DESCRIPTIONS

15W, AC/DC Enclosed Switching Power Supply

RoHS

3 Years Warranty

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 83% 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 EN61558)
- Operating up to 5000m altitude

APPLICATIONS

- Industrial
- LED
- Street light control
- Electricity
- Security
- Telecommunications

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	AE15-03	9.9	3.3V/3.0A	2.85-3.6	73	3000
	AE15-05	15	5V/3.0A	4.5-5.5	78	2400
	AE15-12	15.6	12V/1.3A	10.2-13.8	82	1800
	AE15-15	15	15V/1.0A	13.5-18	82	1200
	AE15-24	15	24V/0.625A	21.6-28.8	83	600
	AE15-48	15.36	48V/0.32A	42-54	83	300

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 Frequency				47	--	63	Hz
	Input Current		115VAC		--	--	0.35	A
			230VAC		--	--	0.25	
	Inrush Current		115VAC		--	30	--	
			230VAC		--	50	--	
	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	--	±1	--	
				12V/15V/24V/48V	--	±0.5	--	
	Load Regulation		0%-100% load	3.3V/5V	--	±1	--	
				12V/15V/24V/48V	--	±0.5	--	
	Ripple & Noise*		20MHz bandwidth (peak-to-peak value)	3.3V/5V	--	--	80	mV
				12V/15V	--	--	120	
				24V/48V	--	--	150	
	Temperature Coefficient				--	±0.03	--	%/℃
	Minimum Load				0	--	--	%
	Stand-by Power Consumption		230VAC		--	0.3	0.5	W
	Hold-up Time		115VAC		--	7	--	ms
			230VAC		--	48	--	
	Short Circuit Protection		Recovery time <5s after the short circuit disappear.		Hiccup, continuous, self-recover			
	Over-current Protection				≥110% Io, self-recover			
	Over-voltage Protection		3.3V/5V		≤6.75VDC (Output voltage hiccup or clamp)			
			12V		≤16.2VDC (Output voltage hiccup or clamp)			
			15V		≤21.8VDC (Output voltage hiccup or clamp)			
			24V		≤33.6VDC (Output voltage hiccup or clamp)			
			48V		≤60.0VDC (Output voltage hiccup or clamp)			
General Specifications	Isolation	Input - ⏚	Electric Strength Test for 1min., leakage current <10mA		2000	--	--	VAC
		Input - output			4000	--	--	

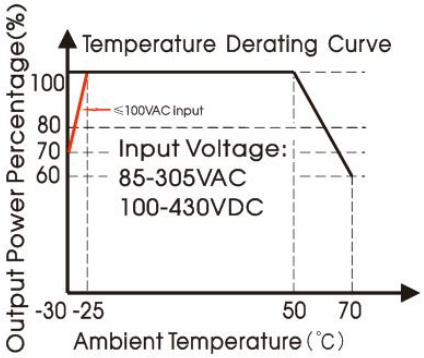
		Output - ⏚		1250	--	--	
	Insulation Resistance	Input - ⏚	At 500VDC	100	--	--	MΩ
		Input - output		100	--	--	
		Output - ⏚		100	--	--	
	Operating Temperature			-30	--	+70	℃
	Storage Temperature			-40	--	+85	
	Storage Humidity	Non-condensing		--	--	95	%RH
	Operating Humidity			20	--	90	
	Switching Frequency			--	65	--	kHz
	Power Derating	-30℃ to -25℃	85VAC - 100VAC	6.0	--	--	%/℃
		+50℃ to +70℃		2.0	--	--	
		85VAC - 100VAC		1.33	--	--	%/VAC
		277VAC - 305VAC		0.72	--	--	
	Safety Class			CLASS I			
	MTBF	MIL-HDBK-217F@25℃		>700,000 h			
Mechanical Specifications	Case Material	Metal (AL5052, SGCC)					
	Dimension	65.00 x 55.00 x 25.00 mm					
	Weight	90.0g (Typ.)					
	Cooling Method	Free air convection					

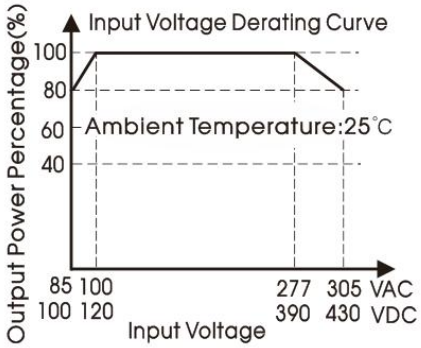
Note: *The "Tip and barrel method" is used for ripple and noise test, output parallel 47uF electrolytic capacitor and 0.1uF ceramic capacitor.

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 B
		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

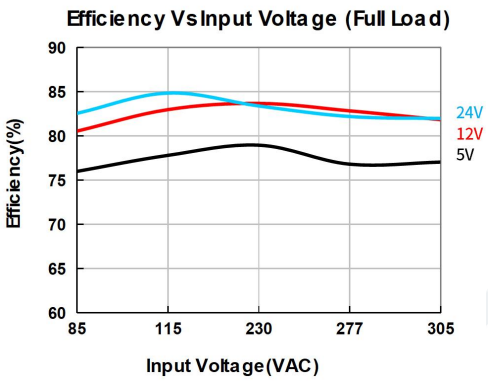
Characteristic Curve

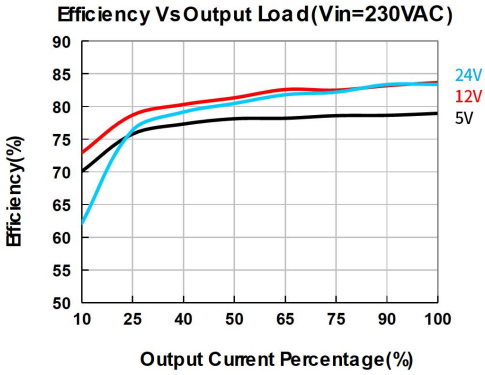




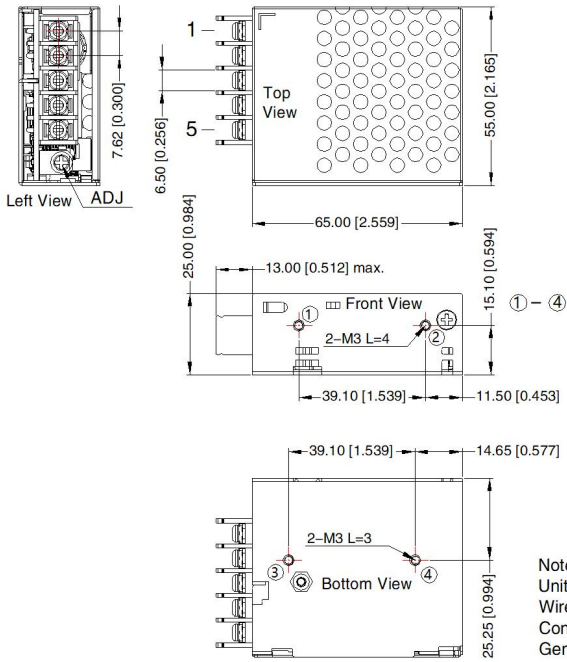
Note: 1. With an AC input between 85-100V/277-305VAC and a DC input between 100-120VDC/390-430VDC, the output power must be derated as per temperature derating curves;

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





AE15-xx(Q) Dimensions and Recommended Layout

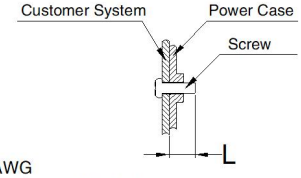


THIRD ANGLE PROJECTION

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

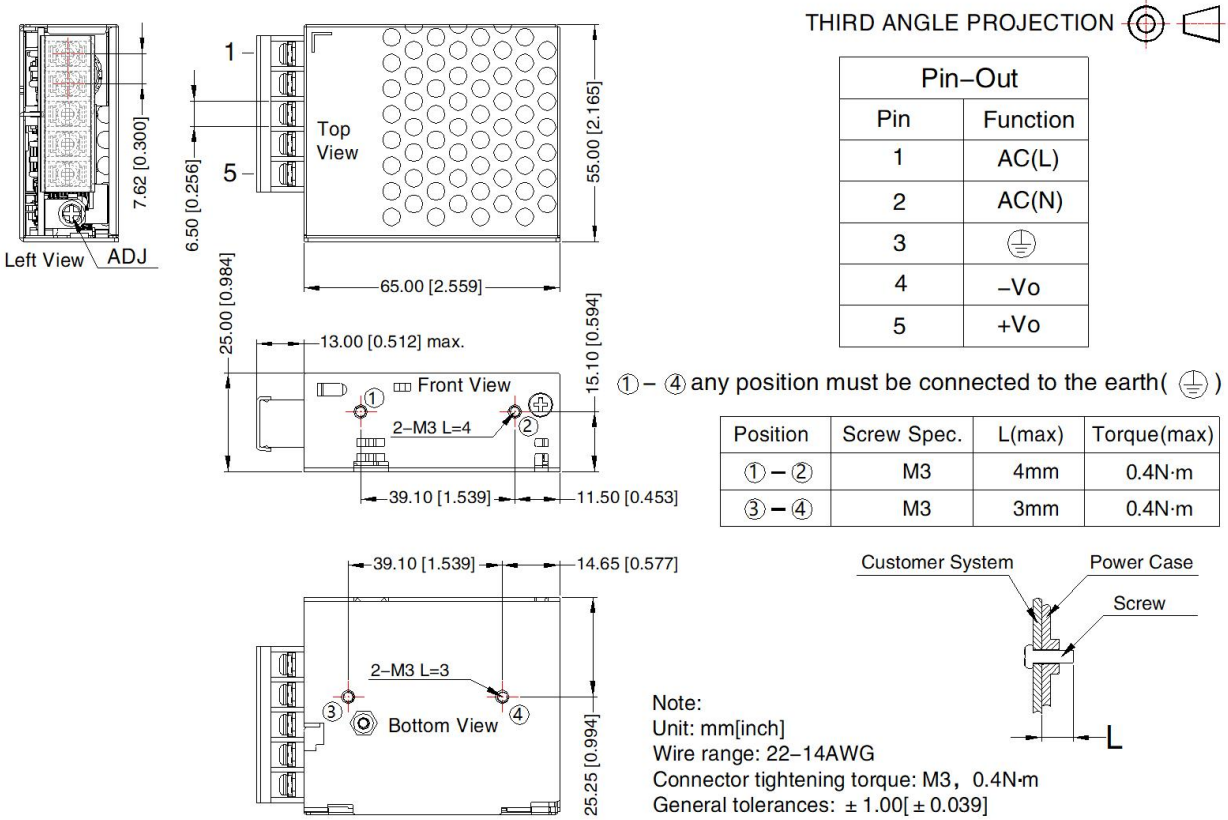
①－④ any position must be connected to the earth(⏚)

Position	Screw Spec.	L(max)	Torque(max)
①－②	M3	4mm	0.4N·m
③－④	M3	3mm	0.4N·m



Note:
Unit: mm[inch]
Wire range: 22-14AWG
Connector tightening torque: M3，0.4N·m
General tolerances: ± 1.00[± 0.039]

AE15-xx-C Dimensions and Recommended Layout



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)
①–②	M3	4mm	0.4N·m
③–④	M3	3mm	0.4N·m

Note:
Unit: mm[inch]
Wire range: 22–14AWG
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.