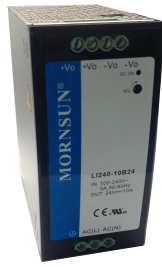


240W DIN-rail AC-DC converter



### FEATURES

- Universal 85 - 264V AC and wide 120 - 370V DC Input
- Active Power Factor Correction (PFC)
- Input undervoltage protection, output short circuit, over-current, over-voltage and over-temperature protection
- Remote On/Off control and output voltage adjust
- IEC60950, UL60950 and EN60950 safety approvals



LI240 is Mornsun's 240W AC-DC converter series featuring a cost-effective, energy efficient solution for standard DIN-rail mounting. The products offer a high level of stability and immunity to noise, compliant with international IEC61000 standards for EMC are safety approved to UL60950 and EN60950. These light weight AC-DC converters also accept DC input, have an extremely compact design for space saving and are ideal for applications such as industrial control, tooling equipment, machinery, railway and transportation and all kinds of applications in a harsh environment.

### Selection Guide

Certification	Part No.	Output Power	Nominal Output Voltage and Current(Vo/Io)	Efficiency (230VAC, %/Typ.)	Max. Capacitive Load(μF)
UL/CE/CB	LI240-10B24	240W	24V/10A	92	4700
	LI240-10B48		48V/5A	93	2700

### 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		--	--	3.0	A
	230VAC		--	--	1.5	
Inrush Current	115VAC		--	30	--	A
	230VAC		--	60	--	
Power Factor	115VAC		--	0.98	--	--
	230VAC		--	0.96	--	
Input Under-voltage Protection	Start-up Voltage	AC input, Full load	75	--	83	VAC
	Shutdown Voltage	AC input, Full load	67	--	74	
Hot Plug			Unavailable			



### Output Specifications

Item	Operating Conditions		Min.	Typ.	Max.	Unit
Output Voltage Range	LI240-10B24	Rated max Output Power 240W	24 - 28 Adjustable			V
	LI240-10B48		48 - 52.8 Adjustable			
Output Voltage Accuracy			--	--	±1	%
Line Regulation	Full load		--	--	±0.5	
Load Regulation	5% - 100% load		--	--	±1	
Ripple & Noise*	LI240-10B24	20MHz bandwidth (peak-peak value)	--	--	100	mV
	LI240-10B48		--	--	150	
Temperature Coefficient			--	±0.03	--	%/°C
Stand-by Power Consumption			--	1.0	--	W
Short Circuit Protection			Continuous, self-recovery			
Over-current Protection			110 - 150% Io, self-recovery			

Over-voltage Protection		Continuous until condition removed, automatic restart			
Over-temperature Protection		Over-temperature shut down with self-recovery			
Minimum Load		0	--	--	%
Start-up Time		--	--	1500	ms
Hold-up Time	115VAC input	--	22	--	
	230VAC input	--	22	--	

Note: \*The "Tip and barrel method" is used for ripple and noise test, please refer to AC-DC Converter Application Notes for specific information.

### General Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Isolation Test	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	+50°C to +70°C	3.0	--	--	%/°C
Safety Standard		IEC60950/EN60950/UL60950			
Safety Certification		IEC60950/EN60950/UL60950			
Safety Class		CLASS I			
MTBF	MIL-HDBK-217F@25°C	> 300,000 h			

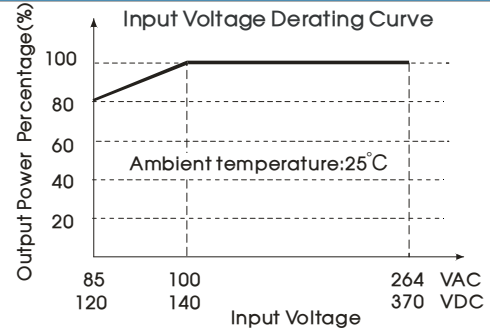
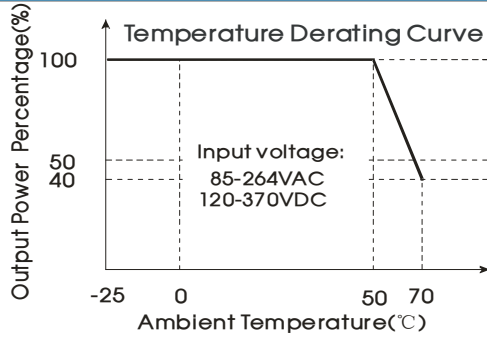
### Physical Specifications

Case Material	Heat-resistant plastic (UL94V-0) and metal
Dimension	60.00 x 125.00 x 120.00 mm
Weight	820g(Typ.)
Cooling Method	Free air convection

### EMC Specifications

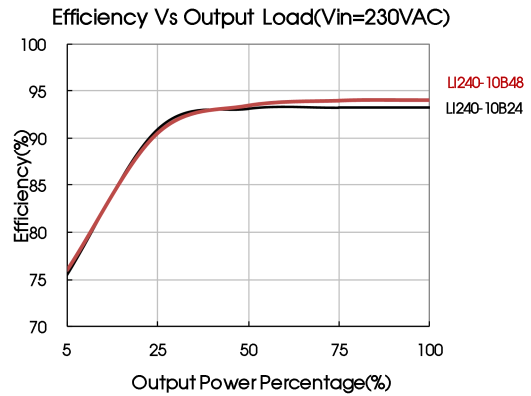
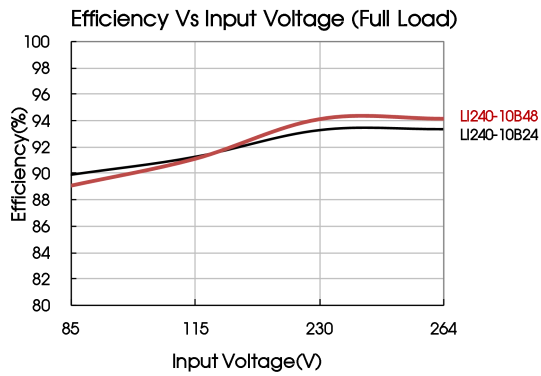
EMI	CE	CISPR22/EN55022	CLASS B	
	RE	CISPR22/EN55022	CLASS B	
	Harmonic current	IEC/EN61000-3-2	CLASS A	
EMS	ESD	IEC/EN61000-4-2	Contact ±6KV/Air ±8KV	Perf. Criteria B
	RS	IEC/EN61000-4-3	10V/m	perf. Criteria A
	EFT	IEC/EN61000-4-4	±4KV	perf. Criteria B
	Surge	IEC/EN61000-4-5	line to line ±2KV/line to ground	perf. Criteria B
	CS	IEC/EN61000-4-6	10Vr.m.s	perf. Criteria A
	PFM	IEC/EN61000-4-8	10A/m	perf. Criteria A
	Voltage dips, short interruptions and voltage variations immunity	IEC/EN61000-4-11	0%,70%	perf. Criteria B

Product Characteristic Curve



Note: ① Input voltage should be derated based on temperature derating when it is 85-100VAC/120-140VDC;

② This product is suitable for use in natural air cooling environments, if in a closed environment, please contact our company's FAE.



Design Reference

1. Typical application circuit

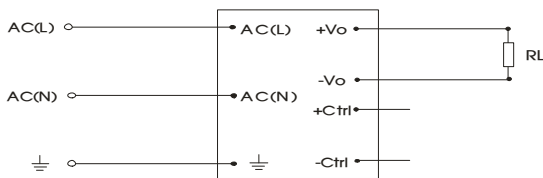


Fig. 1: Typical application circuit

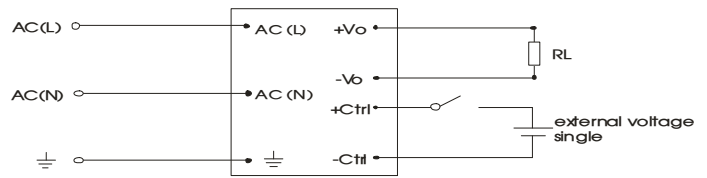


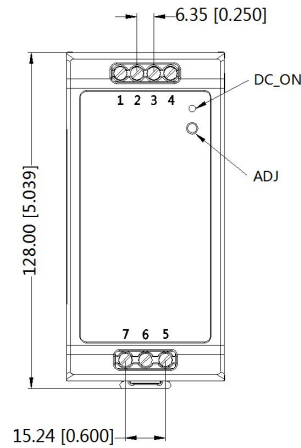
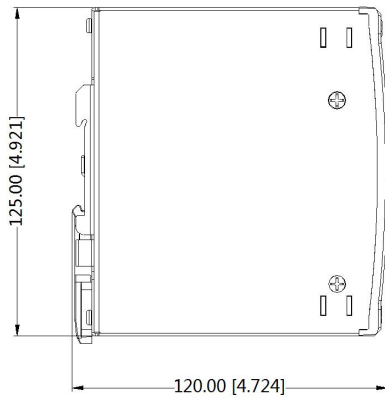
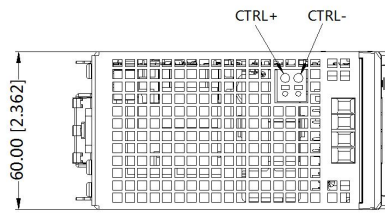
Fig. 2: Remote control Applications circuit

Note: An external voltage source in the range of 4.5 - 12.5VDC is used to power off the converter. The output recovers with signal removed.

2. For more information Please find the application notes on [www.mornsun-power.com](http://www.mornsun-power.com)

Dimensions and Recommended Layout

THIRD ANGLE PROJECTION 



PIN CONNECTION	
Pin	Function
1	+Vo
2	+Vo
3	-Vo
4	-Vo
5	AC(N)
6	AC(L)
7	⏏

Note:  
Unit: mm[inch]  
ADJ : adjustable resistance to change output voltage  
Wire range: 26-10 AWG  
Tightening torque: Max 0.4 N·m  
Mounting rail: TS35, rail needs to connect safety ground  
General tolerances: ±1.00[±0.039]

Notes:

1. For additional information on Product Packaging please refer to [www.mornsun-power.com](http://www.mornsun-power.com). Packaging bag number: 58220024;
2. If the product is not operated within the required load range, the product performance cannot be guaranteed to comply with all parameters in the datasheet;
3. Unless otherwise specified, parameters in this datasheet were measured under the conditions of  $T_a=25^{\circ}\text{C}$ , humidity<75% with nominal input voltage and rated output load;
4. All index testing methods in this datasheet are based on our company corporate standards;
5. We can provide product customization service, please contact our technicians directly for specific information;
6. Specifications are subject to change without prior notice.

Mornsun Guangzhou Science & Technology Co., Ltd.

Address: No. 5, Kehui St. 1, Kehui Development Center, Science Ave., Guangzhou Science City, Huangpu District, Guangzhou, P. R. China  
Tel: 86-20-38601850 Fax: 86-20-38601272 E-mail: info@mornsun.cn www.mornsun-power.com