## DESCRIPTIONS

200W, AC/DC Enclosed Switching Power Supply



RoHS

CE Report EN62368-1

UKCA Report BS EN62368-1

## FEATURES

- Universal 90 - 132VAC/180 - 264VAC input voltage
- DC input range: 240 - 370VDC(Switch in position of 230)
- Accepts AC or DC input (dual-use of same terminal)
- Operating ambient temperature range: - 40℃ to +85℃
- High I/O isolation test voltage up to 4000VAC,
- Operating altitude up to 5000m
- Compact size, high power density
- High efficiency, high reliability
- Output short circuit, over-current, over-voltage, over-temperature protection
- OVC III (designed to meet EN62477)

## APPLICATIONS

- Industrial
- LED
- Street light control
- Electricity
- Security
- Telecommunications
- Smart home

## Selection Guide

| Certification | Part No. | Output Power (W) | Nominal Output Voltage and Current (Vo/Io) | Output Voltage Adjustable Range (V) | Efficiency at 230VAC (%) Typ. | Max. Capacitive Load (μF) |
|---|---|---|---|---|---|---|
| EN/BS EN | AE200-2B-12V2 | 204 | 12V/17A | 11.4-13.8 | 89 | 4000 |
| | AE200-2B-15V2 | 210 | 15V/14A | 14.25-17.25 | 89 | 3300 |
| | AE200-2B-24V2 | 211.2 | 24V/8.8A | 22.8-27.6 | 91 | 1500 |
| | AE200-2B-36V2 | 212.4 | 36V/5.9A | 34.2-41.4 | 91.5 | 1500 |
| | AE200-2B-48V2 | 211.2 | 48V/4.4A | 43.2-52.8 | 92 | 470 |
| | AE200-2B-54V2 | 210.6 | 54V/3.9A | 51.3-56.7 | 92 | 330 |

Note: 1.suffix "Q" for bottom conformal coating and "QQ" for both sides conformal coating;
2. For products with terminal cover, please order "CPJ-033" for self-installation;
3. 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 (by switch) | AC input | Low voltage (switch in position of 115) | 90 | -- | 132 | VAC |
| | | | High voltage (switch in position of 230) | 180 | -- | 264 | |
| | | DC input | Switch in position of 230 | 240 | -- | 370 | VDC |
| | Input Voltage Frequency | | | 47 | -- | 63 | Hz |
| | Input Current | 115VAC | | -- | -- | 5 | A |
| | | 230VAC | | -- | -- | 3 | |
| | Inrush Current | 115VAC | Cold start | -- | 60 | 80 | |
| | | 230VAC | | -- | 60 | 80 | |
| | Leakage Current | 240VAC | | < 0.75mA | | | |
| | Hot Plug | | | Unavailable | | | |
| Output Specifications | Output Voltage Accuracy | Full load range | 12V/15V | -- | ±1.5 | -- | % |
| | | | 24V/36V/48V/54V | -- | ±1 | -- | |
| | Line Regulation | Rated load | | -- | ±0.5 | -- | |
| | Load Regulation | 0% - 100% load | 12V/15V | -- | ±1 | -- | |
| | | | 24V/36V/48V/54V | -- | ±0.5 | -- | |
| | Minimum Load | | | 0 | -- | -- | |
| | Output Ripple & Noise* | 20MHz bandwidth (peak-to-peak value) | 12V/15V/24V | -- | -- | 150 | mV |
| | | | 36V/48V/54V | -- | -- | 200 | |
| | Temperature Coefficient | | | -- | ±0.03 | -- | %/℃ |
| | Stand-by Power Consumption | 230VAC, 25℃ | | -- | -- | 0.75 | W |
| | Hold-up Time | 115VAC | | 8 | -- | -- | ms |
| | | 230VAC | | 16 | -- | -- | |
| | Short Circuit Protection | Recovery time <5s after the short circuit disappear. | | Hiccup, continuous, self-recover | | | |
| | Over-current Protection | | | 120%-300% Io, hiccup, self-recover after fault elimination | | | |
| | Over-voltage Protection | 12V | | ≤16.2VDC (Clamp, self-recover after fault elimination) | | | |
| | | 15V | | ≤21VDC (Clamp, self-recover after fault elimination) | | | |
| | Over-voltage Protection | 24V | | ≤33.6VDC (Clamp, self-recover after fault elimination) | | | |
| | | 36V | | ≤46.8VDC (Clamp, self-recover after fault elimination) | | | |
| | | 48V | | ≤60VDC (Clamp, self-recover after fault elimination) | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | 54V | | ≤63VDC (Clamp, self-recover after fault elimination) | | | |
| | Over-temperature Protection | | | Output voltage turn off, self-recover after fault elimination | | | |
| General Specifications | Isolation | Input - ⏚ | Electric strength test for 1min., leakage current <5mA | 2000 | -- | -- | VAC |
| | | Input - output | | 4000 | -- | -- | |
| | | Output - ⏚ | | 500 | -- | -- | |
| | Insulation Resistance | Input - ⏚ | At 500VDC | 100 | -- | -- | MΩ |
| | | Input - output | | 100 | -- | -- | |
| | | Output - ⏚ | | 100 | -- | -- | |
| | Operating Temperature | | | -40 | -- | +85 | ℃ |
| | Storage Temperature | | | -40 | -- | +85 | |
| | Storage Humidity | | Non-condensing | 10 | -- | 95 | %RH |
| | Operating Humidity | | | 20 | -- | 90 | |
| | Power Derating | | Operating temperature derating | -40℃ to -30℃ | 5 | -- | -- | %/℃ |
| | | | | +50℃ to +70℃ | 2.5 | -- | -- | |
| | | | | +70℃ to +85℃ | 1.33 | -- | -- | |
| | | | Input voltage derating | 90VAC - 100VAC | 3.5 | -- | -- | %/VAC |
| | | | Altitude derating | 2000m - 5000m | 5 | -- | -- | ℃/Km |
| | Safety Class | | | | CLASS I | | | |
| | MTBF | | MIL-HDBK-217F@25℃ | | ≥300,000 h | | | |
| | Warranty | | Ambient temperature: <70℃ | | 3 years | | | |
| Mechanical Specifications | Case Material | | Metal (AL5052, SGCC) | | | | |
| | Dimensions | | 159.00 x 97.00 x 30.00 mm | | | | |
| | Weight | | 415g (Typ.) | | | | |
| | Cooling Method | | Free air convection | | | | |

Note: *The "Tip and barrel method" is used for ripple and noise test, output parallel 47uF electrolytic capacitor and 0.1uF ceramic capacitor,

## Electromagnetic Compatibility (EMC)

| | | | | | |
|---|---|---|---|---|---|
| Electromagnetic Compatibility (EMC) | Emissions (EMI) | CE | CISPR32/EN55032 CLASS A | | |
| | | RE | CISPR32/EN55032 CLASS A | | |
| | Immunity (EMS) | ESD | IEC/EN61000-4-2 Contact ±6KV /Air ±8KV | | perf. Criteria A |
| | | RS | IEC/EN61000-4-3 10V/m | | perf. Criteria A |
| | | EFT | IEC/EN61000-4-4 ±4KV | | 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 |
| | | PFMF | IEC/EN61000-4-8 30A/m | | perf. Criteria A |
| | | Voltage variation* | IEC61000-6-2/IEC61000-4-11 | 70% Un, 25/30 cycle(50/60Hz)<br>40% Un, 10/12 cycle(50/60Hz)<br>0% Un, 1 cycle | perf. Criteria B |
| | | Voltage interruption* | IEC61000-6-2/IEC61000-4-11 | 0% Un, 250/300 cycle(50/60Hz) | perf. Criteria C |

Remark:

1. *This power supply does not meet the harmonic current requirements specified in EN61000-3-2.

Please do not use this power supply under the following conditions:

(1) The terminal equipment is used in the European Union.

(2) Supporting terminals are connected to a public power grid with 220VAC or a higher voltage that comply with the requirements of EN61000-3-2.

(3) The power supply is installed in terminal equipment with average or continuous input power greater than 75W.

(4) The power supply belong to a part of lighting system.

Exception: The power supply used in the following terminal equipment does not need to meet EN61000-3-2.

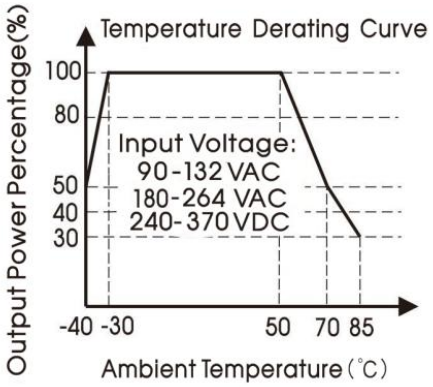
(1) Professional equipment with a total rated input power greater than 1000W.

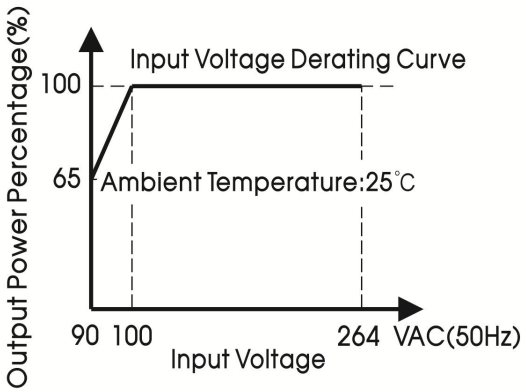
(2) Symmetrically controlled heating element with a rated power less than or equal to 200W.

2. *If no harmonic current is required or customers can solve harmonic current problems by themselves, this product can be used.

3. *Un is the maximum input nominal voltage.

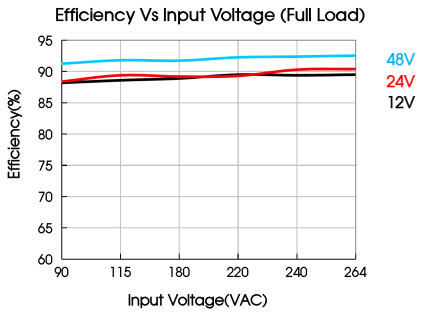
## Characteristic Curve

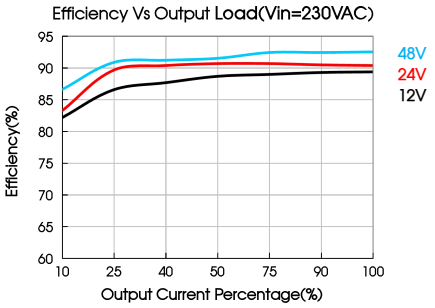



Note: 1. With an input voltage between 90-100VAC the output power must be derated as per the temperature derating curves;

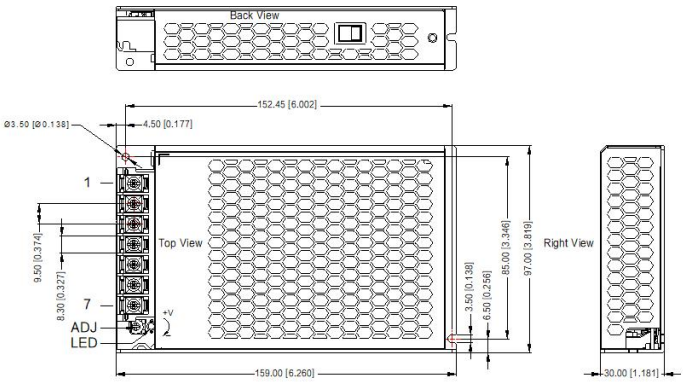
2. This product is suitable for applications using natural air cooling.




## Dimensions and Recommended

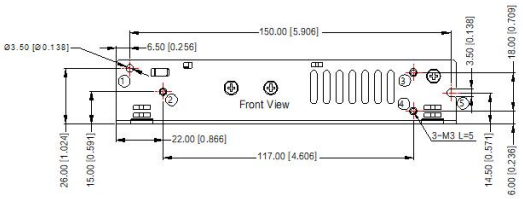
THIRD ANGLE PROJECTION



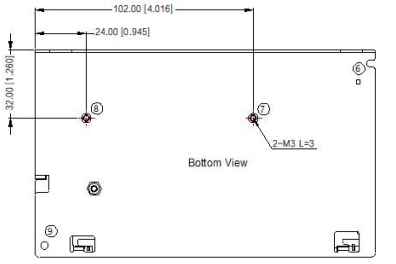

| Pin-Out | |
|---|---|
| Pin | Mark |
| 1 | AC(L) |
| 2 | AC(N) |
| 3 | ⏚ |
| 4 | -Vo |
| 5 | -Vo |
| 6 | +Vo |
| 7 | +Vo |

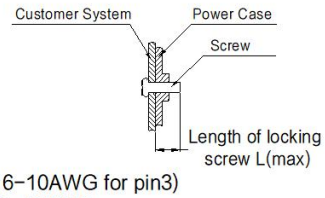
At least one of positions ① to ⑨must be connected to the earth( ⏚ )

| Switch | AC Input | DC Input |
|---|---|---|
| 115V | 90-132VAC | — — — |
| 230V | 180-264VAC | 240-370VDC |




| Position | Screw Spec. | Length of locking screw L(max) | Recommended Torque |
|---|---|---|---|
| ②－④ | M3 | 5mm | 0.4±0.04N・m |
| ⑦－⑧ | M3 | 3mm | 0.4±0.04N・m |




Note:
Unit: mm[inch]
ADJ: Output adjustable resistor
Wire range: Input: 28-10AWG(16-10AWG for pin3)
Output: 12V, 15V: 12-10AWG
24V, 36V: 16-10AWG
48V, 54V: 20-10AWG
Connector tightening torque: M3.5,0.8±0.08N・m .
General tolerances: ±1.00[±0.039]

Note:

1. Unless otherwise specified, parameters in this datasheet were measured under the conditions of Ta=25℃, humidity<75% RH 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. In order to improve the efficiency at high input voltage, there will be audible noise generated, but it does not affect product performance and reliability;
5. We can provide product customization service, please contact our technicians directly for specific information;
6. Products are related to laws and regulations: see "Features" and "EMC";
7. The out case needs to be connected to the earth (⏚)of system when the terminal equipment in operating;
8. The output voltage can be adjusted by the ADJ, clockwise to increase;
9. Our products shall be classified according to ISO14001 and related environmental laws and regulations, and shall be handled by qualified units;
10. The power supply is considered a component which will be installed into a terminal equipment. All EMC tests should be confirmed with the final equipment.
11. The image certification marks are for reference only; please refer to the selection table for actual specifications. Certification is based on the physical mark or packaging label.