



### KEY FEATURES

- Switching Power Module for PCB Mountable
- Active PFC Function, >0.94 (230Vac), >0.98 (115Vac)
- Universal Input: 90-264 VAC
- <0.5W No Load Input Power (except AQC125-48S)
- Four M3 Mounting Holes Optional on Bottom Side
- EN55022 Class B Meets
- Continuous Short Circuit Protection with Hiccup Mode and Auto Recover
- 3-Year Product Warranty



### ELECTRICAL SPECIFICATIONS

All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Model No.	AQC125-12S	AQC125-15S	AQC125-24S	AQC125-48S	
Max Output Wattage (W)	125 W				
Input	Voltage				
	90-264 VAC or 120-370 VDC				
	Frequency (Hz)				
	47-63 Hz				
	Current (Full load)				
	<2.0 A max. (115 VAC) / <1.0 A max. (230 VAC)				
Output	Inrush Current (<2ms)				
	< 35 A max. (115 VAC) / < 70 A max. (230 VAC)				
	Leakage Current				
	< 0.75 mA max.				
	Power Factor				
	PF>0.98 (115 VAC) / PF>0.94 (230 VAC) at Full Load				
Output	Voltage (V.DC.)	12V	15V	24V	48V
	Voltage Accuracy	±2%			
	Current (A) max	10.4	8.33	5.2	2.6
	Line Regulation (LL-HL) (typ.)	±1%			
	Load Regulation (10-100%) (typ.)	±1%			
	Minimum Load	—	—	—	1%
	Maximum Capacitive Load (at 230 VAC)	3,000µF	2,000µF	360µF	180µF
	Ripple & Noise max.	130mV	1% Vout		
	Efficiency (at 230VAC)	90%	90%	90.5%	91.5%
	Hold-up Time (at 115 VAC)	10 ms min.			
Protection	Over Power Protection	Auto recovery			
	Over Temperature Protection	Auto recovery			
	Over Voltage Protection	Zener diode clamp			
	Short Circuit Protection	Auto recovery, Hiccup mode			
Isolation	Input-Output (V.AC)	3000V			
	Input-FG (V.AC)	1500V			
	Output-FG (V.AC)	500V			
Environment	Operating Temperature	-25°C...+70°C (with derating)			
	Storage Temperature	-25°C...+85°C			
	Temperature Coefficient	±0.03%/°C ( 0~70°C )			
		±0.06%/°C ( -25~0°C )			
	Humidity	95% RH			
	MTBF	>250,000 h @ 25°C (MIL-HDBK-217F, Notice 1)			
Physical	Vibration	10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes.			
	Dimension (L x W x H)	5.83 x 2.8 x 1.5 Inches ( 148.0 x 71.0 x 38.0 mm ) Tolerance ±0.5 mm			
	Weight	680 g			
Safety	Cooling Method	Free convection			
	Agency Approvals	CE, UL60950-1, CB			
EMC	EMI (Conducted & Radiated Emission)	EN 55032 class B (Conductive plane to be connected to safety earth)			
	EMS (Noise Immunity)	EN 55024			
	Surge	1KV L-N, 2KV L N-FG			

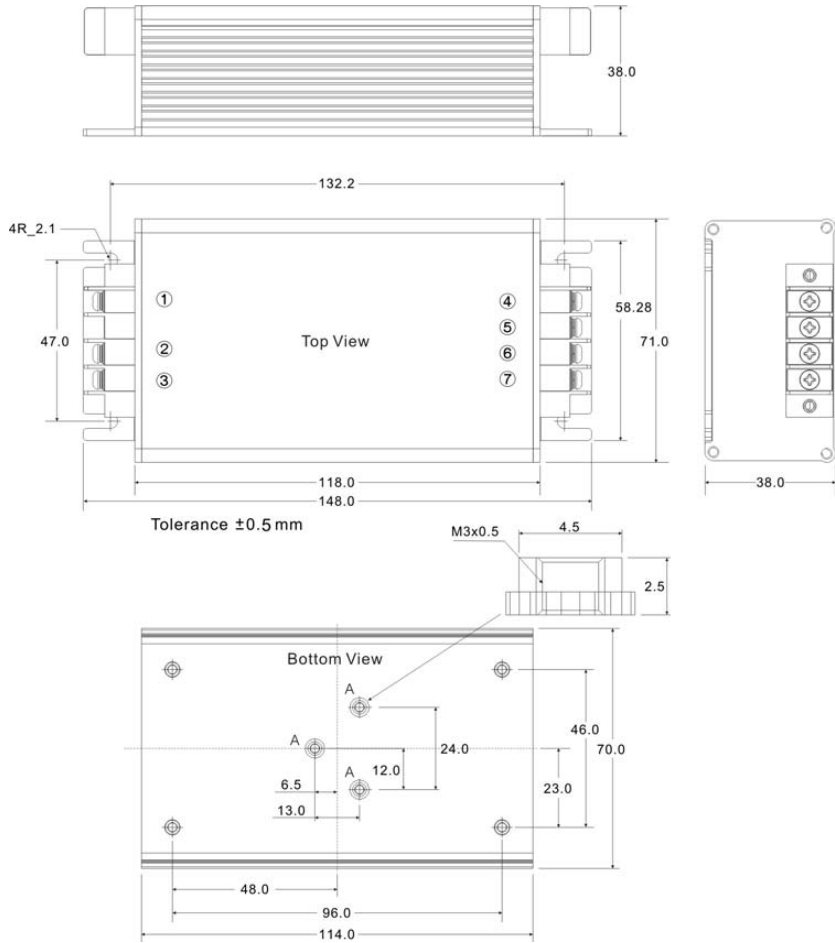


AQC125 SERIES

### NOTE

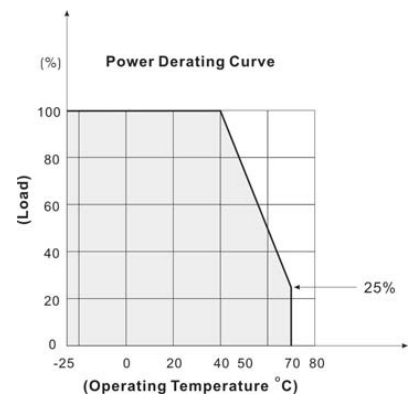
1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
2. Hold-up Time measured at 90% Vout.
3. It's recommended to add Varistor 14S471K at L / N input side in parallel.
4. Please refer to our PDF file "AC-DC Application" on our website: [www.archcorp.com.tw](http://www.archcorp.com.tw)

### MECHANICAL DIMENSION ( Top View )



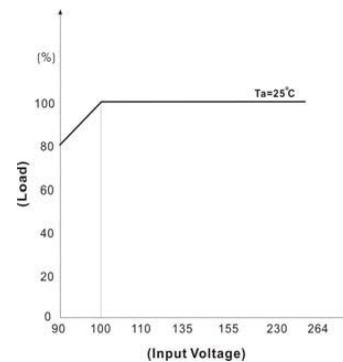
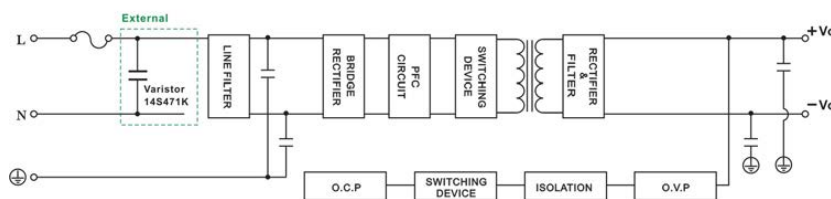
PIN#	Single
1	FG
2	AC IN (N)
3	AC IN (L)
4	+DC OUT
5	+DC OUT
6	-DC OUT
7	-DC OUT

### DERATING



### BLOCK DIAGRAM

Single Output



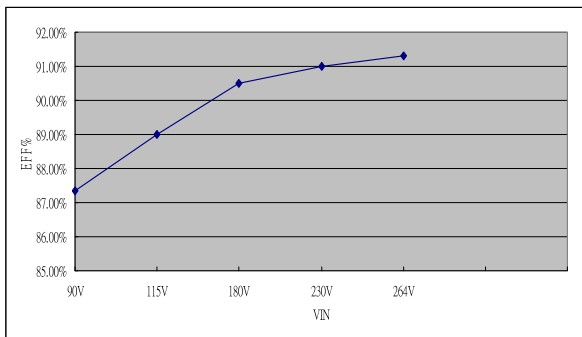


### EFFICIENCY VERSUS LOAD

#### AQC125-12S

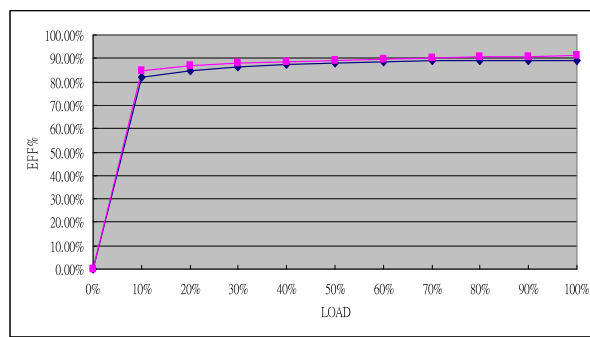
VIN VS Efficiency

Input Voltage (V)	90	115	180	230	264
Efficiency (%)	87.33	89.00	90.49	91.01	91.31



LOAD VS Efficiency

Load (%)	10	20	30	40	50
115V (%)	81.79%	84.70%	86.31%	87.39%	88.09%
230V (%)	84.57	87.08	87.74	88.66	89.10
Load (%)	60	70	80	90	100
115V (%)	88.65%	88.99%	89.09%	89.08%	89.00%
230V (%)	89.71	90.18	90.63	90.82	91.01

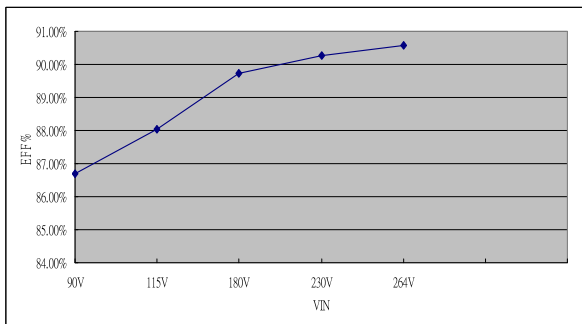


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#### AQC125-15S

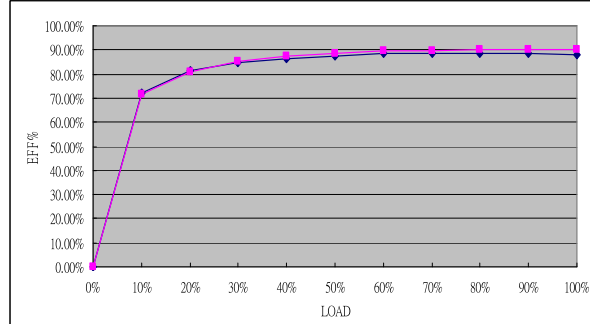
VIN VS Efficiency

Input Voltage (V)	90	115	180	230	264
Efficiency (%)	86.68	88.04	89.72	90.27	90.58



LOAD VS Efficiency

Load (%)	10	20	30	40	50
115V (%)	72.19	81.27	84.84	86.55	87.63
230V (%)	71.78	80.74	85.03	87.30	88.63
Load (%)	60	70	80	90	100
115V (%)	88.34	88.52	88.64	88.42	88.04
230V (%)	89.40	89.85	90.13	90.27	90.27



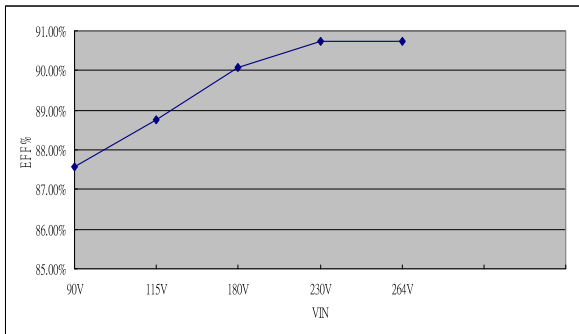


### EFFICIENCY VERSUS LOAD

#### AQC125-24S

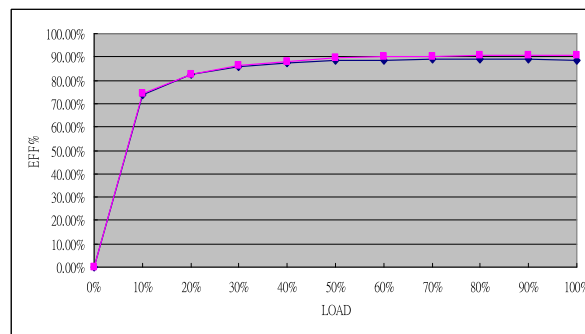
VIN VS Efficiency

Input Voltage (V)	90	115	180	230	264
Efficiency (%)	87.56	88.76	90.09	90.73	90.74



LOAD VS Efficiency

Load (%)	10	20	30	40	50
115V (%)	73.62	82.60	85.79	87.39	88.36
230V (%)	74.30	82.32	86.17	88.23	89.36
Load (%)	60	70	80	90	100
115V (%)	88.76	88.96	88.96	88.83	88.76
230V (%)	90.03	90.37	90.65	90.75	90.73

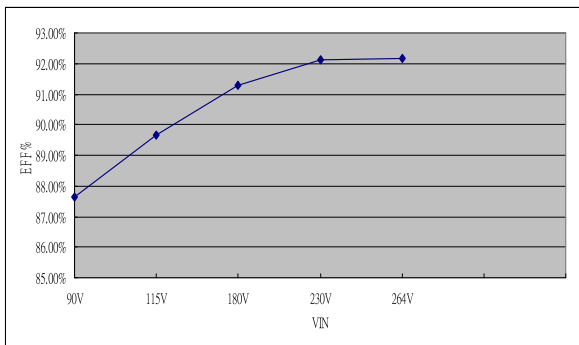


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#### AQC125-48S

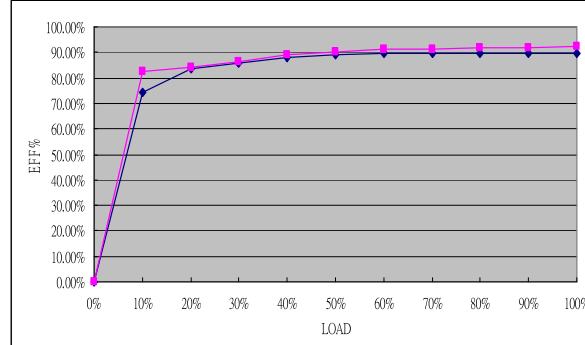
VIN VS Efficiency

Input Voltage (V)	90	115	180	230	264
Efficiency (%)	87.62	89.65	91.29	92.13	92.15



LOAD VS Efficiency

Load (%)	10	20	30	40	50
115V (%)	74.20	83.48	85.89	88.16	88.86
230V (%)	82.44	84.02	86.47	89.00	90.12
Load (%)	60	70	80	90	100
115V (%)	89.45	89.46	89.71	89.74	89.65
230V (%)	91.01	91.43	91.86	91.86	92.13



aqc125-rev1-1218.indd

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Revision 1