



Shenzhen Longxc Power Supply Co.,Ltd.

(CUSTOMER) :

SPECIFICATION

MODEL NO.: ACMS121 SERIES

DOCUMENT NO.: LXC/RD-Spec-053

CUSTOMER NO.:

DATE: 2020-04-27

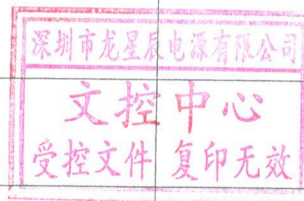
DESCRIPTION: INPUT:100-240VAC 50Hz/60Hz;
OUTPUT:9-48VDC/0-120W

VERSION: V01

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	"√"	CUSTOMER'S SIGNATURE	NOTE
FULL APPROVED			
CONDITIONAL APPROVED			
REJECTED			

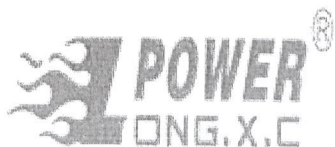


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1、SCOPE

1.1 PICTURE



1.2DESCRIPTION

This document introduces the electrical, mechanical and environmental specifications of the switching power supply.

1.3FEATURES

- Medical power with 2MOPP
- Universal AC input/Full range
- Free convection
- Unenclosed board
- High efficiency
- High power density

2、MODEL NAME RULE

Model:ACMS121-aaa

-ACMS= Name of Longxc medical power supply series

-121= 121 series

- aaa= stands for the output condition. “009” means 9V, “012” means 12V, “015” means 15V, “168” means 16.8V, “018” means 18V, “019” means 19V, “020” means 20V, “024” means 24V,“026” means 26V,“028” means 28V,“030” means 30V,“032” means 32V, ,“036” means 36V,“038” means 38V,“040” means 40V,“042” means 42V,“046” means 46V,“048” means 48V

Model number	Range of output current(A)	Range of output voltage(V)
ACMS121-012	0-10	+11.7~+12.3

Remark:

ACMS121-aaa;, the Earth leakage current less than 300u A at 264Vac,60Hz.

3、INPUT CHARACTERISTICS

3.1 INPUT VOLTAGE & FREQUENCY & Efficiency & PF

Input Voltage	Minimum	Nominal	Maximum
Input Voltage	90Vac	100-240Vac	264Vac
Input Frequency	47Hz	50Hz/60Hz	63Hz
Efficiency	>90% @ full load current and 220Vac		
PF	>0.9 @ full load current and 220Vac		

3.2 INPUT CURRENT

The maximum input current is 2.5A at 90Vac input voltage and full load.

3.3 INRUSH CURRENT

The inrush current will not exceed 50A at 264Vac input for a cold start at 25°C.

4、OUTPUT CHARACTERISTICS

4.1 OUTPUT

Item	ACMS121 SERIES	OUTPUT CHARACTERISTICS			
		Rated output voltage(V)	Output voltage range(V)	Output current range(A)	Rated output power(W)
Model number	ACMS121-009	9	+8.8~+9.3	0-10	90
	ACMS121-012	12	+11.7~+12.3	0-10	120
	ACMS121-015	15	+14.7~+15.3	0-8	120
	ACMS121-168	16.8	+16.5~+17.1	0-7.14	120
	ACMS121-018	18	+17.6~+18.4	0-6.66	120
	ACMS121-019	19	+18.6~+19.4	0-6.31	120
	ACMS121-020	20	+19.6~+20.4	0-6	120
	ACMS121-024	24	+23.5~+24.5	0-5	120
	ACMS121-026	26	+25.5~+26.5	0-4.61	120
	ACMS121-028	28	+27.4~+28.6	0-4.28	120
	ACMS121-030	30	+29.4~+30.6	0-4.0	120
	ACMS121-032	32	+31.4~+32.6	0-3.75	120
	ACMS121-036	36	+35.3~+36.7	0-3.34	120
	ACMS121-038	38	+37.3~+38.7	0-3.16	120
	ACMS121-040	40	+39.2~+40.8	0-3.0	120
	ACMS121-042	42	+41.2~+42.8	0-2.85	120
	ACMS121-046	46	+45.0~+47.0	0-2.60	120
ACMS121-048	48	+47.0~+49.0	0-2.50	120	
Notes: The PS can output 150 W if forced air convection					
Input adjust ratio		±2% Vout			
Load adjust ratio		±2% Vout			
The ripples and noises Vp-p		1% Vout			
Turn on delay		≤2 S @220Vac			
Hold up time		≥10 mS			

4.2 PROTECTION

Item	Specification	note
1	OCP 105~200% of rated load	Self-recovering
2	Output shorted have	The power supply shall withstand continuous current of short circuit on output and no any damage. when the fault condition is removed, the power supply shall be self-recovering.
3	OVP 105~125% of rated Output voltage	

5、 ENVIRONMENTAL REQUIREMENTS

5.1 OPERATING CONDITION

The power supply shall be compliant with each item in this specification for the following environmental conditions.

Ambient Temperature	0℃~40℃
Relative Humidity	0%~95%

5.1 STORAGE CONDITION

Ambient Temperature	-20℃~85℃
Relative Humidity	5%~95%

5.3 COOLING METHOD

Free air convection


5.4 ALTITUDE AND PRESSURE

ALTITUDE	≤5000m
PRESSURE	70KPa ~ 106KPa

5.5 TRANSPORTATION MODE

6、 ELECTROMAGNETIC COMPATIBILITY

Item	Test conditions	Criterion Class	NOTE
Conducted Emission	CLASS B	/	EN60601-1-2:2015; IEC60601-1-2:2014
Space radiation Emission	CLASS B	/	EN60601-1-2:2015; IEC60601-1-2:2014
SURGE	Line to line ±1KV	A	IEC60601-1-2:2014 ; EN60601-1-2:2015
	Line to ground ±2KV	A	EN61000-4-5:2015 ; IEC61000-4-5:2014
Electrostatic discharge	Air discharge ±15KV	A	IEC60601-1-2:2014; EN60601-1-2:2015
	Contact discharge ±8KV	A	EN61000-4-2:2009; IEC61000-4-2:2008
Electrical fast pulse train	±2KV (BURST FREQUENCY=100KHZ)	A	IEC60601-1-2:2014; EN60601-1-2:2015 EN61000-4-4:2013; IEC61000-4-4:2012
Voltage sag and short interruption	Drop to 70%Ut, duration 500ms (25 cycles)	A	IEC60601-1-2:2014; EN60601-1-2:2015 EN61000-4-11:2005; IEC61000-4-11:2004

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	Drop to 40%Ut, duration 20ms (5 cycle)	A	
	Drop to 5%Ut, duration 10ms (0.5 cycles)	A	
	Fall to 5%Ut, duration 5000ms (250 cycles)	B	
Radiation immunity	Test frequency: 80MHz ~ 2700MHz; Magnetic field intensity: 10V/m; Amplitude modulation: 80%AM(1KHz)	A	IEC60601-1-2:2014; EN60601-1-2:2015 EN61000-4-3:2008; IEC61000-4-3:2007
Conduction immunity	Test frequency: 0.15mhz ~ 80MHz; Electric field intensity: 6Vrms; Amplitude modulation: 80%AM(1KHz)	A	IEC60601-1-2:2014; EN60601-1-2:2015 EN61000-4-6:2014; IEC61000-4-6:2013
Harmonic current	CLASS C	/	IEC60601-1-2:2014; EN60601-1-2:2015 EN61000-3-2:2015; IEC61000-3-2:2014
Voltage fluctuation and flicker	Pst value is not greater than 1.0; Plt value not greater than 0.65; The relative steady-state voltage variation dc does not exceed 3.3%; The maximum relative voltage change dam should not exceed 4%. When the duration of relative voltage change is longer than 500mS, the voltage change is less than 4%	/	IEC60601-1-2:2014; EN60601-1-2:2015 EN61000-3-3:2014; IEC61000-3-3:2013
Power frequency magnetic field	30A/m	A	IEC60601-1-2:2014; EN60601-1-2:2015 EN6000-4-8:2010; IEC6000-4-8:2009

Criterion Class:

- A: Normal performance within limits specified by the manufacturer, requestor or purchaser**
- B: Temporary loss of function or degradation of performance which ceases after the disturbance ceases, and from which the equipment under test recovers its normal performance, without operator intervention**
- C: Temporary loss of function or degradation of performance, the correction of which requires operator intervention**
- D: Loss of function or degradation of performance which is not recoverable, owing to damage to hardware or software, or loss of data**

7 MTBF

The power supply shall have a minimum predicted MTBF(MIL-STD-217F) of 100000 hours at normal operation condition and normal use.

8 OTHERS

8.1CONNECTOR TYPE

AC INPUT	VH3.96-3P2(Unplug the second Pin)
DC OUTPUT	VH3.96-4P

8.2WEIGHT

The weight of the power supply shall be about 290g.

9 SAFETY CERTIFICATION

9.1 SAFETY STANDARD

The power supply is designed to meet IEC60601-1;2005, 3rd Edition and EN60601-1;2006,3rd Edition, and design for the following safety regulations.

	ITEM	COUNTRY
<input type="checkbox"/>	UL	USA
<input checked="" type="checkbox"/>	CE	EUROPE
<input checked="" type="checkbox"/>	CB	WORLD
<input type="checkbox"/>	BS	ENGLAND
<input type="checkbox"/>	NRTL	NORTH AMERICA
<input type="checkbox"/>	TUV	GERMANY

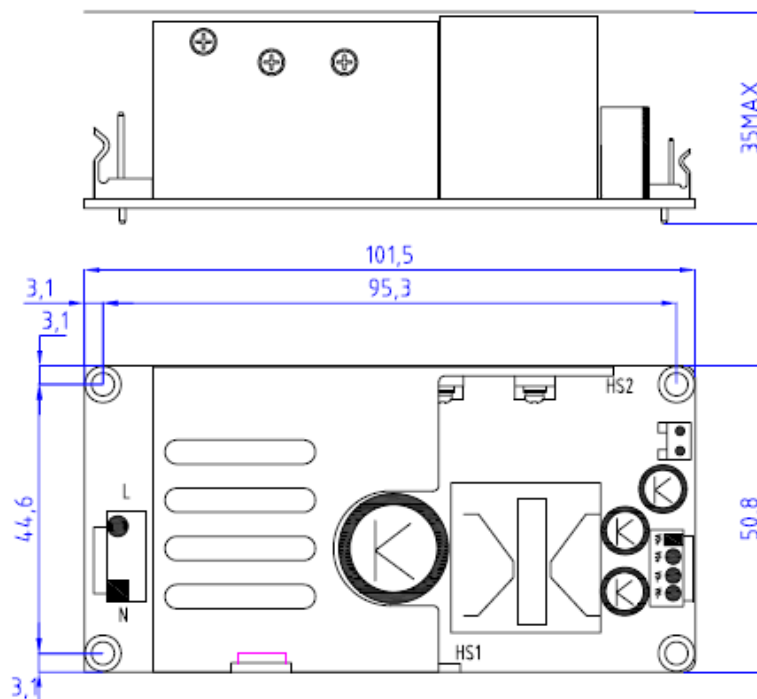
9.2 DIELECTRIC WITHSTAND VOLTAGE

Item	Specification	Note
DIELECTRIC WITHSTAND VOLTAGE	Input—Output	No breakdown, no damage
	Input—Earth	
	Output—Earth	

9.3 INSULATION RESISTANCE

500Vdc/1 Sec,10MΩ min, between primary and secondary.

10 OUTLINE AND LABEL ARTWORK(UNIT:MM)



11 NAMEPLATE (Sample)


Medical Switching Power Supply

Model(型号) : ACMS121-024

RoHS

Input(输入) : 100-240V~, 50/60Hz, 2.5A Max.



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2 NOTICE

- **Unauthorized personnel shall not perform maintenance or repair, and there is a risk of electric shock.**
- **Do not remove the outer cover or touch the internal parts under any circumstances;**
- **For the sake of safety, do not carry out internal warranty fuse and parts replacement separately;**
- **Turn off the power supply immediately if smoke or bad smell is found during starting up or using.**
- **If the product exceeds its service life or is damaged beyond repair, it shall be returned to the manufacturer or the electronic product recycling company for recycling. Environmental pollution or other circumstances caused by direct disposal must be prohibited.**
- **The power supply shall be transported by cars, boats and aircrafts, and it should be pay attention to direct sunlight, moisture and handing in transit.**
- **At the termination of the products use, the products need to be reasonable processed according to the requirements of the local government.**
- **If the product exceeds its service life or is damaged beyond repair, it shall be returned to the manufacturer or the electronic product recycling company for recycling. Environmental pollution or other circumstances caused by direct disposal shall be prohibited.**