

MSC60 Series

60 W Medical Switching Power Module for PCB Mounting

CoolPower
Solutions

KEY FEATURES

- Switching Power Modules for PCB Mounting
- Fully Encapsulated Plastic Case
- Universal Input Range 90-264VAC
- Low Standby <0.3W
- Regulated Output
- Low Ripple and Noise
- Isolation Class II
- Screw Terminal and Din Rail Kit For Optional
- CE, CB, UL, cUL Approvals
- 3-Year Product Warranty



ELECTRICAL SPECIFICATIONS

All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Model No. (Single Output)	MSC60-5S	MSC60-9S	MSC60-12S	MSC60-15S	MSC60-24S	
Max output wattage (W)	51W	60W				
Input	Voltage	90-264 VAC or 120-370 VDC				
	Frequency (Hz)	47-440 Hz				
	Current (Full load)	2 A max. (115 VAC) / 1 A max. (230 VAC)				
	Inrush current (<2ms)	55 A max. (115 VAC) / 95 A max. (230 VAC)				
	Leakage Current	< 0.1mA / 264 VAC (Touch Current)				
	External fuse (recommend)	3.15 A slow blow type				
Output	Voltage (V.DC.)	5.1V	9V	12V	15V	24V
	Voltage set accuracy	±2%				
	Current (mA) max	10,000	6666	5000	4000	2500
	Maximum Capacitive Load (at 230 VAC)	10000uF	5000uF	5000uF	4000uF	2000uF
	Line regulation (typ.)	0.5%				
	Load regulation (1-100%) (typ.)	1.5%		1%		
	Ripple & Noise (max)	100mV (Vp-p)		1% of Vout		
	Efficiency (at 230 VAC)	86%	87%	88%	86%	87%
Hold-up time	10 ms min.					
Protection	Over current protection	Automatic recovery				
	Over voltage protection	Zener diode clamp				
	Short circuit protection	Automatic recovery				
Isolation	Input-Output (V.AC)	4000V				
Environment	Operating temperature	-40°C...+80°C (Case Temperature max. +95°C)				
	Storage temperature	-40°C...+90°C				
	Temperature coefficient	±0.05%/°C				
	Altitude During Operation	5000m				
	Humidity	up to 95% RH				
	MTBF	200,000 h~400,000 h @ 25°C				
	Atmospheric Pressure	70 kPa to 106 kPa				
Physical	Dimension (L x W x H)	3.5 x 2.5 x 1.06 Inches (89.0 x 63.5 x 27.0 mm) Tolerance ±0.5 mm				
	Case Material	Plastic resin + Fiberglass (flammability to UL 94V-0)				
	Weight	280 g				
	Cooling method	Free air convection				

ELECTRICAL SPECIFICATIONS

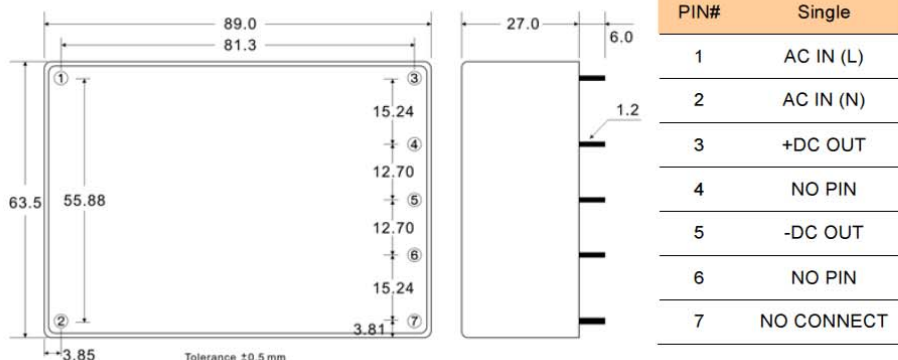
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Model No.	(Single Output)	MSC60-5S	MSC60-9S	MSC60-12S	MSC60-15S	MSC60-24S
Safety	Approval	cUL/UL 60950-1, ANSI/AAMI ES 60601-1: 2005, 1st Edition and CAN/CSA-C22.2 No. 60601-1:08, 2nd Edition, 2XMOPP (Pending)				
EMC	Conducted and radiated EMI	EN55011 (Pending)				
	ESD	EN61000-4-2 air ± 8kV , Contact ± 4kV Pending				
	Radiated Immunity	EN61000-4-3 10V/m Pending				
	Fast Transient	EN61000-4-4 ± 2kV Pending				
	Surge	EN61000-4-5 ±1kV Pending				
	Conducted Immunity	EN61000-4-6 10Vrms Pending				
	PFMF	EN61000-4-8 30A/m Pending				
	Dips	EN61000-4-11 30% 10ms Pending				
	Interruption	EN61000-4-11 >95% 5000ms Pending				

NOTE

- This product is not designed for use in critical life support systems, equipment used in hazardous environment, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other the ones listed in this datasheet.**
- Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
- Safety approvals cover frequency 47-63 Hz.
- That "natural convection" is about 20LFM but is not equal to still air (0 LFM).
- It's recommended to add Varistor 14S471K at L / N input side in parallel.
- Please refer to our PDF file "AC-DC Application" on our website: www.archcorp.com.tw

MECHANICAL DIMENSION (Top View)

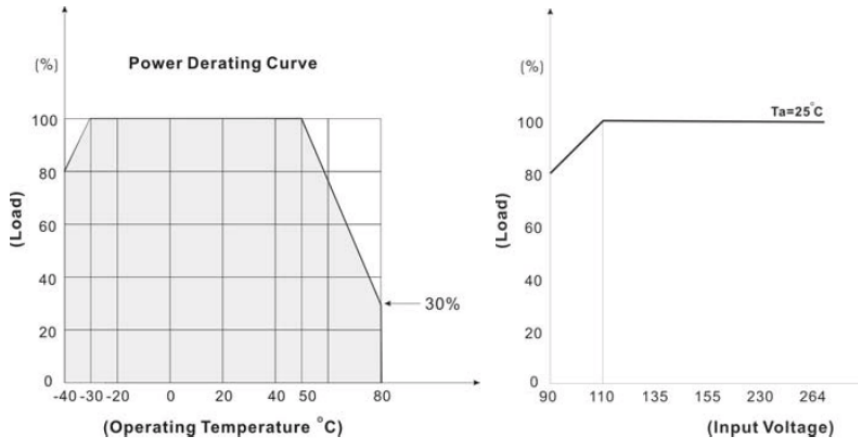


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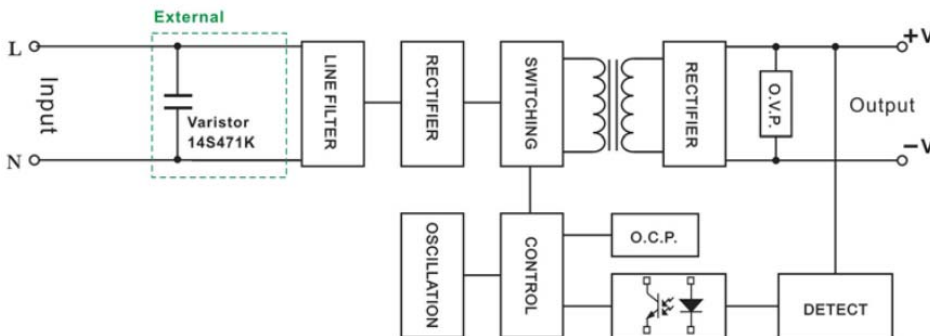
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DERATING



BLOCK DIAGRAM

Single Output



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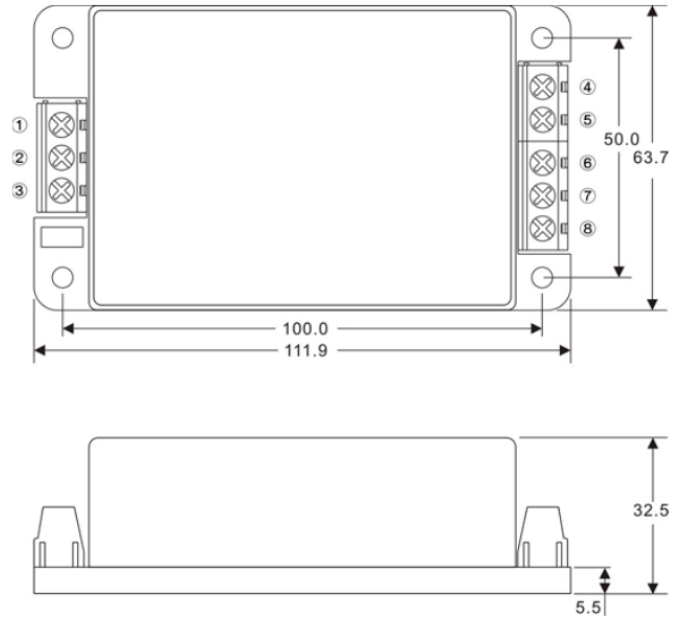
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SCREW TERMINAL

MSC60-A2



PIN#	Single
1	NOCONNECT
2	AC IN (L)
3	AC IN (N)
4	+DC OUT
5	NOCONNECT
6	-DC OUT
7	NOCONNECT
8	NOCONNECT



Din Rail Kit

MSC60-A2-DN

