

APS

Advanced Power Solutions

ELECTRONICS GAME-USE AC TO DC SWITCHING MODE POWER SUPPLIES 105 WATTS APS105SA-3X SERIES



FEATURES:

- **COMPACT SIZE**
- **DUAL INPUT EXTERNAL SELECTABLE**
- **BUILT-IN EMI FILTER MEET FCC B**
- **GREEN LED INDICATES PROPER 5V LEVEL**
- **OVERLOAD & SHORT CIRCUIT PROTECTION**
- **SAFETY MEET UL1950/EN60950 CLASS I**

SPECIFICATION

INPUT SPECIFICATION

Input Voltage: External switch selectable.
90 -132Vac. (115Vac nominal) or
180-264Vac. (230Vac nominal).

Input Connector: See Pin Assignment.

Input Frequency: 47-63Hz.

Inrush Current: 40A peak @115Vac, 80A @230Vac.

Input Current: 2.4A @115Vac, 1.0A @230Vac.

Dielectric Withstand: Meet IEC950.
3,000Vac-Output/Input.
1,500Vac-Input/GND.
500Vac-Output/GND.

EMI: Meet CISPR PUB.22/ FCC Class B.

Hold-up Time: 12mS @115Vac, 15mS @230Vac.

Earth Leakage: Less than 0.5mA @230Vac.

OUTPUT SPECIFICATION

Output Voltage: See Ratings Chart.

Output Current: See Ratings Chart.

Output Connector: See Pin Assignment.

Line Regulation: Main VO1 $\pm 0.1\%$ typ.
Aux. VO2 $\pm 0.5\%$,
VO3 $\pm 0.5\%$ typ.

Load Regulation: Main O/P VO1 $\pm 1.0\%$ typ.
Aux. O/P VO2 & VO3 $\pm 5.0\%$ typ.

Noise & Ripple: Typ. 1% peak to peak.

OVP: +5V O/P only set @ +6.2V $\pm 0.4V$.

Adjustability: +5V O/P adjustable.
No meter required to set 5V level,
Green LED indicates proper 5V level.

Overload Protection: Reduce all O/P voltage
to a safe dissipation level
& protect against short
circuit at any output.

GENERAL SPECIFICATION

Efficiency: Typ. 75%.

Switching Frequency: Fixed Frequency at 30K Hz.

Circuit Topology: Fixed-frequency half bridge circuit.

Transient Response: Output voltage returns in
less than 3mS following a
50% load change.

Safety Standard: UL1950/EN60950 Class I.

Long Term Stability: 0.1% for 8 hours.

Operating Temperature: 0-45°C with convection,
0-80°C with 20CFM fan
cooling

Storage Temperature: -20 to +85°C

Temperature Coefficient: 0.04% /°C

Cooling: Free air convection.
20CFM fan cooling is recommended
for output wattage more than 60 watts.

Output Wattage: Typ. 105W, peak 115W.

OUTPUT VOLTAGE/CURRENT RATINGS CHART

MODEL NO	MAIN VO1 O/P @ ★			AUX. VO2 O/P †			AUX. -VO3 O/P •		
	TYP.	VOLT.	PEAK	TYP.	VOLT.	PEAK	TYP.	VOLT.	PEAK
APS105SA-30	15.0A	+5V	18.0A	3.0A	+12V	3.5A	1.0A	-5V	1.0A
APS105SA-31	15.0A	+5V	18.0A	3.0A	+12V	3.5A	0.5A	-12V	1.0A
APS105SA-32	15.0A	+5V	18.0A	1.5A	+24V	2.0A	0.5A	-12V	1.0A
APS105SA-33	15.0A	+5V	18.0A	2.5A	+15V	3.5A	0.5A	-15V	1.0A

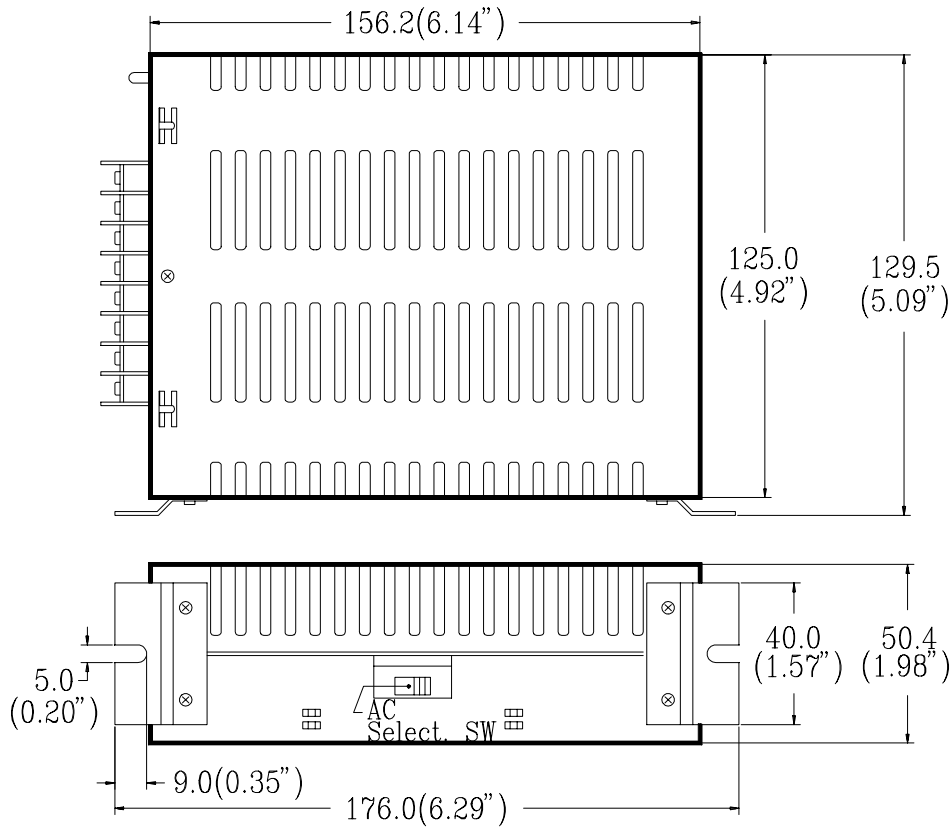
Symbols: "★" OVP built-in. "@" Adjustable. "†" Stacked on main output. "•" Installed with Post Regulator (PR).

Remark: (1) At least 20% of typical main output current is required to maintain stated regulation.

(2) Peak output, less than 60 Sec. Peak current can't be drawn from all output at the same time.

MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 766g (27.0 Oz.)



PIN ASSIGNMENTS

PIN #	ASSIGNMENT
P1-1 (L)	AC LINE
P1-2 (N)	AC NEUTRAL
P1-3 (G)	AC GROUND
P1-4	+5V(+VO1)
P1-5	DC COM.
P1-6	DC COM.
P1-7	+VO2
P1-8	-VO3

CONNECTOR: Barrier-Strip Screw Terminal block
Pitch 0.394"(10.0mm), Screw on top.