

KEY FEATURES

- Switching Power Modules for PCB Mounting
- Fully Encapsulated Plastic Case
- Universal Input Range 90-264VAC
- Regulated Output
- Low Ripple and Noise
- <0.3W No Load Input Power
- Isolation Class II
- 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, "N" to DC "+"; "L" to DC "-" | | | | |
| | Frequency (Hz) | | | | |
| | 47-440 Hz | | | | |
| | Current (Full load) | | | | |
| | 1.5 A max. (115 VAC) / 1 A max. (230 VAC) | | | | |
| Inrush current (<2ms, Cold Start) | | | | | |
| 55 A max. (115 VAC) / 95 A max. (230 VAC) | | | | | |
| Leakage Current | | | | | |
| < 0.1mA / 264 VAC (Touch Current) | | | | | |
| External fuse (recommend) | | | | | |
| 3.15A, 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) (Note 1) | | | | | |
| 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 (with derating) | | | | |
| | Storage temperature | | | | |
| | -40°C...+90°C | | | | |
| | Max Case Operating Temperature | | | | |
| | Under 115 VAC 73°C, others 80°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 | | | | | |
| 540 hPa to 1060 hPa | | | | | |
| Physical | Dimensions (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 (flammability to UL 94V-0) | | | | |
| Weight | | | | | |
| 260 g | | | | | |
| Cooling method | | | | | |
| Free air convection | | | | | |

ELECTRICAL SPECIFICATIONS

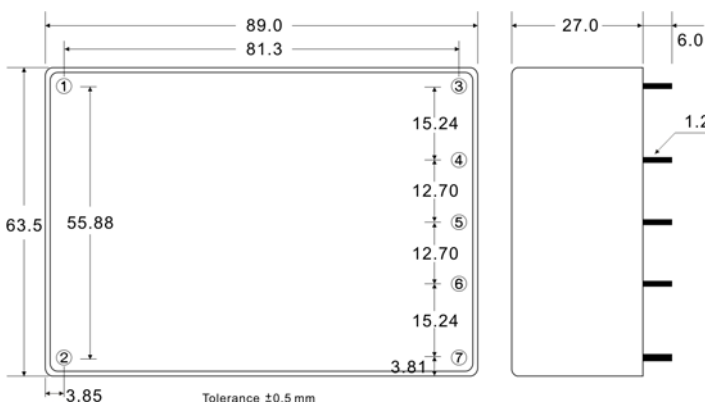
All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

| Model No. | (Single Output) | MSC60-5S | MSC60-9S | MSC60-12S | MSC60-15S | MSC60-24S |
|-----------|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------|-----------|-----------|
| Safety | Approval | cUL / UL Standard: UL 60950-1, CAN/CSA C22.2 No. 60950-1-07 ANSI/AAMI ES60601-1 (2005 + C1:09 + A2:10), CAN/CSA-C22.2 No. 60601-1 (2008), 2 x MOPP CB Standard: IEC 60950-1:2005 (2nd Edition) + Am 1:2009 + Am 2:2013 IEC 60601-1:2005 (3rd Edition) + CORR. 1 (2006) + CORR. 2 (2007) + AM1 (2012) or IEC 60601-1 (2012 reprint), 2 x MOPP | | | | |
| EMC | Conducted and radiated EMI | EN55011 class B (Radiation Class A for MSC60 A2 Series) | | | | |
| | EMS | EN60601-1-2 4th edition | | | | |

NOTE

1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
2. Safety approvals cover frequency 47-63 Hz.
3. That "natural convection" is about 20LFM but is not equal to still air (0 LFM).
4. It's recommended to add Varistor 14S471K at L / N input side in parallel.
5. Please refer to our PDF file "AC-DC Application" on our website: www.archcorp.com.tw

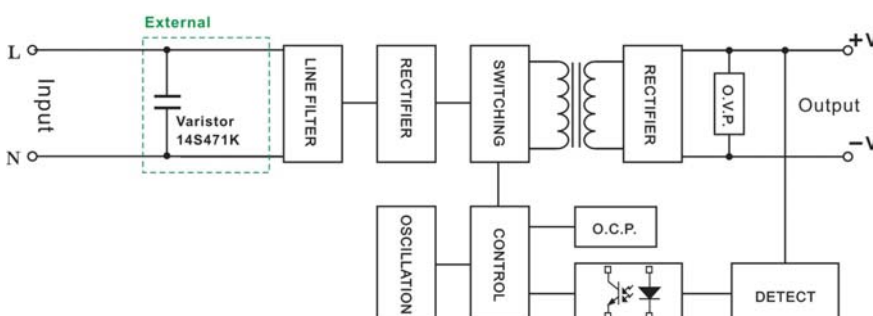
MECHANICAL DIMENSIONS (Top View)



| PIN# | Single |
|------|-----------|
| 1 | AC IN (L) |
| 2 | AC IN (N) |
| 3 | +DC OUT |
| 4 | NO PIN |
| 5 | -DC OUT |
| 6 | NO PIN |
| 7 | NO PIN |

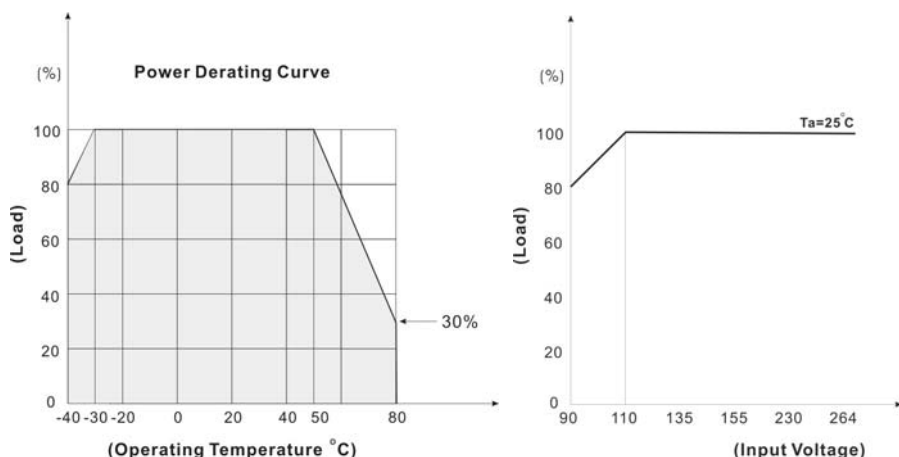
BLOCK DIAGRAM

Single Output



MSC60 SERIES
60 Watts

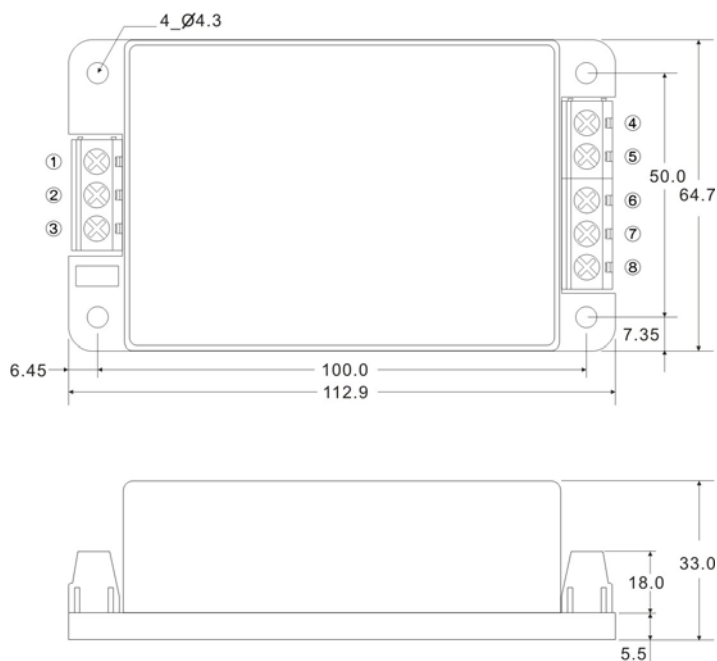
DERATING



SCREW TERMINAL

MSC60-A2


| PIN# | Single |
|------|------------|
| 1 | NO CONNECT |
| 2 | AC IN (L) |
| 3 | AC IN (N) |
| 4 | +DC OUT |
| 5 | NO CONNECT |
| 6 | -DC OUT |
| 7 | NO CONNECT |
| 8 | NO CONNECT |



We reserve the right to make alterations in the product materials and specifications without prior notification and consent to improve reliability, function or design or otherwise.