



FEATURES

- Universal 90 - 264VAC or 120 - 373VDC Input voltage
- Operating ambient temperature range: -30°C to +70°C
- High efficiency, high reliability, long service life
- LED indicator for power on
- Output short circuit, over-current, over-voltage protection
- Withstand 300VAC surge input for 5s
- High I/O isolation test voltage up to 3000VAC
- Safety according to IEC/EN/UL62368, EN60335, GB4943
- Emissions compliant to CISPR32/EN55032 CLASS B
- Withstand 5G vibration test
- Operating altitude up to 5000m

This LM75-10Cxx series of power converter design features 3 output versions, which can independently supply 3 different loads in the system. The products can be used in harsh working environments with an room temperature range from -30°C to +70°C, without the need of a fan for further heat dissipation. In addition, the converters EMC immunity performance meets the requirements of IEC61000 standard and meet emission standard CISPR32/EN55032, class B without any external components, thus providing excellent EMC protection. The products also meet IEC/EN/UL62368, EN60335, GB4943 safety standards. The converters integrate a variety of protection features and offer a high-performance to low-cost ratio providing the best power solution for a variety of industries such as industrial control equipment, instrumentation and smart home and building equipment application.

Selection Guide

Certification	Part No.	Output Power	Nominal Output Voltage and Current (Vo/Io)			Working Current Range*			Efficiency at 230VAC (%) Typ.	Max. Capacitive Load (µF)		
			Vo1/Io1	Vo2/Io2	Vo3/Io3	Io1	Io2	Io3		Vo1	Vo2	Vo3
CE	LM75-10C051212-28	69.6W	+5V/6.0A	+12V/2.8A	-12V/0.5A	0.6-7.0A	0.28-3.5A	0.05-1.0A	82	6000	2800	470
	LM75-10C051515-23	72W	+5V/6.0A	+15V/2.3A	-15V/0.5A	0.6-7.0A	0.23-3.5A	0.05-1.0A		6000	2300	470
	LM75-10C052412-15	73W	+5V/5.0A	+24V/1.5A	+12V/1.0A	0.5-6.0A	0.15-2.0A	0.1-1.5A	84	5000	1500	1000

Note:* Working current range: If any one of the 3 outputs arrive at the maximum current, the total output power cannot exceed the rated power and working time < 3s.

Input Specifications





Item	Operating Conditions		Min.	Typ.	Max.	Unit
Input Voltage Range	AC input		90	--	264	VAC
	DC input		120	--	373	VDC
Input Frequency			47	--	63	Hz
Input Current	115VAC		--	--	1.7	A
	230VAC		--	--	0.9	
Inrush Current	115VAC		--	30	--	
	230VAC		Cold start	--	45	
Leakage Current	240VAC		<2.0mA			
Hot Plug			Unavailable			

Output Specifications

Item	Operating Conditions		Min.	Typ.	Max.	Unit	
Output Voltage Accuracy	Full load range	Vo1	--	±2.0	--	%	
		Vo2	LM75-10C051212-28	--	±6.0		--
			LM75-10C051515-23	-4.0	--		+8.0
			LM75-10C052412-15	--	±6.0		--
		Vo3	LM75-10C051212-28	--	±5.0		--
			LM75-10C051515-23	--	±5.0		--
LM75-10C052412-15	--		±6.0	--			

Line Regulation	Full load	Vo1	--	±1.0	--	%	
		Vo2	LM75-10C051212-28	--	±1.0		--
			LM75-10C051515-23	--	±1.0		--
			LM75-10C052412-15	--	±1.0		--
		Vo3	LM75-10C051212-28	--	±1.0		--
			LM75-10C051515-23	--	±1.0		--
LM75-10C052412-15	--		±2.0	--			
Load Regulation	10% - 100% load (Balanced load)	Vo1	--	±1.0	--	%	
		Vo2	LM75-10C051212-28	--	±5.0		--
			LM75-10C051515-23	--	±5.0		--
			LM75-10C052412-15	--	±5.0		--
		Vo3	LM75-10C051212-28	--	±1.0		--
			LM75-10C051515-23	--	±1.0		--
LM75-10C052412-15	--		±5.0	--			
Ripple & Noise*	20MHz bandwidth (peak-peak value)	Vo1	--	80	--	mV	
		Vo2	LM75-10C051212-28	--	120		--
			LM75-10C051515-23	--	150		--
			LM75-10C052412-15	--	150		--
		Vo3	LM75-10C051212-28	--	80		--
			LM75-10C051515-23	--	80		--
LM75-10C052412-15	--		150	--			
Temperature Coefficient	Vo1	--	±0.03	--	%/°C		
Voltage Adjustable Range*	Vo1	4.75	--	5.50	VDC		
Switching Delay Time	Rated input voltage	--	--	3.0	s		
Output Voltage Rise Time	115/230VAC	--	--	100	ms		
Hold-up Time	115VAC	5	--	--			
	230VAC	30	--	--			
Min. Load	Refer to the working current range						
Short Circuit Protection*	Recovery time <5s after the short circuit disappear	Hiccup, continuous, self-recovery					
Over-current Protection	3 outputs with equal-scale load	110% ≤ I _o , self-recovery					
Over-voltage Protection	5.75VDC ≤ Vo1 ≤ 6.75VDC, Hiccup						
Note: 1.*The "Tip and barrel method" is used for ripple and noise test, (47uF electrolytic capacitor and 104 ceramic capacitor) please refer to AC-DC Converter Application Notes for specific information. 2.*When Vo1 working in the adjustable range, the output power please refer to power derating curve and should not be exceed the rated output power, 3.*Vo3 cannot stay in short circuit for long time.							

General Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit	
Isolation Voltage	Input - Output	3000	--	--	VAC	
	Input - 	2000	--	--		
	Output - 	500	--	--		
Insulation Resistance	Input - Output	100	--	--	MΩ	
	Input - 	100	--	--		
	Output - 	100	--	--		
Operating Temperature	Refer to derating curve	-30	--	+70	°C	
Storage Temperature		-40	--	+85		
Storage Humidity	Non-condensing	--	--	95	%RH	
Power Derating	Input voltage derating	90VAC - 115VAC	0.8	--	--	%/VAC
		115VAC - 264VAC	0	--	--	
		120VDC - 160VDC	0.5	--	--	%/VDC
		160VDC - 373VDC	0	--	--	
	Operating temperature derating	-30°C to +40°C	0	--	--	%/°C
	+40°C to +70°C	2.0	--	--		
Safety Standard	Meet IEC/EN/UL62368/EN60335/GB4943					
Safety Class	CLASS I					
MTBF	MIL-HDBK-217F@25°C	>300,000 h				

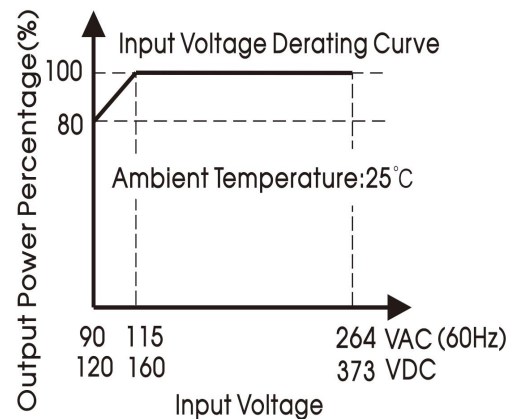
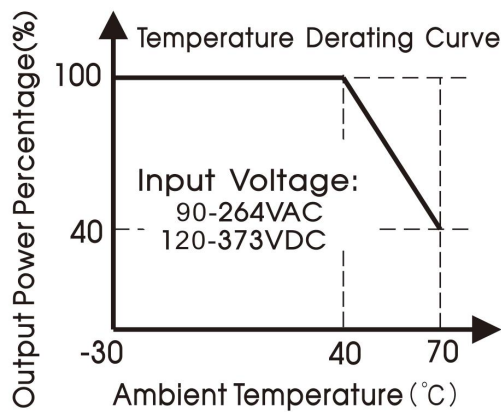
Physical Specifications

Case Material	Metal (AL1100, SGCC)
Dimension	129.00 x 97.00 x 30.00 mm
Weight	320g (Typ.)
Cooling Method	Free air convection

EMC Specifications

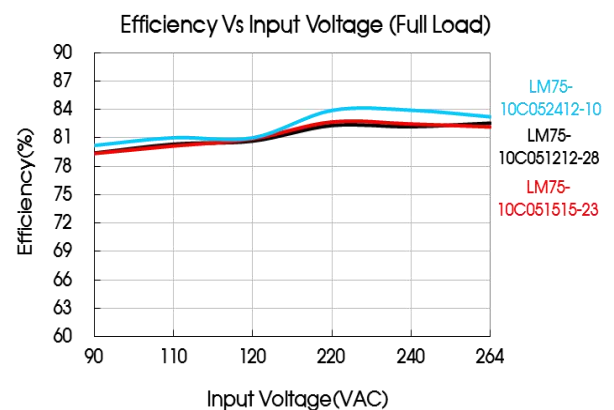
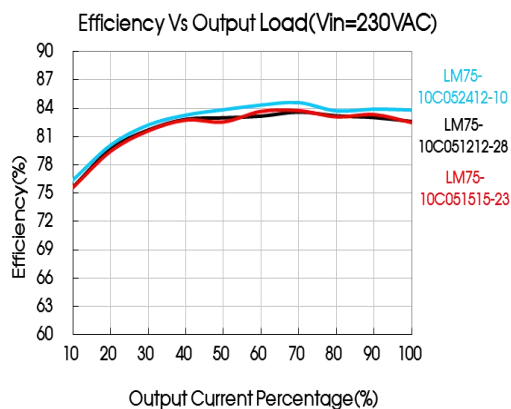
Emissions	CE	CISPR32/EN55032 CLASS B	
	RE	CISPR32/EN55032 CLASS B	
	Harmonic current	IEC/EN61000-3-2 CLASS A	
Immunity	ESD	IEC/EN61000-4-2	Contact ±6KV /Air ±8KV Perf. Criteria A
	RS	IEC/EN61000-4-3	10V/m perf. Criteria A
	EFT	IEC/EN61000-4-4	±2KV perf. Criteria A
	Surge	IEC/EN 61000-4-5	Line to Line ±2KV/Line to Ground±4KV perf. Criteria A
	CS	IEC/EN61000-4-6	10 Vr.m.s perf. Criteria A
	Voltage dips, short interruptions and voltage variations	IEC/EN61000-4-11	0%,70% perf. Criteria B

Product Characteristic Curve

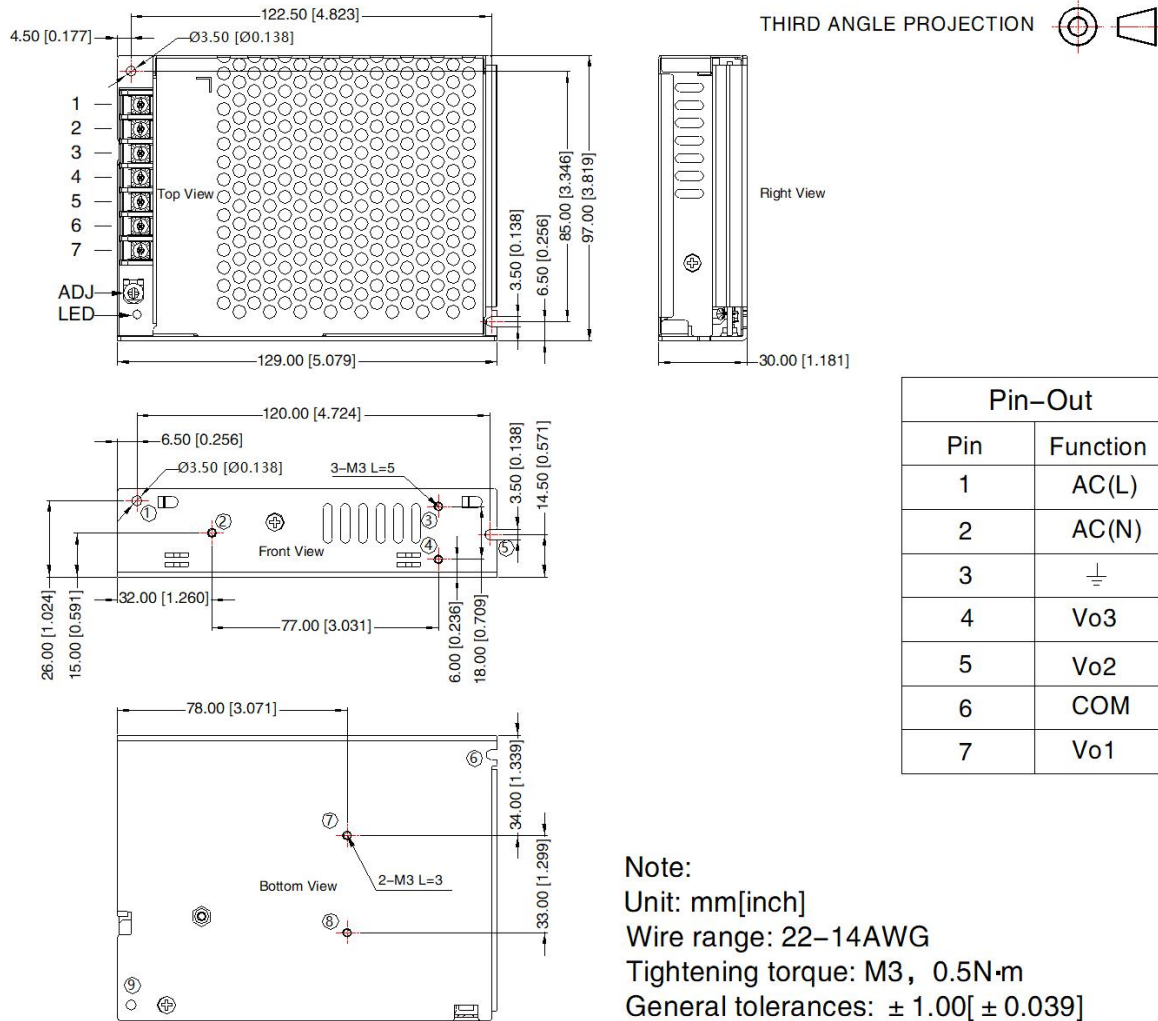


Note: ①With an input voltage between 90 -115VAC and a DC input between 120 -160VDC the output power must be derated as per the temperature derating curves,

②This product is suitable for applications using natural air cooling; for applications in closed environment please consult Mornsun FAE.



Dimensions and Recommended Layout



Note:
 Unit: mm[inch]
 Wire range: 22-14AWG
 Tightening torque: M3, 0.5N-m
 General tolerances: ± 1.00[± 0.039]
 ① - ⑨ any position must be connected to PE

- Note:**
- For additional information on Product Packaging please refer to www.mornsun-power.com. Packaging bag number: 58220065;
 - Unless otherwise specified, parameters in this datasheet were measured under the conditions of Ta=25°C, humidity<75%RH with nominal input voltage and rated output load;
 - The room temperature derating of 5°C/1000m is needed for operating altitude greater than 2000m;
 - All index testing methods in this datasheet are based on our company corporate standards;
 - In order to improve the efficiency at high input voltage, there will be audible noise generated, but it does not affect product performance and reliability;
 - We can provide product customization service, please contact our technicians directly for specific information;
 - Products are related to laws and regulations: see "Features" and "EMC";
 - The out case needs to be connected to PE(⏏)of system when the terminal equipment in operating;
 - Our products shall be classified according to ISO14001 and related environmental laws and regulations, and shall be handled by qualified units;
 - The power supply is considered a component which will be installed into a final equipment. All EMC tests should be confirmed with the final equipment. Please consult our FAE for EMC test operation instructions.

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