LM-10-A1 SERIES

----STANDARD 10W AC-DC MODULE POWER SUPPLY

PRODUCT FEATURES

- Wide voltage input range: 85–305VAC (127–432VDC)
- Operating temperature: -30°C to +70°C
- Protection Functions: Short Circuit, Overload, Overvoltage
- High efficiency and high reliability
- Small size, flame-retardant plastic encapsulation
- Industrial product technical design

APPLIED RANGE

Power systems for wireless networks, telecommunications/data communications, power systems, industrial control systems, measurement instruments, and intelligent fields. Ideal for designs requiring wide input range fluctuation, power isolation, and compact PCB space, while enabling modular product functionality and enhanced reliability.

PRODUCT MODEL

Model	Output Voltage (Vo)	Output Current (Io)	Efficiency(TYP)	Certificate
LM10-S5A1	5V	2000mA	75%	CE
LM10-S9A1	9V	1112mA	80%	CE
LM10-S12A1	12V	834mA	83%	UL/CE
LM10-S15A1	15V	667mA	83%	CE
LM10-S24A1	24V	420mA	83%	UL/CE

*FOR OTHER SPECIFICATIONS OR MODELS, PLEASE CONTACT US DIRECTLY.

INPUT CHARACTERISTICS

Input voltage range	85～305VAC（127～432VDC）	
Incoming frequency	47～63Hz	
Input currenton	250mA (TYP) @115VAc	150mA (TYP)@ 230VAc
External fuse (recommended)	2A/300V Slow Break	

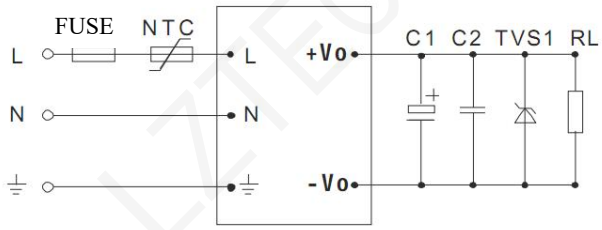
OUTPUT CHARACTERISTIC

Output voltage regulation accuracy	±4%
Source effect	±0.5% (typ)
Load adjustment rate (10%~100%)	±2% (typ)

Minimum load	10%	
Output Ripple + noise (peak-to-peak)	150mV(typ) (20MHz Bandwidth)	
Short-circuit Protection	Hiccup protection, auto-recovery when fault is removed.	
Overvoltage Protection	≥1.1 times	
GENERAL CHARACTERISTIC		
Temperature Characteristic	Working Temperature Power Derating Storage Temperature	-30℃～+70℃ 3.75% / ℃ ， -40℃～+85℃
Power outage duration		40ms(typ)/ at Vin:320Vdc
Humidity		85%RH(max)
Thermoluminescence		0.02%/℃
Switching frequency		65kHz(typ)
Isolation voltage	Input--Output	4000Vac/1Min
Leakage current		<5mA RMS typ. 230VAC/50Hz
Electromagnetic Compatibility Electrostatic Discharge RF radiation immunity Electric fast transient pulse train		IEC/EN 61000-4-2 level 3 6kV/8kV IEC/EN 61000-4-3 IEC/EN 61000-4-4 level 3 2 kV IEC/EN 61000-4-5 level 3 1kV
Conduction/Radiation		EN55032 CLASS B
Security classification		IEC/EN/UL/BS62368-1, GB4943.1, EN61558-1, EN60335-1
Shell grade		UL94V-0 flame retardant plastic
Install		PCB
MTBF		>200,000h @25℃
Packing Spec per Carton		420mm*340mm*200mm;7 .56Kg/180pcs

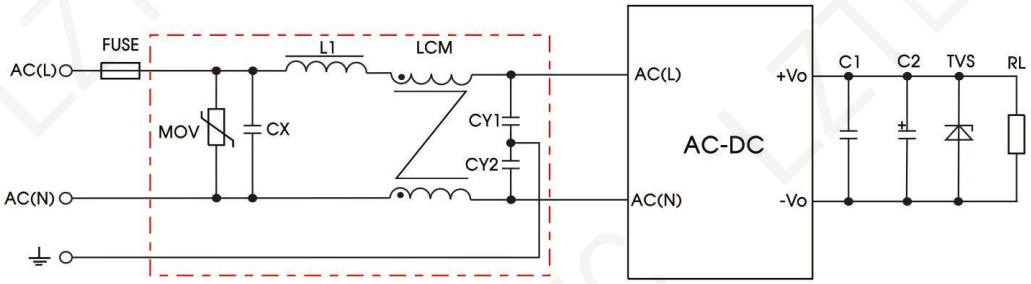
· Unless otherwise stated, all parameters are measured at 230Vac input, rated load and 25℃ ambient temperature.
· Output derating is required at low input voltage, refer to the input derating curve.
· Accuracy includes design tolerance, line regulation and load regulation.
· Ripple & Noise: Measured at 20MHz bandwidth with twisted pair and 0.1μF+47μF parallel terminal capacitors.
· This power supply is a component; system EMC shall be confirmed by the end-equipment manufacturer.
· Start-up time is tested under cold start; frequent power cycling may increase start-up time.
· Input current and safety specs vary slightly with different certifications.
· For altitude over 2000m (6500FT), operating temperature decreases by 3.5℃ per 1000m.

TYPICAL APPLICATION



FUSE	NTC	C1	C2	TVS1
2A/300V Slow Break	6.8Ω/3W	1uF/50V	100uF/35V	SMBJ30A

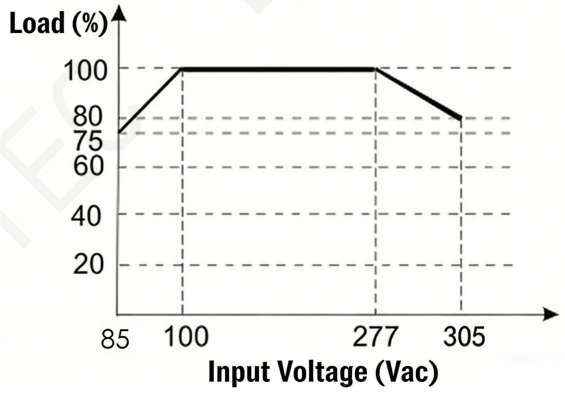
EMC Recommended Circuit



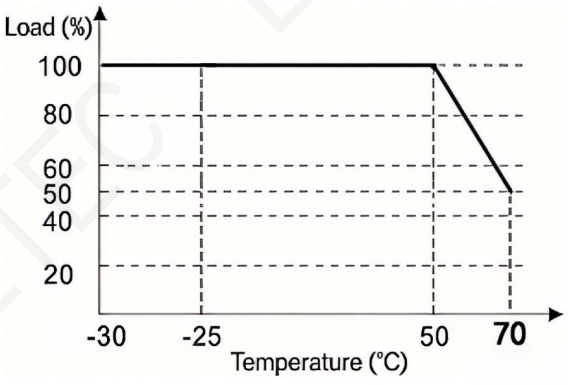
Device	Recommended value
MOV	14D561
CY1、CY2	2200pF/400VAC
CX	0.22uF/310VAC
LCM	>10mH
L1	4.7uH/2A
FUSE	2A/300V, Slow-Break

NOTE:The above parameters are recommended values, subject to technical update without prior notice.

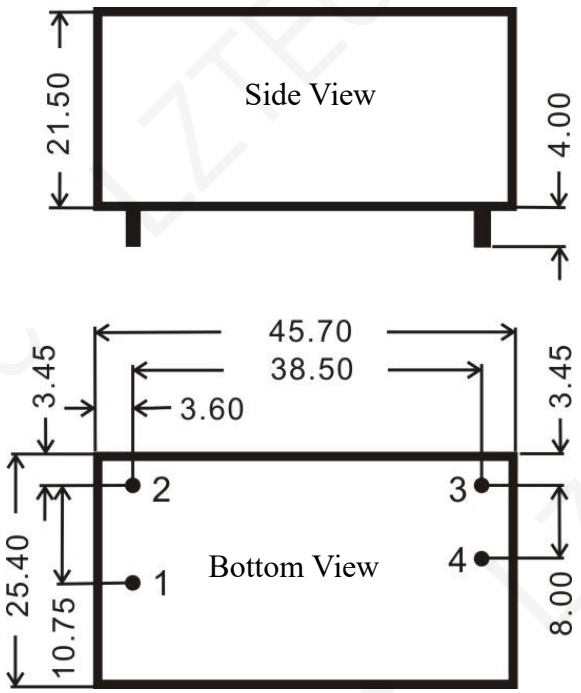
DIAGRAM OF INPUT VOLTAGE AND LOAD



TEMPERATURE AND LOAD RELATIONSHIP DIAGRAM



APPEARANCE AND SIZE



Unit: mm Tolerance: ±0.5mm

Pin	1	2	3	4
Definition	AC(N)	AC(L)	-Vo	+Vo

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