

# TPSPU45E SERIES

50W Desk Top Type  
I.T.E. Power Supplies

## Features:

- Wide Operating Voltage 90 to 264 VAC, 47 to 63 Hz
- IEC-320-C14 Input Inlet
- Optional Output Connector (See page appendix)
- Input Surge Current, Over Voltage And Over Load protection
- Single to Triple Output
- Class I
- 1 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	1.35A
	Input Current (High Line)	Io=Full load, Vin=240VAC	0.80A
Ir	Low Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=115VAC	20A (max.)
	High Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=230VAC	40A (max.)
Eff	Efficiency	Io=Full Load, Vin=230VAC	70~88%
REG-i	Line Regulation	Io=Full Load	0.5~1%
REG-o	Load Regulation	Vin=230VAC	3~7%
OVP	Over Voltage Protection		Nil
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	3S (max.)
Vp-p	Ripple & Noise(Peak to Peak)	Full Load, Vin=90VAC	1% (max.)
Ilk	Safety Ground Leakage Current	Vin=240VAC/60Hz	0.75mA (max.)
TC	Temperature Coefficient	All output	±0.04%/°C
Pno	No-Load Power Consumption	No load, Vin=230VAC	See rating chart
Vps	Dielectric Withstanding Voltage for Primary to secondary	Primary to secondary	4242VDC (min.)
Vpg	Dielectric Withstanding Voltage for Primary to PE	Primary to PE	2677VDC (min.)
Ris	Isolation Resistance	Test Voltage=500VDC	50MΩ (min.)

Note: The Ripple & Noise which is under 3.3VDC at 2% max, Allowed OVP Range 112~150%.

## Environmental

To	Operating Temperature	See derating curve
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:

- POS System
- AV Equipment
- Industrial PC
- Note PC
- Charger
- LED Lighting

## Safety Approvals:



UL/c-UL(UL 60950-1:2nd Edition)  
TUV/GS(EN 60950-1:2nd Edition)



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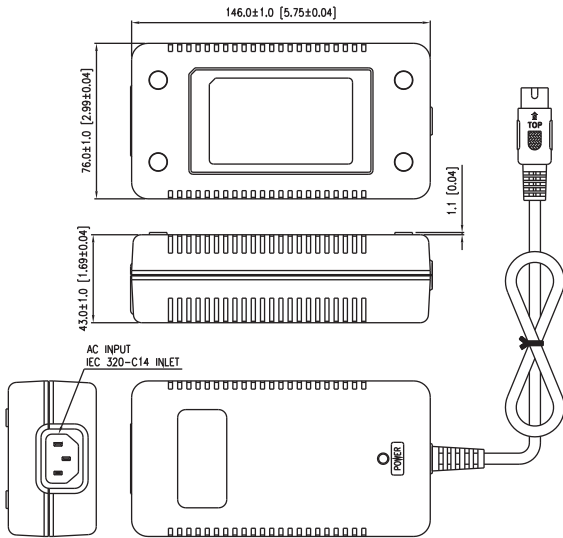
## Output Voltage And Current Rating Chart ( Single Output ) :

Model Number	Output Voltage	Output Current	Total Regulation	Max. Output Power	Pno (max.)
TPSPU45E-101	3 ~ 5 VDC	8.00 A max	5%	40W	4.5W
TPSPU45E-102	5 ~ 6 VDC	8.00 ~ 6.66 A	5%	42W	4.5W
TPSPU45E-103	6 ~ 8 VDC	7.00 ~ 5.25 A	5%	42W	4.5W
TPSPU45E-104	8 ~ 11 VDC	5.63 ~ 4.00 A	5%	45W	4.5W
TPSPU45E-105	11 ~ 13 VDC	4.00 ~ 3.46 A	5%	45W	4.5W
TPSPU45E-106	13 ~ 16 VDC	3.46 ~ 2.81 A	5%	45W	4.5W
TPSPU45E-107	16 ~ 21 VDC	3.12 ~ 2.38 A	5%	50W	4.5W
TPSPU45E-108	21 ~ 27 VDC	2.30 ~ 1.85 A	3%	50W	4.5W
TPSPU45E-109	27 ~ 33 VDC	1.85 ~ 1.51 A	3%	50W	4.5W
TPSPU45E-110	33 ~ 40 VDC	1.51 ~ 1.25 A	3%	50W	4.5W
TPSPU45E-111	40 ~ 50 VDC	1.25 ~ 1.00 A	3%	50W	4.5W

## Output Voltage And Current Rating Chart ( Multi Output ) :

Model Number	Output #1				Output #2				Output #3				Max. Output Power	Pno (max.)
	Vonom	Iomin	Iomax	Regmax	Vonom	Iomin	Iomax	Regmax	Vonom	Iomin	Iomax	Regmax		
TPSPU45E-200	+3.3V	0.7A	5A	7%	+12V	0.4A	2A	5%					40W	5W
TPSPU45E-201	+5V	0.5A	5A	5%	+12V	0.3A	2A	5%					42W	5W
TPSPU45E-202	+5V	0.8A	5A	5%	+15V	0.3A	1.5A	6%					42W	5W
TPSPU45E-203	+5V	0.5A	5A	5%	+24V	0.2A	1A	5%					42W	5W
TPSPU45E-204	+3.3V	0.8A	5A	7%	+5V	0.4A	2A	5%					26.5W	5W
TPSPU45E-209	+12V	0.3A	3A	5%					-12V	0A	1A	10%	42W	5W
TPSPU45E-210	+15V	0.5A	2A	5%					-15V	0.3A	1A	10%	42W	5W
TPSPU45E-215	+5V	0.5A	5A	5%					-24V	0.1A	1A	10%	42W	5W
TPSPU45E-216	+5.1V	0A	1A	5%					+7.2V	0.2A	2.6A	5%	23.82W	5W
TPSPU45E-300	+3.3V	1.0A	5A	7%	+12V	0.3A	2A	5%	-12V	0.15A	0.8A	10%	42W	5.5W
TPSPU45E-301	+5V	0.5A	5A	5%	+12V	0.8A	2A	5%	-5V	0.16A	0.8A	10%	42W	5.5W
TPSPU45E-302	+5V	0.6A	5A	5%	+12V	0.45A	2A	5%	-12V	2A	0.8A	10%	42W	5.5W
TPSPU45E-303	+5V	0.5A	5A	5%	+15V	0.3A	2A	6%	-15V	0.16A	0.8A	10%	42W	5.5W
TPSPU45E-304	+5V	0.5A	5A	5%	+24V	0.1A	1A	5%	-24V	0.10A	0.5A	10%	42W	5.5W
TPSPU45E-305	+5V	0.5A	5A	5%	+24V	0.1A	1A	5%	-12V	0.16A	0.8A	10%	42W	5.5W
TPSPU45E-306	+3.3V	0.5A	5A	7%	+12V	0.2A	2A	5%	-5V	0.16A	0.8A	10%	42W	5.5W

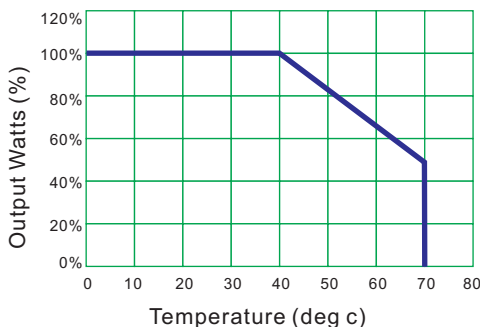
## Mechanical Specifications:



Note:

1. Dimensions are shown in mm.
2. Weight: 535~560gs 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

