DESCRIPTIONS

75W, AC-DC Converter



RoHS

CE Report UKCA Report

EN62368-1 BS EN62368-1

FEATURES

- Universal 85 - 305V AC or 120 - 430VDC Input voltage
- Accepts AC or DC input (dual-use of same terminal)
- Operating temperature range -30℃ to +70℃
- Built-in active PFC function
- High I/O isolation test voltage up to 4000VAC
- High efficiency, high reliability
- Output short circuit, over-current, over-voltage, over-temperature protection（Built-in constant current limiting circuit）
- Remote ON-OFF control
- Designed to meet IEC/EN/UL62368, EN60335, GB4943
- EN62368 safety approval
- Over-voltage class III (designed to meet EN61558)
- Emissions meets CISPR32/EN55032 CLASS B

APPLICATIONS

- Industrial control
- LED
- Street light control
- Electricity
- Security
- Telecommunications
- Smart home etc

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)
EN/BS EN	AEF75-05	75	5V/15A	4.75-5.5	81	10000
	AEF75-12	75.6	12V/6.3A	11.4-13.2	84	6000
	AEF75-15	75	15V/5A	14.3-16.5	85	5000
	AEF75-24	76.8	24V/3.2A	22.8-26.4	86	1500
	AEF75-48	76.8	48V/1.6A	45.6-52.8	88	680

Note: 1.*Use suffix "C" for terminal with protective cover and suffix "Q" for conformal coating;
2.The product picture is for reference only.For details, please refer to the actual product.

Specifications

Specifications	Item	Operating Conditions		Min.	Typ.	Max.	Unit
Input Specifications	Input Voltage Range	AC input		85	--	305	VAC
		DC input		120	--	430	VDC
	Input Voltage Frequency			47	--	63	Hz
	Input Current	115VAC		--	--	1.0	A
		230VAC		--	--	0.6	
	Inrush Current	115VAC	Cold start	--	20	--	
		230VAC		--	35	--	
	Power Factor	115VAC	At full load	0.98	--	--	--
		230VAC		0.93	--	--	
	Leakage Current	277VAC/60Hz		2mA			
	Hot Plug			Unavailable			
Output Specifications	Output Voltage Accuracy	Full load range		--	±2.0	--	%
	Line Regulation	Rated load		--	±0.5	--	
	Load Regulation	0% - 100% load	5V	--	±1.0	--	
			12V/15V/24V/48V	--	±0.5	--	
	Output Ripple & Noise*	20MHz bandwidth (peak-to-peak value)	5V/12V/15V/24V	--	--	120	mV
			48V	--	--	200	
	Temperature Coefficient			--	±0.03	--	%/℃
	Minimum Load			0	--	--	%
	Hold-up Time	230VAC		--	16	--	ms
	Start-up Delay Time	Full load range		--	--	3	s
	Short Circuit Protection	Recovery time <3s after the short circuit disappear.		Constant current, continuous, self-recover			
	Over-current Protection			≥105%Io, self-recovery			
	Over-voltage Protection	5V		≤ 7.0V (Output voltage clamp or hiccup)			
		12V		≤20V (Output voltage clamp or hiccup)			
		15V		≤ 25V (Output voltage clamp or hiccup)			
		24V		≤ 32.4V (Output voltage clamp or hiccup)			
		48V		≤ 60V (Output voltage clamp or hiccup)			
	Over-temperature Protection*	Over-temperature Protection Activation		--	--	85	℃
		Over-temperature Protection Deactivation		50	--	--	
	Remote Control	0-0.8VDC Power ON		0	--	0.8	VDC
		4-10VDC Power OFF		4	--	10	

General Specifications	Isolation	Input - ⏚	Electric Strength Test for 1min., leakage current <10mA			2000	--	--	VAC
		Input-output	Electric Strength Test for 1min., leakage current <10mA			4000	--	--	
		output - ⏚	Electric Strength Test for 1min., leakage current <5mA			500	--	--	
	Insulation Resistance	Input - ⏚	Environment Temperature: 25±5℃, Relative Humidity: < 95%RH, non-condensing Testing Voltage: 500VDC			100	--	--	MΩ
		Input - output				100	--	--	
		output - ⏚				100	--	--	
	Operating Temperature		5V			-30	--	+60	℃
			others			-30	--	+70	
	Storage Temperature					-40	--	+85	
	Storage Humidity		Non-condensing			--	--	95	%RH
	Switching Frequency					--	65	--	kHz
	Power Derating		Operating Temperature Derating	-30℃ to -20℃	85V-230VAC	4.0	--	--	%/℃
				+40℃ to +60℃	5V	2.0	--	--	
				+50℃ to +70℃	others	2.0	--	--	
			Input Voltage Derating	85VAC-100VAC		1.33	--	--	%/VAC
				100VAC-305VAC		0	--	--	
			Altitude Derating	2000m-5000m		5	--	--	%/Km
	Safety Class					CLASS I			
	MTBF		MIL-HDBK-217F@25℃			> 300,000 h			
Mechanical Specifications	Case Material		Metal (AL1100, SGCC)						
	Dimensions		159.00 x 97.00 x 30.00mm						
	Weight		380g (Typ.)						
	Cooling Method		Free air convection						

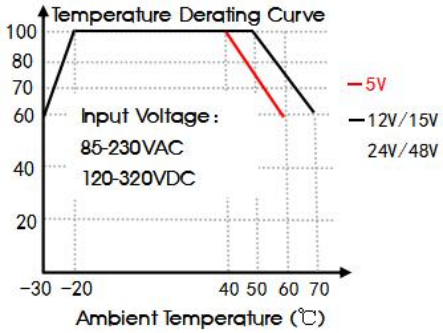
Note:1. *The "Tip and barrel method" is used for ripple and noise test, output parallel 47uF electrolytic capacitor and 0.1uF ceramic capacitor;

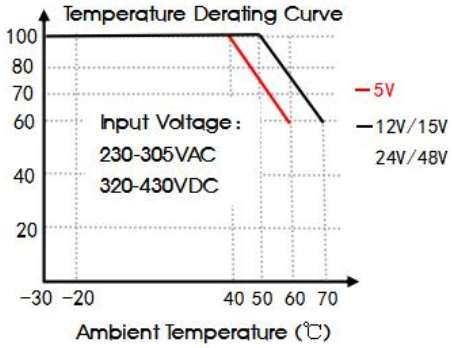
2. *Over-temperature Protection needs to be tested under rated full load conditions.

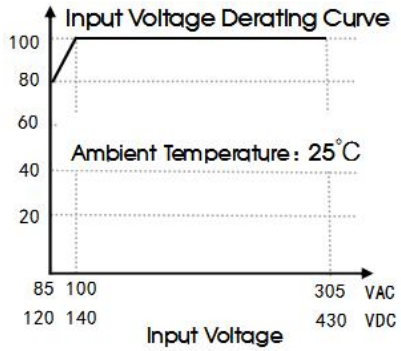
Electromagnetic Compatibility (EMC)

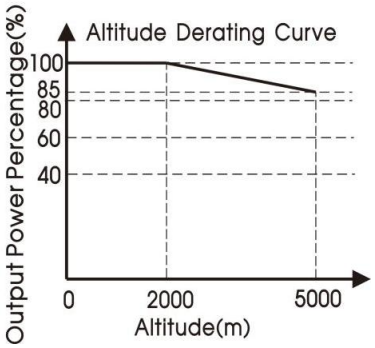
Electromagnetic Compatibility (EMC)	Emissions	CE	CISPR32/EN55032 CLASS B	
		RE	CISPR32/EN55032 CLASS B	
		Harmonic Current	IEC/EN61000-3-2 CLASS A	
		Flicker	IEC/EN61000-3-3	
	Immunity	ESD	IEC/EN 61000-4-2 Contact ±6KV /Air ±8KV	Perf. Criteria B
		RS	IEC/EN 61000-4-3 10V/m	perf. Criteria A
		EFT	IEC/EN 61000-4-4 ±2KV	perf. Criteria A
		Surge	IEC/EN 61000-4-5 line to line ±2KV/ line to ground ±4KV	perf. Criteria A
		CS	IEC/EN61000-4-6 10 Vr.m.s	perf. Criteria A
		DIP	IEC/EN61000-4-11 0%, 70%	perf. Criteria B

Characteristic Curve



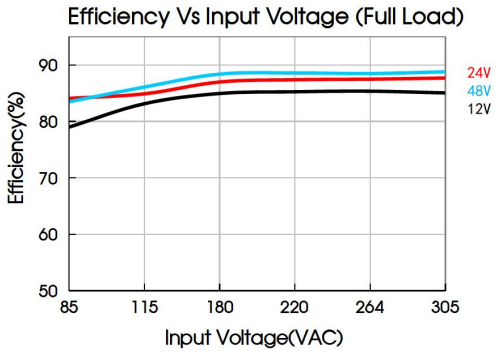


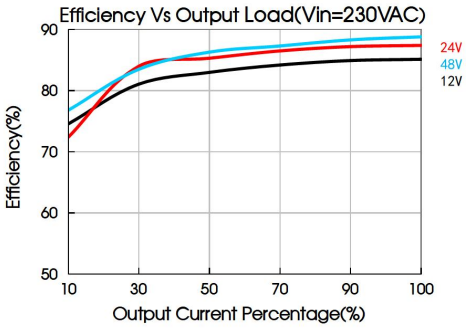




Note: ①With an input voltage between 85-100VAC and a DC input between 120-140VDC the output power must be derated as per the temperature derating curves;

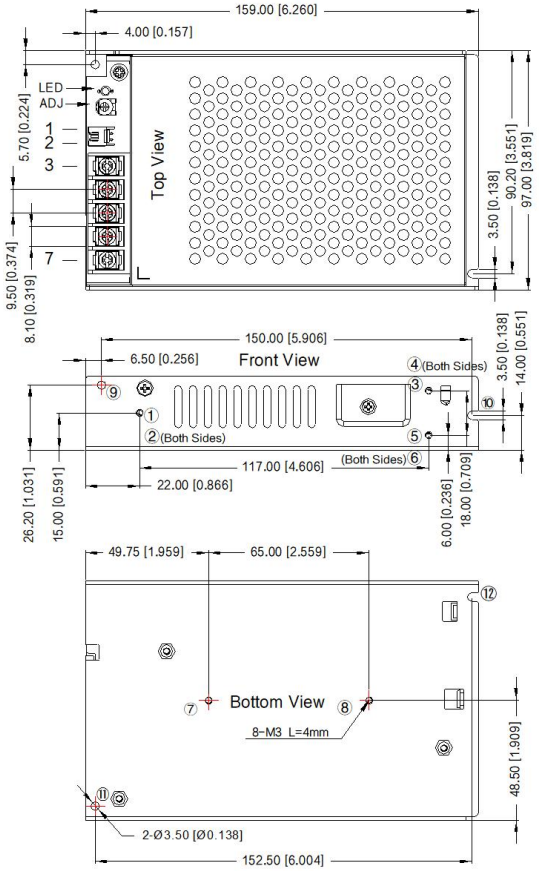
②This product is suitable for applications using natural air cooling;



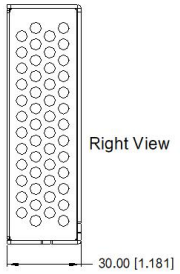


Dimensions and Recommended

AEF75-xx, AEF75-xx-Q Series



THIRD ANGLE PROJECTION

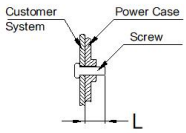


Pin-Out	
Pin	Mark
1	RC+
2	RC−
3	+Vo
4	−Vo
5	⏚
6	AC(N)
7	AC(L)

CN1: JST S2B-XH-A or equivalent			
Pin	Mark	Connector	Terminal
1	RC+	JST: XHP-2 or equivalent	JST: SXH-001T/SXH-002T or equivalent
2	RC−		

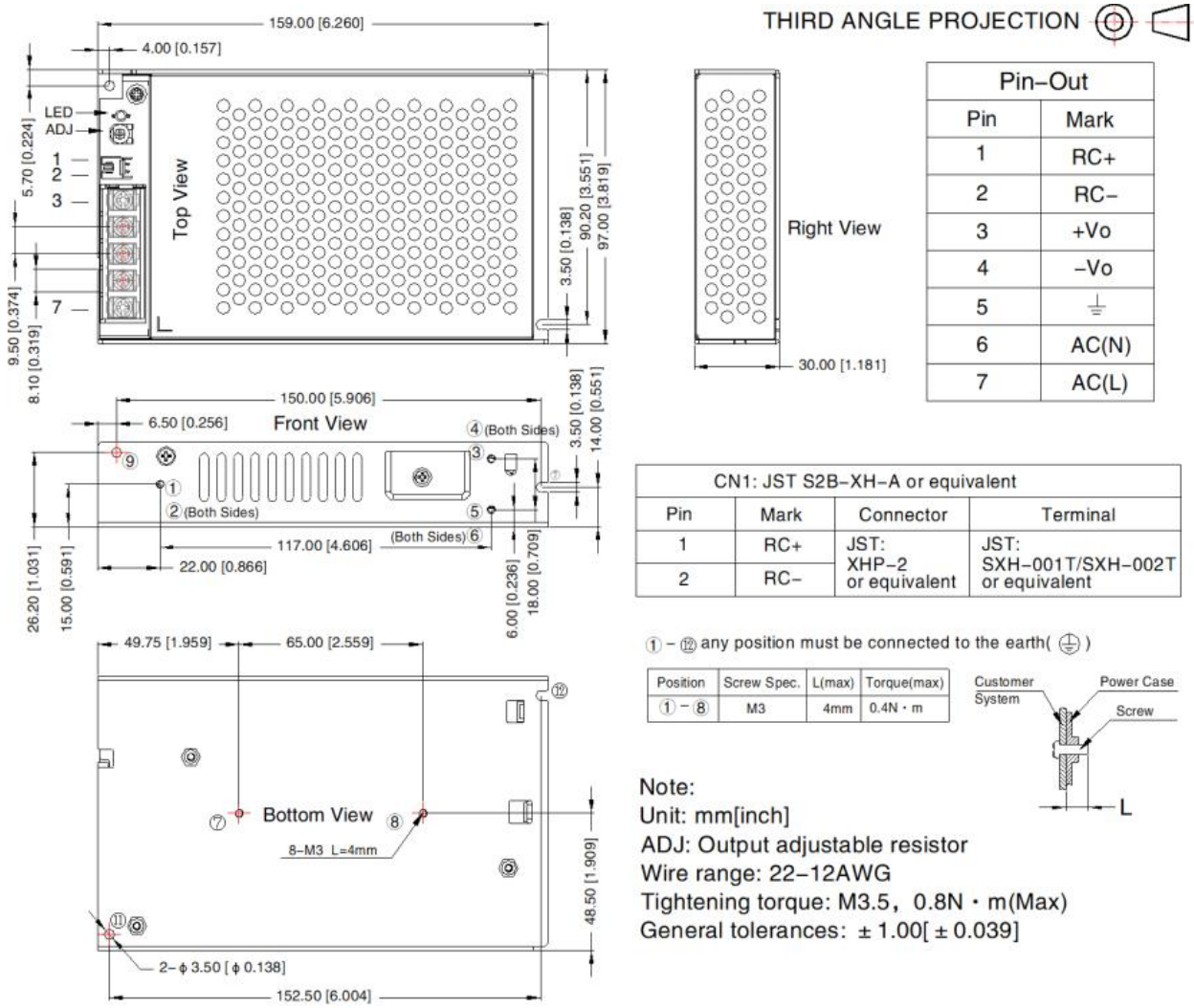
①－⑫any position must be connected to the earth(⏚)

Position	Screw Spec.	L(max)	Torque(max)
①－⑧	M3	4mm	0.4N・m



Note:
Unit: mm[inch]
ADJ: Output adjustable resistor
Wire range: 22-12AWG
Tightening torque: M3.5, 0.8N・m(Max)
General tolerances: ± 1.00[± 0.039]

AEF75-xx-C Series



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

CN1: JST S2B–XH–A or equivalent			
Pin	Mark	Connector	Terminal
1	RC+	JST: XHP–2 or equivalent	JST: SXH–001T/SXH–002T or equivalent
2	RC–		

① – ⑫ any position must be connected to the earth(⏚)

Position	Screw Spec.	L(max)	Torque(max)
① – ⑧	M3	4mm	0.4N · m

Note:
Unit: mm[inch]
ADJ: Output adjustable resistor
Wire range: 22–12AWG
Tightening torque: M3.5, 0.8N · m(Max)
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. 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;
3. Products are related to laws and regulations: see "Features" and "EMC";
4. The out case needs to be connected to PE of system when the terminal equipment in operating;
5. Products shall be classified according to ISO14001 and related environmental laws and regulations, and shall be handled by qualified units;
6. 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.
7. 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.