



Open Frame = 5.00 x 3.00 x 1.10" / U-Frame = 5.50 x 3.29 x 1.57"

### Features:

- \* Universal AC Input (90-264 VAC)
- \* OR'ng Diodes on V1 & V2 for redundant operation
- \* EN61000-3-2 / IEC1000-3-2 Compliant (Harmonic Correction)
- \* Small Open Frame Package - measures only 5.00 x 3.00 x 1.17"
- \* Optional U-Frame Package - measures only 4.50 x 3.29 x 1.57"
- \* Worldwide Safety Approvals
- \* EN55022 & FCC Class B Emissions
- \* CE Mark

### Input

Input Voltage	90-264 VAC
Input Frequency	47-63Hz
Inrush Current	23A Max @ 264 VAC Cold Start
Input Current	1.5A @ 115 VAC / 0.8A @ 230 VAC Typical
Hold-Up Time	43ms @ 115 VAC / 43ms @ 230 VAC Full Load
Leakage Current	<630 $\mu$ A @ 230 VAC
Power Factor	0.99 Typical @ 230 VAC

### General

Efficiency	75% Typ.
Switching Frequency	Fixed Frequency 65KHz
Operating Temperature	0 to 50°C full load, derate 2.5% per °C to 70°C max.
Storage Temperature	-20°C to +85°C
Cooling	Convection Cooled or 30 cfm airflow (see output table)
Temp Co-Efficient	0.04% per °C
Topology	PWM Fixed Frequency Forward Circuit

### Output

Minimum Load	20% of V1 for Dual Output Models only
Line Regulation	$\pm$ 0.5% max.
Load Regulation	V1 = $\pm$ 2% max, V2 & V3 = $\pm$ 5% max
Ripple & Noise	$\pm$ 1% typ. pk-pk @ 20MHz
Overload Protection	125-150% of max power
OverVoltage Protection	V1 Only, 124% ( $\pm$ 8%)
Adjustment	V1 only, -10 / +24% (or OVP Trip Point)
Transient Response	voltage returns < 0.5mS following a 25% load change

### EMC & Safety

Emissions EN55022 "B", FCC Class B

Safety Approvals UL/cUL 1950 Class I  
EN609950 Class I  
CE Mark (LVD)



### Model Number

### Outputs

APS93VP-033250	3.3V@12/25A
APS93VP-050200	5V@10/20A
APS93VP-120085	12V@4.2/8.5A
APS93VP-150068	15V@3.4/6.8A
APS93VP-240043	24V@2.1/4.3A
APS93VP-280038	28V@1.8/3.8A
APS93VP-360030	36V@1.5/3A
APS93VP-480022	48V@1.2/2.1A

### Model Number

### Outputs

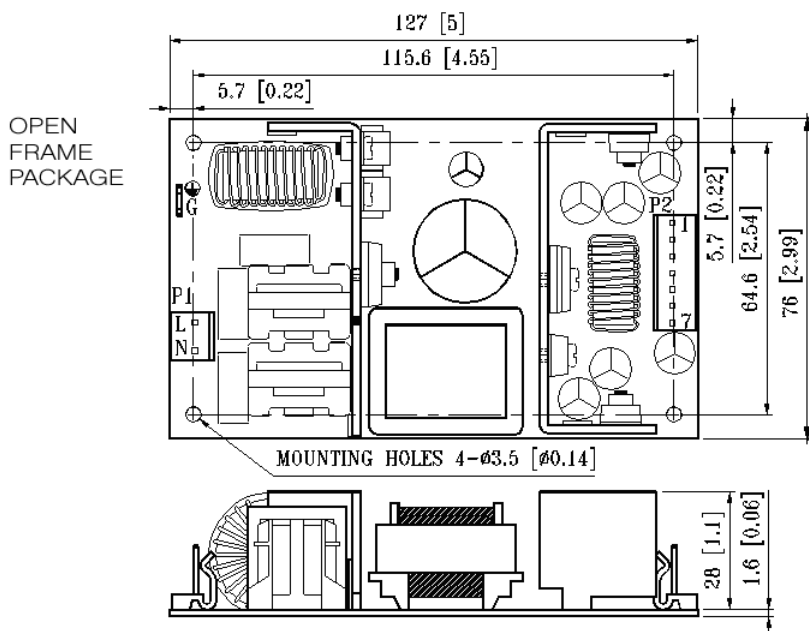
APS93VP-050II	+5V@4/10A	+12V@1.5/3A	-12V@1/1.5A
APS93VPT-050IE	+5V@4/10A	+12V@1.5/3A	-5V@1/1.5A
APS93VPT-050MI	+5V@4/10A	+24V@0.8/1.5A	-12V@1/1.5A
APS93VPT-050KK	+5V@4/10A	+15V@1.2/2.4A	-15V@0.8/1.2A
APS93VPT-033II	+3.3V@5/12A	+12V@1.5/3A	-12V@1/1.5A
APS93VPT-033KK	+3.3V@5/12A	+15V@1.2/2A	-15V@0.8/1.2A

APS93VPD-050I	+5V@6/10A	+12V@2/4A
APS93VPD-050K	+5V@6/10A	+15V@1.6/3.2A
APS93VPD-050M	+5V@6/10A	+24V@1/2A
APS93VPD-033I	+3.3V@8/12A	+12V@2/4A
APS93VPD-033K	+3.3V@8/12A	+15V@1.6/3.2A
APS93VPD-033M	+3.3V@8/12A	+24V@1/2A

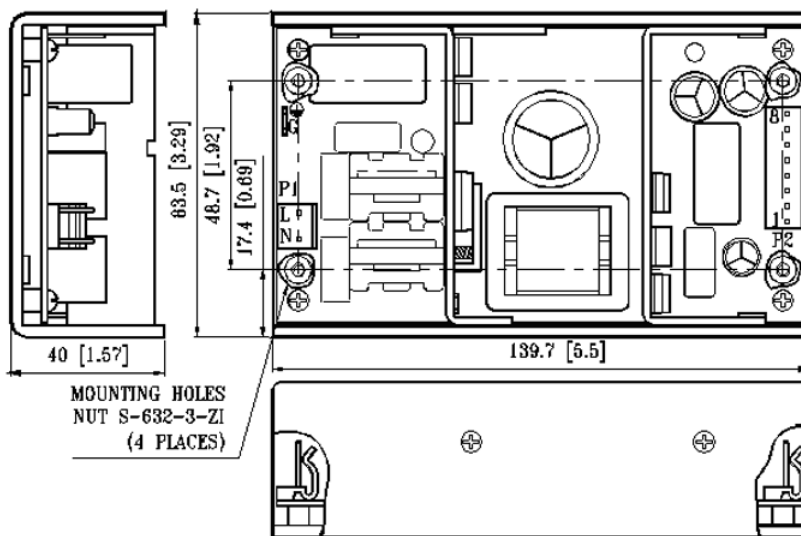
First Amperage rating is convection cooled operation, 2nd is with 30 cfm airflow operation

Add Suffix "-G" for Gaming Applications (< 500uA Leakage Current & Class A Emissions)

**Mechanical Details**



U-FRAME PACKAGE:



**Notes**

WEIGHT: PCB Version = 358g (12.6Oz) / U-Frame Version = 541 oZ. (19.0 Oz)

**INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT:**

INPUT: AC LINE = P1-L / AC NEUTRAL = P1-N / AC GROUND = FAST-ON  
 SINGLE OUTPUT (OPEN FRAME): +V1 = P2-1,2 / RETURN = P2-3,4,5,6  
 SINGLE OUTPUT (U-FRAME): +V1 = P2-7,8 / RETURN = P2-2,3,4,5,6  
 DUAL OUTPUT ASSIGNMENTS: P2-1,2 = V1 / P2-6,7 = V2 / P2-3,4,5 = COMMON  
 TRIPLE OUTPUT ASSIGNMENTS: P2-2,3 = V1 / P2-7 = V2 / P2-1 = V3 / P2-4,5,6 = COMMON

P1 & P2 = Molex 5196 or equivalent