

**KEY FEATURES**

- Switching Power Module for PCB Mountable
- Fully Encapsulated Plastic Case
- Universal Input Range 90-264VAC, 47-440 Hz
- Regulated Output and Low Ripple and Low Noise
- Isolation Class II
- Small Size: 2.0 x 1.0 x 0.597 Inches
- CE, CB and UL Approval



**ELECTRICAL SPECIFICATIONS**

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

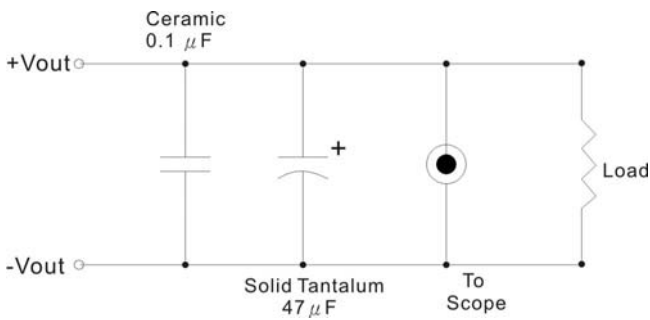
| Model No.                                 | AHC-3.3S                                     | AHC-5S  | AHC-12S | AHC-15S | AHC-24S |        |
|---|--|---|---------|---------|---------|--------|
| Max Output Wattage (W)                    | 4W   | 5W  | 5W      | 5W      | 5.5W    |        |
| Input                                     | Voltage                                      |   |         |         |         |        |
|   | 90-264 VAC or 120-370 VDC                    |   |         |         |         |        |
|   | Frequency (Hz)                               |   |         |         |         |        |
|   | 47-440 Hz                                    |   |         |         |         |        |
|   | Current (Full load)                          |   |         |         |         |        |
|   | 110 mA max. (115 VAC) / 70 mA max. (230 VAC) |   |         |         |         |        |
| Inrush Current (<2ms)                     |  |   |         |         |         |        |
| 10 A max. (115 VAC) / 20 A max. (230 VAC) |  |   |         |         |         |        |
| Leakage Current                           |  |   |         |         |         |        |
| 0.75 mA max.                              |  |   |         |         |         |        |
| External Fuse (mandatory)                 |  |   |         |         |         |        |
| 1.5 A slow blow type                      |  |   |         |         |         |        |
| Output                                    | Voltage (V.DC.)                              | 3.3V  | 5V      | 12V     | 15V     | 24V    |
|   | Voltage Accuracy                             | ±2%   |         |         |         |        |
|   | Current (mA) max                             | 1250  | 1000    | 420     | 333     | 230    |
|   | Line Regulation (LL-HL) (typ.)               | ±0.3%.  |         |         |         |        |
|   | Load Regulation (5-100%) (typ.)              | ±0.5%.  |         |         |         |        |
|   | Minimum Load                                 | 0%  |         |         |         |        |
|   | Maximum Capacitive Load (at 230VAC)          | 13800 uF  | 6000 uF | 1400 uF | 1000 uF | 170 uF |
|   | Ripple                                       | <0.2% Vout +40mV max (Vp-p)   |         |         |         |        |
|   | Noise  | <0.5% Vout +50mV max (Vp-p)   |         |         |         |        |
|   | Efficiency                                   | 68%   | 71%     | 75%     | 75%     | 77%    |
| Hold-up Time                              | 15 ms min.                                   |   |         |         |         |        |
| Protection                                | Over Power Protection                        | Hiccup technique, auto-recovery                                       |         |         |         |        |
|   | Over Voltage Protection                      | Zener diode clamp   |         |         |         |        |
|   | Short Circuit Protection                     | Hiccup mode, indefinite (automatic recovery)                          |         |         |         |        |
| Isolation                                 | Input-Output (V.AC)                          | 3000V   |         |         |         |        |
| Environment                               | Operating Temperature                        | -25°C...+70°C (with derating)   |         |         |         |        |
|   | Storage Temperature                          | -40°C...+85°C   |         |         |         |        |
|   | Temperature Coefficient                      | ±0.02%/°C   |         |         |         |        |
|   | Humidity                                     | 95% RH  |         |         |         |        |
|   | MTBF   | >450,000 h @ 25°C (MIL-HDBK-217F)                                     |         |         |         |        |
| Physical                                  | Dimension (L x W x H)                        | 2.0 x 1.0 x 0.597 Inches ( 50.8 x 25.4 x 15.16 mm ) Tolerance ±0.5 mm |         |         |         |        |
|   | Case Material                                | Plastic resin with Fiberglass (flammability to UL 94V-0)              |         |         |         |        |
|   | Weight                                       | 30 g  |         |         |         |        |
|   | Cooling Method                               | Free air convection   |         |         |         |        |
| Safety                                    | Agency Approvals                             | CE, UL/cUL, CB  |         |         |         |        |
| EMC                                       | EMI (Conducted & Radiated Emission)          | EN 55022 class B  |         |         |         |        |
|   | EMS (Noise Immunity)                         | EN 55024  |         |         |         |        |

**NOTE**

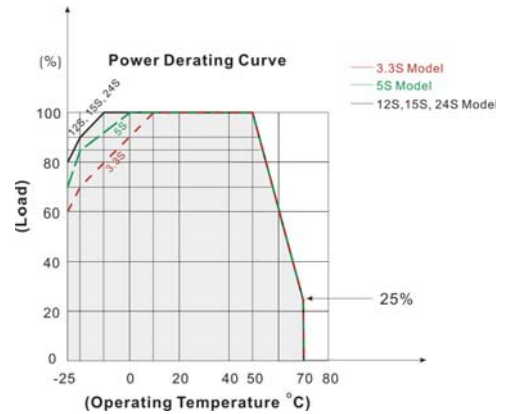
1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
2. It's necessary Varistor 14S471K at L / N input side in parallel.
3. Safety approvals cover frequency 47-63 Hz.
4. Please refer to our PDF file "AC-DC Application" on our website: www.archcorp.com.tw

**OUTPUT NOISE**

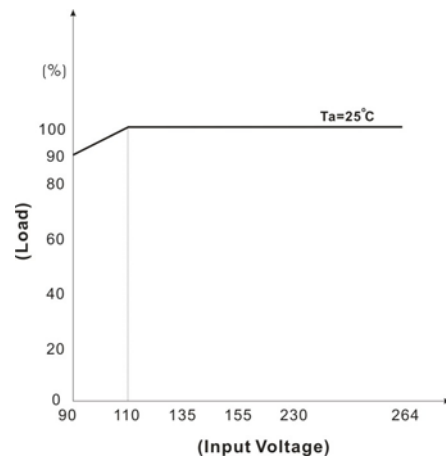
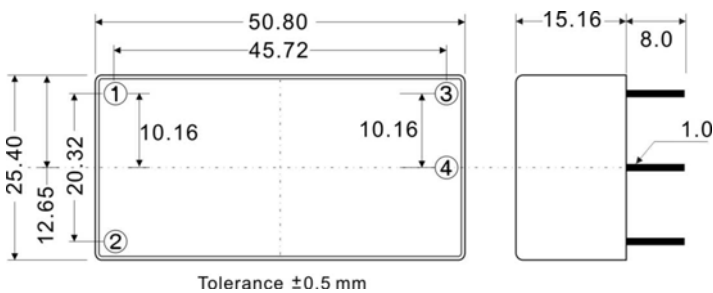
The output noise is measured with 47μF tantalum capacitor and 0.1μF ceramic capacitor across output.



**DERATING**



**MECHANICAL DIMENSION (Top View)**



| PIN# | Single    |
|------|-----------|
| 1    | AC IN (N) |
| 2    | AC IN (L) |
| 3    | +DC OUT   |
| 4    | -DC OUT   |

**BLOCK DIAGRAM**

Single Output

