

TPHPU32A SERIES

30W Desk Top Type
Medical Power Supplies

Features:

- Wide Operating Voltage 90 to 264 VAC, 47 to 63 Hz
- IEC-320-C18 Input Inlet
- Single Output
- Over Voltage and Over Load protection
- ANSI/AAMI ES 60601-1: 2005(UL/cUL 3rd Edition)
EN 60601-1:2006 (TUV/T-mark 3rd Edition)
- Input to Output : 2MOPP
- Energy Star 2.0, Efficiency level V
- Class II
- 2 year warranty



Electrical Characteristics:

Vin	Safety Approvals Input Voltage Range		100~240VAC
	Operate Voltage Range		90~264VAC
fin	Input Frequency		47~63Hz
Po	Output Power Range		See rating chart
Vo	Output Voltage Range		See rating chart
Io	Output Current Range		See rating chart
Iil	Input Current (Low Line)	Io=Full load, Vin=100VAC	0.6A
Iih	Input Current (High Line)	Io=Full load, Vin=240VAC	0.4A
Ir	Low Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=115VAC	28A (max.)
	High Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=230VAC	56A (max.)
Eff	Efficiency	Io=Full Load, Vin=230VAC	73.5~85%
REG-i	Line Regulation	Io=Full Load	1% (max.)
REG-o	Load Regulation	Vin=230VAC	5% (max.)
OVP	Over Voltage Protection		112~132%
OCP	Over Current Protection		110~150%
Ttr	Time of Transient Response	Io=Full Load to Half Load, Vin=100VAC	4mS (max.)
Th	Hold-Up Time	Io=Full Load, Vin=110VAC	12mS (min.)
Ts	Start Up Time	Io=Full Load, Vin=100VAC	0.3~2S
Vp-p	Ripple & Noise(Peak to Peak)	Full Load, Vin=90VAC	1% (max.)
TC	Temperature Coefficient	All output	±0.04%/°C
OA	Operating Altitude		Up to 3000m
Pno	No-Load Power Consumption	No load, Vin=230VAC	See rating chart
Vps	Dielectric Withstanding Voltage	Primary to secondary	6284VDC (min.)

Note: The specifics for testing the energy efficiency of TPHPU32 Series are outlined in a separate document titled "Test Method for Calculating the Energy Efficiency of Single-Voltage External Ac-Dc and Ac-Ac Power Supplies (August 11, 2004)," which is available on the ENERGY STAR Website.

Environmental

To	Operating Temperature	See derating crve
Ts	Storage Temperature	-40~85°C
Ho	Operating Humidity	0~95%
Hr	Storage Humidity	0~95%
MTBF	Operating Temperature at 25°C, Calculated per MIL-HDBK-217F	0.1M Hrs (min.)
Pd	Derate linearly from 100% load at 40°C to 50% load at 70°C	

Application:

- Blood Pressure system
- Portable medical devices
- ECG machine

Safety Approvals:



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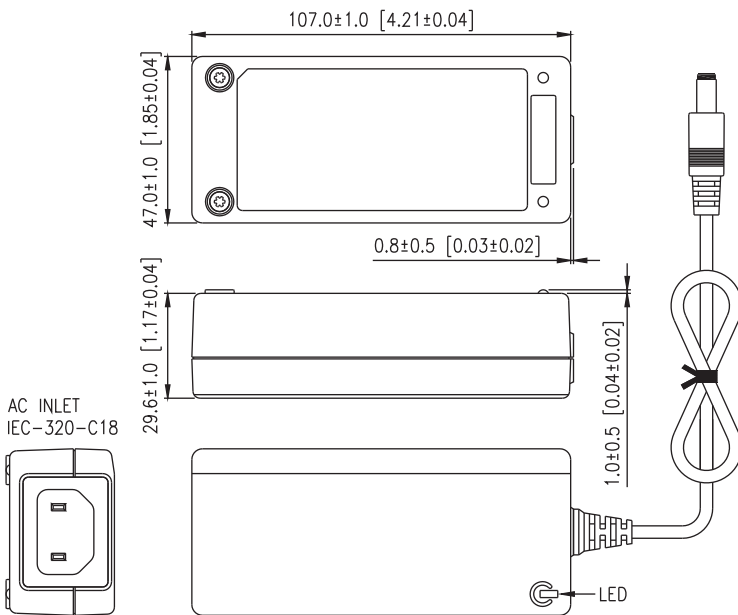
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Output Voltage And Current Rating Chart (Single Output) :

Model Number	Output Voltage	Output Current	Total Regulation	Max. Output Power	Pno (max.)
TPHPU32A-102	5 ~ 6 VDC	4.00 ~ 3.33 A	5%	20W	0.3W
TPHPU32A-103	6 ~ 8 VDC	3.83 ~ 2.87 A	5%	23W	0.3W
TPHPU32A-104	8 ~ 11 VDC	3.38 ~ 2.45 A	5%	27W	0.3W
TPHPU32A-105	11 ~ 13 VDC	2.74 ~ 2.30 A	5%	30W	0.3W
TPHPU32A-106	13 ~ 16 VDC	2.30 ~ 1.88 A	5%	30W	0.3W
TPHPU32A-107	16 ~ 21 VDC	1.88 ~ 1.43 A	5%	30W	0.3W
TPHPU32A-108	21 ~ 27 VDC	1.43 ~ 1.11 A	5%	30W	0.3W
TPHPU32A-109	27 ~ 33 VDC	1.11 ~ 0.91 A	3%	30W	0.3W
TPHPU32A-110	33 ~ 40 VDC	0.91 ~ 0.75 A	3%	30W	0.3W
TPHPU32A-111	40 ~ 48 VDC	0.75 ~ 0.63 A	3%	30W	0.3W

TPHPU32A-102~104 are required to use AWG#16/4FT output cable.
 TPHPU32A-105~111 are required to use AWG#18/ 6FT output cable.
 The regulation and efficiency will be changed by modified output cable.

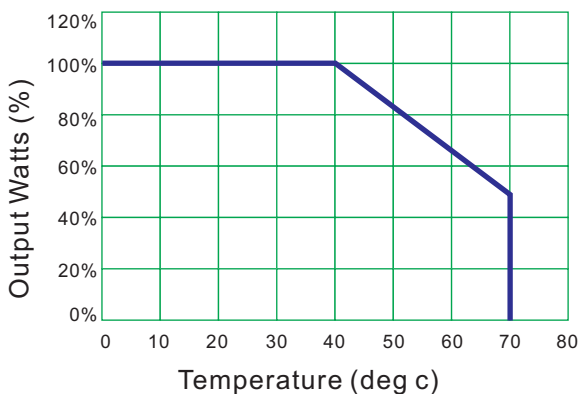
Mechanical Specifications:



Note:

1. Dimensions are shown in mm.
2. Weight: 265-280gs approx.
3. Optional output connector: See page Appendix.

Derating Curve :



1. Operating Temperature: 0 to 70°C
2. Derate linearly from 100% load at 40°C to 50% load at 70°C