

150W, AC-DC converter



FEATURES

- Wide input voltage range: 85 - 264VAC/100 - 370VDC
- AC and DC dual-use (Input from the same terminal)
- Operating temperature range: -40℃ to +70℃
- Low standby power consumption, High efficiency
- 3.75KVAC high isolation voltage
- Low ripple & noise
- Output short circuit, over-current, over-voltage, protection
- Meet IEC62368, EN62368, UL62368

LM150-10Bxx series — offered by Mornsun. It features Cost-effective, energy efficient. It offers stability and high noise immunity for industrial control equipment, machinery and other harsh environments of industrial equipment. The converter is compact size, light weight, compact structure, save a lot of space for customers.

Selection Guide

Part No.	Output Power	Nominal Output Voltage and Current (Vo/Io)	Efficiency (230VAC, %/Typ.)	Max. Capacitive Load (μF)
LM150-10B12	150W	12V/12.5A	87	10000
LM150-10B24		24V/6.5A	89	4700

Input Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Input Voltage Range	AC input	85	--	264	VAC
	DC input	100	--	370	VDC
Input frequency		47	--	63	Hz
Input current	115VAC	--	--	3.0	A
	230VAC	--	--	1.7	
Inrush current	115VAC	--	35	--	
	230VAC	--	60	--	
Hot Plug		Unavailable			

Output Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Output Voltage Accuracy		--	±1	--	%
Line Regulation	Full load	--	±0.5	--	
Load Regulation		--	±0.5	--	
Output adjustable range	12V	10.2	--	13.8	V
	24V	21.6	--	28.5	V
Output Ripple & Noise*	20MHz bandwidth (peak-peak value)	12V	--	150	mV
		24V	--	200	
Temperature Drift Coefficient		--	±0.03	--	%/°C
Stand-by Power Consumption		--	--	0.5	W
Short Circuit Protection		Hiccup, Continuous, self-recovery			
Over-current Protection		110-200% Io, overload continuous working time is less than 10s, self-recovery			
Over-voltage Protection*	12V	≤16V			
	24V	≤35V			
Min. Load		0	--	--	%
Hold-up Time	230VAC	--	35	--	ms

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

* Output latched after OVP, and recovered by an AC restart cycle.

General Specifications

Item		Operating Conditions	Min.	Typ.	Max.	Unit
Isolation Voltage	Input-output	Test time: 1min,Leakage current<10mA	3750	--	--	VAC
	Input- 		2500	--	--	
	Output- 		1250	--	--	
Operating Temperature			-40	--	+70	℃
Storage Temperature			-40	--	+85	
Storage Humidity			--	--	95	%RH
Switching Frequency			--	65	--	kHz
Power Derating		-40℃ to -25℃	3	--	--	% /℃
		+50℃ to +70℃	2.5	--	--	
Safety Standard			Meets UL62368/EN62368/IEC62368			
Safety Class			CLASS I			
MTBF		MIL-HDBK-217F@25° C	> 300,000 h			

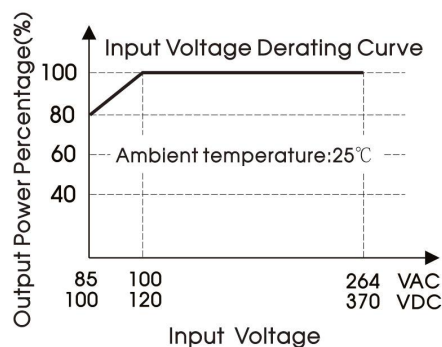
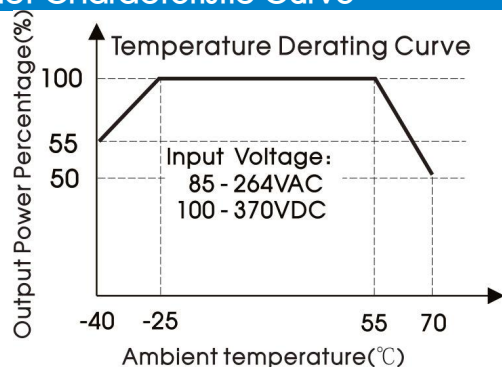
Physical Specifications

Casing Material	metal
Package Dimensions	159.00*97.00*30.00mm
Weight	460g(Typ.)
Cooling method	Free air convection

EMC Specifications

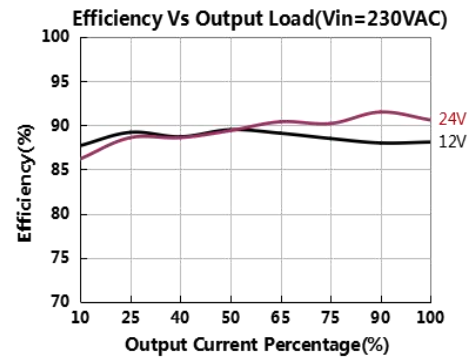
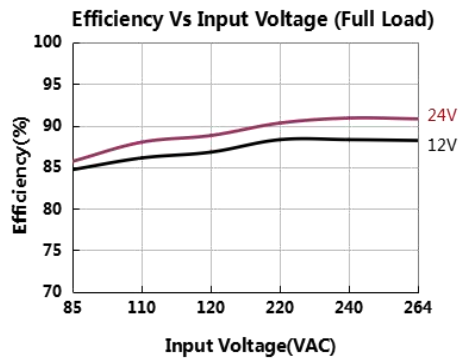
EMI	CE	CISPR32/EN55032	CLASS B	
	RE	CISPR32/EN55032	CLASS B	
EMS	ESD	IEC/EN61000-4-2	Contact ±6KV/Air ±8KV	Perf. Criteria A
	RS	IEC/EN61000-4-3	10V/m	perf. Criteria A
	EFT	IEC/EN61000-4-4	±2KV	perf. Criteria A
	Surge	IEC/EN61000-4-5	line to line ±2KV/line to ground ±4KV	perf. Criteria A
	CS	IEC/EN61000-4-6	10Vr.m.s	perf. Criteria A
	Voltage dips, short interruptions and voltage variations immunity	IEC/EN61000-4-11	0%,70%	perf. Criteria B

Product Characteristic Curve

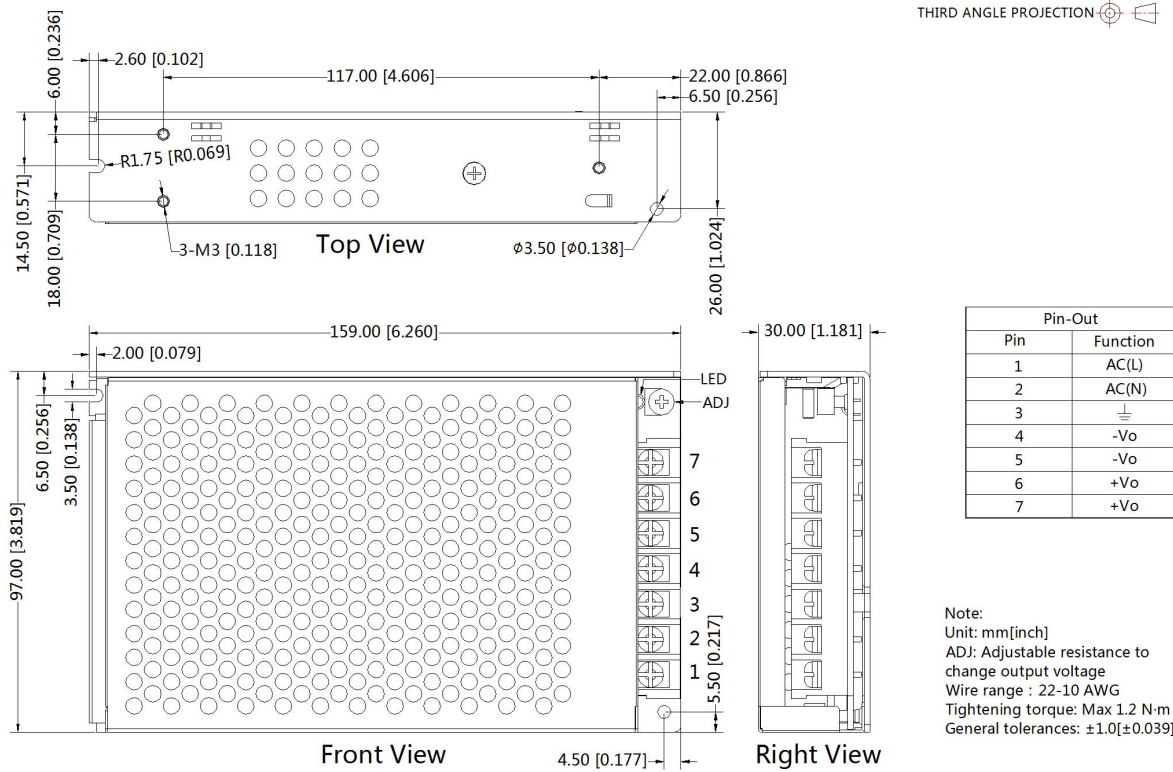


Note: ①Input voltage should be derated based on temperature derating when it is 85 -100VAC/100 -120VDC;

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



Dimensions and Recommended Layout



Notes:

1. Packing information please refer to Product Packing Information which can be downloaded from www.mornsun-power.com. Packing bag number: 58220045;
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 $T_a=25\text{ }^{\circ}\text{C}$, humidity<75% with nominal input voltage and rated output load;
4. All index testing methods in this datasheet are based on our Company's corporate standards;
5. We can provide product customization service, please contact our technicians directly for specific information;
6. Products are related to laws and regulations: see "Features" and "EMC";
7. Our products shall be classified according to ISO14001 and related environmental laws and regulations, and shall be handled by qualified units.

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