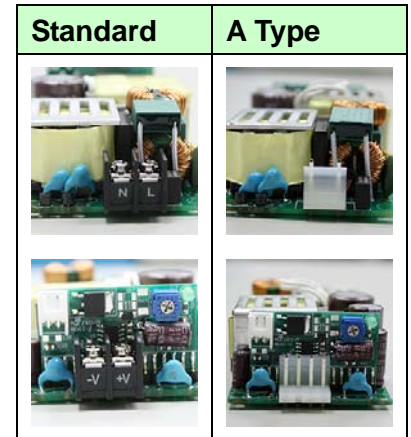


KEY FEATURES

- Open Frame 100W Power Supply in 4.0" x 2.0" Size
- Active PFC Function, >0.95 (230Vac), >0.98 (115Vac)
- Universal Input: 90-264 VAC
- 100W Full Load at 40°C Under Free Air Convection
- 160W with 25CFM FAN
- <0.5W No Load Input Power (except AQF160-48S)
- 12V (Aux) / 0.3A
- EN55022 Class B Meets
- Isolation Class I
- 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.	AQF160-12S	AQF160-15S	AQF160-24S	AQF160-48S	
Max Output Wattage (Free air Convection) (W)	100 W				
Max Output Wattage (with 25CFM FAN) (W)	160 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)				
Inrush Current (<2ms)					
< 35 A max. (115 VAC) / < 70 A max. (230 VAC)					
Leakage Current					
< 0.5 mA max.					
Power Factor					
PF>0.98 (115 VAC) / PF>0.95 (230 VAC) at Full Load					
Output	Voltage (V.DC.)	12V	15V	24V	48V
	Voltage Adj Range (V.DC.)	±4% Output Voltage			
	Voltage Accuracy	±2%			
	Current (Free air Convection) (A) max	8.4	6.7	4.2	2.1
	Current (with 25CFM FAN) (A) max	13.3	10.6	6.66	3.33
	Line Regulation	±1%			
	Load Regulation (10-100%)	±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%	91.5%
	Hold-up Time (at 115 VAC)	10 ms min.			
Protection	Over Power Protection	Auto recovery, Hiccup mode			
	Over Temperature Protection	Auto recovery			
	Over Voltage Protection	Zener diode clamp			
	Short Circuit Protection	Auto recovery, Hiccup mode			
Isolation	Input-Output (V.AC)	3000VAC or 4242VDC			
	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)			
Vibration	10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes.				

ELECTRICAL SPECIFICATIONS

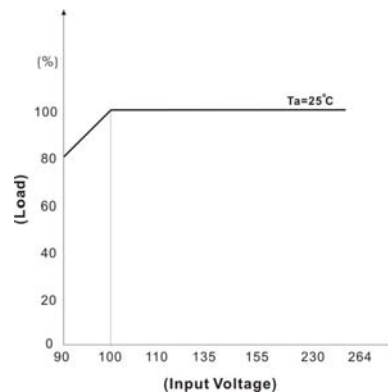
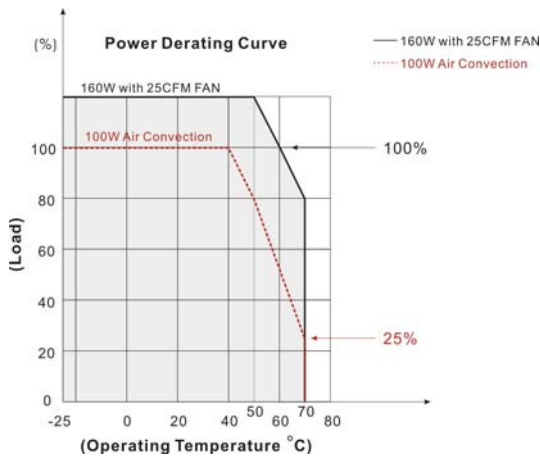
All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Model No.	AQF160-12S	AQF160-15S	AQF160-24S	AQF160-48S
Physical	Dimension (L x W x H) 4.09 x 2.05 x 1.14 Inches (103.9 x 52.1 x 29.0 mm) Tolerance ±0.5 mm			
	Weight 220 g			
	Cooling Method Free convection			
Safety	Agency Approvals CE, UL60950-1			
EMC	EMI (Conducted & Radiated Emission) EN 55022 class B (Conductive plane to be connected to safety earth)			
	EMS (Noise Immunity) EN 55024			

NOTE

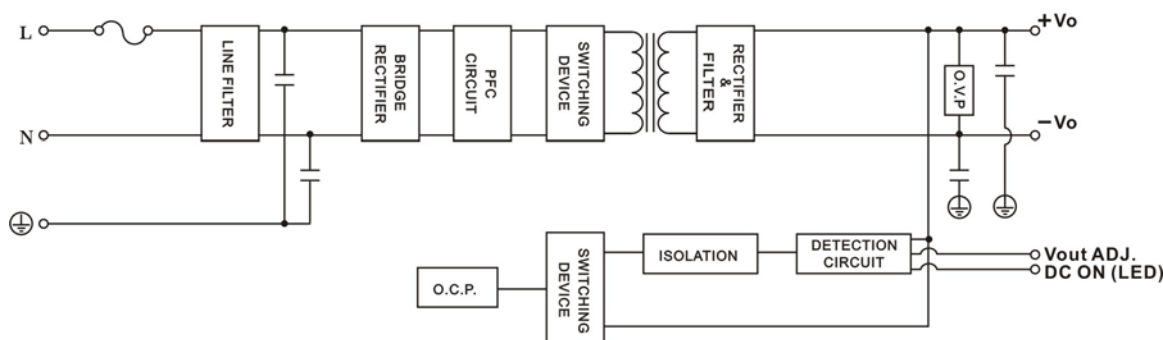
- Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
- Hold-up Time measured at 90% Vout.
- Main Vout must be >50% Load, 12V (Aux) / 0.3A.
- Strongly recommend to conduct this test with DC Voltage. If customer wishes to test with AC Voltage, please disconnect all Y-Capacitors within Arch power supply.

DERATING



BLOCK DIAGRAM

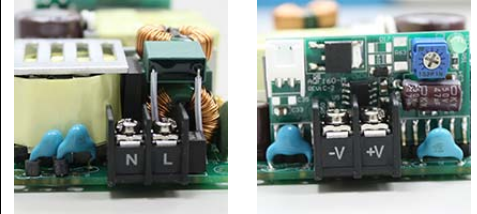
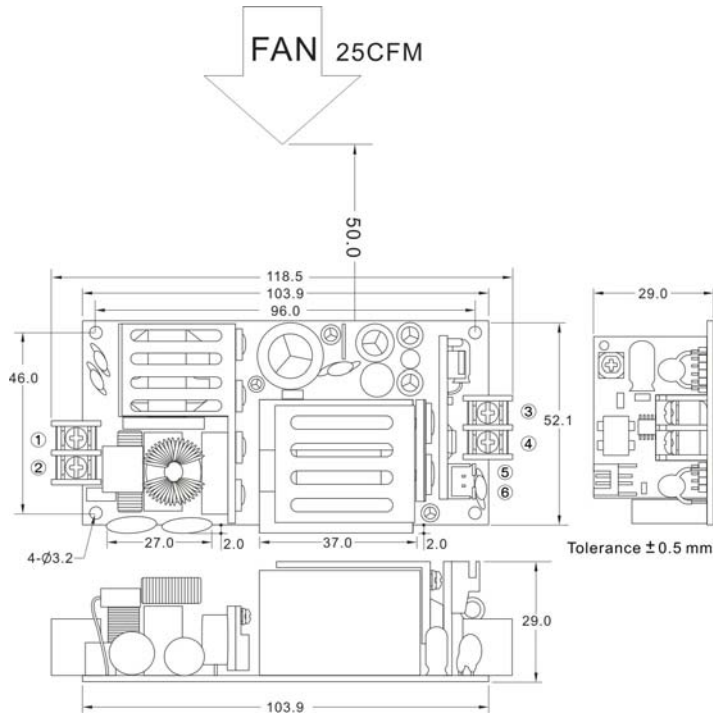
Single Output



For more explicit application advices and notes, please refer to our PDF file "AC-DC Application" on our website: www.archcorp.com.tw

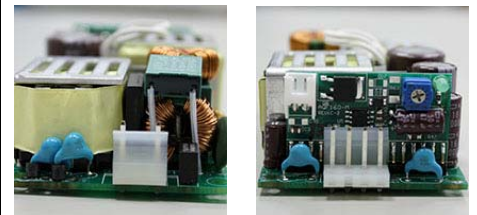
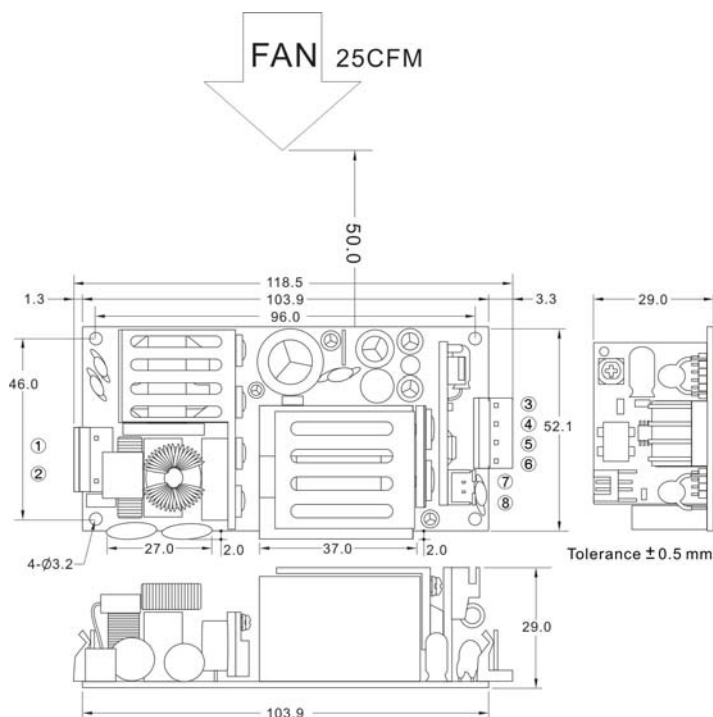
MECHANICAL DIMENSION (Top View)

Standard : Terminal Block



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

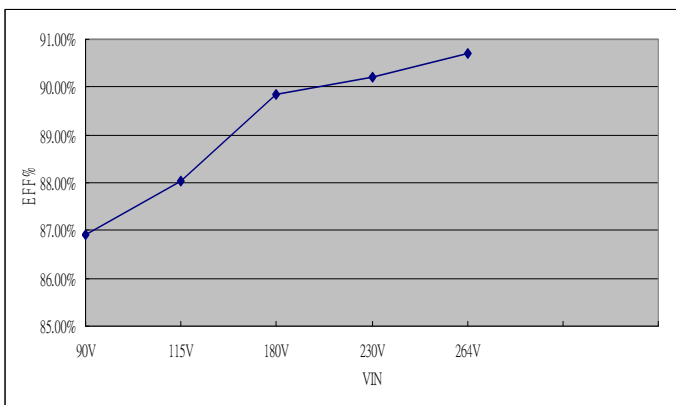
A Type : Molex Series 8673 (Alex Connector Co., Ltd)



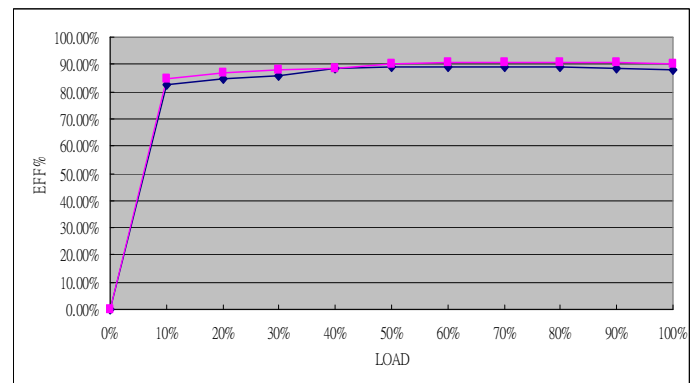
PIN#	Single
1	AC IN (N)
2	AC IN (L)
3	+DC OUT
4	+DC OUT
5	-DC OUT
6	-DC OUT
7	-AUX OUT
8	+AUX OUT

EFFICIENCY VERSUS LOAD
AQF160-12S
VIN VS Efficiency

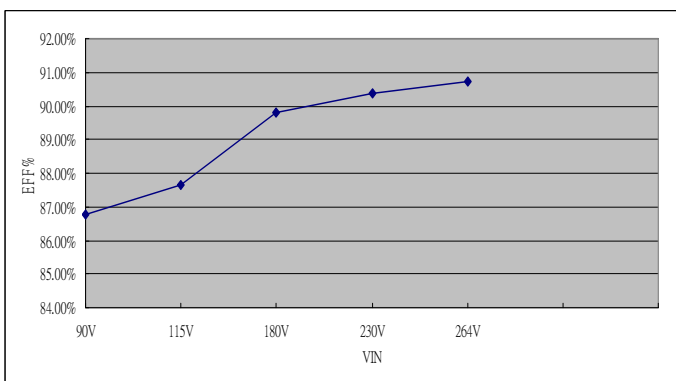
Input Voltage (V)	90	115	180	230	264
Efficiency (%)	86.90	88.03	89.85	90.22	90.69


LOAD VS Efficiency

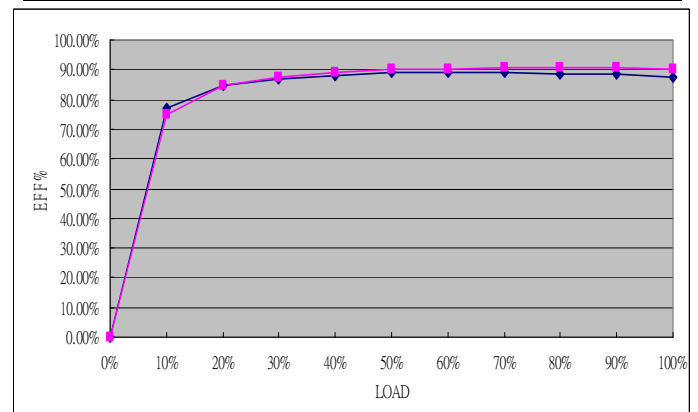
Load (%)	10	20	30	40	50
115V (%)	82.29	84.55	85.71	88.58	89.03
230V (%)	84.68	86.75	88.05	88.64	90.05
Load (%)	60	70	80	90	100
115V (%)	89.08	88.90	88.87	88.61	88.11
230V (%)	90.61	90.79	90.79	90.70	90.40


AQF160-15S
VIN VS Efficiency

Input Voltage (V)	90	115	180	230	264
Efficiency (%)	86.75	87.64	89.81	90.38	90.74

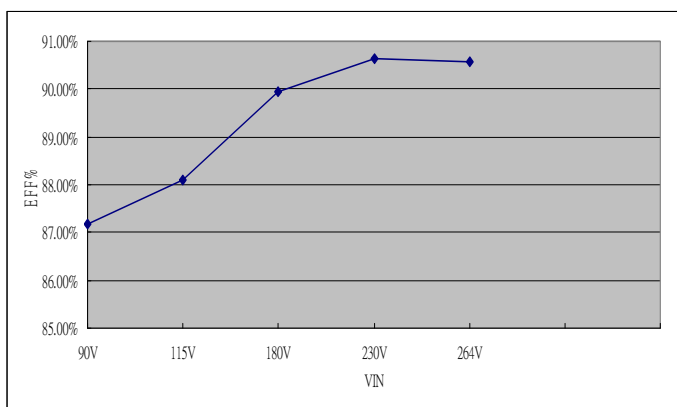

LOAD VS Efficiency

Load (%)	10	20	30	40	50
115V (%)	76.92	84.73	87.06	88.11	88.82
230V (%)	75.13	84.50	87.60	89.04	90.00
Load (%)	60	70	80	90	100
115V (%)	88.91	89.04	88.77	88.31	87.64
230V (%)	90.39	90.66	90.70	90.54	90.38

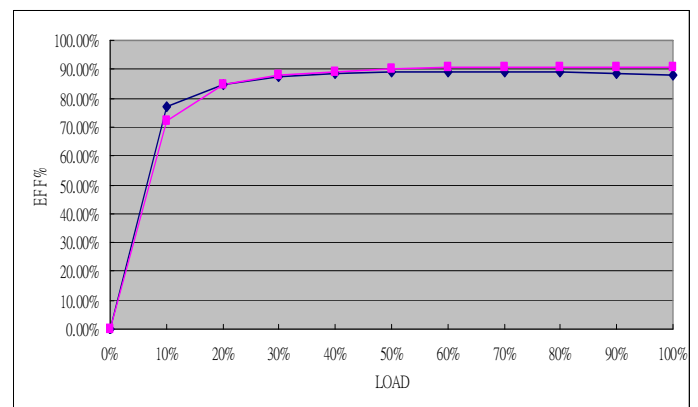


EFFICIENCY VERSUS LOAD
AQF160-24S
VIN VS Efficiency

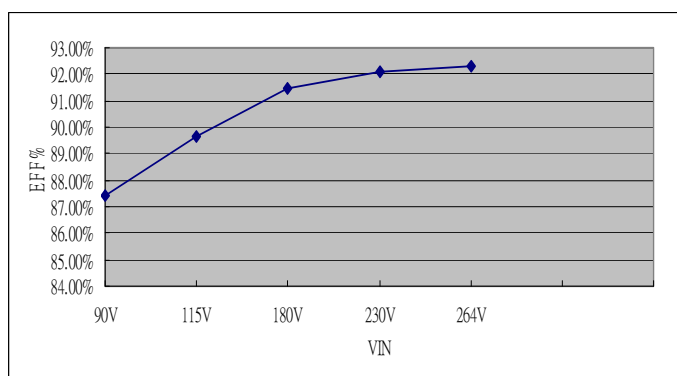
Input Voltage (V)	90	115	180	230	264
Efficiency (%)	87.19	88.09	89.93	90.63	90.57


LOAD VS Efficiency

Load (%)	10	20	30	40	50
115V (%)	76.80	84.68	87.18	88.48	88.87
230V (%)	72.26	84.67	87.96	89.34	90.05
Load (%)	60	70	80	90	100
115V (%)	88.85	89.02	88.82	88.57	88.09
230V (%)	90.51	90.75	90.80	90.73	90.63


AQF160-48S
VIN VS Efficiency

Input Voltage (V)	90	115	180	230	264
Efficiency (%)	87.44	89.65	91.47	92.10	92.33


LOAD VS Efficiency

Load (%)	10	20	30	40	50
115V (%)	79.42	85.97	88.41	89.42	90.04
230V (%)	78.22	84.82	88.72	90.30	91.29
Load (%)	60	70	80	90	100
115V (%)	90.29	90.33	90.15	90.04	89.65
230V (%)	91.77	92.08	92.22	92.16	92.10

