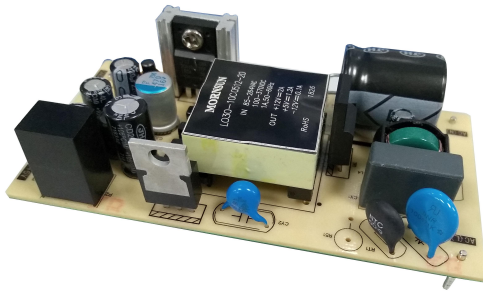


AC charging point dedicated 30W, AC-DC converter



LO30-10C0512-20— a compact size power converter offered by Mornsun. It features universal input voltage, taking both DC and AC input voltage, high efficiency, high reliability, safer isolation. It offers good EMC performance, EMC meets the international IEC60950 standard, and has important application in charging point application.

FEATURES

- Input voltage range: 85 - 264VAC/100 - 370VDC
- Triple regulated output, High output voltage accuracy
- High efficiency up to 78%
- Output short circuit, over-current, over-voltage protection
- Safety Class: Class II

Selection Guide

Part No.	Output Power	Nominal Output Voltage and Current			Efficiency (230VAC, %/Typ.)	Max. Capacitive Load(μF)		
		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	--	A
	230VAC	--	50	--	
Recommended External Input Fuse		2A/250V, slow fusing			
Hot Plug		Unavailable			

Output Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Output Voltage Accuracy	Primary output	--	--	±2	%
	Secondary output	--	±2	±3	
Line Regulation	Full load	Primary output	±0.5	--	%
		Secondary output	±0.5	±0.75	
Load Regulation	10% - 100% load	Primary output	±3	--	%
		Secondary output	±3	--	
Ripple & Noise*	Primary output (20MHz bandwidth peak-peak value)	--	--	200	mV
	Secondary output (20MHz bandwidth peak-peak value)	--	--	200	
Short Circuit Protection	Primary output	Hiccup, Continuous, self-recovery			
	Secondary output	Continuous, self-recovery			
Over-current Protection	Primary output	≥ 110% Io			
Over-voltage Protection	12V output	≤ 18VDC			
Min. Load		10	--	--	%
Hold-up Time	115VAC input	--	3	--	ms
	230VAC input	--	15	--	

Note: * Ripple and noise are measured by "parallel cable" method, please see AC-DC Converter Application Notes for specific operation.

General Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Isolation Voltage	Input-output	3000	--	--	VAC
	Main Output - Secondary output	500	--	--	VDC
Operating Temperature	Test time: 1min	-25	--	+70	°C
Storage Temperature		-25	--	+85	
Storage Humidity		No condensation environment	--	--	95
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		Meets IEC60950/EN60950/UL60950			
Safety Class		CLASS II			
MTBF		MIL-HDBK-217F@25°C ≥300,000 h			

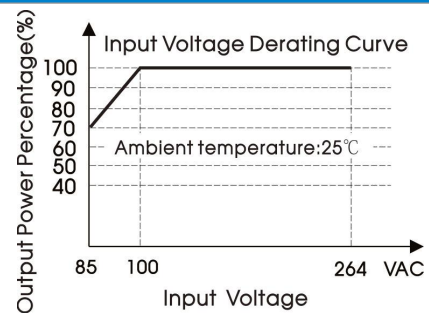
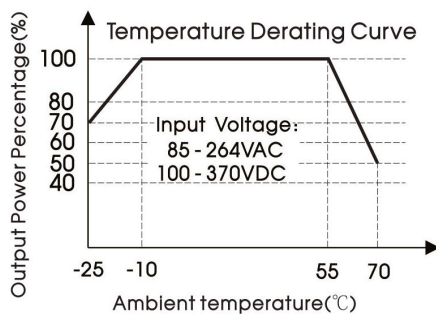
Physical Specifications

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

EMC Specifications

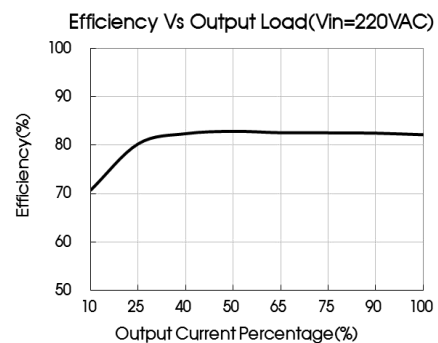
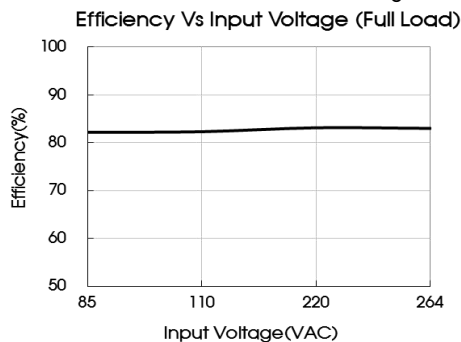
EMI	CE	CISPR32/EN55032	CLASS A	
	RE	CISPR32/EN55032	CLASS A	
EMS	ESD	IEC/EN 61000-4-2	Contact ±4KV	perf. Criteria B
	RS	IEC/EN 61000-4-3	10V/m	perf. Criteria A
	EFT	IEC/EN 61000-4-4	±2KV	perf. Criteria B
	Surge	IEC/EN 61000-4-5	line to line ±1KV	perf. Criteria B
	CS	IEC/EN61000-4-6	10 Vr.m.s	perf. Criteria A

Product Characteristic Curve




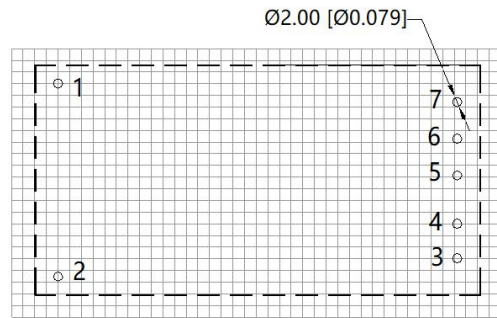
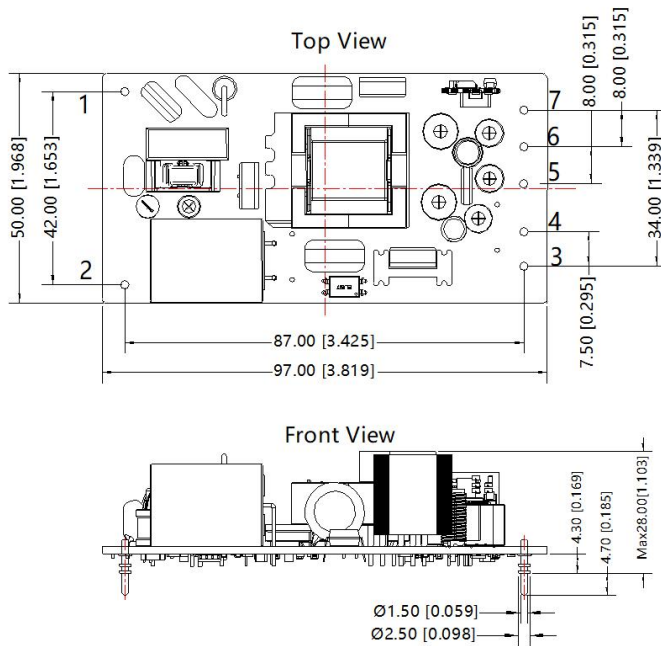
Note: ①Input voltage should be derated based on temperature derating when it is 85-264VAC/100-370VDC;

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. Packing bag number of Horizontal package: 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'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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