TECHNICAL SPECIFICATION

PRODUCT	Medical Power Adapter	SERIES	XH-PH130

Picture



Features

- 130W medical power adapter
- Meet IEC/EN60601-1 medical safety certification
- Protection EMC Class II power
- Wide operating voltage range
- Perfect Protections: Short circuit/Overload/Over voltage/Over current
- 3 years product warranty

*** Application：** Standard active medical equipment

■ Model Selector

Models	Output Voltage	Output Current	Ripple & Noise (MAX)	MAX Total Regulation
PH130-12	12V	9.2A	50mV	±5%
PH130-13.2	13.2V	8.35A	50 mV	±5%
PH130-15	15V	7.35A	50mV	±5%
PH130-19	19V	5.8A	100mV	±5%
PH130-24	24V	4.58A	150mV	±5%

■ Description

PH130 series is a highly reliable, 110W medical desktop single-output green power adapter, equipped with general standard plug. It complies with latest medical safety standards IEC/EN60601-1 and 2 x MOPP. The efficiency of PH130 series is up to 91%, lower than the ultra-low no-load power consumption of 3W. It offers ultra-wide input voltage range from 90VAC to 264VAC, and supplies different output voltages range between 12VDC and 48VDC.

The supreme feature allow adaptor to save the energy when it is either under the operating mode and standby mode. The perfect protection management and flame retardant plastic case ensure the safety and high reliability of the products. With addition of compact structure, natural heat dissipation, and so on, which can satisfy the demands for various types of medical devices.

■ Safety Approvals

CB	CB certification	Medical	Medical grade, Safety Approvals
ROHS	RoHS Compliant	2×MOPP	2 x MOPP Input to Output Isolation
ECO	Eco-Design	BF rated	Type BF Rated Power Supplies

- Safety approval: IEC/EN60601-1. 3.1 version
  GB9706.1-2016
- EMC：IEC/EN60601-1-2 4.0 version
  YY0505-2012

■ Input Specifications

Input Voltage Range	100 ~ 240 Vac	
Start-up Voltage Range	90 ~ 264 Vac	
Input Frequency Range	50~ 60 Hz	
AC Current	0.7A(Min) / 1.7A(Max)	Rated load
Inrush Current	35 A	Rated load
Power Factor	≥0.90	Rated load

■ Output Specifications

Model	PH130-12	PH130-13.2	PH130-15	PH130-19	PH130-24
Output Voltage	12V	13.2V	15V	19V	24V
Voltage Range	11.5-12.5V	12.7-13.7V	14.5-14.5V	18.5-19.5V	23.5-24.5V
Output Current	9.2A	8.35A	7.35A	5.8A	4.58A
Output Power	110.4W	110.22W	110.25W	110.2W	109.92W
Output Ripple	≤120mV	≤132mV	≤150mV	≤190mV	≤240mV
Efficiency	≥91%				
Load Regulation	±2.0%				
Line Regulation	±1.0%				
Setup / Rise Time	1000ms，30ms/230VAC 1500ms，30ms/115VAC at full load				

■ Other Specifications

Standby Power Consumption	3W at 220Aac input/ full load
Power-on Output Delay	15mS / 30mS(MAX) at 220Aac input/ full load
Power On/Off Overshoot	5% / Rated input voltage, rated load
Product Service Life	The environment temp. is 25 ° C and the rated load is ⩾5 years

■ Protection specification

Overload Protection	105% ~ 130% rated output power (CC mode, Auto recovery)
Over Voltage Protection	Shut down output voltage, re-power on to recover
Short circuit	Auto-recovery after the fault is removed

■ Environmental indicators

Working Temp.	-10℃ ~ +50 ℃	
Working Humidity	5 ~ 90% RH non-condensing	
Storage Temp.	-20 ~ 80 ℃	
Storage Humidity	5 ~95% RH non-condensing	
Temp. Coefficient	±0.03% (0 ~40℃)	
Vibration Resistance	10 ~ 500Hz， 2G 10 mins/1cycle	X、Y、Z axes/60 mins
Operating Altitude	0 ~ 5000 meters	For operation above 3500m (5000ft), the maximum operating temperature decreases by 2 ℃ for every 305m increase
Seismic Grade	4 Zone	
Noise	35 dB	

■ Safety & EMC

<table>
<tr><td>Safety Standards</td><td colspan="3">IEC 60601-1:2005 + A1:2012 approved
IEC 60601-1-6:2010 + A1:2013 approved</td></tr>
<tr><td rowspan="5">EMC Emission</td><td>Project</td><td>Test Level / Note</td><td>Standard</td></tr>
<tr><td>Conducted Emission (CE)</td><td>CLASS B</td><td>EN60601-1-2
IEC60601-1-2</td></tr>
<tr><td>Radiated Emission (RE)</td><td>CLASS B</td><td>EN60601-1-2
IEC60601-1-2</td></tr>
<tr><td>Harmonic Current</td><td>CLASS A</td><td>EN61000-3-2
IEC61000-3-2</td></tr>
<tr><td>Voltage Flicker</td><td>Pst≤1.0,
P1t≤0.65,
Steady state voltage change dc<3.3%,
Maximum relative voltage change /d max<3.3%,
Relative voltage change /d(t)>500mS≤4%</td><td>EN61000-3-3
IEC61000-3-3</td></tr>
<tr><td rowspan="8">EMC Immunity</td><td>ESD</td><td>15KV Air discharge
8KV Contact discharge</td><td>EN61000-4-2
IEC61000-4-2</td></tr>
<tr><td>RF</td><td>10V/m (80MHz~2.7GHz)
9~28V/m(385MHz~5.78GHz)</td><td>EN61000-4-3</td></tr>
<tr><td>EFT</td><td>±2KV</td><td>EN61000-4-4
IEC61000-4-4</td></tr>
<tr><td>SURGE</td><td>±1KV/Line-Line
±2KV/Line-Ground</td><td>EN61000-4-5
IEC61000-4-5</td></tr>
<tr><td>CS</td><td>10V</td><td>EN61000-4-6
IEC61000-4-6</td></tr>
<tr><td>MFI</td><td>30A/m</td><td>IEC6000-4-8</td></tr>
<tr><td rowspan="3">Voltage DIP & interruption</td><td>Dip 100%U,5000ms,250 periods</td><td rowspan="3">EN61000-4-11
IEC61000-4-11
(Note：240Vac/50Hz test)</td></tr>
<tr><td>Dip 70%Ut,500ms，25 periods</td></tr>
<tr><td>Dip 40%Ut,100ms,5 periods</td></tr>
</table>

		Dip 0%Ut， 10ms,half period	

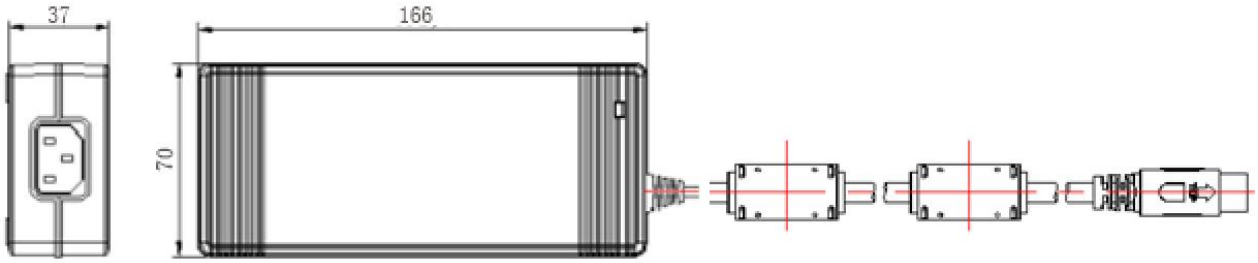
■ Isolation Level

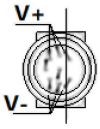
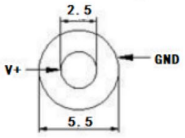
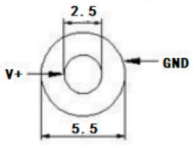
TEST ITEM	Grade	Standard
Input to Output	4000VAC	50Hz, 4000V 1 min, Leakage Current≤5mA, No breakdown and flaring.
Input to Ground	1500VAC	50Hz, 1500V 1 min, Leakage Current≤5mA, No breakdown and flaring.
Output to Ground	500VDC	500V, DC 1 min, Leakage Current≤5mA, No breakdown and flaring.
Isolation Resistance	100MΩ	>100 MΩ & 90% RH & 500 VDC
Earth Leakage Current	264VAC	Leakage Current≤0.3mA
Isolation Level	Primary - secondary:2×MOPP	

■ Others

MTBF	720K hrs min. MIL-HDBK-217F (25℃)
External Dimension (mm)	166×70×37mm（L×W×H）
Weight (g)	≤600g

■ Mechanical Specification



DC Output Plug option	Connectors and pictures
Din 8 Pin Male	 
Din 4 Pin Male	  1、2：V+； 3、4：V-
Φ5.5*2.5*11mm right-angled plug	 
Φ5.5*2.5*11mm straight plug	 

NO.	Connectors	Note
1	Ac input socket adopts AC Inlet **IEC320-C14**	1：AC L 2：GND 3：AC N
2	DC output cable length:1200±50㎜	Optional Customization