DESCRIPTIONS

35W, AC-DC Open Frame Power Supply



RoHS

3 Years Warranty

CE Report EN62368-1

UKCA Report BS EN62368-1

FEATURES

- Universal 85-264VAC or 120-370VDC input voltage
- Input withstand 305VAC/5s
- Accepts AC or DC input (dual-use of same terminal)
- Operating ambient temperature range: -40℃ to +85℃ (-30℃ full load)
- High I/O isolation voltage up to 4000VAC
- Output voltage adjustable
- Output short circuit, over-current, over-voltage protection
- Surge immunity meets Level 4
- Installing in system of Safety Class I is available
- Design refer to UL/IEC62368, EN60335

APPLICATIONS

- Industry
- Handle official business
- Civil

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 (μF) Max.
EN/BS EN	AO35-2B-05M	30	5V/6A	4.5-5.5	85	15000
	AO35-2B-12M	36	12V/3A	10.8-13.5	89	6500
	AO35-2B-15M	36	15V/2.4A	13.5-16.5	88	5000
	AO35-2B-24M	36	24V/1.5A	21.6-27	89	1200
	AO35-2B-36M	36	36V/1A	32.4-39.6	89	800
	AO35-2B-48M	36	48V/0.75A	43.2-52.8	90	390

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 maximum values.

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

Specifications

Product characteristics	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		--	--	0.75	A
			230VAC		--	--	0.5	
	Inrush Current		230VAC	Cold start	--	40	--	
	Input Temporary Over-voltage		Rated load output, 305VAC input		5s/time, interval 10s, product without damaging			
	Hot Plug				Unavailable			
Output Specification	Output Voltage Accuracy		Full load range	5V	--	±2	--	%
				Other output	--	±1	--	
	Line Regulation		Rated load		--	±0.5	--	
	Load Regulation		230VAC	5V	--	±1	--	
				Other output	--	±0.5	--	
	Ripple & Noise*		20MHz bandwidth (peak-to-peak value)	5V	--	40	60	mV
				12V/15V	--	70	100	
				24V/36V	--	80	180	
				48V	--	100	200	
	Stand-by Power Consumption		Room temperature, 230VAC input	5V/12V/15V/24V	--	0.3	0.4	W
				36V/48V	--	0.4	0.5	
	Temperature Coefficient				--	±0.02	--	%/℃
	Short Circuit Protection				Hiccup, continuous, self-recovery			
	Over-current Protection				115% - 300% Io, self-recover			
	Over-voltage Protection		5V		≤7.5V	Output voltage hiccup		
			12V		≤20V			
			15V		≤20V			
			24V		≤32V			
			36V		≤47V			
			48V		≤60V			
	Minimum Load				0	--	--	%
	Hold-up Time		115VAC input		--	16	--	ms
			230VAC input		--	50	--	
General Specifications	Isolation	Input - output	Electric Strength Test for 1min., leakage current <5mA		4000	--	--	VAC
		Input - ⏚			2000	--	--	
		Output - ⏚			500	--	--	
	Insulation Resistance	Input - output	Test voltage: 500VDC		100	--	--	MΩ
		Input - ⏚						
		Output - ⏚						

General Specifications	Operating Temperature			-40	--	+85	℃
	Storage Temperature			-40	--	+85	
	Storage Humidity	Non-condensing		--	--	95	%RH
	Operating Humidity			--	--	90	
	Altitude**			--	--	4000	m
	Output Power Derating	Operating temperature derating	-40℃ to -30℃	5	--	--	%/℃
			+50℃ to +70℃	2.5	--	--	
			+70℃ to +85℃	1.67	--	--	
		Input voltage derating	85VAC - 100VAC	0.67	--	--	
	Leakage Current		240VAC	<0.5mA RMS			
	Safety Class			CLASS I			
	MTBF	MIL-HDBK-217F@25℃		≥300,000 h			
Mechanical Specifications	Dimension	76.20 x 50.80 x 27.00mm					
	Weight	70g (Typ.)					
	Cooling Method	Air cooling					

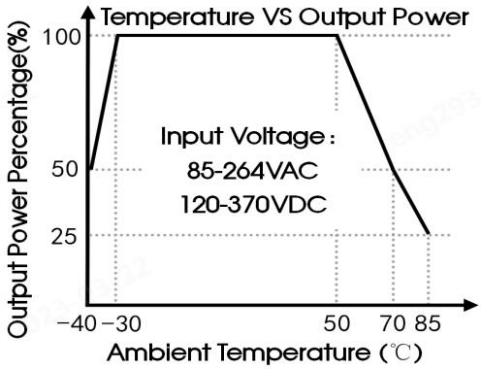
Note: *The "Tip and barrel method" is used for ripple and noise test: by using a 12 twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor;
**For operation of altitude between 2000-4000m.

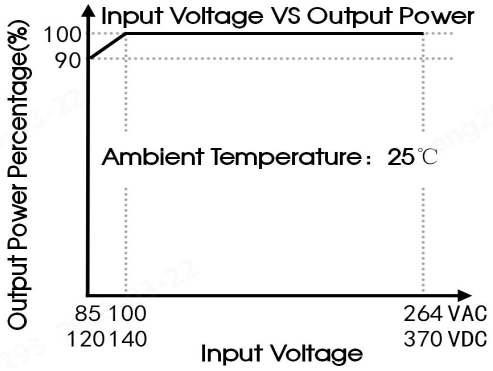
Electromagnetic Compatibility (EMC)

Electromagnetic Compatibility (EMC)	Emissions	CE	CISPR32/EN55032	CLASS B	
		RE	CISPR32/EN55032	CLASS B	
		Harmonic current	IEC/EN61000-3-2	CLASS A	
	Immunity	ESD	IEC/EN61000-4-2	Contact ±4KV/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 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 dips, short interruption and voltage variations	IEC/EN61000-4-11	100% dip 1 periods, 30% dip 25 periods (50Hz), 30 periods (60Hz)	Perf. Criteria B

Note: All EMC performance are been tested on a metal plate with a thickness of 1mm and a length of 360mm × 360mm.

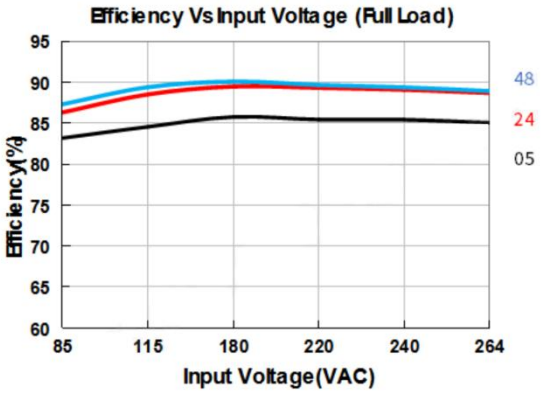
Characteristic Curve

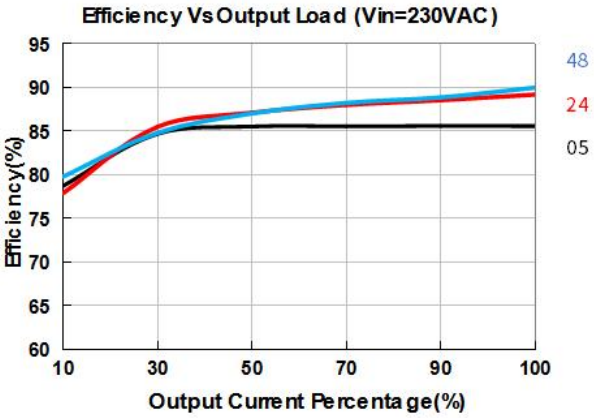




Note: 1.With an AC input voltage between 85-100VAC and a DC input between 120-140VDC the output power must be derated as per the temperature derating curves;

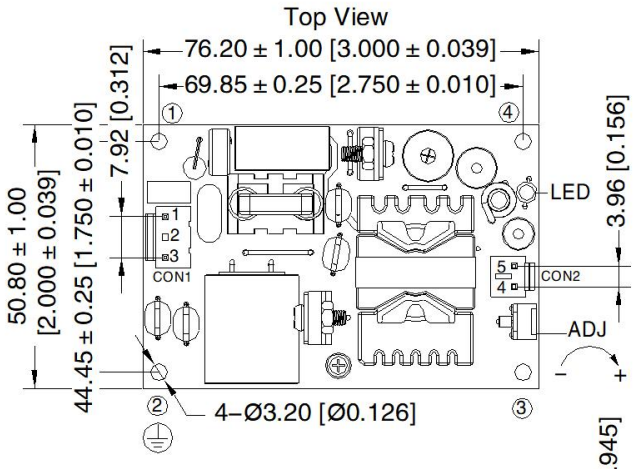
2.This product is suitable for applications using natural air cooling;



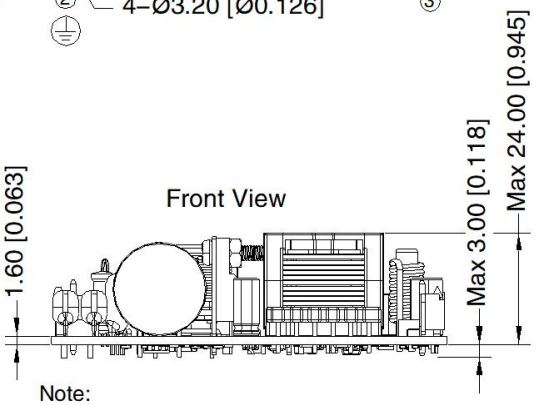


Dimensions and Recommended Layout

THIRD ANGLE PROJECTION

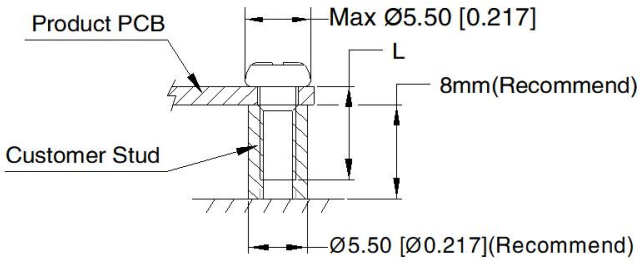


Pin–Out			
Connectors	Pin	Mark	Client Connectors
CON1	1	AC(L)	Housing: JST VHR Contact: JSTSVH–21T–P1.1 or equivalent
	2	No Pin	
	3	AC(N)	
CON2	4	+Vo	Housing: JST VHR Contact: JSTSVH–21T–P1.1 or equivalent
	5	–Vo	



② Must be connected to the earth

Position	Screw Spec.	L(Recommend)	Torque(max)
① – ④	M3	6mm	0.4N · m



Note:
Unit: mm[inch]
General tolerances: ± 0.50[± 0.020]
The layout of the device is for reference only, please refer to the actual product

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 3.5℃/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 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.