



FEATURES

- Special switching power supply designed for professional laser galvanometer industry
- Universal 165- 264VAC or 180 - 370VDC Input voltage
- Accepts AC or DC input (dual-use of same terminal)
- Operating ambient temperature range: -30℃ to +70℃
- High efficiency, low ripple & noise
- High I/O isolation test voltage up to 3000VAC
- Output short circuit, over-current, over-voltage protection
- OVC III (designed to meet EN61558)
- Operating altitude up to 5000m
- 3 years warranty



LM150-12A15 series is one of Mornsun's dual output non-isolation enclosed AC-DC switching power supply. It features universal AC input and at the same time accepts DC input voltage, cost-effective, high efficiency, high reliability and double or reinforced insulation. The Converter offers excellent EMC performance and meet IEC/EN61000-4, IEC/UL/EN62368, GB4943 standards and it is not only specific used in the laser galvanometer industry, but also widely used in current sensors, motors and other fields.

Selection Guide

Certification	Part No.*	Output Power (W)	Nominal Output Voltage and Current		Output Voltage Adjustable Range (ADJ) Io1 (V)	Efficiency at 230VAC (%) Typ.	Max. Capacitive Load (μF) (Vo1/Vo2)
			(Vo1/Io1)	(Vo2/Io2)			
EN/BIS	LM150-12A15	150	+15V/5A	-15V/5A	13.5V-16.5V	85	6000

Note: 1. *Use suffix "C" for terminal with protective cover and suffix "Q" for conformal coating.
2. The product picture is for reference only. For details, please refer to the actual product.

Input Specifications

Item	Operating Conditions		Min.	Typ.	Max.	Unit
Input Voltage Range	AC input		165	--	264	VAC
	DC input		180	--	370	VDC
Input Voltage Frequency			47	--	63	Hz
Input Current	230VAC		--	--	2.5	A
Inrush Current	230VAC	Cold start	--	60	--	
Leakage Current	240VAC		<0.75mA			
Hot Plug			Unavailable			

Output Specifications

Item	Operating Conditions		Min.	Typ.	Max.	Unit
Output Voltage Accuracy	10% - 100% load (Balanced load)	Vo1	--	±1.0	--	%
		Vo2	--	±3.0	--	
Line Regulation	10% - 100% load (Balanced load)	Vo1	--	±0.5	--	
		Vo2	--	±0.5	--	
Load Regulation	10% - 100% load (Balanced load)	Vo1	--	±1.0	--	%
		Vo2	--	±3.0	--	
Ripple & Noise*	20MHz bandwidth (peak-to-peak value)	Vo1/Vo2	--	100	--	mV
Temperature Coefficient			--	±0.03	--	%/℃
Minimum Load			--	10	--	%
Stand-by Power Consumption	230VAC		--	--	5.5	W

AC/DC150W Enclosed Switching Power Supply

LM150-12A15

MORNSUN®

Hold-up Time	230VAC			22	--	ms
Short Circuit Protection	Recovery time <5s after the short circuit disappear.		Hiccup, continuous, self-recover			
Over-current Protection			110%-180% Io, hiccup, self-recover			
Over-voltage Protection	Balanced load, Vo1		≤21.75VDC (Hiccup, self-recover)			
Over-temperature Protection	Over-temperature Protection Activation	Hiccup	--	80	90	℃
	Over-temperature Protection Deactivation		65	--	--	
Note: *The “Tip and barrel method” is used for ripple and noise test, output parallel 47μF electrolytic capacitor and 0.1μF ceramic capacitor, please refer to enclosed Switching Power Supply Application Notes for specific information.						

General Specifications

Item		Operating Conditions		Min.	Typ.	Max.	Unit
Isolation	Input - output	Electric strength test for 1min., leakage current <5mA		3000	--	--	VAC
	Input - ⊕			1500	--	--	
	Output - ⊕			500	--	--	
Insulation Resistance	Input - output	Environment temperature: 25±5℃ Relative humidity: <95%RH, non-condensing Testing voltage: 500VDC		50	--	--	M Ω
	Input - ⊕			50	--	--	
	Output - ⊕			50	--	--	
Operating Temperature				-30	--	+70	℃
Storage Temperature				-40	--	+85	
Operating Humidity		Non-condensing		10	--	95	%RH
Storage Humidity				20	--	90	
Power Derating		Operating temperature derating	+50℃ to +70℃	2.5	--	--	%/℃
Safety Standard				IS13252 (Part1) safety approved & EN/BS EN 62368-1(Report); Design refer to IEC/UL62368-1, EN60335-1, EN61558-2-16, GB4943.1			
Safety Class				CLASS I			
MTBF		MIL-HDBK-217F@25℃		>300,000 h			

Mechanical Specifications

Case Material	Metal (AL1100, SGCC)
Dimensions	159.0 x 97.0 x 30.0 mm
Weight	420g (Typ.)
Cooling Method	Air cooling

Electromagnetic Compatibility (EMC)*

Emissions*	CE	CISPR32/EN55032	CLASS B	
	RE	CISPR32/EN55032	CLASS B	
	Harmonic current	IEC/EN61000-3-2	CLASS A (≤80% Load)	
	Flicker	IEC/EN61000-3-3		
Immunity	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	±4KV	perf. Criteria A
	Surge	IEC/EN61000-4-5	line to line ±2KV/line to PE ±4KV	perf. Criteria A
	CS	IEC/EN61000-4-6	10 Vr.m.s	perf. Criteria A
	Voltage dip, short interruption and voltage variation	IEC/EN61000-4-11	0%, 70%	perf. Criteria B

Notes: *The power supply is considered a component as part of system, all EMC items are tested on a metal plate (L x W x H: 360mm x 360mm x 1mm). Power supply should be combined with final equipment for EMC confirmation;

MORNSUN®

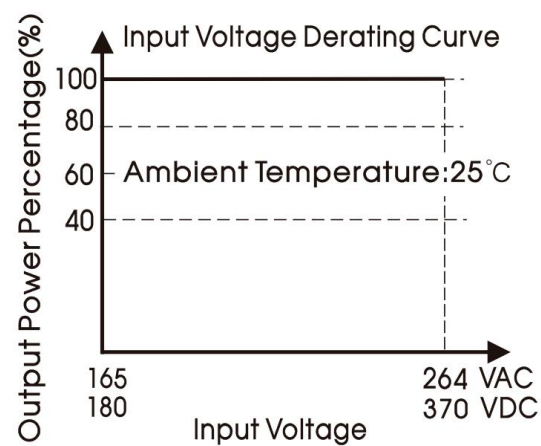
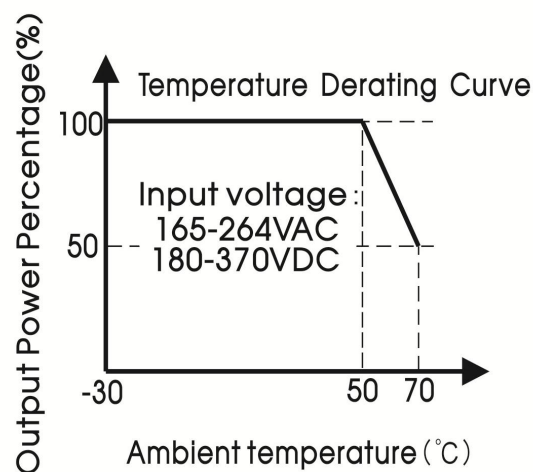
MORNSUN Guangzhou Science & Technology Co., Ltd.

2025.09.25 - A/5

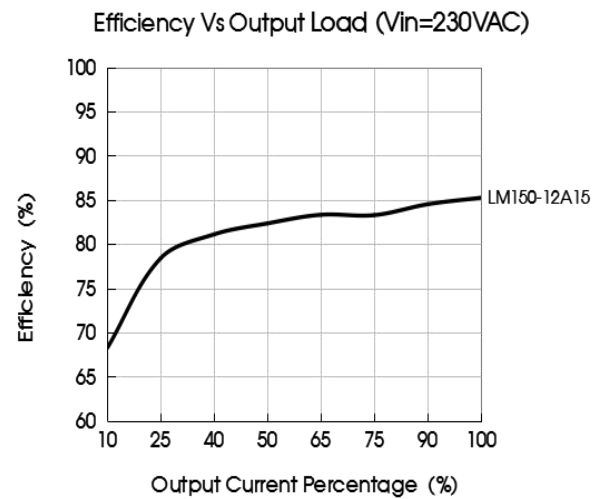
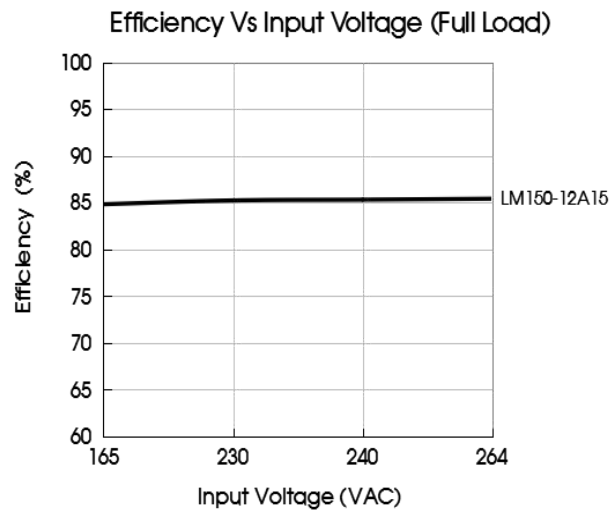
Page 2 of 4

MORNSUN Guangzhou Science & Technology Co., Ltd. reserves the copyright and right of final interpretation


Product Characteristic Curve

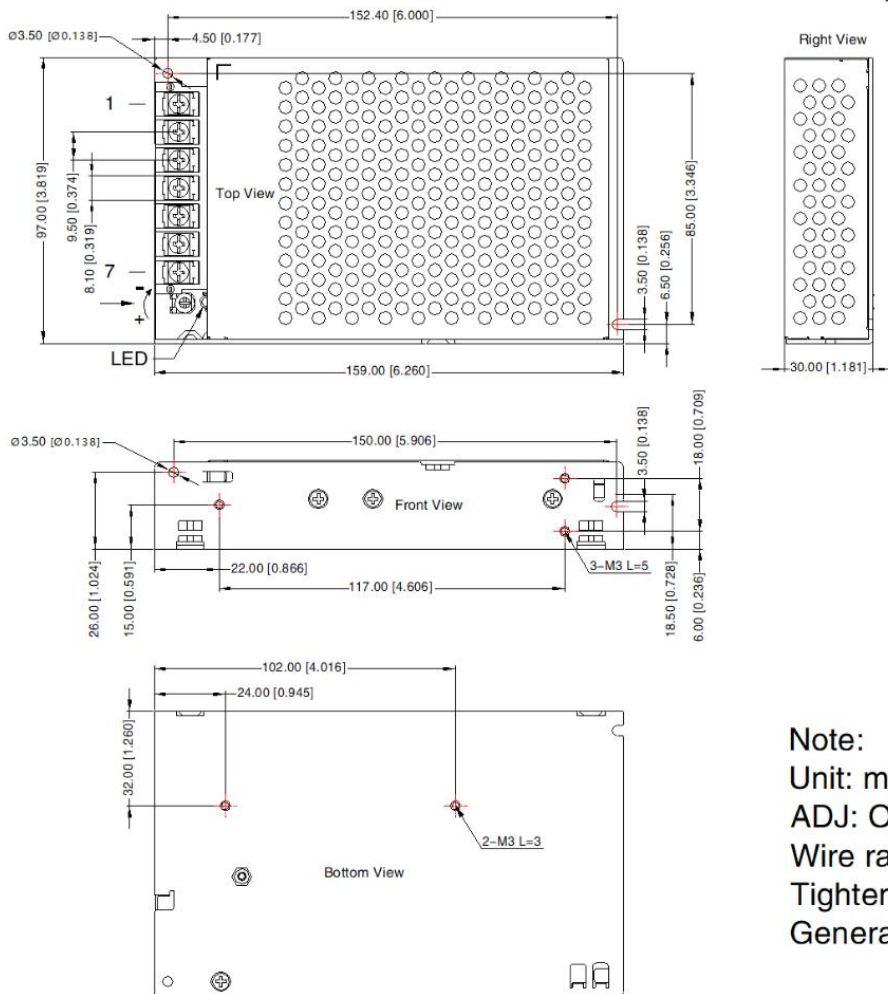



Note: 1.This product is suitable for applications using natural air cooling; for applications in closed environment please consult Mornsun FAE.



Dimensions and Recommended Layout

THIRD ANGLE PROJECTION 



Pin-Out	
Pin	Function
1	AC(L)
2	AC(N)
3	
4	Vo2
5	COM
6	COM
7	Vo1

Note:

Unit: mm[inch]


ADJ: Output adjustable resistor

Wire range: 22-12AWG

Tightening torque: M4, 1.2N.m \pm 10%

General tolerances: \pm 1.00 [\pm 0.039]

Note:

- For additional information on Product Packaging please refer to www.mornsun-power.com. Packaging bag number: 58220111;
- Unless otherwise specified, parameters in this datasheet were measured under the conditions of $T_a=25^{\circ}\text{C}$, humidity<75%RH with nominal input voltage and rated output load;
- All index testing methods in this datasheet are based on our company corporate standards;
- In order to improve the efficiency, there will be audible noise generated when work at light load, but it does not affect product performance and reliability;
- We can provide product customization service, please contact our technicians directly for specific information;
- Products are related to laws and regulations: see "Features" and "EMC";
- The out case needs to be connected to PE () of system when the terminal equipment in operating;
- CAUTION: Double pole, neutral fusing. Disconnect mains before servicing."/>"ATTENTION: Double pôle/fusible sur le neutre. Débrancher l'alimentation avant l'entretien;
- Our products shall be classified according to ISO14001 and related environmental laws and regulations, and shall be handled by qualified units;
- The power supply is considered a component which will be installed into a terminal equipment. All EMC tests should be confirmed with the final equipment. Please consult our FAE for EMC test operation instructions.

Mornsun Guangzhou Science & Technology Co., Ltd.

Address: No. 8 Nanyun 4th Road, Huangpu District, Guangzhou, China

Tel: 86-20-38601850

Fax: 86-20-38601272

E-mail: info@mornsun.cn

www.mornsun-power.com

MORNSUN®

MORNSUN Guangzhou Science & Technology Co., Ltd.

2025.09.25 - A/5

Page 4 of 4

MORNSUN Guangzhou Science & Technology Co., Ltd. reserves the copyright and right of final interpretation