DESCRIPTIONS

45W, AC-DC Open Frame Power Supply





RoHS

CE Report EN62368-1

UKCA Report BS EN62368-1

FEATURES

- Universal 85-264VAC or 100-370VDC input voltage
- High power density, compact size:
- 3" x 2" x 1.03" (AOMU45-2B-xx)
- 3.6" x 2.4" x 1.3" (AOMU45-2B-xx-C)
- Operating ambient temperature range: -40℃ to +70℃
- High I/O isolation voltage up to 4000VAC
- Meets 5000m altitude requirements
- Extremely low leakage current < 75uA
- Stand-by power consumption < 0.3W
- Output short circuit, over-current, over-voltage protection
- Efficiency up to 90%
- Meets 2 x MOPP safety class
- Suitable for BF application
- OVC III (EN61558-1 standards)

APPLICATIONS

- Industrial
- LED
- Lamp control
- Power
- Security
- Comnicate
- Smart Home
- Medical treatment

Selection Guide

Certification	Part No*	Output Power (W)	Nominal Output Voltage and Current (vo/Io)	Output Voltage Adjustable Range (V)	Efficiency at 230VAC (%) Typ.	Capacitive Load (uF) Max.
EN/BS EN	AOMU45-2B-03	26.4W	3.3V/8.00A	2.97-3.63	82	20000
	AOMU45-2B-05	40W	5V/8.00A	4.5-5.5	84	20000
	AOMU45-2B-12	45W	12V/3.75A	10.2-13.8	86	4000
	AOMU45-2B-15		15V/3.00A	13.5-18	86	3500
	AOMU45-2B-24		24V/1.875A	21.6-28.5	90	1000
	AOMU45-2B-30		30V/1.50A	/	89	900
	AOMU45-2B-36		36V/1.25A	32.4-39.6	90	820
	AOMU45-2B-48		48V/0.94A	43.2-52.8	90	330
--	AOMU45-2B-03-C	26.4W	3.3V/8.00A	2.97-3.63	82	20000
--	AOMU45-2B-05-C	40W	5V/8.00A	4.5-5.5	84	20000

EN/BS EN	AOMU45-2B-12-C	45W	12V/3.75A	10.2-13.8	86	4000
--	AOMU45-2B-15-C		15V/3.00A	13.5-18	86	3500
EN/BS EN	AOMU45-2B-24-C		24V/1.875A	21.6-28.5	90	1000
--	AOMU45-2B-30-C		30V/1.50A	/	89	900
	AOMU45-2B-36-C		36V/1.25A	32.4-39.6	90	820
	AOMU45-2B-48-C		48V/0.94A	43.2-52.8	90	330

Note: 1.*Use suffix "-C" for enclosed version.
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		100	--	370	VDC
	Input Frequency			47	--	63	Hz
	Input Current	115VAC		--	--	1100	mA
		230VAC		--	--	700	
	Inrush Current	115VAC		--	--	40	A
		230VAC		--	--	60	
	Leakage Current	240VAC		75uA Max.			
	Hot Plug			Unavailable			
Output Specifications	Output Voltage Accuracy	0% - 100% load	3.3V/5V output	--	±2	--	%
			Other output	--	±1	--	
	Line Regulation	Rated load	3.3V/5V output	--	±0.8	--	
			Other output	--	±0.5	--	
	Load Regulation	230VAC		--	±1	--	
	Ripple & Noise*	20MHz bandwidth (peak-to-peak value)	3.3V/5V/12V/15V output	--	75	100	mV
			24V output	--	80	120	
			30V/36V/48V output	--	100	150	
	Stand-by Power Consumption	30V output		--	0.3	0.4	W
		Other output		--	0.2	0.3	
	Temperature Coefficient			--	±0.02	--	%/W
	Short Circuit Protection			Hiccup, continuous, self-recover			
	Over-current Protection			≥120%Io, self-recover			
	Over-voltage Protection	3.3VDC output		≤5.25V	Output voltage hiccup		
		5VDC output		≤7V			
		12VDC output		≤16V			
		15VDC output		≤22V			
		24VDC output		≤32.4V			
		30VDC output		≤37V			
		36VDC output		≤42.4V			

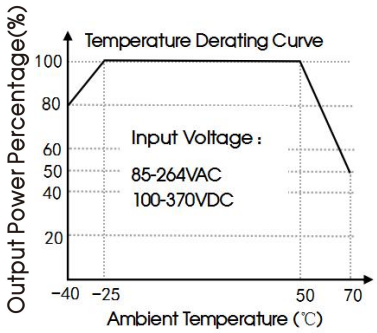
			48VDC output		≤57V			
	Minim Load				0	--		--
	Hold-up Time		115VAC input		13	22	--	ms
			230VAC input		65	100	--	
General Specifications	Isolation	Input - output		Electric Strength Test for 1min., leakage current <5mA	4000	--	--	VAC
		Input - shell	AOMU45-2B-xx-C		2500	--	--	
		Output - shell	AOMU45-2B-xx-C		2500	--	--	
	Insulation Resistance	Input - output	500VDC		100	--	--	MΩ
	Operating Temperature				-40	--	+70	℃
	Storage Temperature				-40	--	+70	
	Storage Humidity				--	--	90	%RH
	Altitude				--	--	5000	m
	Power Derating		-40℃ to -25℃		1.2	--	--	%/℃
			+50℃ to +70℃		2.5	--	--	
			85VAC - 100VAC		1.0	--	--	%/VAC
			2000m-5000m		5.0	--	--	%/Km
	Safety Distance		Clearance		7.6	--	--	mm
			Creepage		8	--	--	
	Safety Class				CLASS I I			
	MTBF		MIL-HDBK-217F@25℃		> 300,000 h			
Mechanical Specifications	Dimension		AOMU45-2B-xx		76.20 x 50.80 x 26.50mm			
			AOMU45-2B-xx-C		91.40 x 60.50 x 33.30mm			
	Weight		AOMU45-2B-xx		95g (Typ.)			
			AOMU45-2B-xx-C		150g (Typ.)			
	Cooling Method				Free air convection			

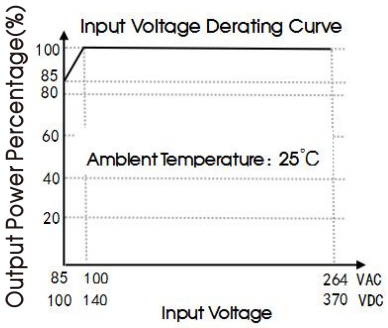
Note: *The "Tip and barrel method" is used for ripple and noise test, 3.3V, 5V, 12V, 15V with a 10uf ceramic capacitor, 24V with a 1uf ceramic capacitor, 30V, 36V, 48V with a 0.1uf ceramic capacitor, please refer to AC-DC Converter Application Notes for specific information.

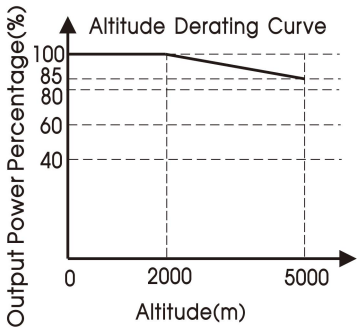
Electromagnetic Compatibility (EMC)

Electromagnetic Compatibility (EMC)	Emissions	CE	CISPR32/EN55032/EN55011 CLASS B	
		RE	CISPR32/EN55032/EN55011 CLASS B	
	Imnity	ESD	IEC/EN61000-4-2 Contact ±8KV/Air ±15KV	Perf. Criteria A
		RS	IEC/EN61000-4-3 20V/m	Perf. Criteria A
		EFT	IEC/EN61000-4-4 ±2KV	Perf. Criteria A
		Surge	IEC/EN61000-4-5 Line to line ±2KV	Perf. Criteria A
		CS	IEC/EN61000-4-6 20Vr.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

Characteristic Curve

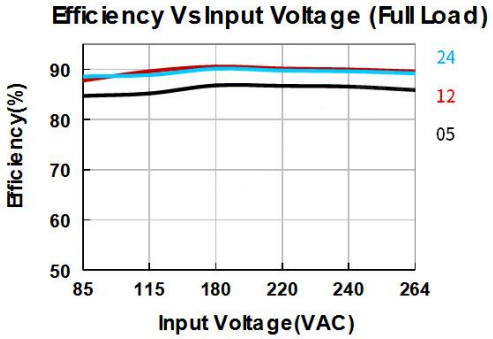


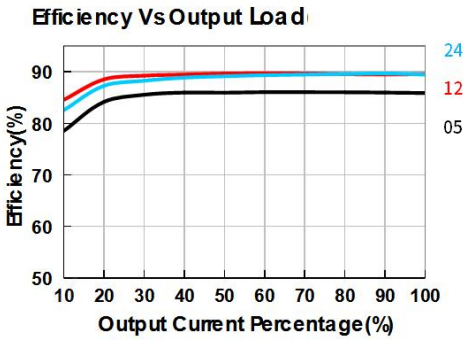




Note: ① With an AC input between 85-100VAC and a DC input between 100-140VDC, the output power st be derated as per temperature derating curves;

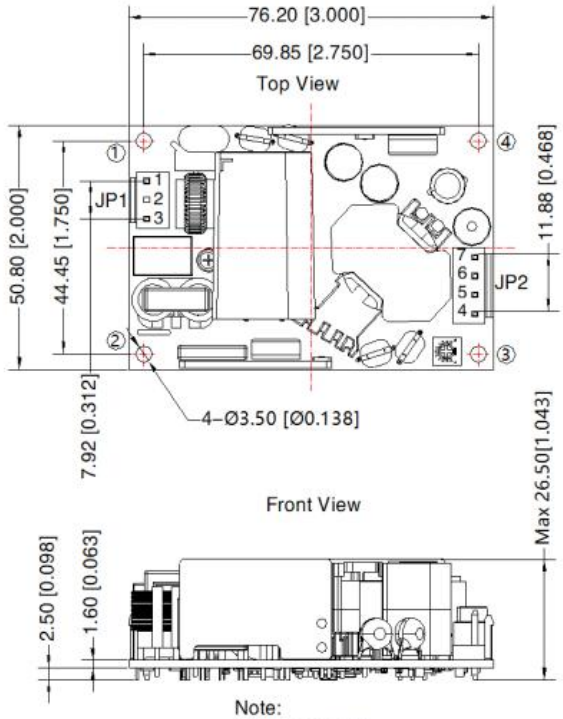
② This product is suitable for applications using natural air cooling.





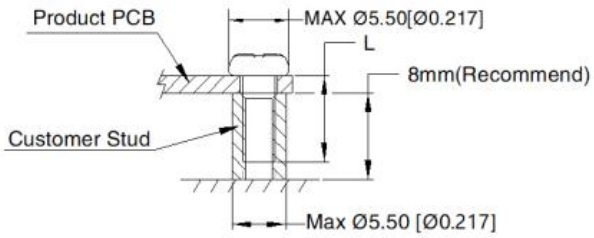
Dimensions and Recommended Layout(AOMU45-2B-xx)

THIRD ANGLE PROJECTION



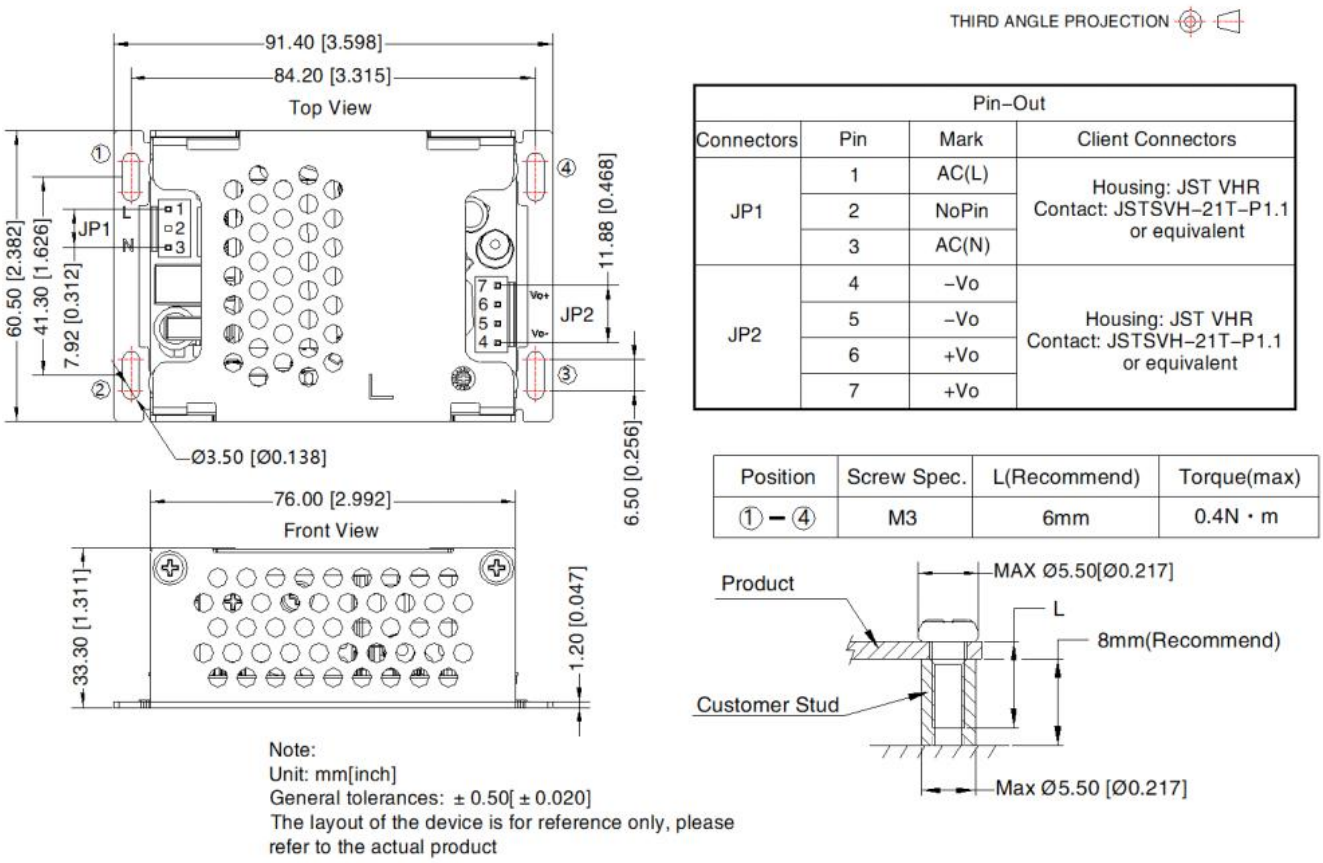
Pin–Out			
Connectors	Pin	Mark	Client Connectors
JP1	1	AC(L)	Housing: JST VHR Contact: JSTSVH–21T–P1.1 or equivalent
	2	NoPin	
	3	AC(N)	
JP2	4	–Vo	Housing: JST VHR Contact: JSTSVH–21T–P1.1 or equivalent
	5	–Vo	
	6	+Vo	
	7	+Vo	

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

Dimensions and Recommended Layout(AOMU45-2B-xx-C)



Pin–Out			
Connectors	Pin	Mark	Client Connectors
JP1	1	AC(L)	Housing: JST VHR Contact: JSTSVH–21T–P1.1 or equivalent
	2	NoPin	
	3	AC(N)	
JP2	4	–Vo	Housing: JST VHR Contact: JSTSVH–21T–P1.1 or equivalent
	5	–Vo	
	6	+Vo	
	7	+Vo	

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% with nominal input voltage and rated output load;
2. All index testing methods in this datasheet are based on our company corporate standards;
3. We can provide product customization service, please contact our technicians directly for specific information;
4. Products are related to laws and regulations: see "Features" and "EMC";
5. Our products shall be classified according to ISO14001 and related environmental laws and regulations, and shall be handled by qualified units.
6. 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.