DESCRIPTIONS

150W, AC-DC Converter



RoHS

Report Report

UL62368-1 EN62368-1 BS EN62368-1 IEC62368-1
EN60335-1 IEC 60335-1
EN61558-1 IEC 61558-1

FEATURES

- Universal 85 - 264VAC or 120 - 370VDC Input voltage
- Accepts AC or DC input (dual-use of same terminal)
- Operating ambient temperature range: -30℃ to +70℃
- Low standby power consumption, high efficiency
- High I/O isolation test voltage up to 4000VAC
- Low ripple & noise
- 150% peak power lasts 5S
- Output short circuit, over-current, over-voltage, over-temperature protection
- OVC III (designed to meet EN62477)
- Operating up to 5000m altitude

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.	Max. Capacitive Load (μF)
UL/EN/BS EN/IEC	AE150-2B-12	150	12V/12.5A	10.2-13.8	86	10000
	AE150-2B-15	150	15V/10A	13.5 -18	87	6000
	AE150-2B-24	156	24V/6.5A	21.6 - 28.8	88	2400
	AE150-2B-36	154.8	36V/4.3A	32.4 - 39.6	88	1200
	AE150-2B-48	158.4	48V/3.3A	43.2 -52.8	89	600

Note: 1. *Use suffix "Q" for conformal coating.
2. If the terminal cover is required, 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		AC input		85	--	264	VAC
			DC input		120	--	370	VDC
	Input Voltage Frequency				47	--	63	Hz
	Input Current		115VAC		--	--	4	A
			230VAC		--	--	2	
	Inrush Current		115VAC	Cold start	--	30	--	
			230VAC		--	60	--	
	Leakage Current		240VAC		< 0.75mA			
	Hot Plug				Unavailable			
Output Specifications	Output Voltage Accuracy		Full load range	Normal temperature,	--	±1	--	%
				high temperature Low temperature		±3		
	Line Regulation		Rated load		--	±0.5	--	
	Load Regulation		0% - 100% load		--	±0.5	--	
	Ripple & Noise*		20MHz bandwidth (peak-to-peak value)	12V/15V	--	--	150	mV
				24V/36V/48V	--	--	200	
	Temperature Coefficient				--	±0.03	--	%/℃
	Minimum Load				0	--	--	%
	Stand-by Power Consumption				--	--	0.5	W
	Hold-up Time		115VAC		8	--	--	ms
			230VAC		16	--	--	
	Short Circuit Protection		Recovery time <5s after the short circuit disappear.		Hiccup, continuous, self-recovery			
	Over-current Protection				≥110% Io, for more than 5 seconds, turn off the output, power restart after recovery			
	Over-voltage Protection		12V		≤18VDC		Hiccup, self-recover	
			15V		≤21.75VDC			
			24V		≤33.6VDC			
			36V		≤48.6VDC			
			48V		≤60VDC			
	Over-temperature Protection				Output voltage turn off, self-recovery			
General Specifications	Isolation	Input - ⏚	Electric strength test for 1min., leakage current <10mA		2000	--	--	VAC
		Input - output			4000	--	--	
		Output - ⏚			1250	--	--	

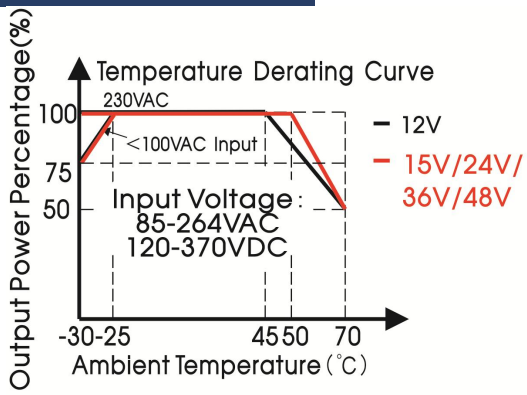
	Insulation Resistance	Input - ⏚	Test voltage: 500VDC	100	--	--	MΩ
		Input - output		100	--	--	
		Output - ⏚		100	--	--	
	Operating Temperature			-30	--	+70	℃
	Storage Temperature			-40	--	+85	
	Storage Humidity	Non-condensing		10	--	95	%RH
	Operating Humidity			20	--	90	
	Switching Frequency			--	65	--	kHz
	Power Derating	Operating temperature derating	85-100VAC	-30 to -25℃	5	--	--	%/℃
			12V	+45 to +70℃	2	--	--	
			15/24/36/48V	+50 to +70℃	2.5	--	--	
		Input voltage derating		85-100VAC	1.33	--	--	%/VAC
	Safety Class				CLASS I		
	MTBF	MIL-HDBK-217F@25℃			>300,000 h		
	Warranty	Ambient temperature: <45℃			3 years		
Mechanical Specifications	Case Material	Metal (AL1100, SGCC)					
	Dimensions	159.00 x 97.00 x 30.00mm					
	Weight	410g (Typ.)					
	Cooling Method	Free air convection					

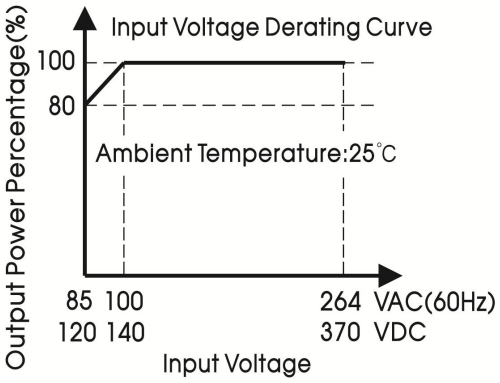
Note: *The "Tip and barrel method" is used for ripple and noise test, output parallel 47uF electrolytic capacitor and 0.1uF ceramic capacitor.

Electromagnetic Compatibility (EMC)

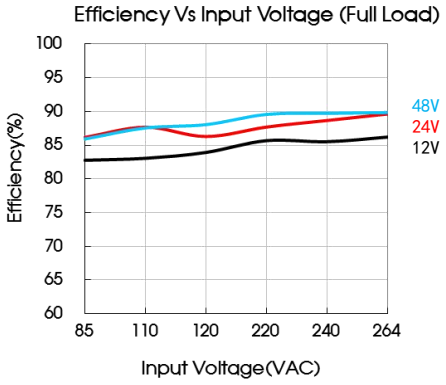
Electromagnetic Compatibility (EMC)	Emissions (EMI)	CE	CISPR32/EN55032 CLASS B	
		RE	CISPR32/EN55032 CLASS B	
		Harmonic current	IEC/EN61000-3-2 CLASS A (≤80% Load)	
	Immunity (EMS)	ESD	IEC/EN61000-4-2 Contact ±6KV/Air ±8KV	Perf. Criteria A
		RS	IEC/EN61000-4-3 10V/m	Perf. Criteria A
		EFT	IEC/EN61000-4-4 ±4KV	Perf. Criteria A
		Surge	IEC/EN61000-4-5 line to line ±2KV/line to ground ±4KV	Perf. Criteria A
		CS	IEC/EN61000-4-6 10Vr.m.s	Perf. Criteria A
		Voltage dips, short interruptions and voltage variations immunity	IEC/EN61000-4-11 100% dip 1 periods, 30% dip 25 periods, 100% interruptions 250 periods	Perf. Criteria B

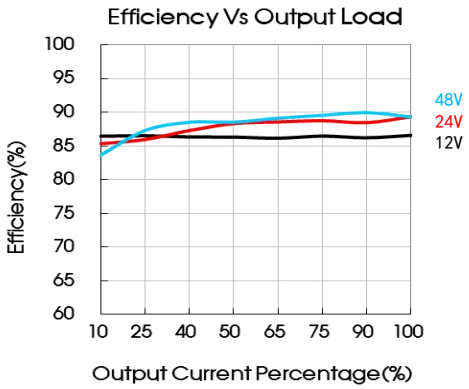
Characteristic Curve



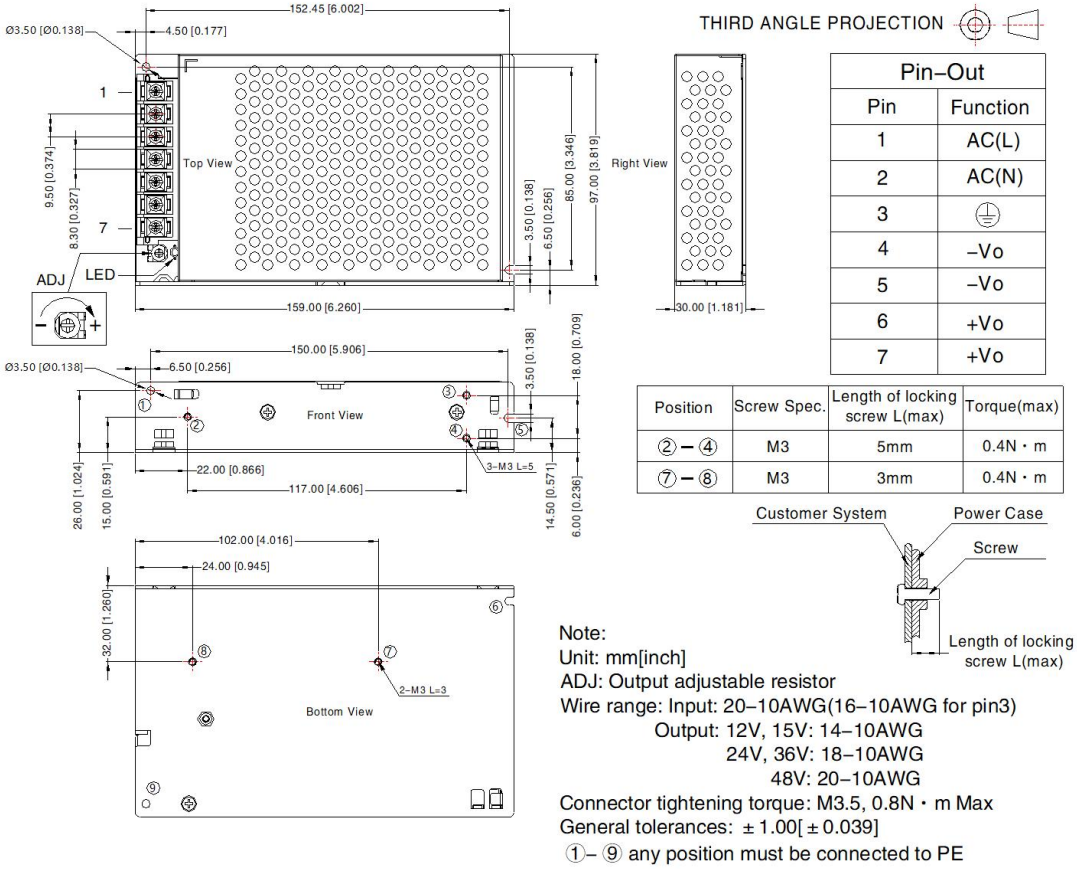


Note: 1. With an AC input between 85-100VAC and a DC input between 120-140VDC, the output power must be derated as per temperature derating curves;
2. This product is suitable for applications using natural air cooling.





Dimensions and Recommended



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

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

Note:
Unit: mm[inch]
ADJ: Output adjustable resistor
Wire range: Input: 20–10AWG(16–10AWG for pin3)
Output: 12V, 15V: 14–10AWG
24V, 36V: 18–10AWG
48V: 20–10AWG
Connector tightening torque: M3.5, 0.8N・m Max
General tolerances: ±1.00[±0.039]
①– ⑨ 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 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. Products are related to laws and regulations: see "Features" and "EMC";
6. The out case needs to be connected to PE (⏚) of system when the terminal equipment in operating;
7. The output voltage can be adjusted by the ADJ, clockwise to increase;
8. Our products shall be classified according to ISO14001 and related environmental laws and regulations, and shall be handled by qualified units.
9. 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.
10. 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.