

KEY FEATURES

- Switching Power Module for PCB Mountable
- Fully Encapsulated Plastic Case
- Universal Input Range 90-264VAC
- Regulated Output
- Low Ripple and Noise
- <0.15W No Load Input Power
- Isolation Class II
- CE, CB, UL, cUL Approval
- 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) | MTC30-5S | MTC30-12S | MTC30-15S | MTC30-24S |
|---|---|-----------|-----------|-----------|
| Max Output Wattage (W) | 25W | 30W | 30W | 30W |
| Input | Voltage | | | |
| | 90-264 VAC or 120-370 VDC | | | |
| | Frequency (Hz) | | | |
| | 47-440 Hz | | | |
| | Current (Full load) | | | |
| | 650 mA max. (115 VAC) / 400 mA max. (230 VAC) | | | |
| | Inrush current (<2ms, Cold Start) | | | |
| 30 A max. (115 VAC) / 60 A max. (230 VAC) | | | | |
| Leakage Current | | | | |
| < 0.1mA / 264 VAC (Touch Current) | | | | |
| No Load Input Power (<240 VAC) | | | | |
| <0.15W | | | | |
| External Fuse (recommend) | | | | |
| 3.15 A slow blow type | | | | |
| Output | Voltage (V.DC.) | | | |
| | 5V | 12V | 15V | 24V |
| | Voltage Accuracy | | | |
| | ±2% | | | |
| | Current (mA) max | | | |
| | 5000 | 2500 | 2000 | 1250 |
| | Line Regulation (LL-HL) (typ.) | | | |
| | ±0.5% | | | |
| Load Regulation (10-100%) (typ.) | | | | |
| ±1% | | | | |
| Maximum Capacitive Load (at 230 VAC) | | | | |
| 6800uF | 1600uF | 1200uF | 470uF | |
| Ripple & Noise (max.) (Note 1) | | | | |
| 100mVp-p | 150mVp-p | 150mVp-p | 240mVp-p | |
| Efficiency (at 230 VAC) | | | | |
| 84% | 89% | 86% | 86% | |
| Hold-up Time | | | | |
| 10 ms min. | | | | |
| Protection | Over Power Protection | | | |
| | Hiccup technique, auto-recovery | | | |
| | Over Voltage Protection | | | |
| Zener diode clamp | | | | |
| Short Circuit Protection | | | | |
| Hiccup mode (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 | | | |
| | 84°C | | | |
| | Temperature Coefficient | | | |
| | ±0.05%/°C | | | |
| Altitude During Operation | | | | |
| 5000m | | | | |
| Humidity | | | | |
| up to 95% RH | | | | |
| MTBF | | | | |
| >250,000 h @ 25°C (MIL-HDBK-217F) | | | | |
| Atmospheric Pressure | | | | |
| 540 hPa to 1060 hPa | | | | |
| Physical | Dimensions (L x W x H) | | | |
| | 2.52 x 1.8 x 0.93 Inches (64.1 x 45.6 x 23.5 mm) Tolerance ±0.5 mm, Height Tolerance ±1 mm | | | |
| | Case Material | | | |
| | Plastic resin (flammability to UL 94V-0) | | | |
| Weight | | | | |
| 135 g | | | | |
| Cooling Method | | | | |
| Free air convection | | | | |

ELECTRICAL SPECIFICATIONS

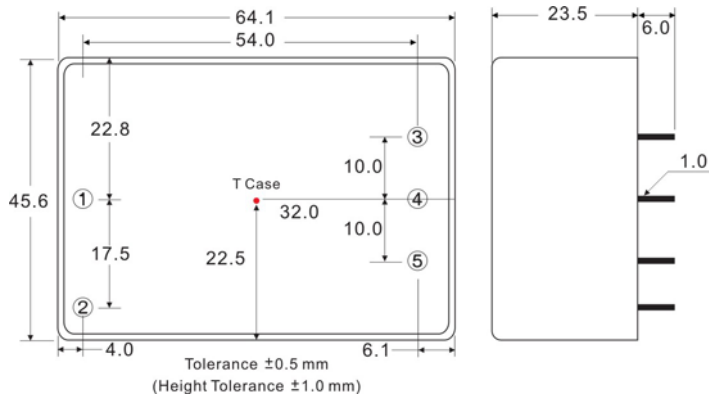
All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

| Model No. (Single Output) | MTC30-5S | MTC30-12S | MTC30-15S | MTC30-24S |
|-----------------------------|---|---|-----------|-----------|
| 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 MTC30 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

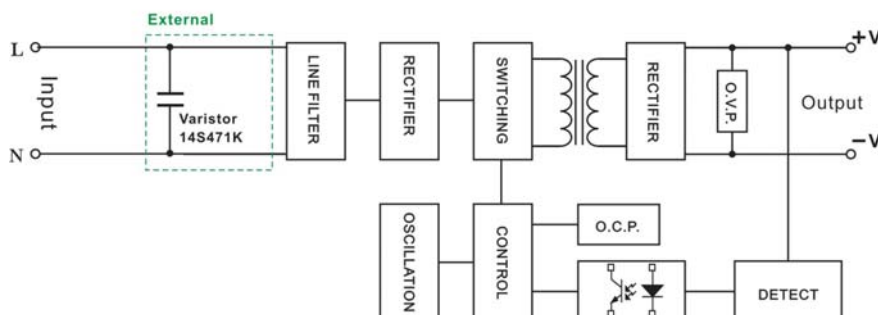
MECHANICAL DIMENSIONS (Top View)

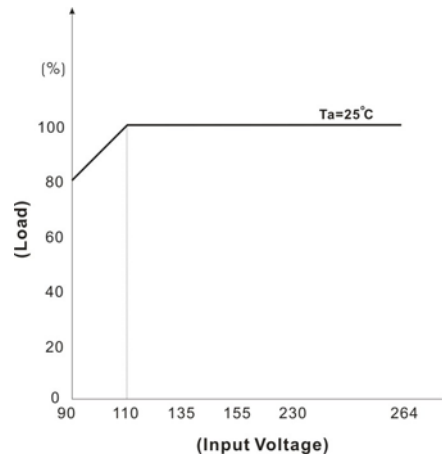
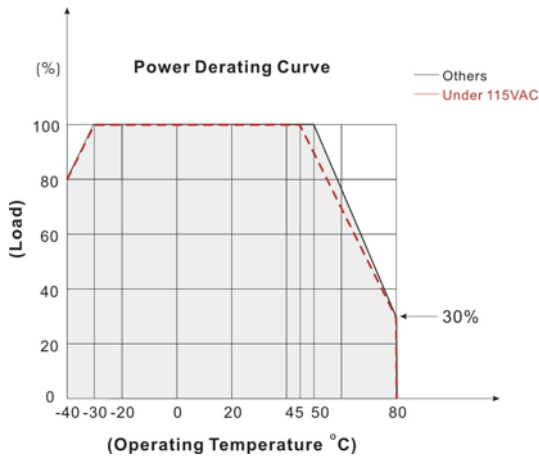


| PIN# | Single |
|------|-----------|
| 1 | AC IN (N) |
| 2 | AC IN (L) |
| 3 | -DC OUT |
| 4 | NO PIN |
| 5 | +DC OUT |

BLOCK DIAGRAM

Single Output



DERATING

SCREW TERMINAL
MTC30-A2


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

