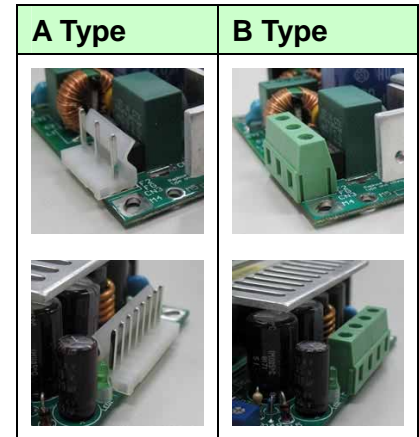


KEY FEATURES

- Enclosed Switching Power Supply
- 180 Watt with 18CFM FAN
- High Efficiency up to 93%
- Universal Input: 90-264 VAC
- Low Ripple and Noise
- With P.F.C. Function >0.95
- 120 Watt with Free Air Convection
- Ultra Compact Size: 5.0 x 3.24 x 1.5 Inches
- 2-Years Product Warranty


ELECTRICAL SPECIFICATIONS

Model No.	AQF120E-12S	AQF120E-24S	AQF120E-48S	
Max Output Wattage (18CFM FAN) (W)	180 W			
Max Output Wattage (W)	120 W			
Input	Voltage	90-264 VAC or 120-370 VDC (80-274 VAC or 110-390 VDC with Derating)		
	Frequency (Hz)	47-63 Hz		
	Current (Full load)	<2.0 A max. (115 VAC) / <1.0 A max. (230 VAC)		
	Inrush Current (<2ms)	< 30 A max. (115 VAC) / < 60 A max. (230 VAC)		
	Leakage Current	< 0.5 mA max.		
	Power Factor	PF>0.99 (115 VAC) / PF>0.95 (230 VAC) at Full Load		
Output	Voltage (V.DC.)	12V	24V	48V
	Voltage Accuracy	±2%		
	Voltage Adj. Range (V.DC)	11.4~13.2V	22.8~26.4V	45.6~52V
	Current (18CFM FAN) (A) max	0~15	0~7.5	0~3.75
	Current (Convection) (A) max	0~10	0~5	0~2.5
	Line Regulation	±1%		
	Load Regulation	±1%		
	Minimum Load	0%		
	Maximum Capacitive Load	0-40,000µF	0-20,000µF	0-1,200µF
	Ripple & Noise max.	50 mv	100mV	100mV
	Efficiency (typ.)	90%	93%	93%
	Hold-up Time	15 ms min.		
	Switching Frequency	100 kHz		
Protection	Over Power Protection	Auto recovery		
	Over Voltage Protection	Auto recovery (> 125% Vout)		
	Short Circuit Protection	Auto recovery		
Isolation	Input-Output (V.AC)	4000V		
	Input-FG (V.AC)	2000V		
	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 (0~50°C)		
	Humidity	95% RH		
	MTBF	>100,000 h @ 25°C (MIL-HDBK-217F, Notice 1)		
	Vibration	10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes.		
Physical	Dimension (L x W x H)	5.0 x 3.24 x 1.5 Inches (127.0 x 82.2 x 38.1 mm) Tolerance ±0.5 mm		
	Weight	400 g		
	Cooling Method	Free convection		
Safety	Agency Approvals	CE, UL60950		
EMC	EMI (Conducted & Radiated Emission)	EN61000-6-3, EN 55022 class B		
	EMS (Noise Immunity)	EN 55024		

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

2.Ripple & Noise are measured at 20MHz of bandwidth with 0.1UF & 4UF parallel capacitor.

3.Hold-up Time measured at 90% Vout.

MECHANICAL DIMENSION (Top View)

Standard

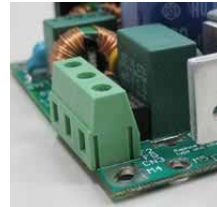
18 CFM

136.0
127.0
69.0
10.0
46.9
38.1
82.2
4
5
6
7
Tolerance ± 0.5 mm
38.1
120.0
100.0
13.0
12.0
24.0
69.0
60.5

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

A Type

B Type



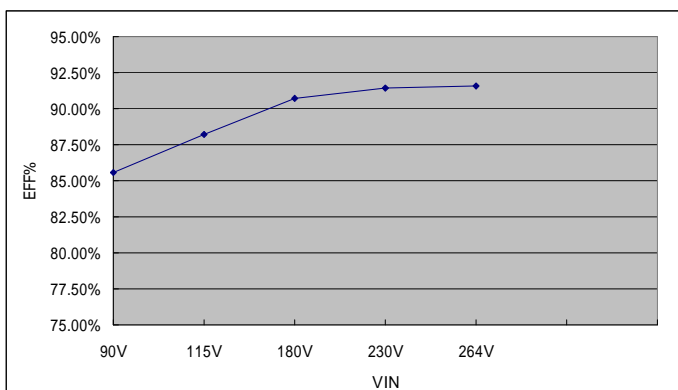
PIN#	Single
1	AC IN (L)
2	AC IN (N)
3	FG
4 ~ 7	+DC OUT
8 ~ 11	-DC OUT



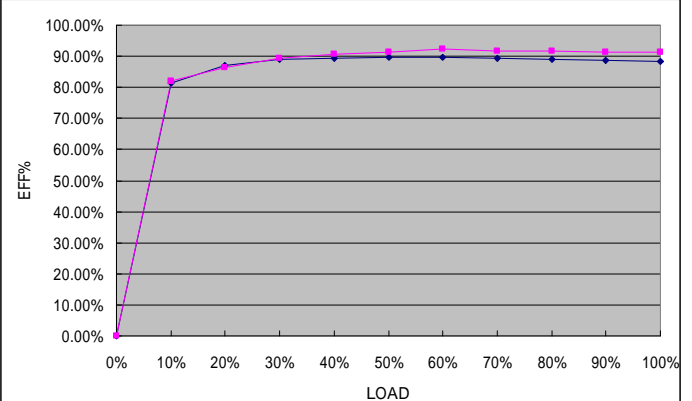
PIN#	Single
1	AC IN (L)
2	AC IN (N)
3	FG
4 ~ 5	+DC OUT
6 ~ 07	-DC OUT

EFFICIENCY VERSUS LOAD
AQF120E-12S
VIN VS Efficiency

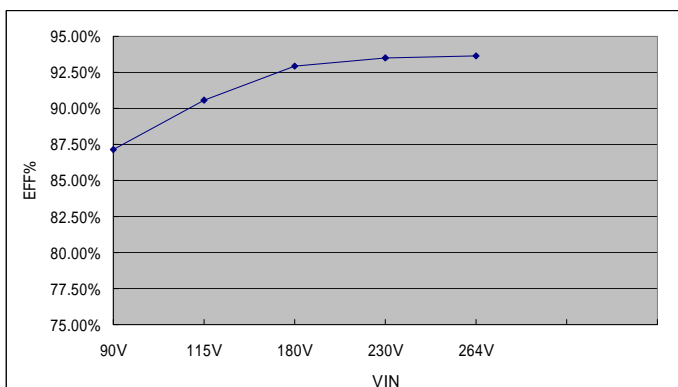
Input Voltage (V)	90	115	180	230	264
Efficiency (%)	85.58	88.22	90.74	91.43	91.58


LOAD VS Efficiency

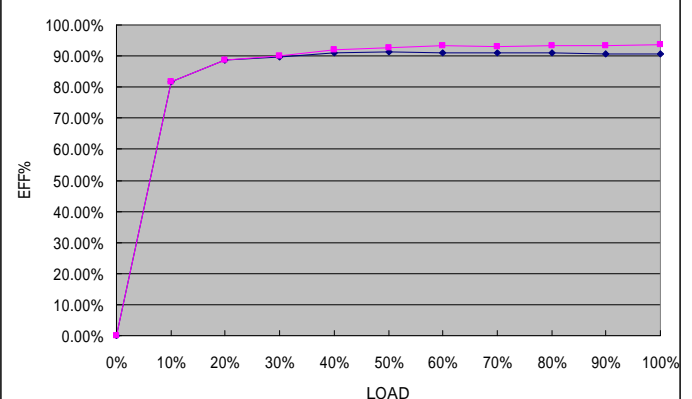
Load (%)	10	20	30	40	50
115V (%)	81.36	87.19	88.93	89.34	89.81
230V (%)	82.13	86.37	89.43	90.70	91.32
Load (%)	60	70	80	90	100
115V (%)	89.68	89.47	89.1	88.69	88.22
230V (%)	92.21	91.57	91.56	91.48	91.43


AQF120E-24S
VIN VS Efficiency

Input Voltage (V)	90	115	180	230	264
Efficiency (%)	87.12	90.59	92.92	93.53	93.65


LOAD VS Efficiency

Load (%)	10	20	30	40	50
115V (%)	81.58	88.58	89.57	90.97	91.27
230V (%)	81.77	88.72	90.02	92.19	92.58
Load (%)	60	70	80	90	100
115V (%)	91.05	91.11	90.92	90.72	90.59
230V (%)	93.32	93.13	93.35	93.45	93.53

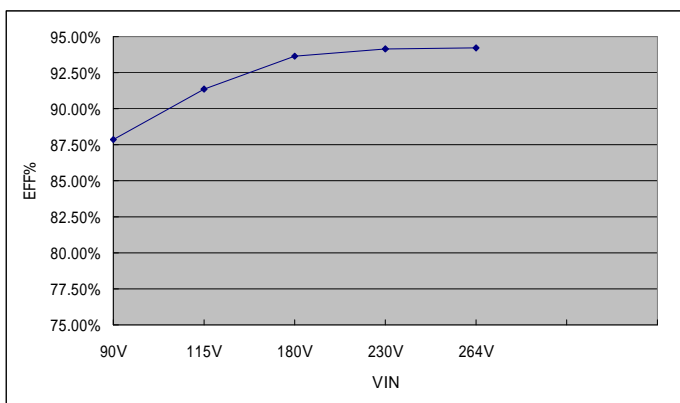


EFFICIENCY VERSUS LOAD

AQF120E-48S

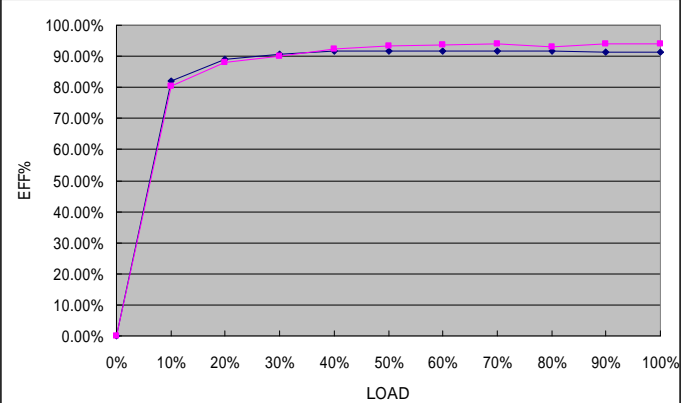
VIN VS Efficiency

Input Voltage (V)	90	115	180	230	264
Efficiency (%)	87.82	91.33	93.65	94.17	94.24

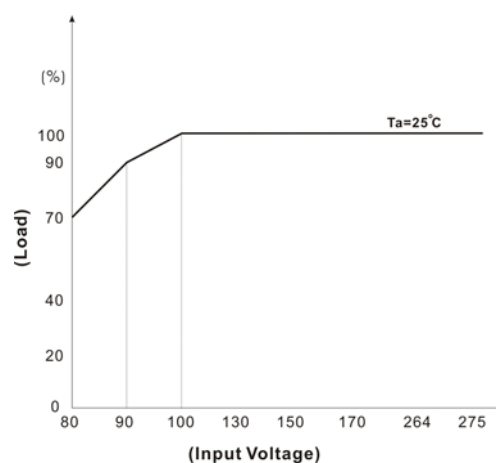
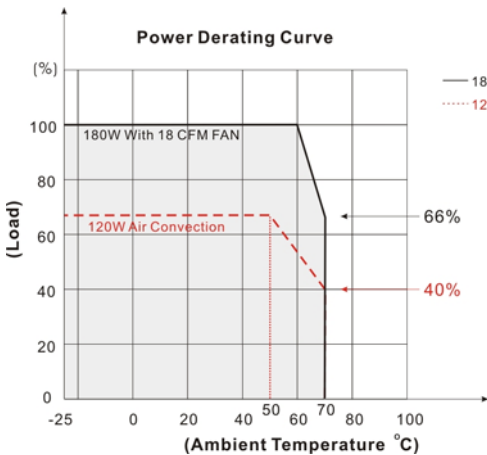


LOAD VS Efficiency

Load (%)	10	20	30	40	50
115V (%)	82.19	89.06	90.84	91.55	91.65
230V (%)	80.25	88.19	90.06	92.29	93.21
Load (%)	60	70	80	90	100
115V (%)	91.78	91.81	91.57	91.36	91.33
230V (%)	93.71	93.89	93.18	93.88	94.17



DERATING



BLOCK DIAGRAM

