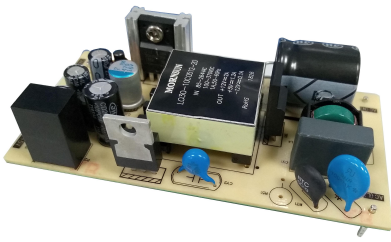


30W, AC-DC converter



RoHS

FEATURES

- 85 - 264V Universal AC or wide 100 - 370VDC 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

LO30-10C0512-20 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	Vo3/ Io3		Vo1	Vo2	Vo3
LO30-10C0512-20	35.2W	12V/2000mA	5V/2000mA	-12V/100mA	78	3000	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	--	--	1	A
	230VAC	--	--	0.7	
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	--	±2	±3	
Line Regulation	Full load	Vo1	±0.5	--	
		Vo2	±0.5	±0.75	
Load Regulation	10% - 100% load	Vo1	±3	--	
		Vo2	±3	--	
Ripple & Noise*	Vo1 (20MHz bandwidth peak-to-peak value)	--	--	200	mV
Short Circuit Protection	Vo1	Hiccup, continuous, self-recovery			
	Vo2	Continuous, self-recovery			
Over-current Protection	Vo1	≥ 110% Io			
Over-voltage Protection	12V output	≤ 18VDC			
Minimum Load		10	--	--	%
Start-up Delay Time	115VAC input	--	3	--	ms
	230VAC input	--	15	--	

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.	3000	--	--	VAC
	Vo1- Vo2		500	--	--	VDC
Operating Temperature			-25	--	+70	°C
Storage Temperature			-25	--	+85	
Storage Humidity		No condensation environment	--	--	95	%RH
Switching Frequency			--	65	--	kHz
Power Derating		-25°C to -10°C	2	--	--	% / °C
		+55°C to +70°C	3.33	--	--	
		85 VAC - 100 VAC	2			% / VAC
Safety Standard			UL62368/EN62368/IEC62368			
Safety Class			CLASS II			
MTBF			MIL-HDBK-217F@25°C ≥300,000 h			

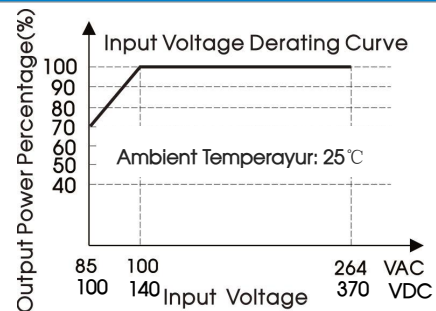
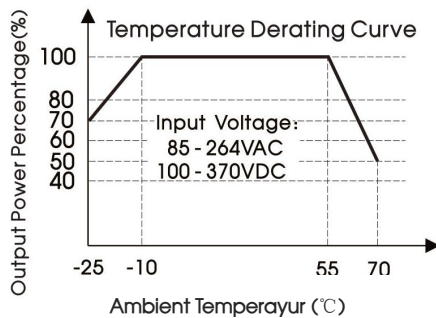
Mechanical Specifications

Dimension	97.00 x 50.00 x 28.00mm
Weight	80g(Typ.)
Cooling method	Free air convection

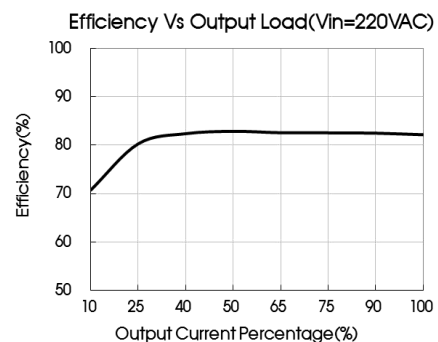
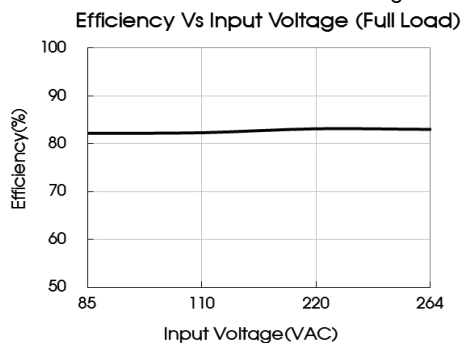
Electromagnetic Compatibility (EMC)

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
	CS	IEC/EN61000-4-6	10 Vr.m.s	perf. Criteria A

Product Characteristic Curve

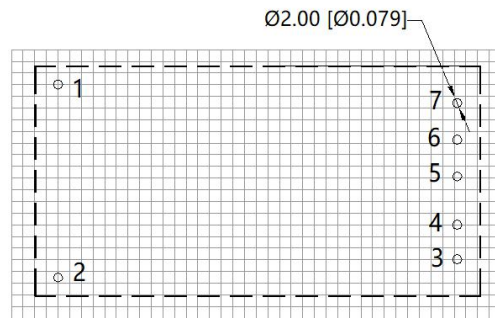
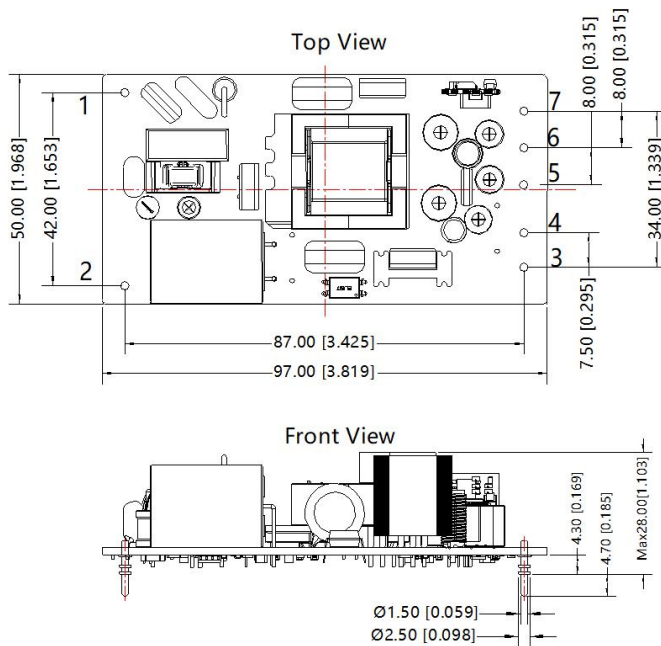


Note: ①With an AC input between 85-100V and a DC input between 100-140V, the output power must be derated as per temperature derating curves;
②This product is suitable for use in natural air cooling environments, if in a closed environment, please contact our company's FAE.



Dimensions and Recommended Layout

THIRD ANGLE PROJECTION 



Note: Grid 2.54*2.54mm

Pin-Out	
Pin	Function
1	AC(L)
2	AC(N)
3	GND
4	+12V
5	-12V
6	COM
7	+5V

Note :
Unit : mm[inch]
Pin diameter tolerances : $\pm 0.10[\pm 0.004]$
General tolerances : $\pm 1.00[\pm 0.039]$

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: sales@mornsun.cn

www.mornsun-power.com