DESCRIPTIONS

25W, AC-DC Converter



RoHS

c UL us Report UL62368-1

CE Report EN62368-1

UKCA Report BS EN62368-1

FEATURES

- Wide 85 - 305VAC or 100 - 430VDC input voltage
- Accepts AC or DC input (dual-use of same terminal)
- Operating ambient temperature range: -30℃ to +70℃
- Up to 88% efficiency
- No-load power consumption < 0.5W
- High I/O isolation test voltage up to 4000VAC
- Output short circuit, over-current, over-voltage protection
- OVC III (designed to meet EN62477)
- 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(V)	Efficiency at 230VAC (%) Typ.	Capacitive Load (uF) Max.
EN/BS EN	AE25-03	19.8	3.3V/6A	2.85-3.6	78	5000
UL/EN/BS EN	AE25-05	25	5V/5A	4.5-5.5	81	4000
EN/BS EN	AE25-12	25.2	12V/2.1A	10.8-13.2	85	3000
EN/BS EN	AE25-15	25.5	15V/1.7A	13.5-16.5	86	2000
EN/BS EN	AE25-24	26.4	24V/1.1A	22-27.6	87	1000
EN/BS EN	AE25-48	27.36	48V/0.57A	42-54	88	500

Note:1. *Use suffix "C" for terminal with protective cover, suffix "Q" for bottom conformal coating.

2. *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	--	305	VAC
		DC input		100	--	430	VDC
	Input Voltage Frequency			47	--	63	Hz
	Input Current	115VAC		--	--	0.6	A
		230VAC		--	--	0.34	
	Inrush Current	115VAC	Cold start	--	20	--	
		230VAC		--	40	--	
	Leakage Current	277VAC		< 0.5mA			
	Hot Plug			Unavailable			
Output Specifications	Output Voltage Accuracy	Full load range	3.3V	--	±3	--	%
			5V	--	±2	--	
			12V/15V/24V/48V	--	±1	--	
	Line Regulation	Rated load	3.3V/5V	--	±0.5	±1	
			12V/15V/24V/48V	--	±0.5	--	
	Load Regulation	0% - 100% load	3.3V/5V	--	±1	±2	
			12V/15V/24V/48V	--	±0.5	±1	
	Ripple & Noise*	20MHz bandwidth (peak-to-peak value)	3.3V/5V/12V/15V/24V	--	--	100	mV
			48V	--	--	120	
	Temperature Coefficient			--	±0.03	--	%/℃
	Minimum Load			0	--	--	%
	Stand-by Power Consumption	230VAC	3.3V/5V/12V/15V/24V	--	--	0.3	W
			48V	--	--	0.5	
	Start-up Delay Time			--	300	--	ms
	Hold-up Time	115VAC		--	8	--	
		230VAC		--	60	--	
	Short Circuit Protection	Recovery time <5s after the short circuit disappear.		Hiccup, continuous, self-recover			
	Over-current Protection			110%-300% Io, self-recover			
	Over-voltage Protection	3.3V		≤6.75VDC (Output voltage hiccup, self-recover)			
		5V		≤7.75VDC (Output voltage hiccup, self-recover)			
		12V		≤16.2VDC (Output voltage hiccup, self-recover)			
		15V		≤20.25VDC (Output voltage hiccup, self-recover)			
		24V		≤32.4VDC (Output voltage hiccup, self-recover)			
		48V		≤60VDC (Output voltage hiccup, self-recover)			

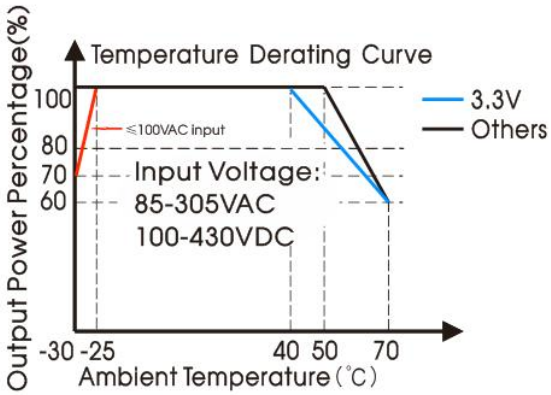
General Specifications	Isolation	Input - ⏚	Electric strength test for 1min., leakage current <10mA		2000	--	--	VAC
		Input - output			4000	--	--	
		Output- ⏚			1250	--	--	
	Insulation Resistance	Input - ⏚	At 500VDC		100	--	--	MΩ
		Input - output			100	--	--	
		Output - ⏚			100	--	--	
	Operating Temperature				-30	--	+70	℃
	Storage Temperature				-40	--	+85	
	Storage Humidity		Non-condensing		--	--	95	%RH
	Operating Humidity				20	--	90	
	Switching Frequency				--	65	--	kHz
	Power Derating		85VAC-100VAC	-30℃ to -25℃	6.0	--	--	%/℃
			3.3V	+40℃ to +70℃	1.33	--	--	
			Others	+50℃ to +70℃	2.0	--	--	
			85VAC-100VAC		1.33	--	--	%/VAC
			277VAC-305VAC		0.72	--	--	
	Safety Class				CLASS I			
	MTBF		MIL-HDBK-217F@25℃		>450,000 h			
Mechanical Specifications	Case Material		Metal (AL5052, SGCC)					
	Dimension		80.00 x 55.00 x 25.00 mm					
	Weight		115g (Typ.)					
	Cooling Method		Free air convection					

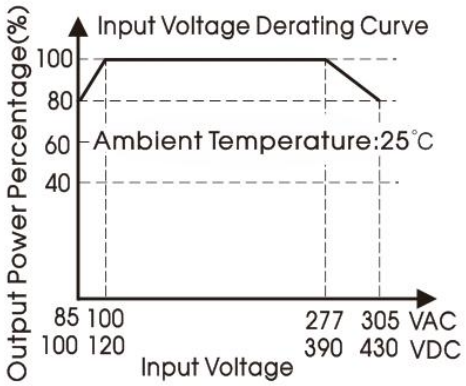
Note: *The "Tip and barrel method" is used for ripple and noise test, output parallel 47uF electrolytic capacitor and 0.1uF ceramic capacitor

Electromagnetic Compatibility (EMC)

Electromagnetic Compatibility (EMC)	Emissions (EMI)	CE	CISPR32/EN55032 CLASS B	
		RE	CISPR32/EN55032 CLASS B	
	Immunity (EMS)	ESD	IEC/EN 61000-4-2 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 ±1KV/line to PE ±2KV	perf. Criteria A
		CS	IEC/EN61000-4-6 10Vr.m.s	perf. Criteria A
		Voltage dip, short interruption and voltage variation	IEC/EN61000-4-11 0%, 70%	perf. Criteria B

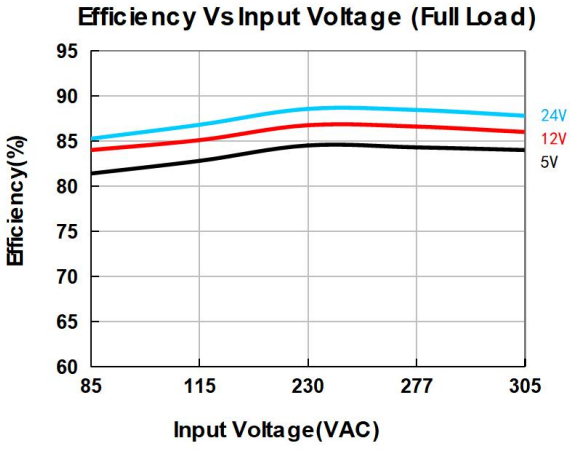
Characteristic Curve

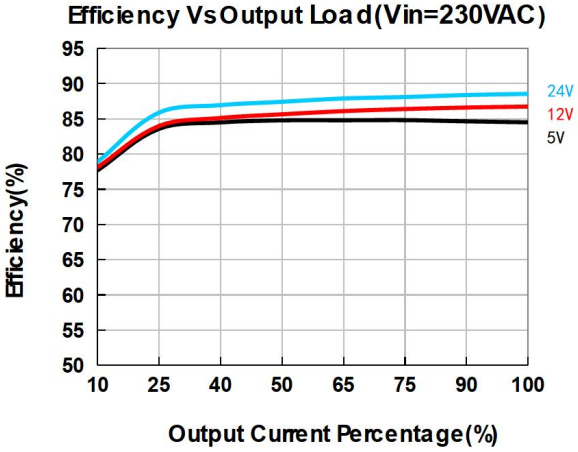




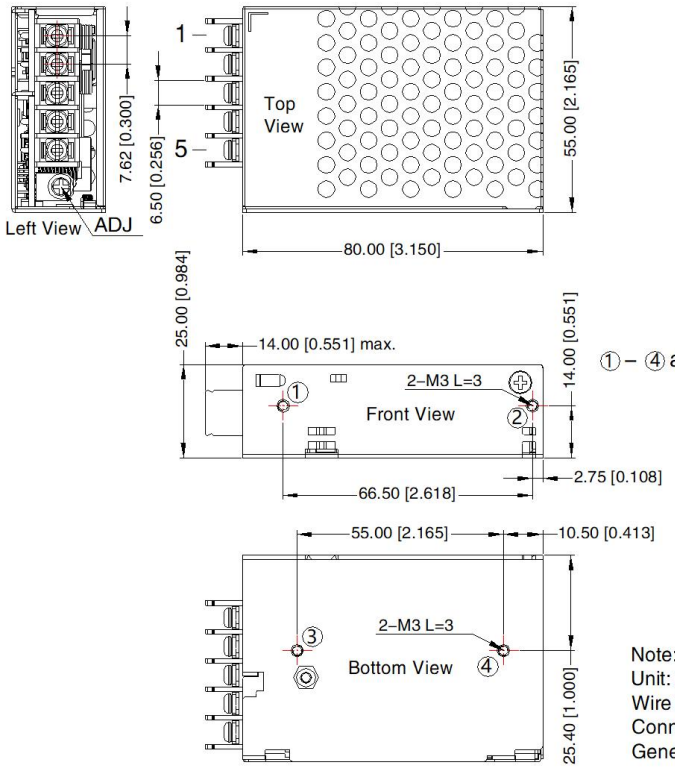
Note: 1. With an AC input between 85-100V/277-305VAC and a DC input between 100-120VDC/390-430VDC, the output power must be derated as per temperature derating curves;

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





AE25-xx(Q)Dimensions and Recommended

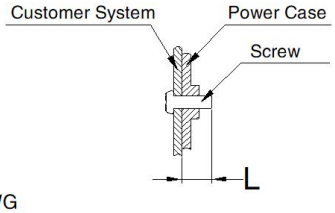


THIRD ANGLE PROJECTION

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

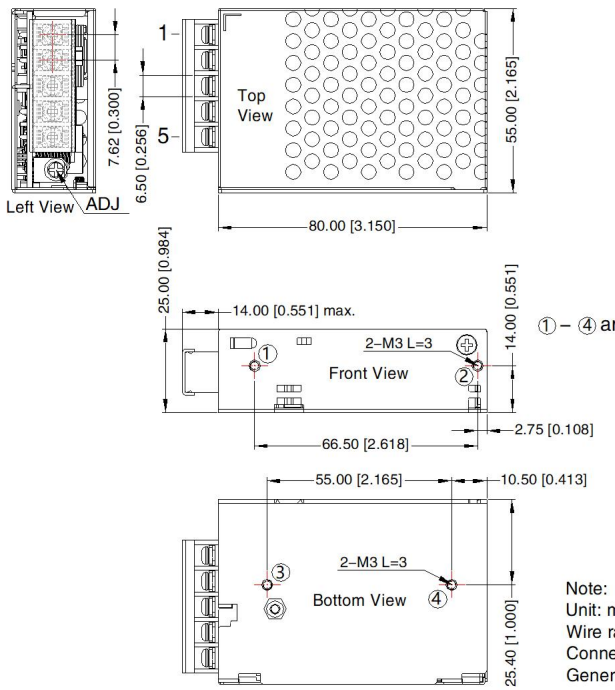
①– ④ any position must be connected to the earth(⏚)

Position	Screw Spec.	L(max)	Torque(max)
①– ④	M3	3mm	0.4N·m



Note:
Unit: mm[inch]
Wire range: 22–12AWG
Connector tightening torque: M3, 0.4N·m
General tolerances: ± 1.00[± 0.039]

AE25-xx-C Dimensions and Recommended

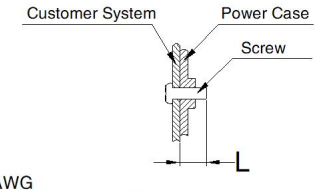


THIRD ANGLE PROJECTION

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

①– ④ any position must be connected to the earth(⏚)

Position	Screw Spec.	L(max)	Torque(max)
①– ④	M3	3mm	0.4N·m



Note:
Unit: mm[inch]
Wire range: 22–12AWG
Connector tightening torque: M3, 0.4N·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 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 the earth (⏚) of system when the terminal equipment in operating;
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 final equipment. All EMC tests should be confirmed with the final equipment. Please consult our FAE for EMC test operation instructions.
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.