## DESCRIPTIONS

75W, AC/DC Open Frame Power Supply

RoHS

3 Years Warranty

CE Report EN62368-1

UKCA Report BS EN62368-1

## FEATURES

- Universal 85-264VAC input voltage
- Operating ambient temperature range: -40℃ to +70℃ (-30℃ full load)
- High I/O isolation voltage up to 4000VAC
- Operating altitude up to 5000m
- Very low leakage current < 100uA
- 135% peak load for 500ms (5V output)
- 145% peak load for 500ms (other output)
- Load up to 100W with external fan
- Output short circuit, over-current, over-voltage protection
- Efficiency up to 90%
- Meets 2 x MOPP safety class
- Suitable for BF application
- Installing in system of Safety Class I/II is available
- Design refer to IEC/EN/ES60601, UL/EN/IEC62368

## APPLICATIONS

- LED
- Industrial control
- Street light control
- Electricity
- Security
- Telecomnications
- Smart Home
- Medical

## Selection Guide

| Certification | Part No. | Output Power (W) | Nominal Output Voltage and Current (Vo/Io) | 23.5CFM（MIN）Output Current（A） | Output Voltage Adjustable Range ADJ (V) | Efficiency at 230VAC (%) Typ. | Capacitive Load (μF) Max. |
|---|---|---|---|---|---|---|---|
| EN/BS EN | AOMU75-2B-05 | 50.0/60.0 | 5V/10.0A | 12.0 | 4.5-5.5 | 84 | 10000 |
| | AOMU75-2B-12 | 75.6/99.6 | 12V/6.3A | 8.3 | 11.4-12.6 | 88 | 6000 |
| | AOMU75-2B-15 | 75.0/100.5 | 15V/5.0A | 6.7 | 14.3-15.8 | 88 | 5000 |
| | AOMU75-2B-19 | 76.0/100.7 | 19V/4.0A | 5.3 | 18.0-20.0 | 88 | 3000 |
| | AOMU75-2B-24 | 76.8/100.8 | 24V/3.2A | 4.2 | 22.8-25.2 | 89 | 1500 |
| | AOMU75-2B-36 | 75.6/100.8 | 36V/2.1A | 2.8 | 34.2-37.8 | 89 | 1000 |
| | AOMU75-2B-48 | 76.8/100.8 | 48V/1.6A | 2.1 | 45.6-50.4 | 90 | 470 |
| | AOMU75-2B-55 | 75.9/100.1 | 55V/1.38A | 1.82 | 52.0-56.5 | 90 | 300 |

Note: 1. *The actual adjustment range may extend outside the values stated, care should be exercised to ensure that the output voltage and power levels remain within the published maxim values.

2. The product picture is for reference only. For details, please refer to the actual product.

## Specifications

| Product Specifications | Item | Operating Conditions | | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|---|
| Input Specifications | Input Voltage Range | AC input | | 85 | -- | 264 | VAC |
| | Input Frequency | | | 47 | -- | 63 | Hz |
| | Input Current | 115VAC | | -- | -- | 2.0 | A |
| | | 230VAC | | -- | -- | 1.5 | |
| | Inrush Current | 115VAC | | -- | -- | 40 | |
| | | 230VAC | | -- | -- | 70 | |
| | Leakage Current | 264VAC | | 100uA Max. | | | |
| | Hot Plug | | | Unavailable | | | |
| Output Specifications | Output Voltage Accuracy | 0% - 100% load | 5V output | -- | -- | ±2.0 | % |
| | | | Other output | -- | -- | ±1.0 | |
| | Line Regulation | Rated load | | -- | -- | ±0.5 | |
| | Load Regulation | 230VAC | 5V output | -- | -- | ±1.5 | |
| | | | Other output | -- | -- | ±1.0 | |
| | Ripple & Noise* | 20MHz bandwidth (peak-to-peak value) | 5V output | -- | -- | 100 | mV |
| | | | 12V/15V/19V/24V output | -- | -- | 120 | |
| | | | 36V/48V/55V output | -- | -- | 150 | |
| | Stand-by Power Consumption (no fan) | 5V/12V/15V/19V/24V output | | -- | 0.15 | 0.3 | W |
| | | 36V/48V/55V output | | -- | 0.2 | 0.5 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Short Circuit Protection | | | Hiccup, continuous, self-recover | | | |
| Output Specifications | Over-current Protection | | 5V output | ≥130%Io, self-recover | | | |
| | | | Other output | ≥140%Io, self-recover | | | |
| | Over-voltage Protection | | 5VDC output | ≤8.5V | Output voltage clamp or hiccup | | |
| | | | 12VDC output | ≤16.2V | | | |
| | | | 15VDC output | ≤20.3V | | | |
| | | | 19VDC output | ≤30.0V | | | |
| | | | 24VDC output | ≤32.4V | | | |
| | | | 36VDC output | ≤50.0V | | | |
| | | | 48VDC output | ≤60.0V | | | |
| | | | 55VDC output | ≤60.0V | | | |
| | Minim Load | | | 0 | -- | -- | % |
| | Hold-up Time | | 230VAC input | 45 | 60 | -- | ms |
| General Specifications | Isolation | Input - output | Electric Strength Test for 1min., leakage current <5mA | 4000 | -- | -- | VAC |
| | | Input - ⏚ | | 2000 | -- | -- | |
| | | Output - ⏚ | | 1500 | -- | -- | |
| | Insulation Resistance | Input - output | 500VDC | 100 | -- | -- | MΩ |
| | Operating Temperature | | | -40 | -- | +70 | ℃ |
| | Storage Temperature | | | -40 | -- | +70 | |
| | Altitude* | | | -- | -- | 5000 | m |
| | Power Derating | Natural air cooling 100% load | -40℃ to -30℃ | 7.0 | -- | -- | %/℃ |
| | | | +40℃ to +70℃ 5V output | 1.67 | -- | -- | |
| | | | +50℃ to +70℃ Other output | 2.5 | -- | -- | |
| | | Forced cooling 120% load air flow 23.5CFM | -40℃ to -30℃ 5V output | 7.0 | -- | -- | |
| | | | -30℃ to -20℃ | 2.0 | -- | -- | |
| | | | +60℃ to +70℃ | 7.0 | -- | -- | |
| | | Forced cooling 133% load air flow 23.5CFM | -40℃ to -30℃ Other output | 7.0 | -- | -- | |
| | | | -30℃ to -20℃ | 3.3 | -- | -- | |
| | | | +60℃ to +70℃ | 8.3 | -- | -- | |
| | | | 85VAC - 100VAC | 1.34 | -- | -- | %/VAC |
| | Safety Distance | | Clearance | 7.0 | -- | -- | mm |
| | | | Creepage | 8.0 | -- | -- | |
| | Safety Class | | | CLASS I (connected PE)/ CLASS II (without PE) | | | |
| | MTBF | | MIL-HDBK-217F@25℃ | > 300,000 h | | | |

| | | |
|---|---|---|
| Mechanical Specifications | Dimension | 101.60 x 50.80 x 32.00mm |
| | Weight | 125g (Typ.) |
| | Cooling Method | Free air convection |

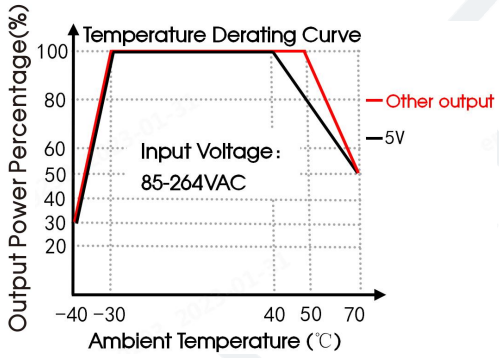
Note: *The "Tip and barrel method" is used for ripple and noise test, with a 0.1uf & 47uf parallel capacitor, please refer to AC-DC Converter Application Notes for specific information.

**For operation of altitude between 2000-5000m.

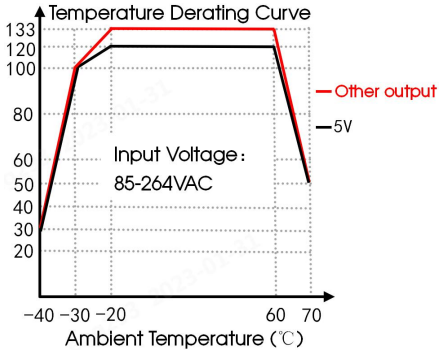
## Electromagnetic Compatibility (EMC)

| | | | | |
|---|---|---|---|---|
| Electromagnetic Compatibility (EMC) | Emissions | CE | CISPR32/EN55032 CLASS B | |
| | | RE | CISPR32/EN55032 CLASS B | |
| | | Harmonic current | IEC/EN61000-3-2 CLASS A | |
| | Imnity | ESD | IEC/EN61000-4-2 Contact ±8KV/Air ±15KV | Perf. Criteria A |
| | | RS | IEC/EN61000-4-3 10V/m | Perf. Criteria A |
| | | EFT | IEC/EN61000-4-4 ±2KV | Perf. Criteria A |
| | | Surge | IEC/EN61000-4-5 Line to line ±2KV/line to PE ±4KV | Perf. Criteria A |
| | | CS | IEC/EN61000-4-6 10Vr.m.s | Perf. Criteria A |
| | | Voltage dips, short interruption and voltage variations | IEC/EN61000-4-11 100% dip 1 periods, 30% dip 25 periods,100% interruptions 250 periods | Perf. Criteria B |

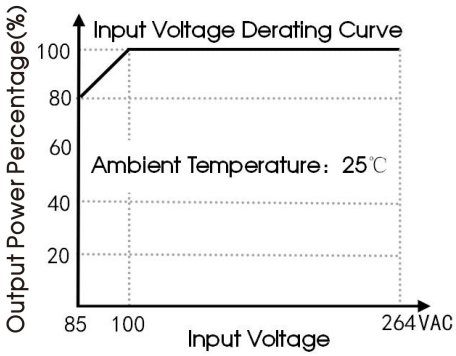
## Product Characteristic Curve




Natural air cooling

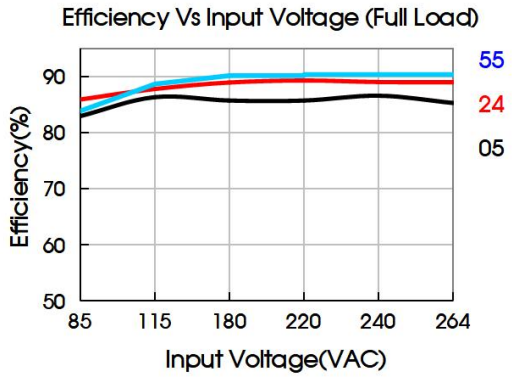


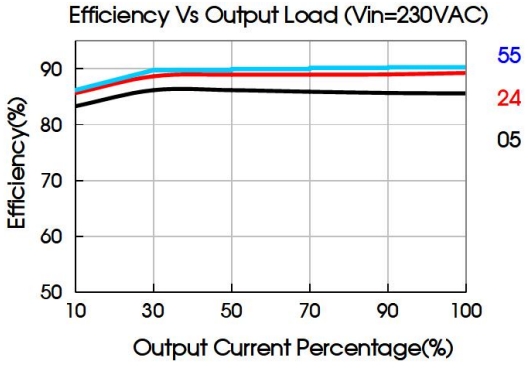

Forced cooling (23.5CFM)



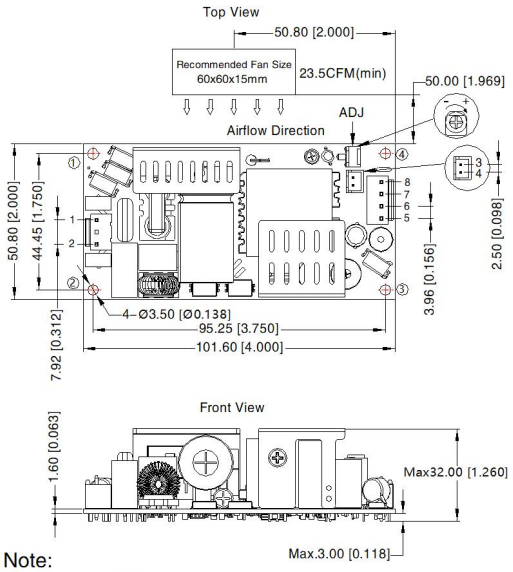

Note: ① With an AC input between 85-100VAC, the output power st be derated as per temperature derating curves;

② This product is suitable for applications using natural air cooling.



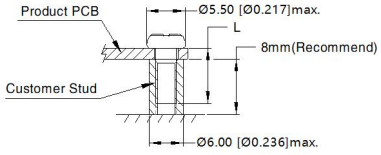

## Dimensions and Recommended Layout




THIRD ANGLE PROJECTION

| Pin-Out | | |
|---|---|---|
| Pin | Mark | Customer Connector |
| 1 | AC(N) | Housing: JST VHR<br>Terminal: JST SVH-21T-P1.1<br>or equivalent |
| 2 | AC(L) | |
| 3 | Fan- | Housing: PJA-006<br>Terminal: PJA-007<br>or equivalent |
| 4 | Fan+ | |
| 5、6 | -Vo | Housing: JST VHR<br>Terminal: JST SVH-21T-P1.1<br>or equivalent |
| 7、8 | +Vo | |

| Position | Screw Spec. | L(Recommend) | Torque(max) |
|---|---|---|---|
| ①－④ | M3 | 6mm | 0.4N・m |




Note:
1. Unit: mm[inch]
2. ADJ: Output adjustable resistor
3. General tolerances: ± 1.00[ ± 0.039]
4. Do not use fan power to power other devices
5. The layout of the device is for reference only, please refer to the actual product
6. It is recommended 10mm distance between the PCB and other components for safety purpose
7. Class Ⅰ system ①, ③ positions must be connected to the earth( ⏚ )
8. Class Ⅱ system ①, ③ positions must be connected together

Note:

1. Unless otherwise specified, parameters in this datasheet were measured under the conditions of Ta=25℃, humidity<75% with nominal input voltage and rated output load;
2. The room temperature derating of 5℃/1000m is needed for operating altitude greater than 2000m;
3. All index testing methods in this datasheet are based on our company corporate standards;
4. We can provide product customization service, please contact our technicians directly for specific information;
5. Products are related to laws and regulations: see "Features" and "EMC";
6. The output voltage can be adjusted by the ADJ, clockwise to increase;
7. Our products shall be classified according to ISO14001 and related environmental laws and regulations, and shall be handled by qualified units