

# APU45 SERIES

## 50W Desk Top Low Operating Temperature Power Supplies.

### Description:

The APU45 series of AC/DC switching mode power supplies provide 50 Watts of continuous output power. All supplies are UL 94V-1 min compliant. All models meet FCC Part-15 class B and CISPR-22 class B emission Limits and are designed to comply with UL/c-UL(UL 60950-1:2<sup>nd</sup> Edition), TUV/GS(EN 60950-1:2<sup>nd</sup> Edition) and new CE requirements. All units are 100% burned in and tested.



### Features:

- Wide Input Voltage 90 to 264 VAC, 47 to 63 Hz
- IEC-320-C14 Input Inlet
- Single to Triple Output
- Input Surge Current, Over Voltage And Over Load protection
- Over Voltage Protection (Crowbar Design)
- Operating temperature -40~70°C
- Class I
- 2 year warranty

**PRELIMINARY**

### Electrical Characteristics:

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit.
Vin	Safety Approvals Input Voltage Range		100		240	VAC
	Operate Voltage Range		90		264	VAC
fin	Input Frequency		47		63	Hz
Po	Output Power Range	Vin=90 to 264VAC	0		50	W
Vo	Output Voltage Range		See rating chart			V
Io	Output Current Range		See rating chart			A
Iil	Input Current (Low Line)	Io=Full load, Vin=115VAC			1.35	A
Iih	Input Current (High Line)	Io=Full load, Vin=230VAC			0.8	A
Irl	Low Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=115VAC		16	20	A
Irh	High Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=230VAC		32	40	A
Eff	Efficiency	Io=Full Load, Vin=230VAC	See rating chart			%
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			4	mS
Thold	Hold-Up Time	Io=Full Load, Vin=110VAC	12	16		mS
Ts	Start Up Time	Io=Full Load, Vin=100VAC	0.3	1	2	S
* Vp-p	Ripple & Noise (Peak to Peak)	Full Load, Vin=90VAC		0.5	1	%
Ilk	Safety Ground Leakage Current	Io=Full Load, Vin=240VAC		0.5	0.75	mA
TC	Temperature Coefficient	All output	-0.04		0.04	%/°C
Pno	No-Load Power Consumption	No load, Vin=230VAC	See rating chart			W

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

### Environmental :

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Toper	Operating Temperature		-40	40	70	°C
Tstg	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
Pd	Derate linearly from 100% load at 40°C to 50% load at 70°C					

### Safety Specifications:

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Vps	Dielectric Withstanding Voltage for Primary to secondary	Primary to secondary	4242			VDC
Vpg	Dielectric Withstanding Voltage for Primary to Ground	Primary to ground	2121			VDC
Ris	Isolation Resistance	Test Voltage=500VDC	50			MΩ
CISPR	EMI requirements for CISPR-22	Vin=220VAC	B			CLASS
FCC	EMI requirements for FCC PART-15	Vin=120VAC	B			CLASS

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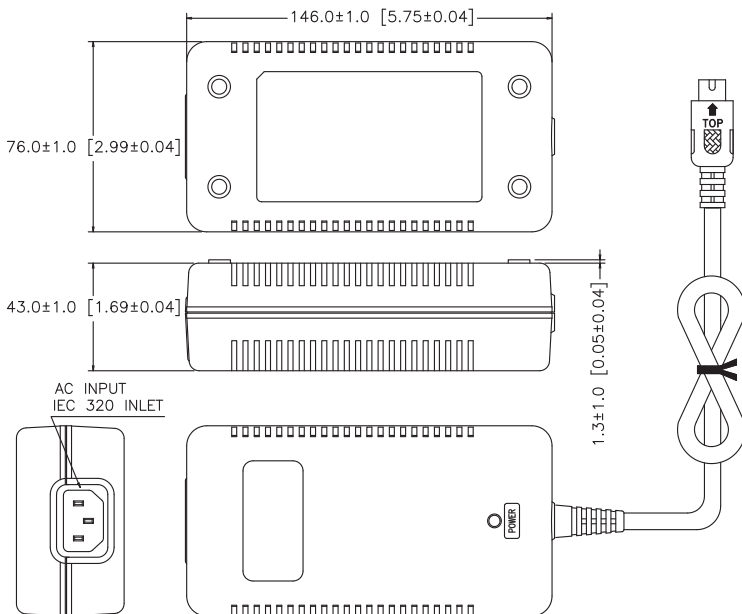
## Output Voltage And Current Rating Chart (Single Output) :

Model Number	Output Voltage	Output Current	Total Regulation	Efficiency (min.)	Maximum Output Power	Pno (max.)
APU45-101	3 ~ 5 VDC	8.00 A max	5%	60%	40W	4 W
APU45-102	5 ~ 6 VDC	8.00 ~ 6.66 A	5%	70%	42W	
APU45-103	6 ~ 8 VDC	7.00 ~ 5.25 A	5%	70%	42W	
APU45-104	8 ~ 11 VDC	5.63 ~ 4.00 A	5%	75%	45W	
APU45-105	11 ~ 13 VDC	4.00 ~ 3.46 A	5%	75%	45W	
APU45-106	13 ~ 16 VDC	3.46 ~ 2.81 A	5%	75%	45W	
APU45-107	16 ~ 21 VDC	3.12 ~ 2.38 A	5%	78%	50W	
APU45-108	21 ~ 27 VDC	2.30 ~ 1.85 A	3%	78%	50W	
APU45-109	27 ~ 33 VDC	1.85 ~ 1.51 A	3%	78%	50W	
APU45-110	33 ~ 40 VDC	1.51 ~ 1.25 A	3%	80%	50W	
APU45-111	40 ~ 50 VDC	1.25 ~ 1.00 A	3%	80%	50W	

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

Model Number	Output#1				Output#2				Output#3				Eff.(min.)	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%					68%	40W	4.5W
APU45-201	+5V	0.5A	5A	5%	+12V	0.3A	2A	5%					70%	42W	
APU45-202	+5V	0.8A	5A	7%	+15V	0.3A	1.5A	5%					70%	42W	
APU45-203	+5V	0.5A	5A	5%	+24V	0.1A	1A	5%					70%	42W	
APU45-204	+3.3V	0.5A	5A	7%	+5V	0.2A	2A	5%					65%	26.5W	
APU45-209	+12V	0.3A	3A	5%					-12V	0.1A	1A	5%	75%	42W	
APU45-210	+15V	0.2A	2A	5%					-15V	0.1A	1A	5%	75%	42W	
APU45-215	+5V	0.5A	5A	5%					-24V	0.1A	1A	5%	70%	42W	
APU45-216	+5.1V	0A	1A	5%					+7.2V	0.2A	2.6A	5%	65%	23.82W	
APU45-300	+3.3V	1.0A	5A	7%	+12V	0.3A	2A	5%	-12V	0.1A	0.8A	5%	70%	42W	
APU45-301	+5V	0.5A	5A	5%	+12V	0.2A	2A	5%	-5V	0A	0.8A	5%	70%	42W	
APU45-302	+5V	0.5A	5A	5%	+12V	0.2A	2A	5%	-12V	0A	0.8A	5%	70%	42W	
APU45-303	+5V	0.5A	5A	5%	+15V	0.3A	2A	6%	-15V	0A	0.8A	5%	70%	42W	
APU45-304	+5V	0.5A	5A	5%	+24V	0.2A	1A	5%	-24V	0A	0.5A	5%	70%	42W	
APU45-305	+5V	0.5A	5A	5%	+24V	0.1A	1A	5%	-12V	0A	0.8A	5%	68%	42W	
APU45-306	+3.3V	0.5A	5A	7%	+12V	0.4A	2A	5%	-5V	0A	0.8A	5%	70%	42W	

## Mechanical Specifications:



### Note:

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