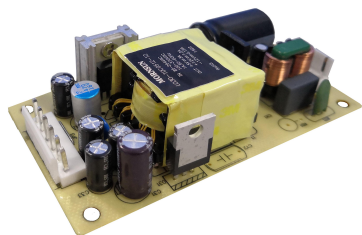


30W, AC-DC converter



RoHS



FEATURES

- 85 - 264V Universal AC or wide 100 - 373V 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

LO30-10C0512-12 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
LO30-10C0512-12	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	--	373	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*	20MHz bandwidth (peak-to-peak value)	--	100	200	mV
Short Circuit Protection	5V output	Hiccup, continuous, self-recovery			
Over-current Protection	5V output	≥110%Io, self-recovery			
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	℃
Storage Temperature			-25	--	+85	
Storage Humidity			--	--	95	%RH
Switching Frequency			--	65	--	kHz
Power Derating	-25℃ to -10℃		2	--	--	% /℃
	+55℃ to +70℃		3.33	--	--	
	85VAC- 100VAC		2	--	--	%/VAC
Safety Standard		UL62368/EN62368/IEC62368				
Safety Class		CLASS II				
MTBF		MIL-HDBK-217F@25℃	≥ 300,000 h			

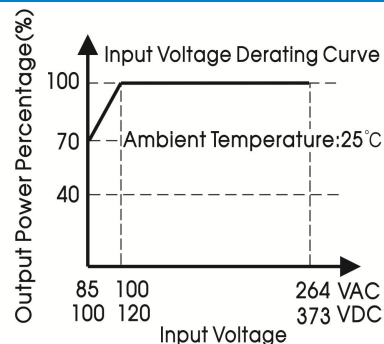
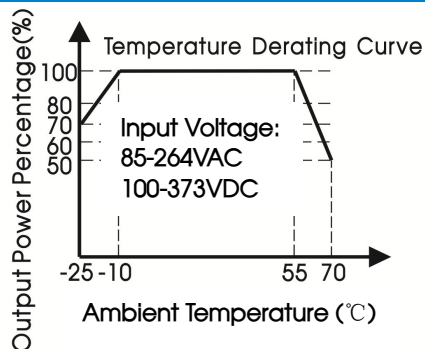
Mechanical Specifications

Dimension	97.00 x 50.00 x 28.00mm
Weight	86g (Typ.)
Cooling Method	Free air convection

Electromagnetic Compatibility (EMC)

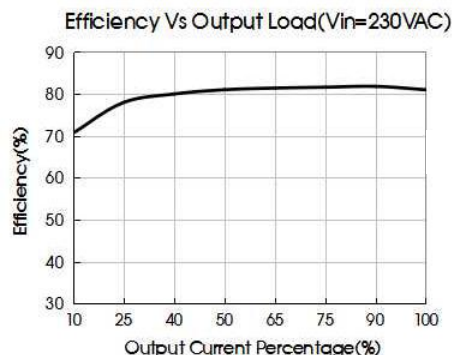
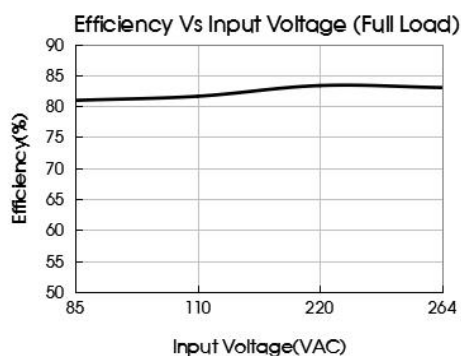
Emissions	CE	CISPR32/EN55032	CLASS A	
	RE	CISPR32/EN55032	CLASS A	
Immunity	ESD	IEC/EN61000-4-2	Contact ±4KV	Perf. Criteria B
	RS	IEC/EN61000-4-3	10V/m	perf. Criteria A
	EFT	IEC/EN61000-4-4	±2KV	perf. Criteria B
	Surge	IEC/EN61000-4-5	line to line ±1KV	perf. Criteria B

Product Characteristic Curve



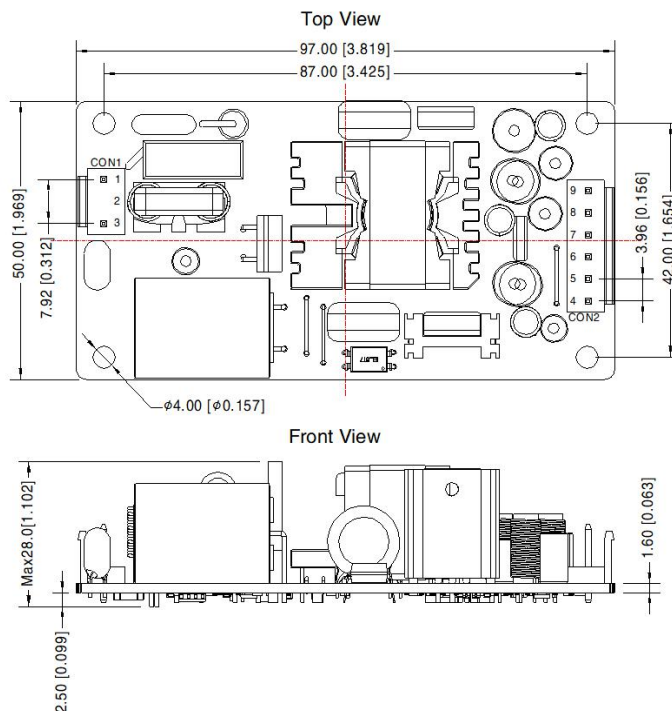
Note: ① With an AC input voltage between 85 - 100VAC and a DC input between 100 - 120VDC the output power must be derated as per the temperature derating curves;

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-Out			
Pin	Function	Product Connectors	Client Connectors
1	AC(L)	VH-3A or B2P3-VH or the same Spec.	VH-3Y or VHR-3N or the same Spec.
2	NoPin		
3	AC(N)		
4	GND	VH-6A or B6P-VH or the same Spec.	VH-6Y or VHR-6N or the same Spec.
5	+Vo1		
6	NC		
7	-Vo2		
8	COM		
9	+Vo2		

Note:

Unit: mm[inch]

General tolerances: $\pm 0.50 [\pm 0.020]$

In CON1 model: VH-3A, Client Connectors: VH-3Y

Out CON2 model: VH-6A, Client Connectors: VH-6Y

Mounting hole screwing torque: Max 0.4 N·m

The layout of the device is for reference only, please refer to the actual product

Notes:

1. Packaging information please refer to Product Packaging 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.

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