

Features

- Universal Input 80~264V AC
- Operating Temperature Range: -30°C~70°C
- Approved to UKCA, CE, cURus
- Safety standards to UL 62368-1, EN 60601-1
- Efficiency up to 94%
- Protections: SCP, OLP, OVP, OTP
- Single Output 12~48V DC



Ideal Power's 57PFS-220-xy 220W Open Frame AC/DC Medical Power Supply Module Series is certified to UKCA, CE, cURus & EN 60601-1/UL 62368-1 Standards and complies with the relevant Efficiency Regulations. These are primarily used in Medical, ITE, Audio & Video Industries and customised solutions are available upon request.

Models

Model Number	DC Voltage (V)	Rated Current (A)		Rated Power (W)		Voltage Adj. Range (V)	Efficiency (%)	Ripple & Noise (mVp-p)
		10CFM	Convection	10CFM	Convection			
57PFS-150-12	12	18.4	11.7	220.8	140.4	11.4 ~ 12.6	92.5	100
57PFS-150-15	15	14.7	9.4	220.5	141	14.2 ~ 15.8	93	100
57PFS-150-24	24	9.2	5.9	220.8	141.6	22.8 ~ 25.2	93	150
57PFS-150-27	27	8.1	5.2	218.7	140.4	25.6 ~ 28.4	93	150
57PFS-150-36	36	6.1	3.9	219.6	140.4	34.2 ~ 37.8	93	150
57PFS-150-48	48	4.6	3	220.8	144	45.6 ~ 50.4	94	200

Input Specifications

Voltage Range	80~264VAC (Refer to "Static characteristics")
Frequency Range	47 ~63Hz
Power Factor	PF>0.93/230VAC, PF>0.98VAC at full load
AC Current (Typ.)	3A/115VAC 1.5/230VAC
Inrush Current (Typ.)	30A/115VAC, 60A/230VAC (cold start)

Output Specifications

Voltage Tolerance	±2%	12v, 15v
	±1.0%	Others
Line Regulation	±0.5%	All
Load Regulation	±1.0%	12v, 15v
	±0.5%	Others
Setup, Rise Time	500ms,50ms/230VAC – 500ms,50ms/115VAC	
Hold Up Time (Typ.)	14ms/230VAC – 14ms/115VAC	

Protection

Overload	105% ~ 140% rated output power	
	Protection type: Shut down, recovers after re-power on.	
Over Voltage	15 ~ 18V	12v
	18 ~ 24V	15v
	29 ~ 35V	24v
	35 ~ 42V	27v
	43.5 ~ 52V	36v
	56 ~ 66V	48v
	Protection type: Shut down, recovers after re-power on.	
Over Temperature	Protection type: Shut down, recovers after re-power on.	

Function

Fan Supply	12V at 0.5A for driving fan; tolerance ±15% at main output 20% rated current (10CFM)
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Environmental Characteristics

Working Temp., Humidity	-30~+70°C (Refer to “Derating curve”), 20~90%RH non-condensing
Storage Temp., Humidity	-40~+85°C, 10~95%RH
Temp. Coefficient	±0.03%/°C(0~50°C)
Vibration	10~500Hz, 2G 10min./ 1 cycle, each along X, Y, Z axes

Safety

Safety Regulations:	UL62368-1, TUV EN62368-1, CCC GB4943.1, EN60601-1 (2XMOPP)
Withstand Voltage:	I/P-O/P:3KVAC, I/P-FG:2KVAC, O/P-FG:1.5KVAC

EMC

Parameter	Standard	Test Level / Note
Conducted emission	BS EN/EN55032(CISPR32), FCC PART 15 / CISPR22, GB9254.1	Class B
Radiated emission	BS EN/EN55032(CISPR32), FCC PART 15 / CISPR22, GB9254.1	Class B
Harmonic current	BS EN/EN61000-3-2, GB17625.1	Class A
Voltage flicker	BS EN/EN61000-3-3	

EMC BS EN/EN55035

Parameter	Standard	Test Level / Note
ESD	BS EN/EN61000-4-2	Level 4, 8KV air, Level 2, 4KV contact, criteria A
RF field susceptibility	BS EN/EN61000-4-3	Level 3, criteria A
EFT bursts	BS EN/EN61000-4-4	Level 3, criteria A
Surge susceptibility	BS EN/EN61000-4-5	Level 3, 1KV/L-N, 2KV/L/N-FG criteria A
Conducted susceptibility	BS EN/EN61000-4-6	Level 3, criteria A
Magnetic field immunity	BS EN/EN61000-4-8	Level 4, criteria A
Voltage dips and interruptions	BS EN/EN61000-4-11	>95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods

Other Specifications

MTBF	500Khrs MIL-HDBK-217F(25°C)
Dimension	101.6x50.8x29mm(L*W*H)
Packing	0.19Kg; 72pcs/ 14.7Kg/ 1.18CUFT

Notes:

All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.

Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.

Tolerance: includes set up tolerance, line regulation and load regulation.

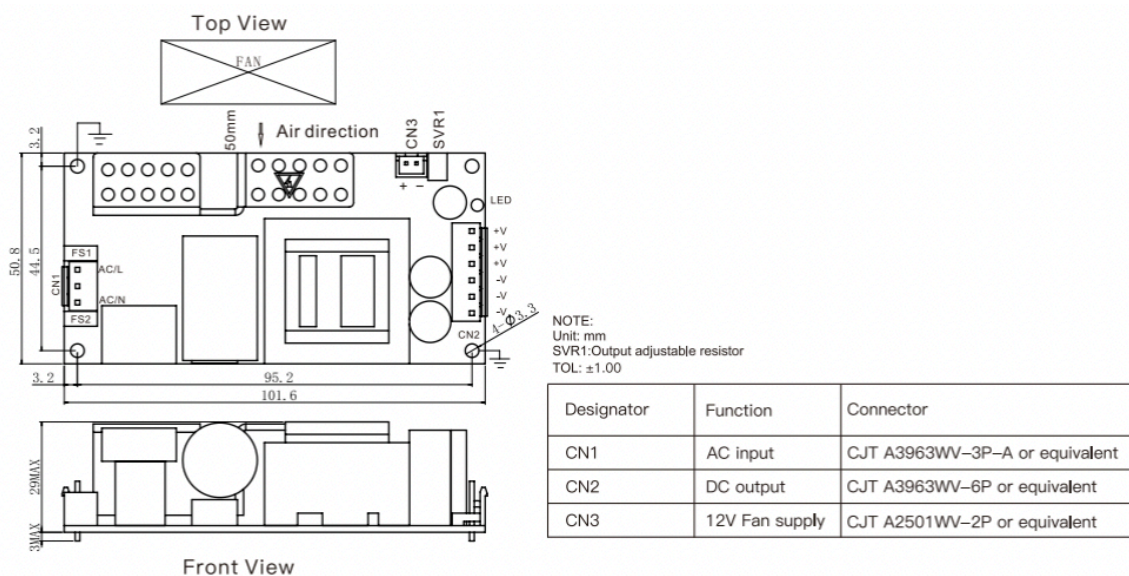
Line regulation is measured from low line to high line at rated load.

Load regulation is measured from 0% to 100% rated load.

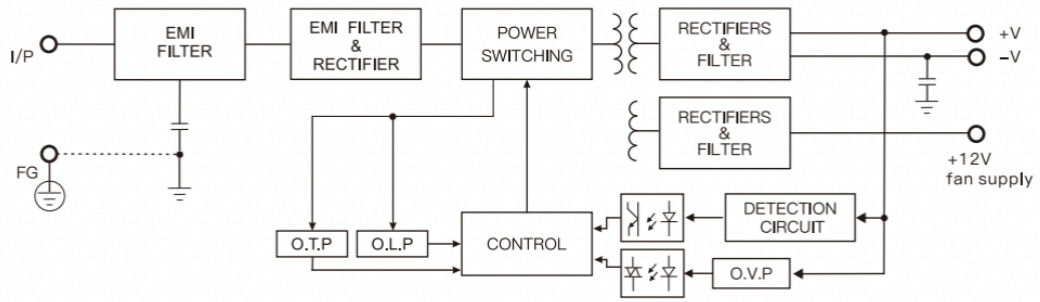
Length of set up time is measured at cold first start, Turning ON/OFF the power supply very quickly may lead to increase of the set-up time.

The ambient temperature derating of 5°C/1000m is needed for operating altitude great than 2000m(6500ft).

The power supply is considered a component which will be installed into a final equipment. All the EMC tests are being executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives.

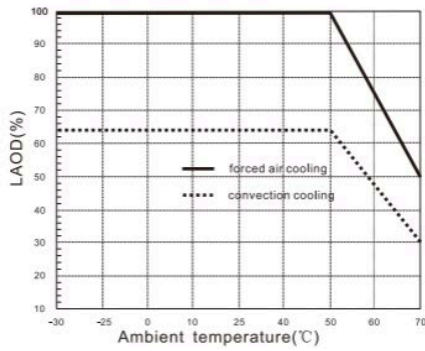
Mechanical Drawing


Block Diagram



Derating Curves

Derating curve



Static characteristics

