

# PFC 150W Single Output power supply

# AK150 series



## Features :

- Green design, No-load power consumption < 0.7W
- Universal AC input with active PFC
- Protections: Short circuit / Over load / Over voltage  
Brown-out (Low AC Input Voltage)
- Cooling by free air convection
- Power ON with LED indicator
- All using 105°C long life electrolytic capacitors
- High operation temperature up to 70°C
- Withstand 5G vibration test
- 100% full load burn-in test
- High efficiency, long life and high reliability
- 3 years warranty



## SPECIFICATION

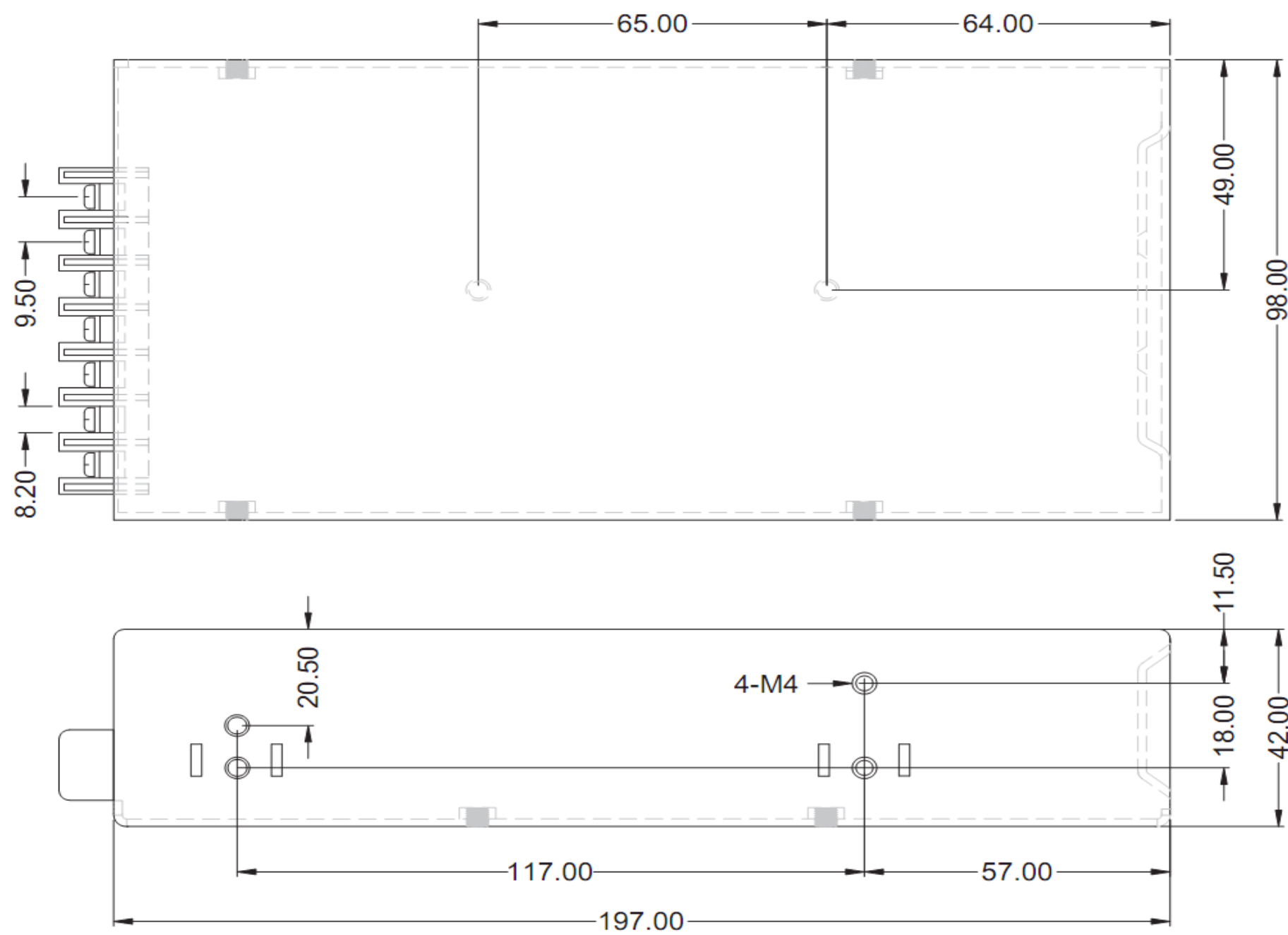
INPUT	Voltage and Frequency RANGE <sup>2</sup>	90 ~ 264VAC 50 / 60Hz, or 127 ~ 370VDC								
	AC CURRENT	1.8 A / 115VAC		0.9A / 230VAC						
	INRUSH CURRENT(Typ.)	30A / 115VAC 55A / 230VAC								
	LEAKAGE CURRENT	< 2mA / 230VAC								
	Power Factor (Typ.)	>0.92 / 230VAC		>0.98 / 115VAC at full load						
MODEL		AK-150-05	AK-150-7.5	AK-150-12	AK-150-13.5	AK-150-15	AK-150-24	AK-150-27	AK-150-48	
OUTPUT	DC VOLTAGE RANGE	5V	7.5V	12V	13.5V	15V	24V	27V	48V	
	RATED CURRENT	20A	20A	12.5A	11.2A	10A	6.3A	5.6A	3.2A	
	Current Range	0 ~ 20A	0 ~ 20A	0 ~ 12.5A	0 ~ 11.2A	0 ~ 10A	0 ~ 6.3A	0 ~ 5.6A	0 ~ 3.2A	
	RATED POWER	100W	150W	150W	151.2W	150W	151.2W	151.2W	153.6W	
	Ripple & Noise (max.) <sup>3</sup>	100 mVp-p	100 mVp-p	100 mVp-p	100 mVp-p	100 mVp-p	120 mVp-p	120 mVp-p	200 mVp-p	
	VOLTAGE ADJ. RANGE	4.5~5.5V	6.75~8.25V	10.8~13.2V	12.15~14.9V	13.5~16.5V	21.6~26.4V	24.3~29.7V	43.2~52.8V	
	VOLTAGE TOLERANCE <sup>4</sup>	±2%	±1.5%	±1%	±1%	±1%	±1%	±1%	±1%	
	Line Regulation	±1%	±1%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	Load Regulation	±1%	±1%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	Setup, Rise Time	<2500ms, <110ms at full load								
	Hold Up Time (Typ.)	>32ms / 230VAC, > 10ms / 115VAC at full load								
EFFICIENCY (Typ.)	79%	82%	86%	87%	87%	87%	87%	89%	89%	
PROTECTION	Over Load	> 105% rated output power. Protection type : Hiccup mode, recovers automatically after fault condition is removed								
	Over Voltage	115% ~ 150% rated output voltage Protection type : latch-off mode								
	Over Temperature	90°C ±5°C detect on Air Protection type : shut down o/p voltage, after temperature goes down and re-power ON to recover								
ENVIRONMENT	WORKING TEMP.	nominal -30 to +80 C ambient ( 40C at full load, linearly derate to 50% of output rating up to 80C)								
	WORKING HUMIDITY	20 ~ 90% R.H non-condensing								
	STORAGE TEMP., HUMIDITY	-40 to 80 C, 5% to 95%RH								
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)								
	VIBRATION	10 ~ 500Hz, 5G 10min./1 cycle, period for 60 min. Each along X,Y,Z axes								
SAFETY & EMC	SAFETY STANDARDS	UL 60950-1, 2 n d Edition, TUV EN60950-1 : 2006+A11 Approved								
	WITHSTAND VOLTAGE	I/P - O/P : 3KVAC(4242 DC) I/P - FG : 1.5KVAC(2121 DC) O/P-FG : 0.5KVAC(707DC), 1 min								
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG: 100MΩ / 500VDC								
	EMI CONDUCTION & RADIATION	EN55022: 2006 Class B								
	HARMONIC CURRENT	EN61000-3-2: 2006 Class A, EN61000-3-3: 1995+A1: 2001+A2: 2005								
	EMS IMMUNITY	EN61204-3: 2000, EN55024: 1998+A1: 2001+A2: 2003 light industry level, criteria A								
OTHERS	MTBF	161K HRS Compliance : MIL-HDBK-217F								
	Cooling	Cooling by free convection								
	DIMENSION	197x98x42mm / 7.76x3.86x1.65inch								
	PACKING	0.7kg ; 24Pcs/16.8kg								
NOTE	<ol style="list-style-type: none"> <li>All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>De-rating may be needed under low input voltages. Please check the de-rating curve for more details.</li> <li>Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47 uf parallel capacitor.</li> <li>Tolerance: includes set up tolerance, line regulation and load regulation.</li> <li>The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.</li> </ol>									

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### Mechanical Specification

Unit : mm



### De-rating Curve

