

# APU45 series

50W Desk Top Type  
Extreme Temp. 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)
- Over Voltage Protection (Crowbar Design)
- Input Surge Current, Over Voltage And Over Load protection
- Single to Triple Output
- Operating temperature -40~70°C
- Class I
- 3 year warranty



**PRELIMINARY**

## 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 (max.)
Iih	Input Current (High Line)	Io=Full load, Vin=240VAC	0.8A (max.)
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	75~88%
REG-i	Line Regulation	Io=Full Load	0.5~1%
REG-o	Load Regulation	Vin=230VAC	3~15%
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	2S (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	2121VDC (min.)
Ris	Isolation Resistance	Test Voltage=500VDC	50MΩ (min.)

Note: The Ripple & Noise which is under 3.3VDC at 2% max

## 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:

**RoHS2**  
2011/65/EU



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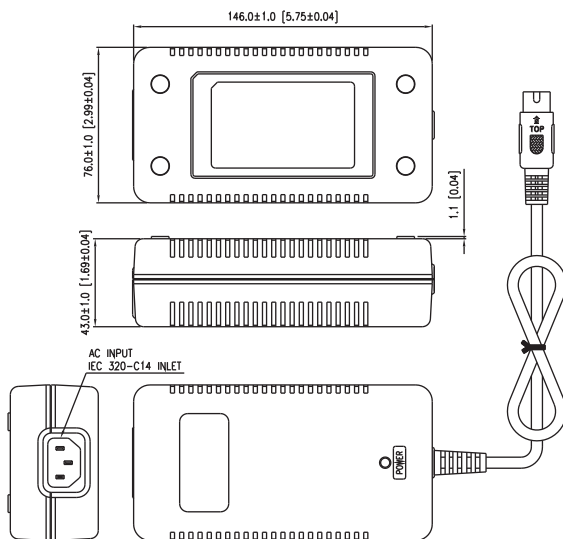
## Output Voltage And Current Rating Chart ( Single Output ) :

Model Number	Output Voltage	Output Current	Total Regulation	Max. Output Power	Pno (max.)
APU45-101	3 ~ 5 VDC	8.00 A max	5%	40W	4W
APU45-102	5 ~ 6 VDC	8.00 ~ 6.66 A	5%	42W	4W
APU45-103	6 ~ 8 VDC	7.00 ~ 5.25 A	5%	42W	4W
APU45-104	8 ~ 11 VDC	5.63 ~ 4.00 A	5%	45W	4W
APU45-105	11 ~ 13 VDC	4.00 ~ 3.46 A	5%	45W	4W
APU45-106	13 ~ 16 VDC	3.46 ~ 2.81 A	5%	45W	4W
APU45-107	16 ~ 21 VDC	3.12 ~ 2.38 A	5%	50W	4W
APU45-108	21 ~ 27 VDC	2.30 ~ 1.85 A	3%	50W	4W
APU45-109	27 ~ 33 VDC	1.85 ~ 1.51 A	3%	50W	4W
APU45-110	33 ~ 40 VDC	1.51 ~ 1.25 A	3%	50W	4W
APU45-111	40 ~ 50 VDC	1.25 ~ 1.00 A	3%	50W	4W

## 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		
APU45-200	+3.3V	0.5A	5A	7%	+12V	0.3A	2A	5%					40W	4.5W
APU45-201	+5V	0.5A	5A	5%	+12V	0.3A	2A	5%					42W	4.5W
APU45-202	+5V	0.8A	5A	7%	+15V	0.3A	1.5A	5%					42W	4.5W
APU45-203	+5V	0.5A	5A	5%	+24V	0.1A	1A	5%					42W	4.5W
APU45-204	+3.3V	0.5A	5A	7%	+5V	0.2A	2A	5%					26.5W	4.5W
APU45-209	+12V	0.3A	3A	5%					-12V	0.1A	1A	5%	42W	4.5W
APU45-210	+15V	0.2A	2A	5%					-15V	0.1A	1A	5%	42W	4.5W
APU45-215	+5V	0.5A	5A	5%					-24V	0.1A	1A	5%	42W	4.5W
APU45-216	+5.1V	0A	1A	5%					+7.2V	0.2A	2.6A	5%	23.82W	4.5W
APU45-300	+3.3V	1.0A	5A	7%	+12V	0.3A	2A	5%	-12V	0.1A	0.8A	5%	42W	4.5W
APU45-301	+5V	0.5A	5A	5%	+12V	0.2A	2A	5%	-5V	0A	0.8A	5%	42W	4.5W
APU45-302	+5V	0.5A	5A	5%	+12V	0.2A	2A	5%	-12V	0A	0.8A	5%	42W	4.5W
APU45-303	+5V	0.5A	5A	5%	+15V	0.3A	2A	6%	-15V	0A	0.8A	5%	42W	4.5W
APU45-304	+5V	0.5A	5A	5%	+24V	0.2A	1A	5%	-24V	0A	0.5A	5%	42W	4.5W
APU45-305	+5V	0.5A	5A	5%	+24V	0.1A	1A	5%	-12V	0A	0.8A	5%	42W	4.5W
APU45-306	+3.3V	0.5A	5A	7%	+12V	0.4A	2A	5%	-5V	0A	0.8A	5%	42W	4.5W

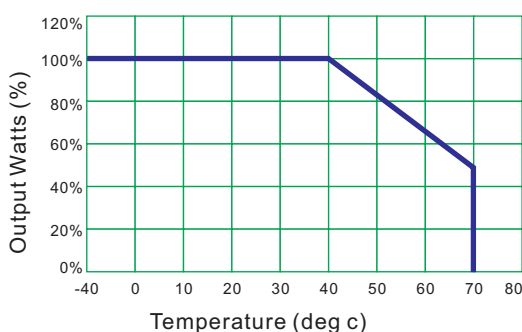
## Mechanical Specifications:



Note:

1. Dimensions are shown in mm.
2. Weight: 535~560gs approx.
3. Optional output connector:  
See page Appendix.

## Derating Curve :



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