

LM-15-A1 SERIES

---- AC-DC MODULE POWER SUPPLY 15W



PRODUCT FEATURES

- Wide voltage input range: 85-305VAC (127-432VDC)
- Operating temperature: -30°C ~ +70°C
- Full protection features (self-recovery of short circuit protection, etc.)
- High efficiency and high reliability
- Small size, flame retardant plastic shell packaging
- Industrial-grade product technical design

APPLIED RANGE

Power supply systems applicable to wireless networks, telecommunication/data communication, power systems, industrial control systems, measuring instruments and meters, intelligent fields, etc. They are suitable for designs requiring wide input voltage range fluctuation, power isolation, and compact PCB layout space. Meanwhile, they can realize product functional modularization and improve product reliability.

PRODUCT MODEL

Model	Output voltage (Vo)	Output Current(Io)	Efficiency (TYP)	Certificate
LM15-S05A1	5V	3000mA	77%	CE
LM15-S09A1	9V	1666mA	79%	CE
LM15-S12A1	12V	1250mA	86%	UL\CE
LM15-S15A1	15V	1000mA	86%	CE
LM15-S24A1	24V	625mA	86%	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	350mA (TYP) @115VAC	200mA (TYP)@ 230VAC
External fuse (recommended value)	3.15A/350V	Slow Break

OUTPUT CHARACTERISTIC

Output voltage regulation accuracy	±4%
Line regulation	±0.5% (typ)

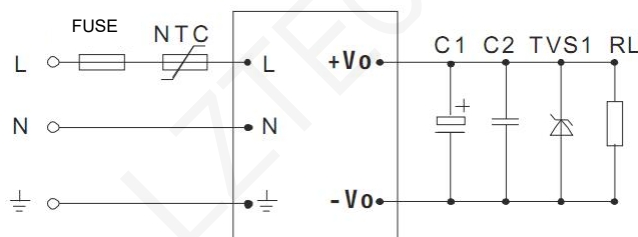
Load adjustment rate (10%~100%)	±1% (typ)
Minimum load	10%
Output ripple + noise (peak-to-peak)	100mV(typ) (20MHz Bandwidth)
Short-circuit protection	Can be short-circuited for a long time and self-recover
Output overvoltage protection	≥1.1 times

GENERAL CHARACTERISTIC

Temperature Characteristic	Operating temperature	-30°C~+70°C
	Power derating	3.75% / °C
	Storage temperature	-40°C~+90°C
Hold-up time		40ms(typ)/ at Vin:320Vdc
Humidity		85%RH(max)
Temperature coefficient		0.02%/°C
Switching frequency		65kHz(typ)
Isolation voltage	Input--Output	3000Vac/1Min
Leakage current		<5mA RMS typ. 230VAC/50Hz
*ESD immunity	IEC/EN 61000-4-2 level 3 6kV/8kV	
* RF radiation immunity	IEC/EN 61000-4-3	
*Fast transient pulse group	IEC/EN 61000-4-4 level 3 2 kV	
*Surge immunity	IEC/EN 61000-4-5 level 3 1kV/2kV	
*Conducted/Radiated emission	EN55032 CLASS B	
Security classification	IEC/EN/UL/BS62368-1, GB4943.1, EN61558-1, EN60335-1.	
Outer shell grade	UL94V-0 flame retardant plastic	
Mounting method	PCB	
MTBF	>200,000h @25°C	

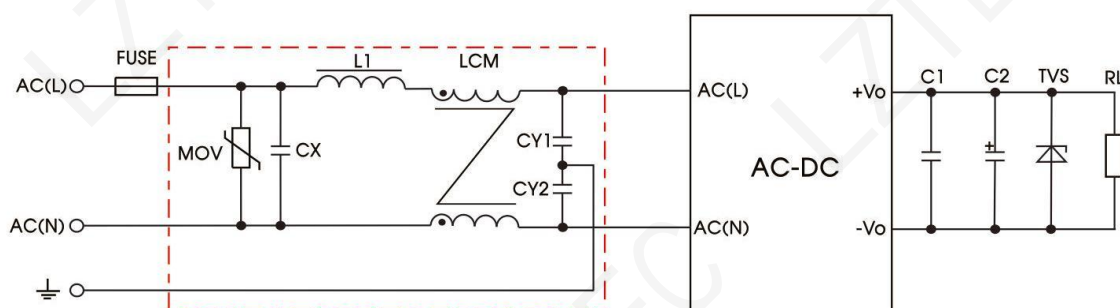
- Unless otherwise stated, all parameters are measured at 230Vac input, rated load and 25°C ambient temperature.
- Output derating is required at low input voltage, refer to the input derating curve.
- Accuracy includes design tolerance, line regulation and load regulation.
- Ripple & Noise: Measured 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°C per 1000m.

TYPICAL APPLICATION



FUSE	NTC	C1	C2	TVS1
3.15A/300V Slow Break	6.8Ω/3W	1uF/50V	100uF/35V	SMBJ30A

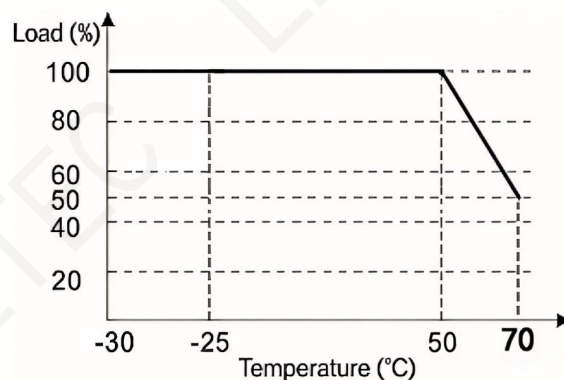
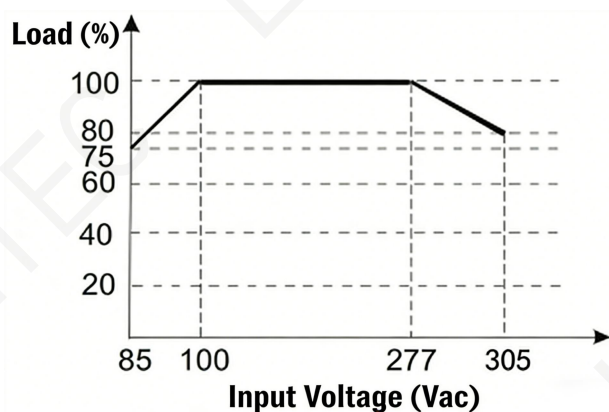
EMC Recommended Circuit



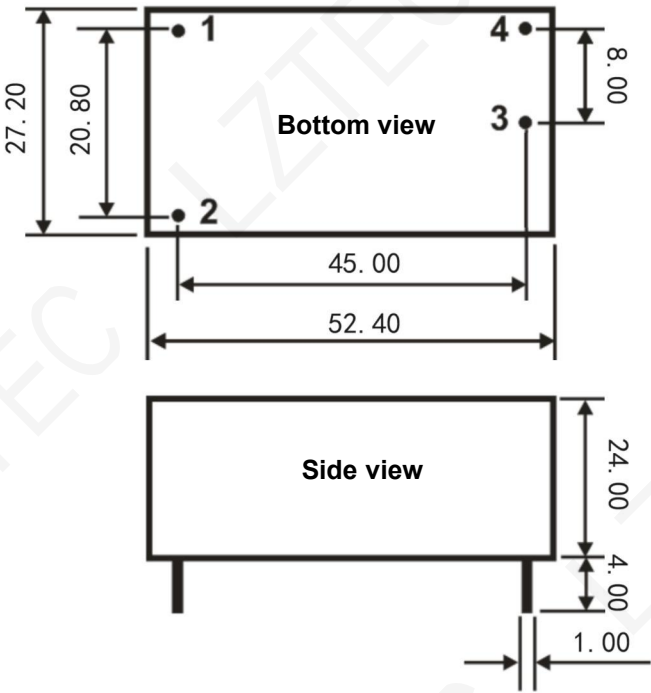
Component	Recommended Value
MOV	14D561
CY1、CY2	2200pF/400VAC
CX	0.22uF/275VAC
LCM	>10mH
L1	4.7uH/2A
FUSE	3.15A/300V, slow break

INPUT VOLTAGE VERSUS LOAD DIAGRAM

TEMPERATURE VS. LOAD



APPEARANCE AND SIZE



Unit: mm Tolerance: ±0.5mm

Pin No.	1	2	3	4
Definition	AC(L)	AC(N)	+Vo	-Vo

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