



Advanced Power Solutions

4/5/01

**UNIVERSAL INPUT AC TO DC EXTERNAL DESKTOP ADAPTOR
MULTIPLE OUTPUT 14-16 WATTS SWITCHING POWER SUPPLIES
APS14ES SERIES**



FEATURES:

- ACCOMMODATE UNIVERSAL AC SOURCES
- DESKTOP WITH IEC320 AC RECEPTACLE
- MEET UNIVERSAL SAFETY STANDARDS
- EMI MEET EN55022/ FCC CLASS B
- CE MARKING COMPLIANCE

SPECIFICATION

INPUT SPECIFICATION

Input Voltage: 90 to 264Vac typical
Input Connector: IEC320-3P DT7 or IEC320-2P
DT8 for dual output
Input Frequency: 47-63Hz
Inrush Current: 26A @ 230Vac typical
Input Current: Typ.0.4A @ 115Vac / 0.2A @ 230Vac
Dielectric Withstand: Meet IEC950
EMI: Meets EN55022 / FCC Class B
Hold-up Time: 10mS @115Vac or 40mS @230Vac typ.

OUTPUT SPECIFICATION

Output Voltage: See Ratings Chart
Output Current: See Ratings Chart
Output Wattage: 14 to 16 Watts typical
Output Connector & Cord: Optional
Line Regulation: 0.1% typical
Load Regulation: Main O/P VO1 $\pm 1.5 \sim 3.0\%$ typical
Aux. O/P VO2 ± 3.0 to 5.0% typical
Aux. O/P VO3 ± 1.0 to 2.0% typical with PR
Noise & Ripple: 1.0% peak to peak typical
OVP: Built-in "Latch type" on main output VO1 only
Latch type or Zener diode clamp for dual output series
Adjustability: Factory set
Overload Protection: Typ. 125 ~ 150% of max. power
Overrange or short circuit, power foldback & self-recovering

GENERAL SPECIFICATION

Efficiency: 74 to 78% typical
Switching Frequency: Approximate 35KHz
Circuit Topology: Fixed Frequency Flyback circuit
Transient Response: Output voltage returns in
less than 3mS following a 25% load change
Safety Standard: UL1950/ EN60950 Class I. Class II
for dual output series
Power Density: 1.12Watts. / Inch³

Operating Temperature: 0 to +40°C
Storage Temperature: -20°C to +85°C
Temperature Coefficient: 0.04% per °C
Cooling: Free air convection
Construction: Impact resistant thermo-plastic
enclosure case
Desktop Format
Weight : 330g(11.6Oz)

Notes: (1) All measurements are at nominal input, full load, and +25°C unless otherwise specified.

(2) Load regulation is measured at 115Vac or 230Vac in percentage to indicate the change in output voltage as the load is varied from half load to full load (unit $\pm\%$).
the multi-output, the main output remains 50% load and other aux. output remains 20% load.

(3) The exact obtainable load regulation depends upon the output load current & cord selected. Upper data are for 6 ft.(2 m)cord AWG#18 wires.



For the details of safety approval, please consult the factory.

OUTPUT VOLTAGE/CURRENT RATINGS CHART

SINGLE OUTPUT

MODEL NO.	MAIN O/P VO1 ★	
	TYP.	VOLT.
APS14ES-10	2.50A	5.0V
APS14ES-10A	2.20A	6.2V
APS14ES-11	1.25A	12.0V
APS14ES-12	1.00A	15.0V
APS14ES-14	1.40A	9.5V
APS14ES-16	1.50A	9.0V
APS14ES-19	3.00A	3.3V

DUAL OUTPUT

MODEL NO.	MAIN O/P VO1 ★			AUX. O/P VO2 †		
	TYP.	VOLT.	MAX.	TYP.	VOLT.	MAX.
APS14ES-21	1.0A	+5.0V	1.5A	0.75A	+12.0V	1.5A
APS14ES-22	1.0A	+5.0V	1.5A	0.60A	+15.0V	1.2A
APS14ES-23	1.0A	+5.0V	1.5A	0.40A	+24.0V	0.8A
APS14ES-291	1.0A	+3.3V	1.5A	0.75A	+12.0V	1.5A
APS14ES-292	1.0A	+3.3V	1.5A	0.60A	+15.0V	1.2A
APS14ES-293	1.0A	+3.3V	1.5A	0.40A	+24.0V	0.8A

TRIPLE OUTPUT

MODEL NO.	MAIN O/P VO1 ★			AUX. O/P VO2 †			AUX. O/P VO3 •		
	TYP.	VOLT.	MAX.	TYP.	VOLT.	MAX.	TYP.	VOLT.	MAX.
APS14ES-30A	0.75A	+5.0V	2.0A	1.0A	+12.0V	1.0A	0.05A	-12.0V	0.5A
APS14ES-30	1.50A	+5.0V	2.0A	0.2A	+12.0V	0.5A	0.20A	-12.0V	0.4A
APS14ES-31	1.50A	+5.0V	2.0A	0.2A	+12.0V	0.5A	0.50A	-5.0V	0.9A
APS14ES-32	1.50A	+5.0V	2.0A	0.1A	+24.0V	0.3A	0.20A	-12.0V	0.4A
APS14ES-33	1.50A	+5.0V	2.0A	0.2A	+15.0V	0.4A	0.50A	-5.0V	0.8A
APS14ES-34	1.50A	+5.0V	2.0A	0.2A	+15.0V	0.4A	0.15A	-15.0V	0.3A

Symbol: "★" OVP Built-in. "•" Installed with Post Regulator (PR). "†" Stacked on main output.

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

(2) Max. load is the continuous operating load of each rail. But the max. load of each rail can not be drawn from all output at the same time.

MECHANICAL DIMENSIONS: MM [INCHES].

WEIGHT: 330g (11.6 Oz).

