

HPA65 series

V1.0

65W Medical / ITE Power Supply

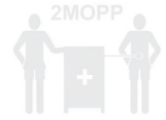
GENERAL DESCRIPTION:

The HPA65 series is an external unit with dual certifications for both medical and ITE safety standards. It consistently delivers 65 watts of power across a voltage range of 8V to 48V. Designed to operate effectively within a temperature range of -40 to 70°C, it is suitable for a wide range of applications. Furthermore, it holds an IP22 rating, offering a certain degree of protection against dust and liquids. All units pass burn-in test at full load condition.



FEATURES:

- Input Voltage Range: 70-264VAC
- Operating Temperature: -40~70°C (with derating from 50°C)
- Suitable for BF Application
- Protection: OVP, OLP, OTP, SCP
- 2MOPP
- Operating Altitude: 5000M
- Build-In EMI Filter
- Meet 60335
- 3-Year Warranty



APPLICATIONS:

- Video Conferencing System
- Printer
- Video Converter
- Traffic Flow Monitor
- Infrared Camera
- Medical Tablet
- Respiratory Device and Heart Monitor
- Blood Analyzer
- Vision Examiner
- Protein Analyzer

SAFETY STANDARDS:



GENERAL SPECIFICATION:

- **Waterproof and Dustproof Degree:** IP22
- **Protection Classes:** I (meet Class II)
- **Safety:** IEC 62368-1 Edition 2.0, IEC 62368-1 Edition 3.0, EN 62368-1, UL62368-1, CAN/CSA-C22.2 NO.62368-1-14, IEC 60601-1 Edition 3.2, EN60601-1, ANSI/AAMI ES60601-1: 2005 (R2012), CSA C22.2 NO. 60601-1-14

ELECTRICAL CHARACTERISTICS:

Characteristic	Condition	Min.	Typ.	Max.	Unit
Nominal Input Voltage	100/240VAC, single phase	100		240	VAC
Input Voltage Range	Derate linearly from 100% load at 90VAC to 70% load at 70VAC	70		264	VAC
Input Frequency Range	Sine Wave	47		63	Hz
Output Power	See Rating Chart			65	W
Low Line Input Current	Full Load, Vin=115VAC			1.5	A
High Line Input Current	Full Load, Vin=230VAC			0.75	A
Low Line Input Inrush Current	Full Load, 25°C, Cool Start, Vin=115VAC			50	A
High Line Input Inrush Current	Full Load, 25°C, Cool Start, Vin=230VAC			100	A
Earth Leakage Current	0.1 mA @ 264VAC Normal Condition, 0.3 mA @ 264VAC Single Fault Condition)			0.1	mA
Average Efficiency	CoC v5 (Tier2), See Rating Chart		89		%
Line Regulation	Full Load, Vin=100~120VAC			0.5	%
Load Regulation	Vin=100~240VAC		3	5	%
Hold-Up Time	Hold up time is measured from the end of the last charging pulse to the time which the main output drops down to low limit of main output at rated load and nominal line.	10	12		ms
Start-Up Time	Full Load, Vin=100~240VAC			3	s
Rise Time	At 115VAC & 230VAC			50	ms
MTBF (typ.)	1 million hours based on Telecordia SR-332(at 115 Vac, MAX. load and 25°C ambient)		1000k		h

PROTECTION:

Characteristic	Condition	Min.	Typ.	Max.	Unit
Short Circuit	Hiccup Mode, (Non-Latching, Auto-Recovery)				
Over Temperature	Hiccup Mode, (Non-Latching, Auto-Recovery)				
Overvoltage	Latch Mode	105		150	%
Overload/Overcurrent	Hiccup Mode, (Non-Latching, Auto-Recovery)	110		154	%

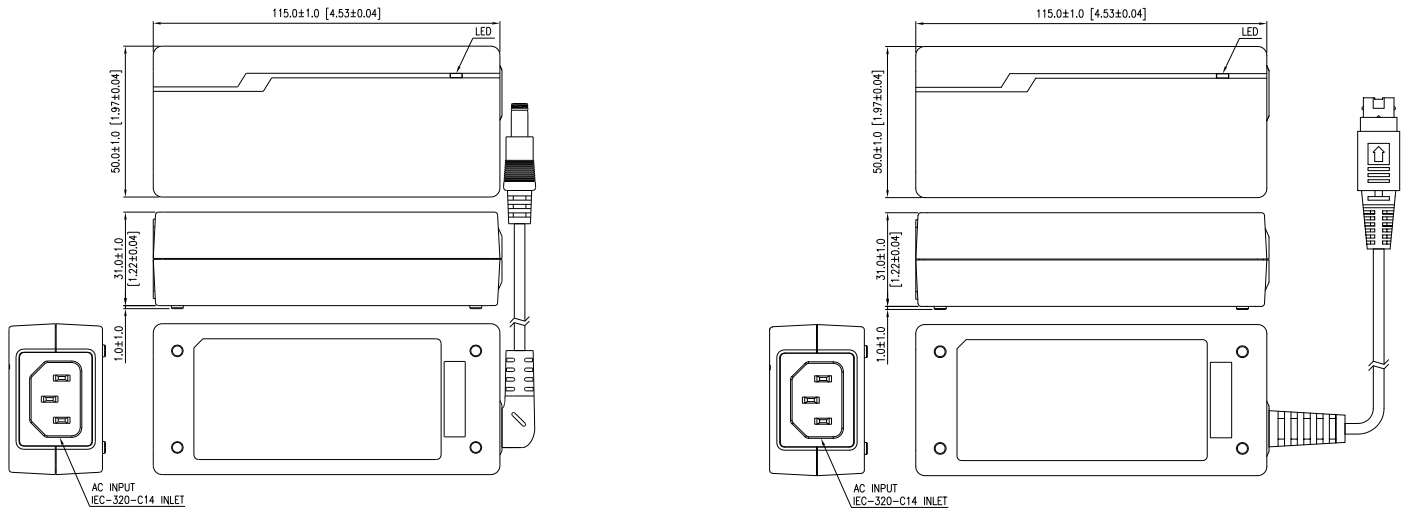
ENVIRONMENTAL:

Characteristic	Condition	Min.	Typ.	Max.	Unit
Operating Temperature	Derate Linearly From 100% Load at 40°C to 50% Load at 70°C	-40		70	°C
Storage Temperature	Surrounding Air Temperature	-40		85	°C
Temperature Coefficient	All Condition			±0.04	%/°C
Operating Humidity	10-95% RH (Non-Condensing)	10		95%	RH
Storage Humidity		0		95%	RH
Operating Altitude	Up to 5,000 meters	5000			m
Vibration	Non-Operating, 5-500 Hz, 2.09 Grms, 20 minute for Each Three Axis			2.09	G

EMC:

Characteristic	Condition	Min.	Typ.	Max.	Unit
Electrostatic Discharge	Air Discharge, IEC/EN61000-4-2, Level 4 Criteria A			15	kV
Electrostatic Discharge	Contact Discharge, IEC/EN61000-4-2, Level 4 Criteria A			8	kV
Surge Susceptibility	IEC/EN61000-4-5, Level 3 Criteria A, Differential Mode:1kV			1	kV
Surge Susceptibility	IEC/EN61000-4-5, Level 3 Criteria A, Common Mode:2kV			2	kV
Dielectric Withstand Voltage (P-S)	Primary to Secondary, Limit Current <10mA			4000	VAC
Dielectric Withstand Voltage (P-G)	Primary to PE, Limit Current <10mA			1500	VAC
EMC Emission	Compliance to En55032, EN55035		B		Class

MECHANICAL DIMENSIONS: (UNIT: mm)



OUTPUT CABLE RECOMMEND :

1. Selected output connectors and wire, please refer to the Appendix.
2. 8V~9V are required to use AWG#14, 2FT, UL11353, 80°C output cable.
3. 12V are required to use AWG#16, 4FT, UL1571, 80°C output cable.
4. 15V~16V are required to use AWG#16, 4FT, UL1571, 80°C output cable.
5. 18V~24V are required to use AWG#18, 4FT, UL1571, 80°C output cable.
6. 28V~48V are required to use AWG#20, 4FT, UL1185, 80°C output cable.

Rating Chart:

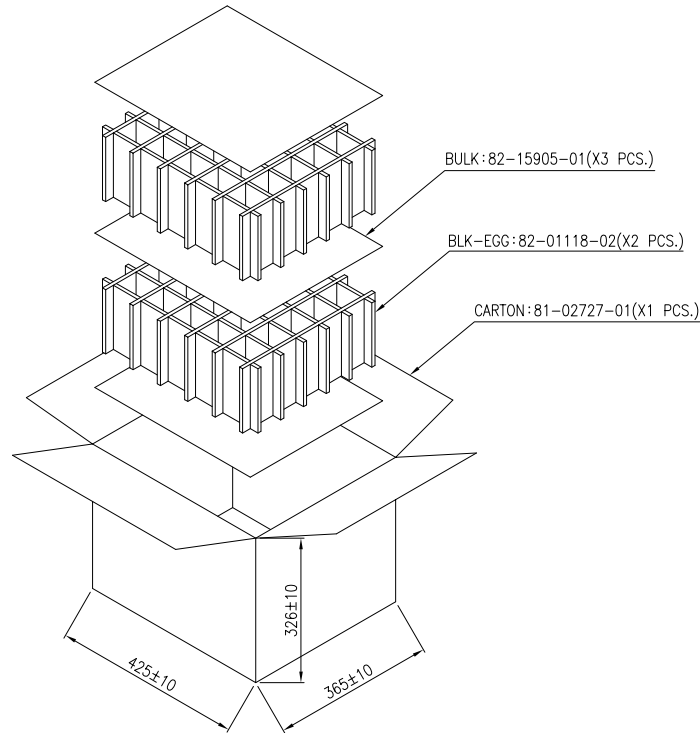
MODEL NO.	Rated Output Voltage	Rated Output Current	Maximum Output Power	Ripple & Noise	Total Regulation	Load Efficiency 10%	AVG. Efficiency	Max. No Load Consumption	Hold-Up Time (typ.)	Limited Power Source
	(VDC)	(A)	(W)	(mVp-p)	(%)	(%)	(%)	(W)	(ms)	(LPS)
HPA65A-080	8	6.75	54	80	±5	79.0	89.0	0.15	12	×
HPA65A-090	9	6.00	54	100	±5	79.0	89.0	0.15	12	×
HPA65A-120	12	5.42	65	100	±3	79.0	89.0	0.15	12	✓
HPA65A-150	15	4.33	65	100	±3	79.0	89.0	0.15	12	✓
HPA65A-160	16	4.06	65	120	±3	79.0	89.0	0.15	12	✓
HPA65A-180	18	3.61	65	120	±3	79.0	89.0	0.15	12	✓
HPA65A-190	19	3.42	65	120	±3	79.0	89.0	0.15	12	✓
HPA65A-200	20	3.25	65	130	±3	79.0	89.0	0.15	12	✓
HPA65A-240	24	2.70	65	150	±2.5	79.0	89.0	0.15	12	✓
HPA65A-280	28	2.32	65	180	±2.5	79.0	89.0	0.15	12	✓
HPA65A-300	30	2.16	65	200	±2.5	79.0	89.0	0.15	12	✓
HPA65A-480	48	1.36	65	200	±2.5	79.0	89.0	0.15	12	✓

Product Coding:

HP	□	65	□	□
SINPRO ITE/ Medical Desktop Supply	A: 275 VAC Max (Standard) I: 297 VAC Max/ OVC III	Max. wattage in the product	AC Inlet A: C14 B: C8	Output Voltage 120: 12V 150: 15V 240: 24V 480: 48V

STANDARD PACKAGING: (UNIT: mm)

- * Power Supplies per Box (full box): 50pcs
- * Box Dimensions: L425*W365*H326 cm



* The packing information is for reference purposes.
Please reach out to our sales team for confirmation of the packing details.

Standard Connector:

Barrel Female Plug	Plug PN	OD	ID	L	Standard Connection	Wire Material	Wire Type
	P01N	5.5	2.5	11	Center=OUT(+) Sleeve=RTN(-) (Tuning Fork Type)	UL1571 UL1185	12V, 15V~16V: 16AWG/4FT 18V~24V: 18AWG/4FT 28V~48V: 20AWG/4FT
POWER DIN-4 + Lock	Plug PN	Standard Connection			Wire Material	Wire Type	
	P09B	P1,P2=OUT P3,P4=RTN			UL11353	8V~9V: 14AWG*2C/2FT	

Optional Connector:

Barrel Female Plug	Plug PN	OD	ID	L	Standard Connection	Wire Material	Wire Type
	P01M	5.5	2.5	9.5	Center=OUT(+) Sleeve=RTN(-) (Tuning Fork Type)	UL1571 UL1185	12V, 15V~16V: 16AWG/4FT 18V~24V: 18AWG/4FT 28V~48V: 20AWG/4FT
	P01S	5.5	2.5	12			
Barrel Angle Female Plug	Plug PN	OD	ID	L	Standard Connection	Wire Material	Wire Type
	P02M	5.5	2.5	9.5	Center=OUT(+) Sleeve=RTN(-) (Tuning Fork Type)	UL1571 UL1185	12V, 15V~16V: 16AWG/4FT 18V~24V: 18AWG/4FT 28V~48V: 20AWG/4FT
	P02N	5.5	2.5	11			

* Please contact our sales team for detailed information regarding optional output connectors.