DESCRIPTION 200W，AC-DC Converter



RoHS

UL62368-1 EN62368-1 BS EN62368-1 IEC62368-1

FEATURES

- Selectable AC input range: 90 - 132VAC/ 180 - 264VAC (by switch)
- DC input range: 240 - 373VDC (Switch in position of 230)
- Ultra low standby power consumption < 0.75W @230VAC
- Operating ambient temperature range: - 30℃ to +70℃
- High efficiency, high reliability
- LED indicator for power on
- 150% peak load for 5 seconds
- Output short circuit, over-current, over-voltage, over-temperature protection
- Operating altitude up to 5000m

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 ADJ (V)	Efficiency at 230VAC (%) Typ.	Capacitive Load (uF) Max.
		Steady state	transient**				
UL/EN/BS EN/IEC	AE200-2B-05	150	200	5V/30A	4.5 - 5.5	87.0	10000
	AE200-2B-12	204	--	12V/17A	10.2 -13.8	87.5	4000
	AE200-2B-15	210	--	15V/14A	13.5 -18.0	88.0	3300
	AE200-2B-24	211.2	--	24V/8.8A	21.6 - 28.8	88.5	1500
	AE200-2B-36	212.4	--	36V/5.9A	32.4 - 39.6	89.0	1500
	AE200-2B-48	211.2	--	48V/4.4A	43.2 - 52.8	89.5	470

Note: 1. *Use suffix "Q" for conformal coating and suffix "QQ" for double side conformal coating.
2. **Hold-up time1min (Typ.).
3. If the terminal covers is required, please place an order with "CPJ-033" for self-installation.
4. 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	--	373	VDC
	Input Voltage Frequency			47	--	63	Hz
	Input Current	115VAC		--	--	5	A
		230VAC		--	--	3	
	Inrush Current	115VAC	Cold start	--	60	80	
		230VAC		--	60	80	
	Hot Plug			Unavailable			
Output Specifications	Output Voltage Accuracy	Full load range	5V	--	±3.0	--	%
			12V	--	±1.5	--	
			15V/24V/36V/48V	--	±1.0	--	
	Line Regulation	Rated load		--	±0.5	--	
	Load Regulation	0% - 100% load	5V	--	±2.0	--	
			12V	--	±1.0	--	
			15V/24V/36V/48V	--	±0.5	--	
	Ripple & Noise*	20MHz bandwidth (peak-to-peak value)	5V/12V/15V/24V	--	150	--	mV
			36V/48V	--	200	--	
	Temperature Coefficient			--	--	±0.03	%/℃
	Minimum Load			0	--	--	%
	Stand-by Power Consumption	Room temperature, 230VAC input		--	--	0.75	W
	Hold-up Time	Room temperature, full load	115VAC	12	--	--	ms
			230VAC	16	--	--	
	Short Circuit Protection	Recovery time <5s after the short circuit disappear.		Hiccup, continuous, self-recover			
	Over-current Protection	5V		110% - 200%Io, self-recover			
		12V/15V/24V/36V/48V		130% - 250%Io, last for 5s, Output voltage turn off, self-recover			
	Over-voltage Protection	5V		≤8V (Output voltage turn off, re-power on for recover)			

			12V			≤18V (Output voltage hiccup, self-recover)		
			15V			≤22V (Output voltage hiccup, self-recover)		
			24V			≤33.6V (Output voltage hiccup, self-recover)		
			36V			≤46.8V (Output voltage hiccup, self-recover)		
			48V			≤60V (Output voltage hiccup, self-recover)		
	Over-temperature Protection		5V			Output voltage turn off, re-power on for recover		
			12V/15V/24V/36V/48V			Output voltage hiccup, self-recover		
General Specifications	Isolation	Input - ⏚	Electric strength test for 1min., leakage current <5mA			2000	--	--	VAC
		Input - output				3000	--	--	
		Output - ⏚				500	--	--	
	Insulation Resistance	Input - ⏚	Test voltage: 500VDC			100	--	--	MΩ
		Input - output				100	--	--	
		Output - ⏚				100	--	--	
	Operating Temperature					-30	--	+70	℃
	Storage Temperature					-40	--	+85	
	Storage Humidity		Non-condensing			--	--	95	%RH
	Operating Humidity					--	--	90	
	Power Derating		Operating temperature derating	5V output	+40 to +70℃	1.66	--	--	%/℃
				Other output	+50 to +70℃	2.5	--	--	
			Input voltage derating	90 - 100VAC	50Hz	3.5	--	--	
				90 - 100VAC	60Hz	2.0	--	--	%/VAC
	Safety Class					CLASS I			
	MTBF		MIL-HDBK-217F@25℃			≥300,000 h			
Mechanical Specifications	Case Material		Metal (AL1100, SGCC)						
	Dimensions		179.00 x 99.00 x 30.00mm						
	Weight		5V		520g (Typ.)				
			Other output		500g (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	CE	CISPR32/EN55032 CLASS A	
		RE	CISPR32/EN55032 CLASS A	
	Immunity	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 ±2KV	perf. Criteria A
		Surge	IEC/EN61000-4-5 line to line ±2KV / line to ground ±4KV	perf. Criteria A
		CS	IEC/EN61000-4-6 10Vr.m.s	perf. Criteria A
		Voltage dips, short interruptions and voltage variations	IEC/EN61000-4-11 100% dip 1 periods, 30% dip 25 periods, 100% interruptions 250 periods	perf. Criteria B

Remark:

1. One magnetic bead (nickel-zinc ferrite) should be coupled with the output load line during CE/RE testing;
2. This power supply does not meet the harmonic current requirements specified in EN61000-3-2.

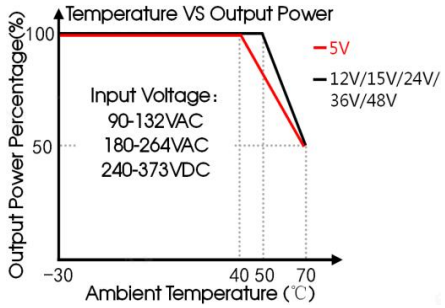
Please do not use this power supply under the following conditions:

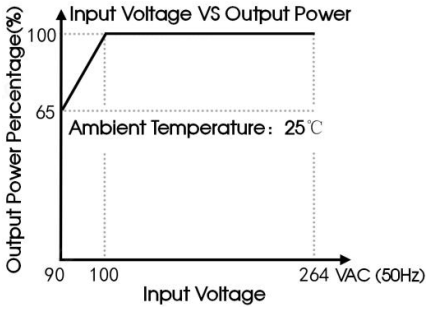
1) The terminal equipment is used in the European Union.
2) Supporting terminals are connected to a public power grid with 220VAC or a higher voltage that comply with the requirements of EN61000-3-2.
3) The power supply is installed in terminal equipment with average or continuous input power greater than 75W.
4) The power supply belong to a part of lighting system.

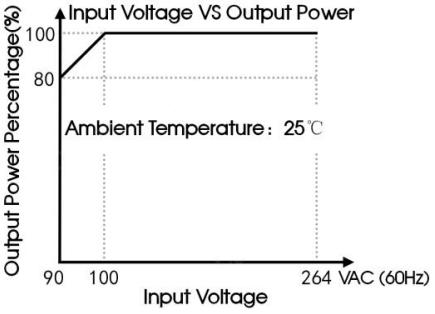
Exception: The power supply used in the following terminal equipment does not need to meet EN61000-3-2.

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

Characteristic Curve

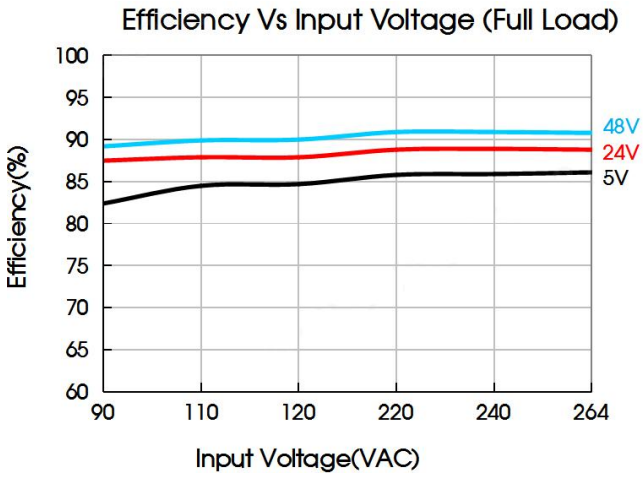


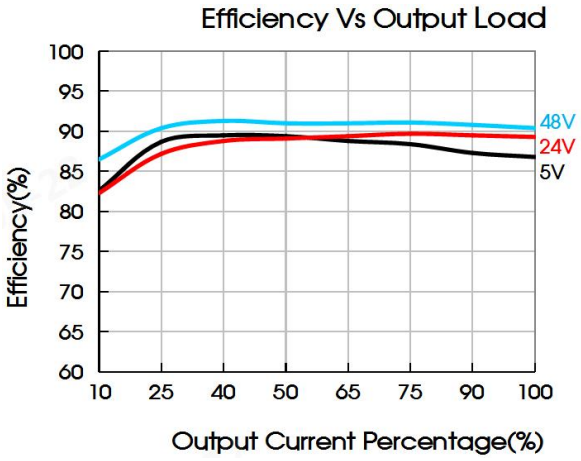




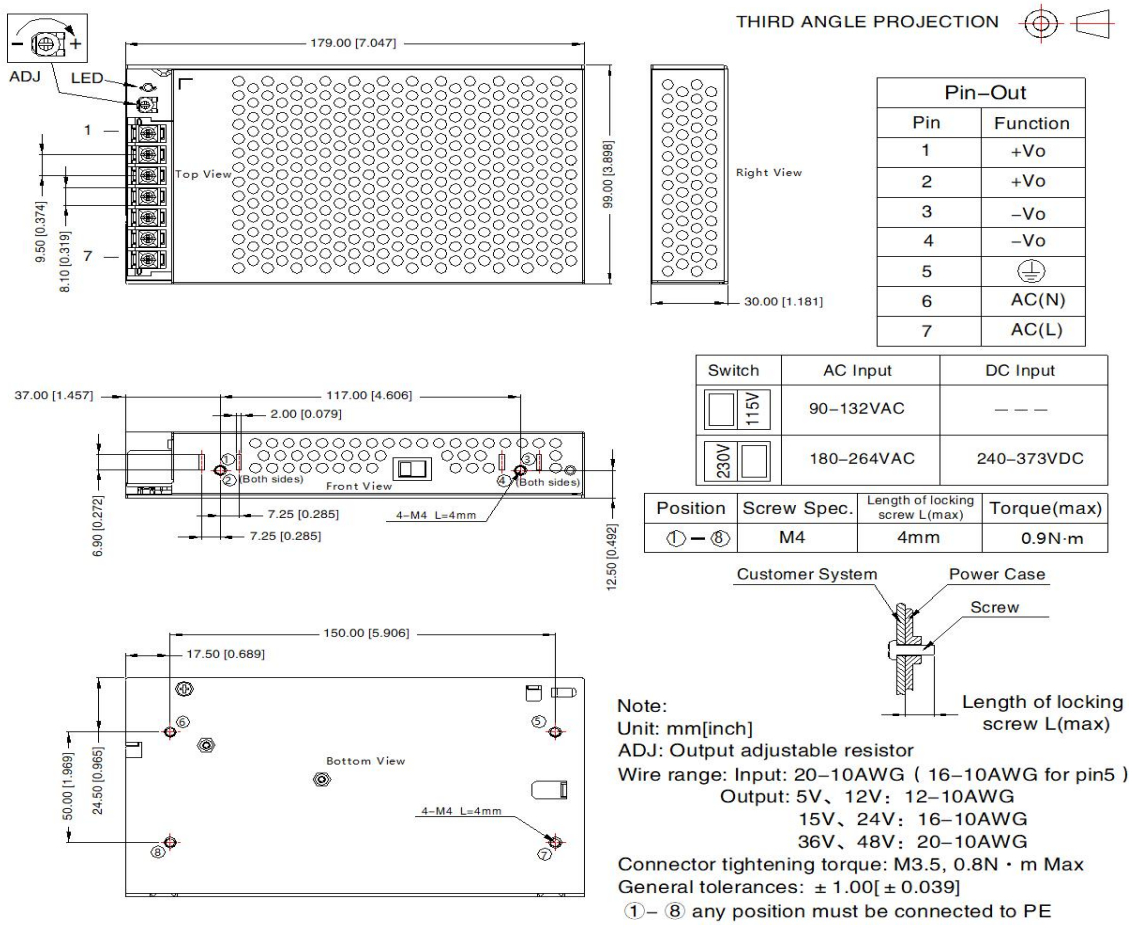
Note:

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 free air cooling.





Dimensions and Recommended



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

Switch	AC Input	DC Input
115V	90-132VAC	— — —
230V	180-264VAC	240-373VDC

Position	Screw Spec.	Length of locking screw L(max)	Torque(max)
① — ⑧	M4	4mm	0.9N·m

Note:
Unit: mm[inch]
ADJ: Output adjustable resistor
Wire range: Input: 20-10AWG (16-10AWG for pin5)
Output: 5V、12V: 12-10AWG
15V、24V: 16-10AWG
36V、48V: 20-10AWG
Connector tightening torque: M3.5, 0.8N · m Max
General tolerances: ± 1.00[± 0.039]
① - ⑧ any position must be connected to PE

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 ambient 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 PE(⏚) 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 final 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.