

APS

Advanced Power Solutions

09/26/2001

UNIVERSAL INPUT HARMONIC CORRECTION AC-DC MULTIPLE OUTPUT N+1 REDUNDANCY AND CURRENT SHARING 500 WATTS INTERNAL SWITCHING POWER SUPPLIES APS500VP SERIES



FEATURES:

- ACCOMMODATES UNIVERSAL AC SOURCES
- DUAL CONVERTER ARCHITECTURE
- MEETS IEC1000-3-2 HARMONIC CORRECTION
- HOT-SWAPPABLE/OR-ING DIODES FOR N+1 REDUNDANCY
- THIRD-WIRE CURRENT SHARING
- MEETS UNIVERSAL SAFETY STANDARDS
- EMI MEETS EN55022 CLASS A
- CE MARKING COMPLIANCE

SPECIFICATION

INPUT SPECIFICATION

Input Voltage / Freq.: Typ. 90-264 Vac with PFC / 47-63Hz
Input Connector: IEC320-3P with On/Off Switch
Inrush Current: Typ. 24.0A@230Vac (Active).
Input Current: Typ. 7.0A@115Vac/ 3.5A@230Vac
Dielectric Withstand: Meets IEC950
EMI: Meets EN55022 Class A
Hold-up Time: Typ. 28mS @ 115Vac & 230Vac
Power OK Signal: Available at VO1, VO2 & VO3
Power Factor Correction: Meet Harmonic Correction IEC1000-3-2. PF typ. 0.97-0.98
Over Temperature Protection: By thermostat
Power-On LED Indicator: Installed
Overload Protection (OLP): Fully protected against output overload or short circuit Consult factory for OLP setting
Earth Leakage: Less than 0.78mA@230Vac

OUTPUT SPECIFICATION

Output Voltage and Current: See Ratings Charts
Output Connector: Molex Mini-Fit 5569-24
Output Wattage: 500 watts max.
Line Regulation: Typ. 0.1%
Load Regulation: Main VO1 typ. $\pm 2.0\%$;
Main VO2 typ. $\pm 2.0\%$ Aux. VO3 typ. $\pm 2.5\%$ (Mag Amp)
Noise & Ripple: Typ. 1-2.0% peak to peak
OVP: Built-in at all outputs (Latch)
Over Current Protection: Installed in all outputs
Redundancy: All three O/P available for N+1 redundant operation
Current Sharing: 3rd-wire current sharing for VO1,2
OR-ing Diode: Installed in VO1,2,3
Adjustability: Available at VO1,2,3
Remote Sense: Available at VO1 & VO2

GENERAL SPECIFICATION

Efficiency: Typ. 65-70%
Switching Frequency: Fixed frequency at 60KHz
Circuit Topology: PWM fixed-frequency forward circuit
Transient Response: Output voltage returns in typ. 0.3mS following a 25% load change
Safety Standard: UL1950/EN60950 Class I
Hot Swappable: Available
Power Density: 2.72 Watts/ Cubic Inch

Operating Temperature: 0 to +50°C
Storage Temperature: -20 to +85°C
Temperature Coefficient: Typ. 0.04% /°C
Cooling: Cooling fan installed inside
MTBF: About 60,000 hours at full load and 25°C condition by MIL-HDBK-217F spec
Construction: Enclosure box with cooling fan



In application

OUTPUT VOLTAGE / CURRENT RATINGS CHART

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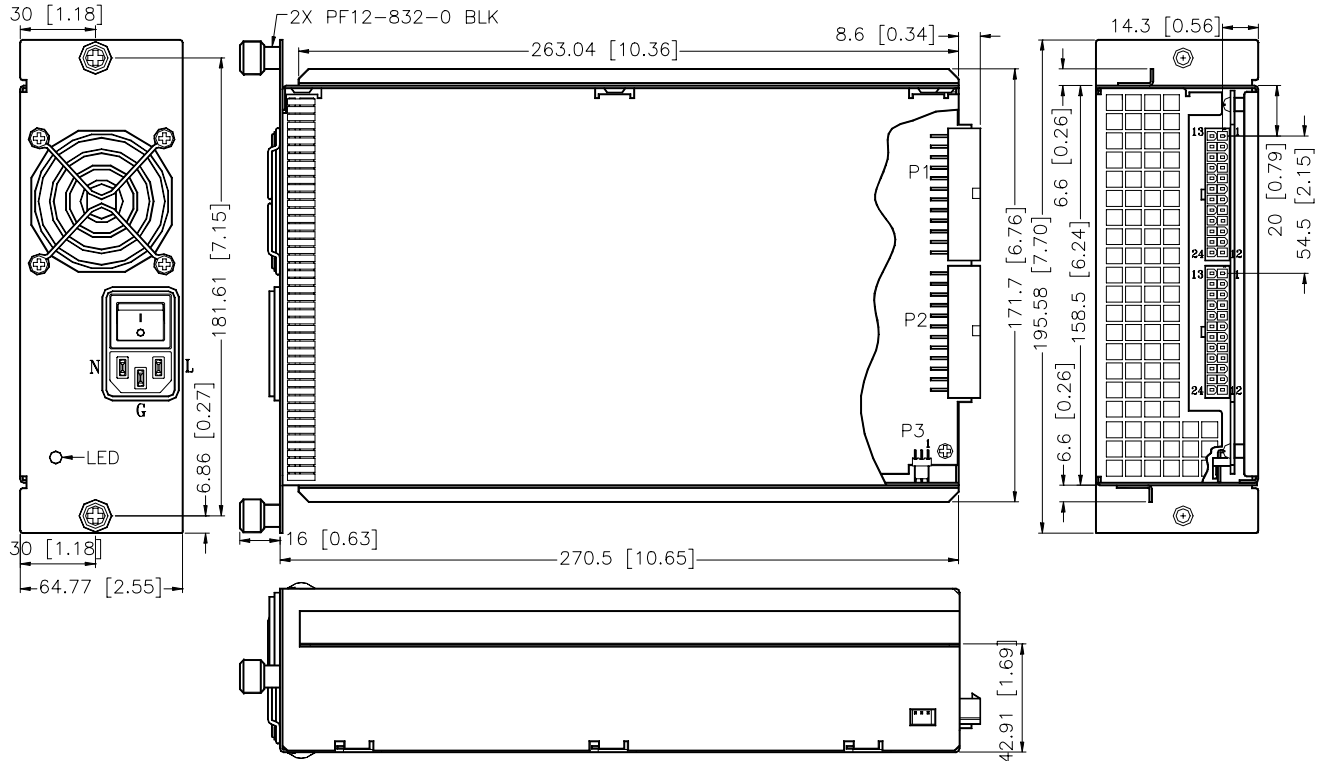
TRIPLE OUTPUT

MODEL NO.	MAIN VO1 @ ★#=-●		MAIN +VO2 @ ★#=-●		AUX. +VO3 @ ★#▲●	
	Typ.	Volt.	Typ.	Volt.	Typ.	Volt.
APS500VPT-033EI	100.0A	+3.3V	25.0A	+5.0V	4.0A	+12.0V
APS500VPT-033EK	100.0A	+3.3V	25.0A	+5.0V	3.2A	+15.0V
APS500VPT-033EM	100.0A	+3.3V	25.0A	+5.0V	2.0A	+24.0V
APS500VPT-050DI	75.0A	+5.0V	25.0A	+3.3V	4.0A	+12.0V
APS500VPT-050DK	75.0A	+5.0V	25.0A	+3.3V	3.2A	+15.0V
APS500VPT-050DM	75.0A	+5.0V	25.0A	+3.3V	2.0A	+24.0V

Symbol: "★" OVP built-in. "@" Adjustable. "●" Installed with OR-ing diode. "▲" Installed with magnetic amplifier. "=" Active load sharing. "#" Remote sense.

MECHANICAL DIMENSIONS: MM [INCHES]

WEIGHT: 3,500.0g. (7.72 lb.)



INPUT & OUTPUT CONNECTORS PIN ASSIGNMENTS

ASSIGNMENT	AC INPUT			TRIPLE OUTPUT				ASSORTED SIGNAL									
	AC-L	AC-N	AC-G	VO1	VO2	VO3	DC COM	P.O.K.	+3.3V=	+5V=	+3.3V#	-3.3V#	+5V#	-5V#	+3.3V MSR	+5V MSR	+12V MSR
CONNECTOR & PIN #	L	N	G	P1-1-4,12-15,23,24 P2-1,2,13,14	P2-3,4,15,16	P2-20,21	P1-5-11,16-22 P2-5,6,7,8,17,18,19	P2-10	P2-11	P2-24	P2-9	P2-12	P2-22	P2-23	P3-1	P3-2	P3-3

Mating connector: Molex 42358-24.

Remark: <MSR> means output measurement Point.