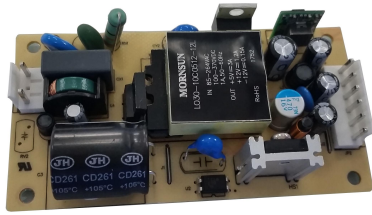


30W, AC-DC converter



RoHS



FEATURES

- 85 - 264V Universal AC or wide 100 - 370V DC Input
- Triple output, regulated, high output voltage accuracy
- High efficiency up to 78%
- Output short circuit, over-current, over-voltage protection
- Safety Class: Class II

LO30-10C0512-12L is one of Mornsun's compact size power converter. The product features universal AC input voltage, at the same time also accepts DC input, high efficiency, high reliability and reinforced insulation. It offers excellent EMC performance, meets IEC62368 safety standard.

Selection Guide

Part No.	Output Power	Nominal Output Voltage and Current			Efficiency at 230VAC (%) Typ.	Capacitive Load (μF) Max.		
		Vo1/ Io1	Vo2/ Io2	-Vo2/ -Io2		Vo1	Vo2	-Vo2
LO30-10C0512-12L	31.2W	5V/3000mA	12V/1200mA	-12V/150mA	78	15000	1000	220

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	--	--	0.9	A
	230VAC	--	--	0.5	
Inrush Current	115VAC	--	30	--	
	230VAC	--	50	--	
Recommended External Input Fuse		2A/250V, slow-blow			
Hot Plug		Unavailable			

Output Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Output Voltage Accuracy	Vo1	--	--	±2	%
	Vo2	--	--	±5	
Line Regulation	Full load	Vo1	±0.5	--	
		Vo2	±1.5	--	
Load Regulation	10% - 100% load	Vo1	±3	--	
		Vo2	±5	--	
Ripple & Noise*	Vo1, 20MHz bandwidth (peak-to-peak value)	--	100	200	mV
Short Circuit Protection	Vo1	Hiccup, continuous, self-recovery			
Over-current Protection		≥110% Io			
Over-voltage Protection	5V output	≤7.5VDC			
Minimum Load		10	--	--	%
Hold-up Time	115VAC input	--	5	--	ms
	230VAC input	--	20	--	

Note: * The "parallel cable" 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	Input - output	Electric Strength Test for 1min., (leakage current < 5mA)	3000	--	--	VAC
	Vo1 - Vo2/(-Vo2)		500	--	--	VDC
Operating Temperature			-25	--	+70	°C
Storage Temperature			-25	--	+85	
Storage Humidity	No condensation environment		--	--	95	%RH
Switching Frequency			--	100	--	kHz
Power Derating	-25°C to -10°C		2	--	--	% / °C
	+55°C to +70°C		3.33	--	--	
	85VAC- 100VAC		2	--	--	% / VAC
Safety Standard			UL62368/EN62368/IEC62368			
Safety Class			CLASS II			
MTBF	MIL-HDBK-217F@25°C		≥ 300,000 h			

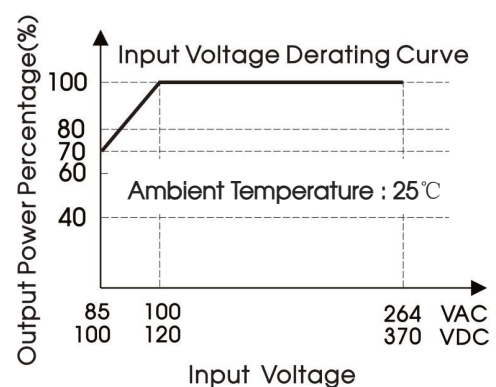
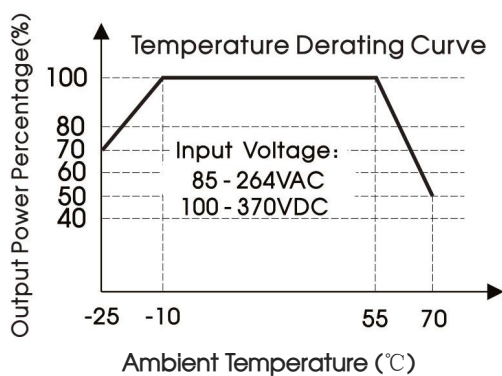
Mechanical Specifications

Dimension	97.00 x 50.00 x 25.00mm
Weight	75g (Typ.)
Cooling Method	Free air convection

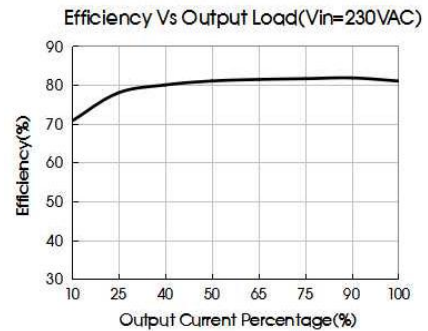
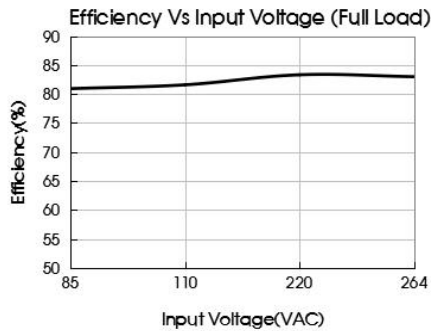
Electromagnetic Compatibility (EMC)

Emissions	CE	CISPR32/EN55032 CLASS A	
	RE	CISPR32/EN55032 CLASS A	
Immunity	ESD	IEC/EN 61000-4-2 Contact ±4KV	perf. Criteria B
	RS	IEC/EN 61000-4-3 10V/m	perf. Criteria A
	EFT	IEC/EN 61000-4-4 ±2KV	perf. Criteria B
	Surge	IEC/EN 61000-4-5 line to line ±1KV	perf. Criteria B

Derating Curve

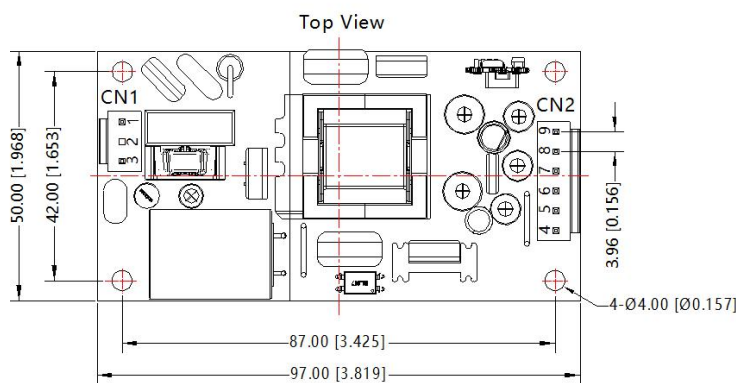


Note: ① With an AC input voltage between 85 - 100VAC and a DC input between 100 - 120VDC the output power must be derated as per the temperature derating curves;
② This product is suitable for applications using natural air cooling; for applications in closed environment please consult Mornsun FAE.

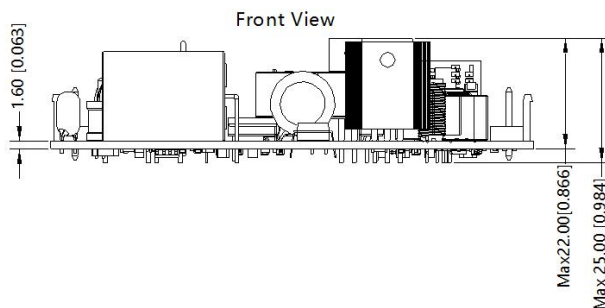


Dimensions and Recommended Layout

THIRD ANGLE PROJECTION



Pin	Function	Pin-Out	
		Connector	Terminal
1	AC(L)	VH-3A(No Mid-P) or B2P3-VH or the same Spec.	VH-3Y or VHR-3N or the same Spec.
2	No Pin		
3	AC(N)		
4	GND		
5	+5V	VH-6A or B6P-VH or the same Spec.	VH-6Y or VHR-6N or the same Spec.
6	NC		
7	-12V		
8	COM		
9	+12V		



Note:
Unit: mm[inch]
CN1 Spec.: VH-3A(No Mid-Pin), Recommend terminal: VH-3Y
CN2 Spec.: VH-6A, Recommend terminal: VH-6Y
Mounting hole screwing torque: Max0.4N·m
General tolerances: $\pm 1.00[\pm 0.039]$
The layout of the device is for reference only, please refer to the actual product

- Note:
1. Packing information please refer to Product Packing Information which can be downloaded from www.mornsun-power.com.
Packaging bag number: 58220019;
 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. 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.

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