AQFC480U Series

480 W AC/DC Switching Power Supply

CoolPower Solutions

KEY FEATURES

- U Bracket Switching Power Supply
- Universal Input: 90-264 VAC
- Active P.F.C. Function, PF>0.95
- 300W Convection without FAN
- 480W Convection with 18CFM FAN
- Protections: Over Load / Over Voltage / Over Temperature / Short Circuit All by Auto-recovery
- Built-in Remote ON/OFF Control
- Stand by 5V @ 0.3A
- Stand by 5V @ 0.6A with 18CFM FAN
- High Efficiency up to 92%
- Ultra Compact Size: 7.0 x 4.2 x 1.78 Inches
- 3-Years Product Warranty



Standard	A Type
	
	

c UL us E199779 LEVEL3

ELECTRICAL SPECIFICATIONS

Model No.			AQFC480U-12S	AQFC480U-24S	AQFC480U-36S	AQFC480U-48S
Max Output Wattage (Convection) (W)			280W	280W	300W	300W
Max Output Wattage (18CFM FAN) (W)			480W			
Input	Voltage		90-264 VAC or 120-370 VDC			
	Frequency (Hz)		47-63 Hz			
	Current (Full load)		< 5.5 A max. (115 VAC) / < 3.0 A max. (230 VAC)			
	Inrush Current (<2ms)		< 50 A max. (115 VAC) / < 70 A max. (230 VAC)			
	Leakage Current		< 0.5 mA max.(240VAC 63Hz)			
	Power Factor		PF>0.95 (115 VAC) / PF>0.90 (230 VAC) at Full Load			
Output	Constant Current Range (.VDC)		10 ~ 13.2V	20 ~ 26.4V	26 ~ 36V	30 ~ 50.4V
	Current Adj. Range (Convection) (A) max		5 ~ 23.33	4 ~ 11.66	3 ~ 8.33	3 ~ 6.25
	Current Adj. Range (18CFM FAN) (A) max		5 ~ 40	4 ~ 20	3 ~ 13.33	3 ~ 10
	Minimum Load		5%			
	Maximum Capacitive Load		180000 uF	75000 uF	50000 uF	25000 uF
	Ripple & Noise (max.)		100mVp-p	200mVp-p	200mVp-p	300mVp-p
	Efficiency (Convection) (%)	Vin:115(V.AC)	88%	89%	90%	89%
		Vin:230(V.AC)	90%	91%	92%	91%
	Efficiency (18CFM FAN) (%)	Vin:115(V.AC)	85%	87%	89%	88%
		Vin:230(V.AC)	88%	90%	92%	91%
	Hold-up Time		10 ms min.			
	Switching Frequency		62.5 kHz ±10%			
Protection	Over Power Protection		Auto recovery			
	Over Voltage Protection		Auto recovery			
	Over Temperature		Auto recovery			
	Short Circuit Protection		Auto-recovery			
Isolation	Input-Output (V.AC)		3000V			
	Input-FG (V.AC)		1500V			
	Output-FG (V.AC)		500V			
Function	5V Stand by (18CFM FAN)		5VSB: 5V@0.6A ; Tolerance ±10% , Ripple & Noise: 100m Vp-p (max.)			
	Remote Control		+RC / -RC: Power ON=open ; Power OFF=short			
	FAN Control		12VDC / 0.5A max.			

1. All specifications valid at normal 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 & 47uF parallel capacitor.

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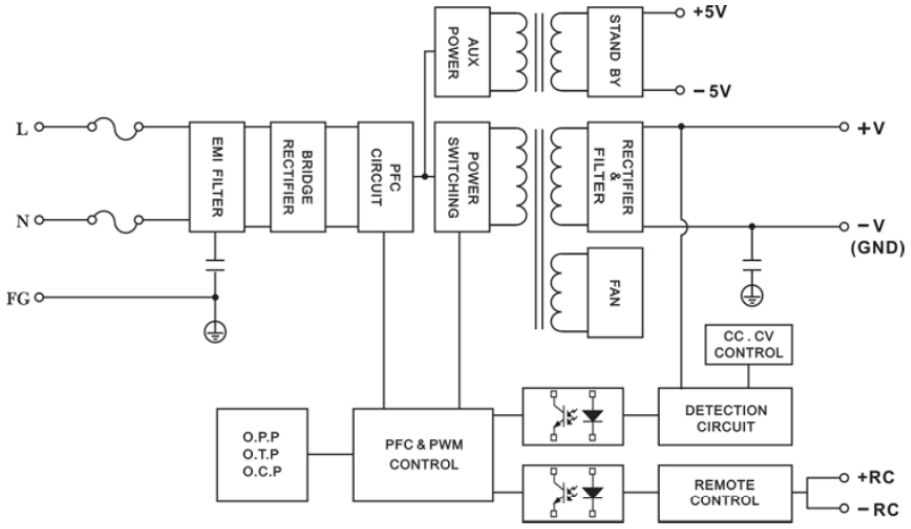
CoolPower Solutions

ELECTRICAL SPECIFICATIONS

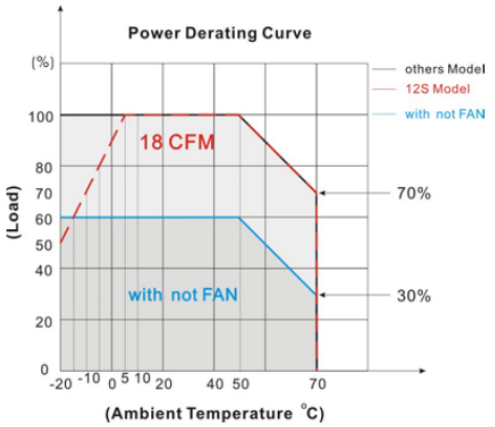
Model No.		AQFC480U-12S	AQFC480U-24S	AQFC480U-36S	AQFC480U-48S
Environment	Operating Temperature	-20°C…+70°C (with derating)			
	Storage Temperature	-25°C…+85°C			
	Temperature Coefficient	±0.03%/°C (0~50°C)			
	Humidity	95% RH			
	MTBF	>100,000 h @ 25°C (MIL-HDBK-217F)			
	Vibration	10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes.			
Physical	Dimension (L x W x H)	7.0 x 4.2 x 1.78 Inches (177.8 x 106.5 x 45.0 mm) Tolerance ±0.5 mm			
	Weight	780 g			
Safety	Agency Approvals	UL60950-1, CE(Surge:4KV)			
EMC	EMI (Conducted & Radiated Emission)	EN 55022 class B			
	EMS (Noise Immunity)	EN 55024			

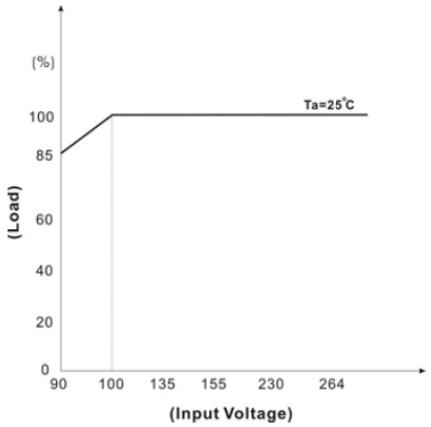
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BLOCK DIAGRAM



DERATING





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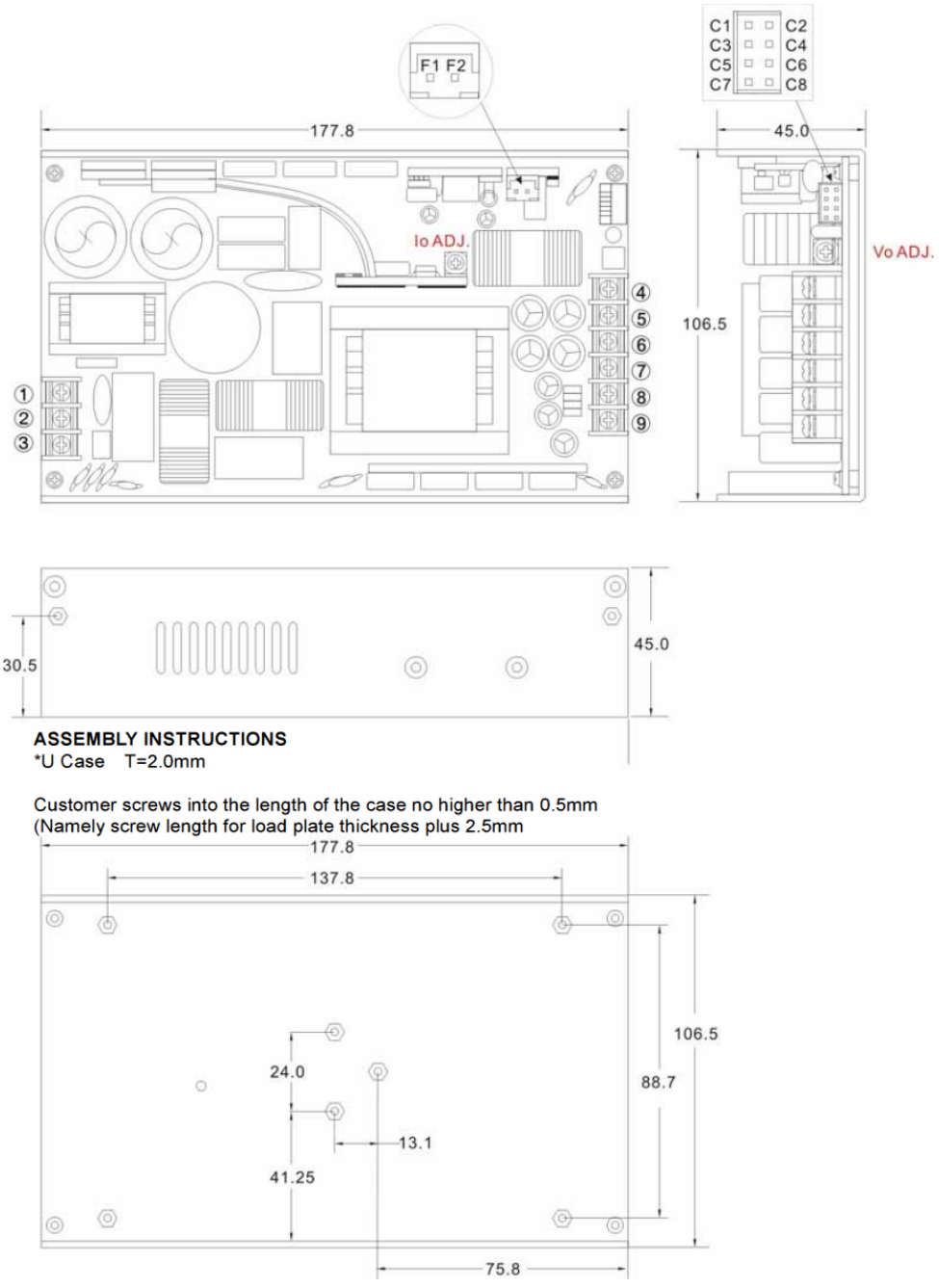
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MECHANICAL DIMENSION

Standard







AC Input Terminal Pin	
PIN#	SINGLE
1	AC IN (N)
2	AC IN (L)
3	⏚

DC Output Terminal Pin	
PIN#	SINGLE
4~6	+DC OUT
7~9	-DC OUT

Connector Pin (CN4)	
PIN#	SINGLE
C1	NC
C2	NC
C3	+RC
C4	-RC
C5	NC
C6	NC
C7	+5V SB
C8	-5V SB

FAN Molex Pin	
PIN#	SINGLE
F1	-DC
F2	+DC

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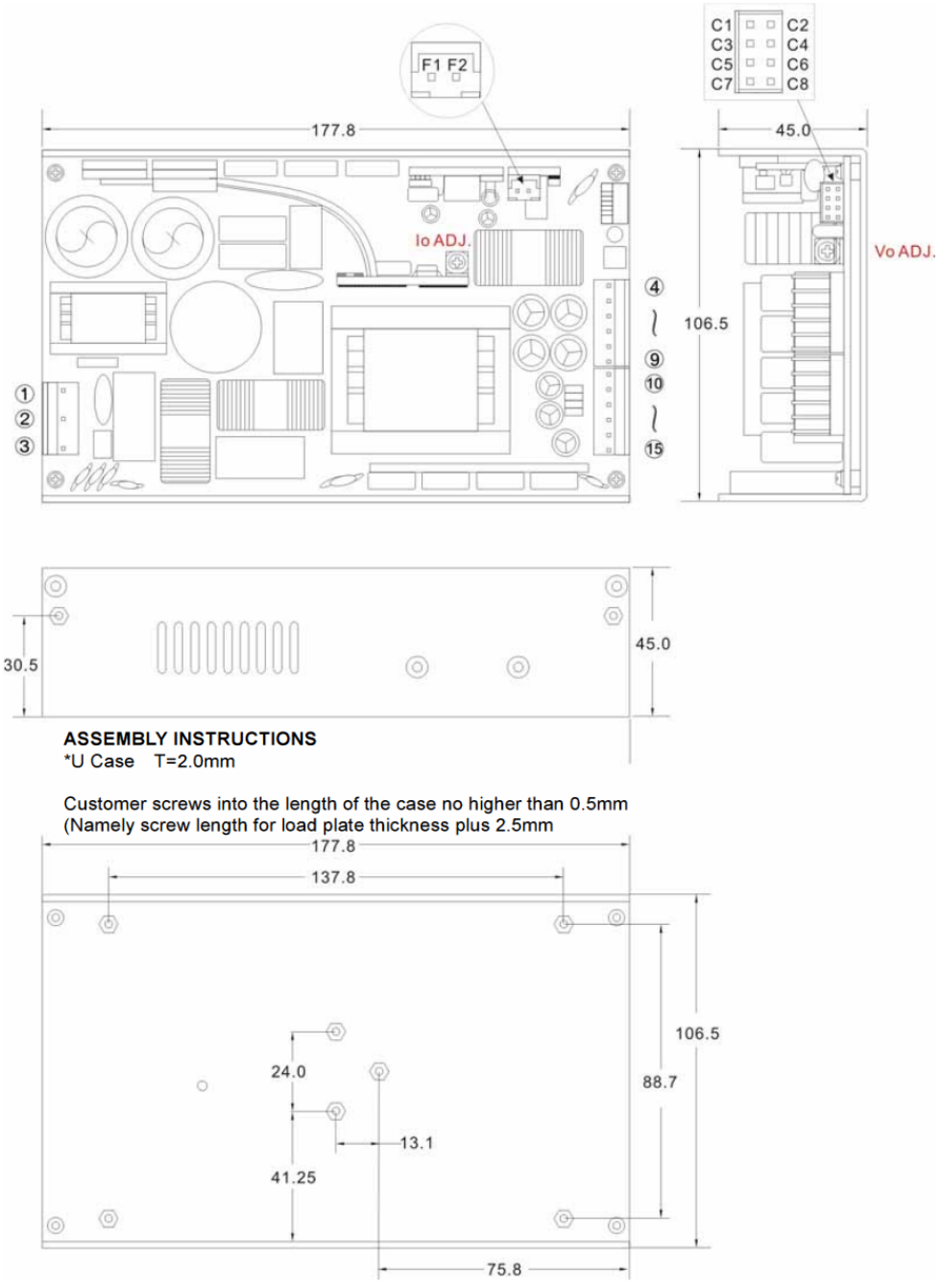
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MECHANICAL DIMENSION

A Type







AC Input Terminal Pin	
PIN#	SINGLE
1	AC IN (N)
2	AC IN (L)
3	⏚

DC Output Terminal Pin	
PIN#	SINGLE
4~9	+DC OUT
10~15	-DC OUT

Connector Pin (CN4)	
PIN#	SINGLE
C1	NC
C2	NC
C3	+RC
C4	-RC
C5	NC
C6	NC
C7	+5V SB
C8	-5V SB

FAN Molex Pin	
PIN#	SINGLE
F1	-DC
F2	+DC

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FUNCTION DESCRIPITON of CN4 :

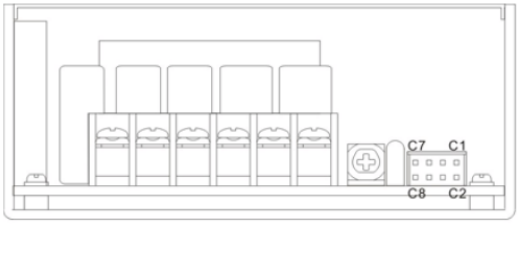
Pin No.	Function	Description
C1	NC	
C2	NC	
C3	+RC	Turns the output on and off by electrical or dry contact between pin C4 (-RC), Short: Power OFF, Open: Power ON.
C4	-RC	Remote control ground.
C5	NC	
C6	NC	
C7	+5V SB	Stand by voltage output ground 4.5~5.5V, referenced to pin C8(-5V SB). The maximum load current is 0.6A.
C8	-5V SB	Stand by voltage output ground.

FUNCTION MANUAL :

Remote Control

It can be turned ON/OFF by using the "Remote Control" function.

Between RC+(pinC3) and RC-(pinC4)	Output Status
SW ON (Short)	OFF
SW OFF (Open)	ON



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