standard rail (35mm) Installation and save a lot of space for customers.

Selection Guide

| Certification | Model | Output Power | Nominal Output Voltage and Current(Vo/Io) | Efficiency (230VAC, %/Typ.) | Max. Capacitive Load(μF) |
|-----------------|-------------|--------------|---|-----------------------------|--------------------------|
| UL/CE (Pending) | LI120-10B24 | 120W | 24V/5A | 92 | 4700 |

Input Specifications

| Item | Operating Conditions | | Min. | Typ. | Max. | Unit |
|--------------------------------|----------------------|----------|------|------|------|------|
| Input Voltage Range | AC input | | 85 | -- | 264 | VAC |
| | DC input | | 120 | -- | 370 | VDC |
| Input frequency | | | 47 | -- | 63 | Hz |
| Input current | 115VAC | | -- | -- | 1.5 | A |
| | 230VAC | | -- | -- | 0.75 | |
| Inrush current | 115VAC | | -- | 35 | -- | |
| | 230VAC | | -- | 70 | -- | |
| Power Factor | 115VAC | | -- | 0.98 | -- | -- |
| | 230VAC | | -- | 0.96 | -- | |
| Input under-voltage protection | Start-up Voltage | AC input | 76 | -- | 83 | VAC |
| | Shutdown Voltage | AC input | 67 | -- | 75 | |



Output Specifications

| Item | Operating Conditions | | Min. | Typ. | Max. | Unit |
|-------------------------------|-----------------------------------|--|--|-------|------|------|
| Output Voltage Accuracy | | | -- | -- | ±1 | % |
| Linear Regulation | Full load | | -- | -- | ±0.5 | |
| Load Regulation | | | -- | -- | ±1 | |
| Output Ripple & Noise* | 20MHz bandwidth (peak-peak value) | | -- | -- | 100 | mV |
| Temperature Drift Coefficient | | | -- | ±0.03 | -- | %/°C |
| Stand-by Power Consumption | | | -- | -- | 0.75 | W |
| Short Circuit Protection | | | Continuous, self-recovery | | | |
| Over-current Protection | | | 110-150% Io, start protecting after 3 seconds, and auto recovery | | | |
| Over-voltage Protection | | | Overvoltage Restart | | | |
| Over-temperature Protection | | | Over-temperature shutdown , and auto recovery | | | |
| Min. Load | | | 0 | -- | -- | % |
| Start-up Time | | | -- | -- | 1500 | ms |

| | | | | | |
|--------------|--------|----|----|----|--|
| Hold-up Time | 115VAC | -- | 25 | -- | |
| | 230VAC | -- | 25 | -- | |

Note: * Rely test method is adopted test the ripple and noise, please see *AC-DC Converter Application Notes* for specific operation methods.

General Specifications

| Item | Operating Conditions | Min. | Typ. | Max. | Unit |
|--------------------------------|---|------|------|------|------|
| Isolation Voltage | Input-output | 3000 | -- | -- | VAC |
| | Input-  | 1500 | -- | -- | |
| | Output-  | 500 | -- | -- | |
| Operating Temperature | | -25 | -- | +70 | °C |
| Storage Temperature | | -25 | -- | +85 | |
| Storage Humidity | | -- | -- | 95 | %RH |
| Switching Frequency | | -- | 100 | -- | kHz |
| Power Derating | +55°C to +70°C | 2.5 | -- | -- | %/°C |
| Safety Standard | IEC60950/EN60950/UL60950 | | | | |
| Safety-regulated Certification | EN60950/UL60950 Pending | | | | |
| Safety Class | CLASS I | | | | |
| Hot Plug | Unavailable | | | | |
| MTBF | MIL-HDBK-217F@25°C > 300,000 h | | | | |

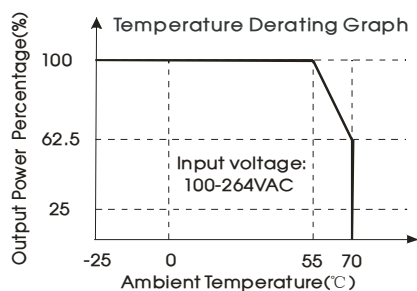
Physical Specifications

| | |
|--------------------|--|
| Casing Material | heat-resistant plastic (UL94-V0) and metal |
| Package Dimensions | 35.00*125.00*112.70 mm (W*H*D) |
| Weight | 560±20 g |
| Cooling method | Natural cooling |

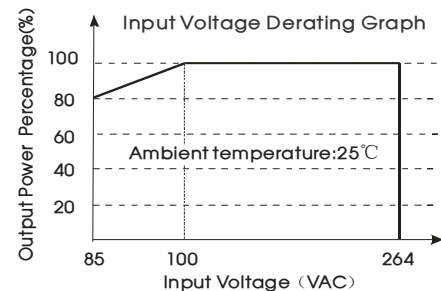
EMC Specifications

| | | | | |
|-----|--|--------------------------|-----------------------|------------------|
| EMI | Conducted Disturbance | CISPR22/EN55022, CLASS B | | |
| | Radiated Emission | CISPR22/EN55022, CLASS B | | |
| EMS | Electrostatic Discharge | IEC/EN61000-4-2 | Contact ±6KV/Air ±8KV | Perf. Criteria B |
| | Radiation Immunity | IEC/EN61000-4-3 | 10V/m | perf. Criteria A |
| | EFT | IEC/EN61000-4-4 | ±4KV | perf. Criteria B |
| | Surge Immunity | IEC/EN61000-4-5 | ±2KV/±4KV | perf. Criteria B |
| | Conducted Disturbance immunity | IEC/EN61000-4-6 | 10 Vr.m.s | perf. Criteria A |
| | Immunity for Power frequency magnetic field | IEC/EN61000-4-8 | 10A/m | perf. Criteria A |
| | Immunities of voltage dip, drop and short interruption | IEC/EN61000-4-11 | 0%-70% | perf. Criteria B |

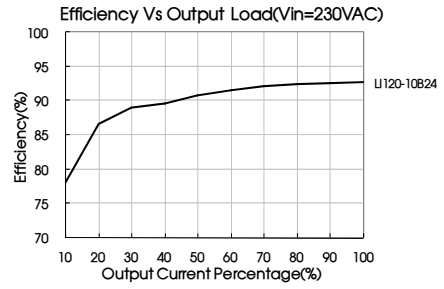
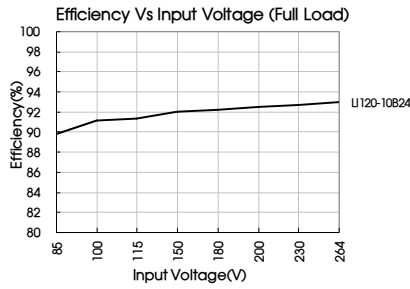
Product Characteristic Curve



Note: Input voltage should be derated based on temperature derating when it is 85-100VAC.



Note: When input DC, VDC=1.414*VAC-20.



Design Reference

1. Typical application circuit

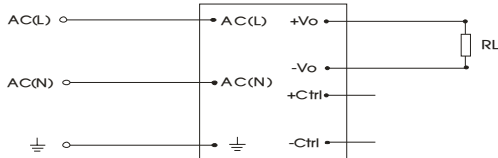


Fig. 1: Typical application circuit

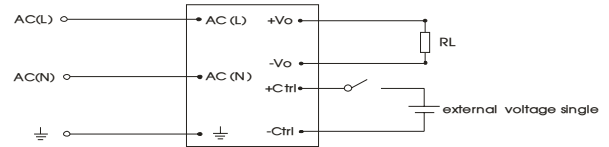
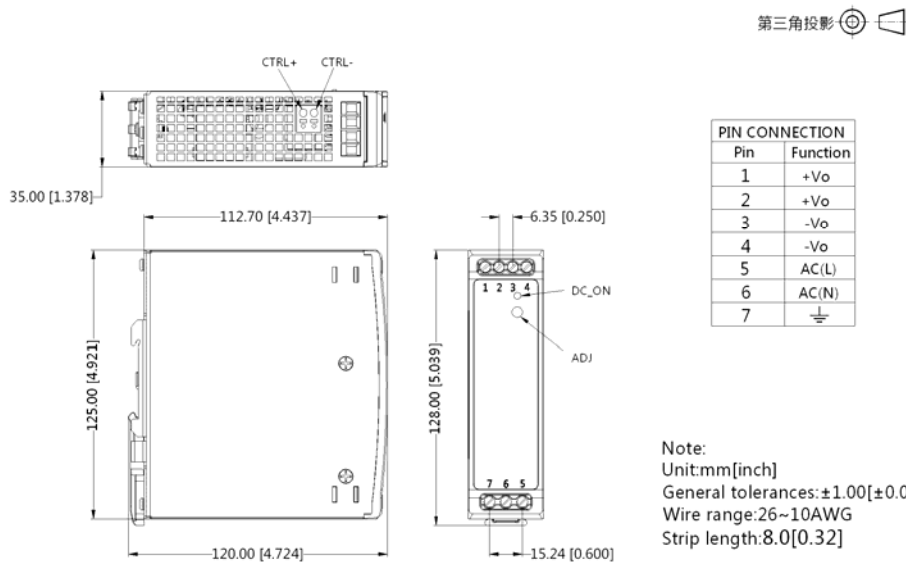


Fig. 2: Remote control Applications circuit

*Note: external voltage single range 4.5 ~ 12.5VDC realize the power off, the single disappears and recovery

2. For more information Please find the application notes on www.mornsun-power.com

Dimensions and Recommended Layout



Note:

1. Packing Information please refer to 'Product Packing Information'. Packing bag number: 58220028;
2. Unless otherwise specified, data in this datasheet should be tested under the conditions of Ta=25°C, humidity<75% when inputting nominal voltage and outputting rated load;
3. All index testing methods in this datasheet are based on our Company's corporate standards;
4. The performance indexes of the product models listed in this manual are as above, but some indexes of non-standard model products will exceed the above-mentioned requirements, and please directly contact our technician for specific information;
5. We can provide product customization service;
6. The product specification may be changed at any time without prior notice.

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