

UNIVERSAL INPUT AC TO DC EXTERNAL DESKTOP ADAPTOR MULTIPLE OUTPUT SWITCHING POWER SUPPLIES 20 WATTS APS20ES SERIES



FEATURES:

- AUTOMATICALLY ACCOMMODATES UNIVERSAL AC SOURCES
- DESKTOP ADAPTOR WITH IEC 320 3-P INPUT RECEPTACLE
- DESIGNED TO MEET UNIVERSAL SAFETY STANDARDS
- EMI/RFI MEET CISPR PUB. 22 CLASS B
- CE MARKING COMPLIANCE

SPECIFICATIONS

INPUT SPECIFICATIONS:

Input Voltage: Typical 90-265VAC
Input Connector: IEC 320 3-P AC receptacle
Input Frequency: 47-63Hz
Inrush Current: 15A Max. @ 230VAC
Input Current: 0.6A @ 115VAC, 0.3A @ 230VAC
Dielectric Withstand: (1*) Meets IEC950
 (At output cord end for 1 second.)
 3,300VAC-Output/Input
 1,650VAC-Input/GND
 Output/GND-Open/Short Test only
EMI/RFI: Meet CISPR PUB. 22 Class B

OUTPUTS SPECIFICATIONS:

Output Voltage: See RATINGS CHARTS
Output Currents: See RATINGS CHARTS
Output Connector: Optional
Line Regulation: $\pm 0.1\%$ typical
Load Regulation: (2*) Main O/P VO1 $\pm 3\%$
Aux. O/P: VO2 $\pm 5\%$, VO3 $\pm 5\%$ typical
Noise & Ripple: Typical 1% peak to peak
OVP: 124% VO1 for the main output only
Adjustability: Factory set
Hold-up Time: 33mS typical @ 115VAC
 186mS typical @ 230VAC
Overload Protection: About 120% maximum power

GENERAL SPECIFICATIONS:

Efficiency: Typical 75% Switching Frequency: About 37-100KHz Circuit Topology: Free-running flyback circuit Transient Response: Output voltage returns in less than 3mS following a 50% load change Safety Standard: UL1950/EN60950	Operating Temperature: 0-40°C Storage Temperature: -20 to +85°C Temperature Coefficient: 0.04% per °C Cooling: Free air convection MTBF: Greater than 100K hours at typical load at 25°C; calculated according to MIL-HBK-217E
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Remarks:(1*) Dielectric Withstand: If at the cord strain relief end for 1 minute, the results are 3,000VAC -Output/Input, 1,500VAC -Input/GND, 500VAC-Output/GND.

(2*) Load regulation: The exact obtainable voltage regulation depends upon the output cord selected and load currents.

Above data are for 6ft. (2 meters) cord AWG #18/20 wires with PF or PD type connector.



VOLTAGE/CURRENT RATINGS CHART

DUAL OUTPUT:

SINGLE OUTPUT:

MODEL NO.	MAIN O/P VO1		
	TYP.	VOLT.	MAX.
APS20ES-10	4.0A	5V	5.5A
APS20ES-11	1.66A	12V	2.5A
APS20ES-12	1.33A	15V	2.0A
APS20ES-12	0.83A	24V	1.25A

MODEL NO	MAIN O/P VO1			AUX.O/P VO2 for ●		
	TYP.	VOLT.	PEAK	TYP.	VOLT.	PEAK
APS20ES-20	3.0A	+5V	4.0A	1.0A	-5V	1.0A
APS20ES-21	3.0A	+5V	4.0A	0.5A	-12V	1.0A
APS20ES-22	3.0A	+5V	4.0A	0.5A	-15V	1.0A
APS20ES-23	2.0A	+5V	3.0A	0.5A	-24V	1.0A

TRIPLE OUTPUT:

MODEL NO.	MAIN O/P VO1			AUX. O/P VO2 †			AUX. O/P VO3 ●		
	TYP.	VOLT.	PEAK	TYP.	VOLT.	PEAK	TYP.	VOLT.	PEAK
APS20ES-30	2.0A	+5V	3.0A	0.5A	+12V	1.0A	0.25A	-12V	0.5A
APS20ES-31	2.0A	+5V	3.0A	0.5A	+12V	1.0A	0.8A	-5V	1.0A
APS20ES-32	2.0A	+5V	3.0A	0.2A	+24V	0.5A	0.5A	-12V	0.5A
APS20ES-33	2.0A	+5V	3.0A	0.5A	+15V	0.5A	0.5A	-5V	0.5A
APS20ES-34	2.0A	+5V	3.0A	0.5A	+15V	1.0A	0.3A	-15V	0.5A

Symbols: "†" Stacked on main output. "●" Installed with Post Regulator (PR).

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

(2) Peak output, less than 30 sec. Peak current can't be drawn from all output at the same time.

MECHANICAL DIMENSIONS: MM (INCHES)

WEIGHT: 530g. (18.7 Oz.)

