

# Datasheet

## AC-DC Converter A3D series



### Product Detail

RS Pro switch mode power supply supports a wide input voltage range of up to 65%, high power density and low loss. Typical applications for the PCB mount AC/DC power supply induced industrial and office equipment. The 1-output power rating, delivers 3.3V output voltage and 900mA output current.

This embedded Switch Mode Power Supply based on UL60950, IEC60950, EN60950, EN55022 Class B and EN55024 standards.

### Features and Benefits

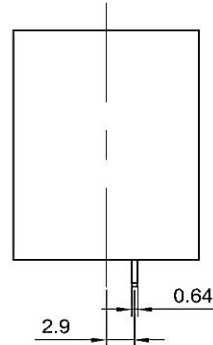
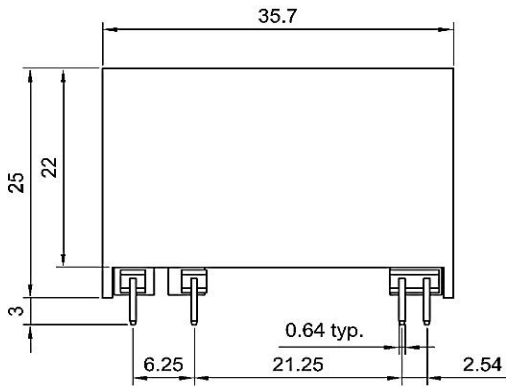
- Universal Full Input 90 – 264VAC or 120-370VDC
- 3 Watt Power
- Short Circuit Protect Function
- No Load Power Consumption 0.3W typ.
- 3.75kVAC Isolation
- Operating Temperature Range from -40°C to +80°C without Derating

## Specifications:

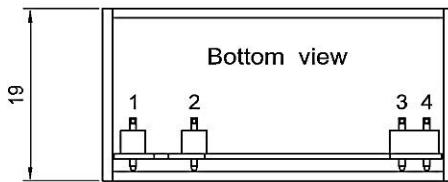
|                             | A3D-AC3.3                            | A3D-AC05 |
|-----------------------------|--------------------------------------|----------|
| Case Material               | UL94V-0                              |          |
| Depth                       | 25mm                                 |          |
| Efficiency                  | 67%                                  | 71%      |
| Input Voltage               | 90 – 264Vac, 120 – 370Vdc            |          |
| Isolation Voltage           | 3kV ac / 1minute                     |          |
| Leakage Current (Output)    | 10uA Max.                            |          |
| Length                      | 35mm                                 |          |
| Line Regulation             | ± 1.5% Max.                          |          |
| Load Regulation             | ± 6% Typ. (2-100%Load)               |          |
| Maximum Temperature         | +85°C                                |          |
| Minimum Temperature         | -40°C                                |          |
| MTBF                        | 3000000h                             |          |
| No Load Consumption (Input) | 30mW Typ.                            |          |
| Number od Outputs           | 1                                    |          |
| Output Current              | 900mA                                | 600mA    |
| Output Voltage              | 3.3Vdc                               | 5Vdc     |
| Over Current Protection     | Continuous, Automatics Recovery      |          |
| Over Voltage Protection     | Zener Diode Clamp                    |          |
| Package Type                | Encapsulated                         |          |
| Potting Material            | Silicone                             |          |
| Power Rating                | 3W                                   |          |
| Ripple and Noise            | 200mVpp                              |          |
| Storage Temperature         | -40°C to +85°C                       |          |
| Weight                      | 27.5g Typ.                           |          |
| Width                       | 19mm                                 |          |
| Frequency Rating            | 60kHz Typ.                           |          |
| Safety                      | Based on UL60950, EN60950            |          |
| EMC                         | Based on EN55022 Class B and EN55024 |          |

1. All specifications in this datasheet are measured at normal input and ambient temperature of 25° C.
2. The “output voltage tolerance” includes initial voltage accuracy, thermal drift, line regulation and load regulation at rated input voltage and load conditions
3. MTBF\* are tested base on MIL-HDBK-217F

## Mechanical Specification



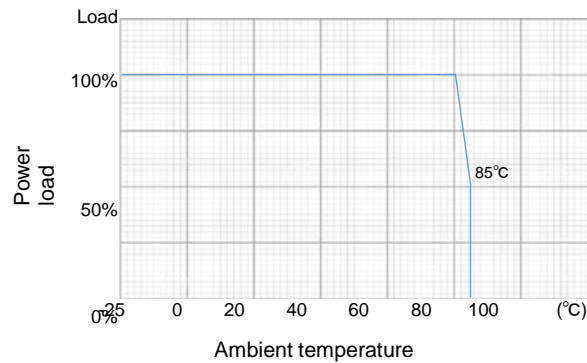
3rd angle projection



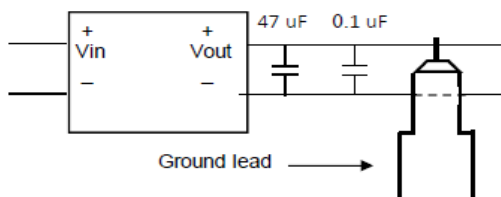
| Pin # |            |
|-------|------------|
| 1     | AC Vin (L) |
| 2     | AC Vin (N) |
| 3     | +DC Vout   |
| 4     | -DC Vout   |

Unit : mm  
Tolerance :  $\pm 0.5\text{mm}$

## Derating Curve



## Application Note



“The Ripple and Noise” is the maximum peak to peak voltage value measured at the output with a 20MHz bandwidth, At rated line voltage at full load; And with a 47uF low ESR electrolytic capacitor in parallel with a 0.1uF ceramic capacitor across the output.