AC/DC Converter

LI240-10Bxx Series

MORNSUN®

240W, AC/DC converter

FEATURES

- Wide input voltage range: 85~264VAC/120~370VDC
- Active PFC
- Input under-voltage protection, output short circuit, over-current, over-voltage, over-temperature protections
- Meets IEC60950, UL60950, EN60950 standards

LI240-10Bxx series---- 240W converter offered by Mornsun. It features Cost-effective, standard rail mounting, energy efficient. EMC and Safety specifications meet the international IEC61000, UL60950 and EN60950 standards. This series of products can be used in industrial control equipment, machinery, railway transport etc.

Selection Guide

Certification	Part No.	Output Power	Nominal Output Voltage and Current(Vo/Io)	Efficiency (230VAC, %/Typ.)	Max. Capacitive Load(μF)
UL/CE	LI240-10B24	240W	24V/10A	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	--	--	3.0	A
		230VAC	--	--	1.5	
Inrush Current		115VAC	--	30	--	
		230VAC	--	60	--	
Power Factor		115VAC	--	0.98	--	--
		230VAC	--	0.96	--	
Input Under-voltage Protection	Start-up Voltage	AC input	75	--	83	VAC
	Shutdown Voltage	AC input	67	--	74	
Hot Plug			Unavailable			

Output Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Output Voltage Range	Rated max Output Power 240W	24~28 Adjustable			V
Output Voltage Accuracy		--	--	±1	%
Line Regulation	Full load	--	--	±0.5	
Load Regulation	5%-100% load	--	--	±1	
Ripple & Noise*	20MHz bandwidth (peak-peak value)	--	--	100	mV
Temperature Coefficient		--	±0.03	--	%/℃
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 automatic restart until the over-voltage condition is removed			
Over-temperature Protection		shut down the output voltage at over-temperature, self-recovery			
Min. Load		0	--	--	%

Start-up Time		--	--	1500	ms
Hold-up Time	115VAC input	--	22	--	
	230VAC input	--	22	--	

Note: * Ripple and noise are measured by "rely test" method, please see AC-DC Converter Application Notes for specific operation.

General Specifications

Item		Operating Conditions	Min.	Typ.	Max.	Unit
Isolation Voltage	Input-output	Test time: 1min	3000	--	--	VAC
	Input- ⏚		1500	--	--	
	Output- ⏚		500	--	--	
Operating Temperature			-25	--	+70	℃
Storage Temperature			-25	--	+85	
Storage Humidity			--	--	95	%RH
Switching Frequency			--	100	--	KHz
Power Derating		+50℃ to +70℃	3.0	--	--	%/℃
Safety Standard			IEC60950/EN60950/UL60950			
Safety Certification			EN60950/UL60950			
Safety Class			CLASS I			
MTBF			MIL-HDBK-217F@25℃ > 300,000 h			

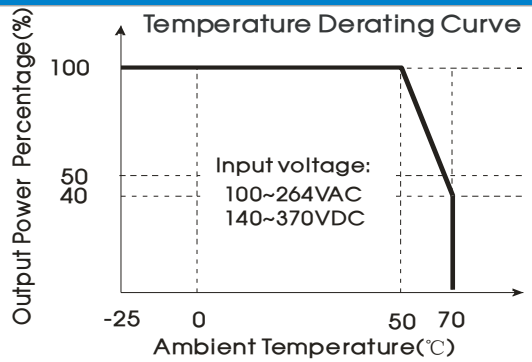
Physical Specifications

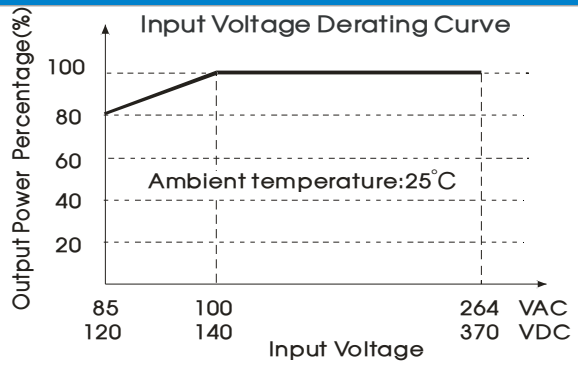
Casing Material	heat-resistant plastic (UL94-V0) and metal
Dimension	60.00*125.00*120.00 mm (W*H*D)
Weight	820(Typ.)±20 g
Cooling Method	Free convection

EMC Specifications

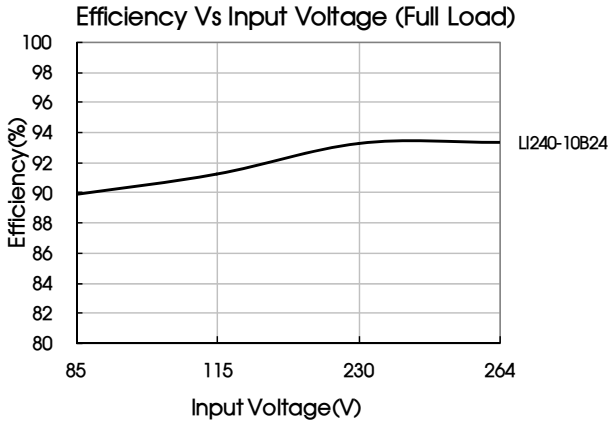
EMI	CE	CISPR22/EN55022, CLASS B	
	RE	CISPR22/EN55022, CLASS B	
EMS	ESD	IEC/EN61000-4-2 Contact ±6KV/Air ±8KV	Perf. Criteria B
	RS	IEC/EN61000-4-3 10V/m	perf. Criteria A
	EFT	IEC/EN61000-4-4 ±4KV	perf. Criteria B
	Surge	IEC/EN61000-4-5 ±2KV/±4KV	perf. Criteria B
	CS	IEC/EN61000-4-6 10 Vr.m.s	perf. Criteria 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

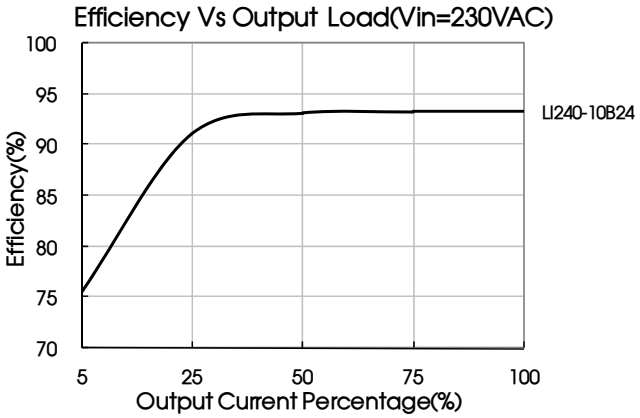
Product Characteristic Curve





Note: ①Input voltage should be derated based on temperature derating when it is 85-100VAC/120-140VDC;
②This 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

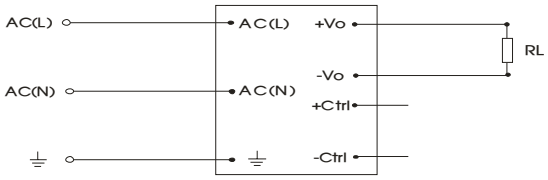


Fig. 1: Typical application circuit

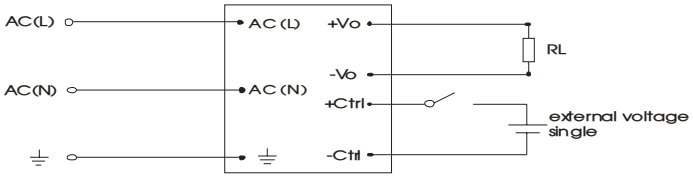
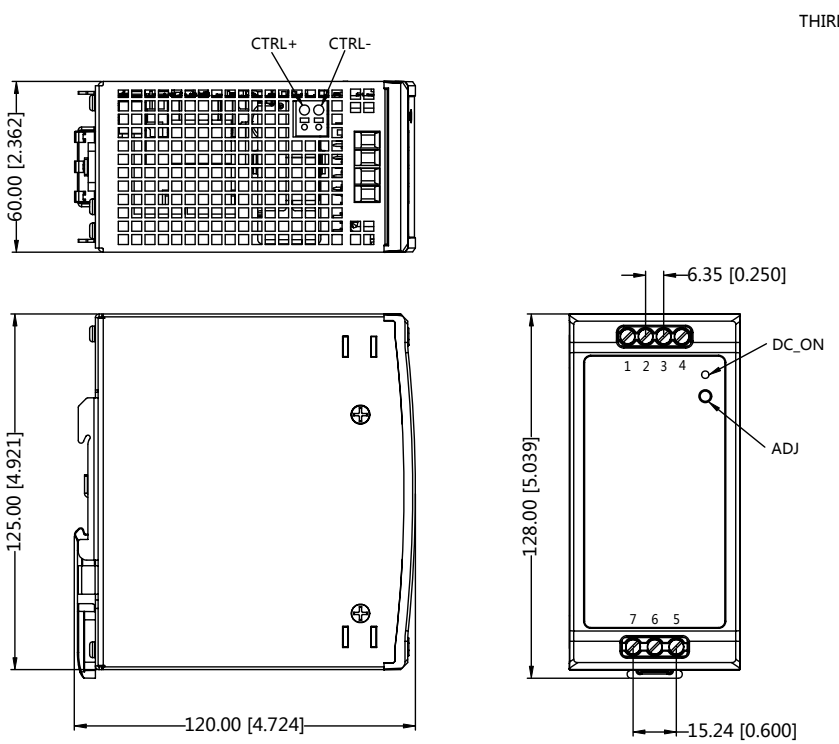


Fig. 2: Remote control Applications circuit

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

2.For more information about Mornsun EMC Filter products, please visit www.mornsun-power.com to download the Selection Guide of EMC Filter

Dimensions and Recommended Layout



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

Note:
Unit:mm[inch]
General tolerances:±1.00[±0.040]
Wire range:26~10AWG
Installed on DIN RAIL TS35

Notes:

1. Packing information please refer to Product Packing Information which can be downloaded from www.mornsun-power.com. Packing 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 Ta=25 ℃, humidity<75% with nominal input voltage and rated output load;
4. All index testing methods in this datasheet are based on our Company's corporate standards;
5. The performance parameters of the product models listed in this manual are as above, but some parameters of non-standard model products may exceed the requirements mentioned above. Please contact our technicians directly for specific information;
6. We can provide product customization service;
7. Specifications are subject to change without prior notice.

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