

Special for Power distribution network AC/DC converter



FEATURES

- Input voltage range: 85 - 132VAC
- Operating temperature range: -40°C to +70°C
- High efficiency up to 77%
- Output short circuit, over-current, over-voltage protection
- Safety Class: IEC62368 CLASS I
- EMC: IEC/EN61000-Level 4
- Hold-up time is up to 400ms
- Primary Output impressed-voltage resistance is up to +9V

LO15-21D0524-02-GY is a compact size power converter applied in Power distribution network which is offered by Mornsun. It features high efficiency, high reliability, safer isolation. It offers good EMC performance. Security standard meet IEC62368 standard.

Selection Guide

Part No.	Output Power	Nominal Output Voltage and Current		Efficiency (115VAC, %/Typ.)	Max. Capacitive Load (μF)	
		Vo1/ Io1	Vo2/ Io2		Vo1	Vo2
LO15-21D0524-02-GY	14.8W	5V/2000mA	24V/200mA	77	6000	2000

Input Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Input voltage range	AC input	85	--	132	VAC
Input frequency		47	--	63	Hz
Input Current	115VAC	--	--	0.6	A
Inrush Current	115VAC	--	30	--	
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		--	--	±10	
Line Regulation	Full load	Primary output	--	±0.5	--	
		Secondary output	--	±1.5	--	
Load Regulation	10%-100% load	Primary output	--	±3	--	
		Secondary output	--	±10	--	
Min Load			10	--	--	
Hold-up Time	115VAC input		350	400	--	ms
Primary output Ripple & Noise*	20MHz bandwidth (peak-peak value)		--	--	50	mV
Primary output impressed voltage	At normal temperature, 115VAC input full load	9V impressed-voltage to 5V output	No break down			
Short circuit protection	5V output		Hiccup, continuous, self-recovery			
Over-current	5V output		≥ 110% Io			
Over-voltage	5V output		≤ 7.5VDC			

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	Test time: 1min	4000	--	--	VAC
	output - output		4000	--	--	
	Input - PG		2500	--	--	
Operating Temperature			-40	--	+70	°C
Storage Temperature			-40	--	+85	
Storage Humidity	Non condensing environment		--	--	95	%RH
Welding Temperature	Wave-soldering	260 ± 5°C; time: 5 - 10s				
	Manual-welding	360 ± 10°C; time: 3 - 5s				
Switching Frequency (PFM Mode)			--	100	--	kHz
Output Power Derating	Operating temperature derating	-40°C to 0°C	0.75	--	--	% / °C
		+50°C to +70°C	1.5	--	--	
Safety Standard			Meets IEC62368/EN62368/UL62368			
Safety Class			CLASS I			
MTBF			MIL-HDBK-217F@25°C >300,000 h			

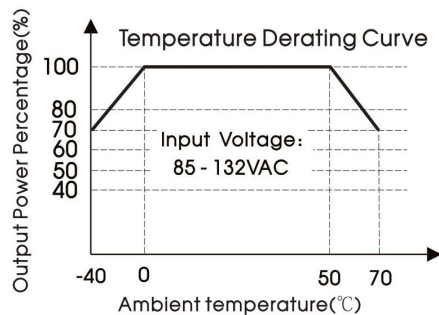
Physical Specifications

Dimensions	95.00*45.00*32.00mm
Weight	80.0g (Typ.)
Cooling Method	Free air convection

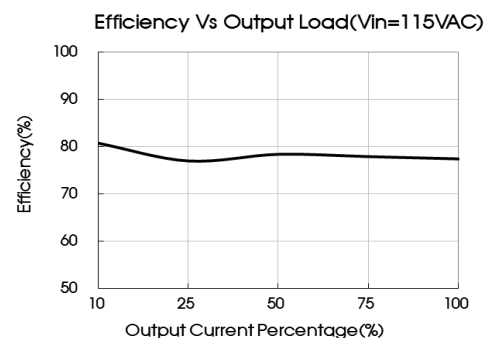
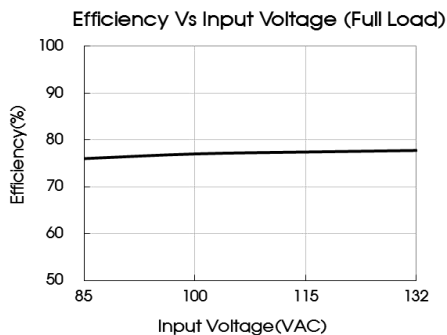
EMC Specifications

EMI	CE	CISPR32/EN55032	CLASS B
	RE	CISPR32/EN55032	CLASS B
EMS	ESD	IEC/EN 61000-4-2	Contact ±8KV perf. Criteria B
	RS	IEC/EN 61000-4-3	10V/m perf. Criteria A
	EFT	IEC/EN 61000-4-4	±4KV perf. Criteria B
	Surge	IEC/EN 61000-4-5	line to line ±2KV/line to ground ±4KV perf. Criteria B

Product Characteristic Curve

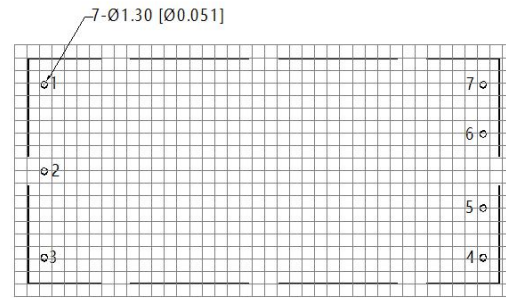
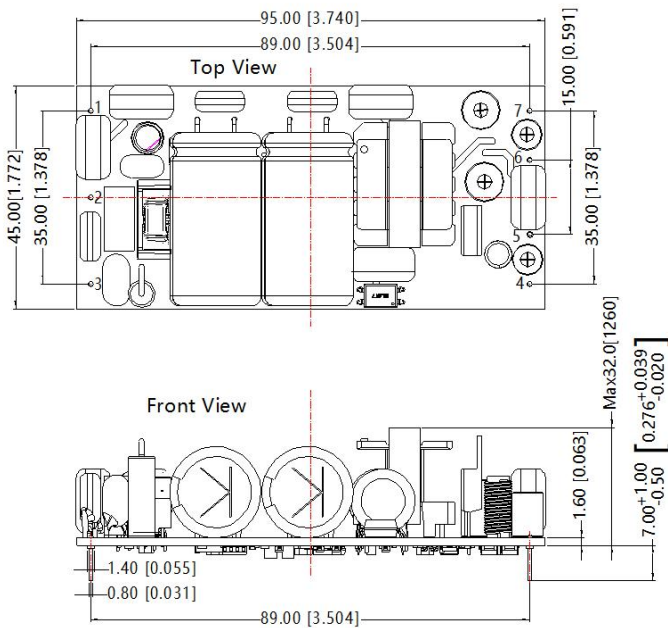


Note: ①This product is suitable for use in natural air cooling environments, if in a closed environment, please contact our company's FAE.



Dimensions and Recommended Layout

THIRD ANGLE PROJECTION



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

Note:
Unit: mm[inch]
Pin section tolerances: $\pm 0.10[\pm 0.004]$
General tolerances: $\pm 1.0[\pm 0.040]$
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.
Packing bag number: 58220019;
2. If the product does not work within the required load range, there is no guarantee that the product performance will meet all of the performance specifications in this manual.
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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