

## High Power Supplies 600/700 Watt AC/DC Universal Input Power Supply

## SUMMARY

- **90 -264 Vac nominal input range**
- **Overvoltage and short circuit protection**
- **Approved to UL, CSA and EN Standards**
- **Power Good LED**
- **Low Leakage**

The GPHP Series are universal input AC/DC power supplies with power factor correction (PFC) with up to 700 Watts output power. The GPHP product incorporates 'hot-swap' capabilities and a handle. The series is approved to EN60950 to reduce design-in time and end system compliance costs



GPHP 600 shown in CRA rack

## All specifications are typical at nominal input, full load at 25 °C unless otherwise stated

## SPECIFICATIONS

OUTPUT SPECIFICATIONS		
Output Power	Integral forced air	700 Watts max.
Total Regulation		See table
Rise time	At turn-on	2.0 s max.
Transient response	Main output 25% 0.1 A/ $\mu$ s	3.5% max. dev. 350 $\mu$ s recovery to 1%
Temperature Coefficient		+/-0.03%/oC
Overvoltage protection		125% +/-10%
Short Circuit protection	block wall	Yes

INPUT SPECIFICATIONS		
Input Voltage range	Universal input	100-240 nom (85 - 264 max) Vac
Input frequency		47 Hz to 63 Hz
Input surge current		25 A max.
Ground Leakage current	264 Vac 60 Hz	160 $\mu$ A
Input current	120 Vac	8.5 A
	230 Vac	4.5 A
Input fuse	F1,F2	10.0 A

EMC INFORMATION		
Conducted emissions	FCC Pt 15, EN55022	Level B
Radiated emissions	FCC Pt 15, EN55022	Level A
Line freq. harmonics	EN61000-3-2	Class A
Voltage fluctuations	EN61000-3-3	Complies (clause 5b)
ESD Air	EN61000-4-2	8 kV contact
ESD Contact	EN61000-4-2	6 kV air
Radiated immunity	EN61000-4-3	3 V/m
Fast Transients (EFT)	EN61000-4-4	2 kV 5 kHz
Line surge immunity	EN61000-4-5	1 kV diff /2 kV cm
Conducted immunity	EN61000-4-6	3 Vrms
Power freq. mag. field	EN61000-4-8	3 A/m
Voltage dip immunity	EN61000-4-11	Unit will ride through without loss of output at 75% of rated load with AC power fail warning.

ENVIRONMENTAL SPECIFICATIONS		
Thermal Performance	operating ambient (see ratings chart)	-20 °C -50 °C
	non-operating	-40 to +85 °C
	0 - 50 °C Convection cooled	600 Watts
Maximum Altitude	operating / non-operating	10,000 ft. / 40,000 ft. max.
Relative Humidity	non-condensing	5% - 95% RH
Vibration (operating)	0.003 g <sup>2</sup> /Hz	1.5 g <sub>rms</sub> 3 axes 10 min/axis
Vibration (non-operating)	0.026 g <sup>2</sup> /Hz	5.0 g <sub>rms</sub> 3 axes, 1 hr/axis
Shock	half-sine 20 g <sub>pk</sub>	10 ms, 3 axes, 6 shocks total
Shock	half-sine 40 g <sub>pk</sub>	10 ms, 3 axes, 6 shocks total

GENERAL SPECIFICATIONS		
Hold-up time	120 Vac, 60 Hz	30 ms at 600 Watts output
Efficiency	120 Vac 600 W output	>84 %
isolation voltage	input to ouput	4000 Vac
	input to ground	1500 Vac
Switching frequency	fixed	70 KHz, +/- 10 KHz
Safety Approvals	UL/EN/IEC 60950-1 1st Edition CSA22.2 No.60950-1-03	
Maximum weight	2 kg (4.4 lbs)	

MODEL NUMBER	Output	Peak Output	Features	Ripple	Regulation
GPHP600-24	24 V 25 A	24 V 27 A	Hot Swap	240 mV	3% (see note 4)
GPHP600-28	28 V 21.5 A	28 V 23.5 A	Hot Swap	240 mV	3% (see note 4)
GPHP600-36	36 V 17 A	36 V 19 A	Hot Swap	240 mV	3% (see note 4)
GPHP700-48	48 V 14 A	48 V 15.6 A	Hot Swap	240 mV	3% (see note 4)

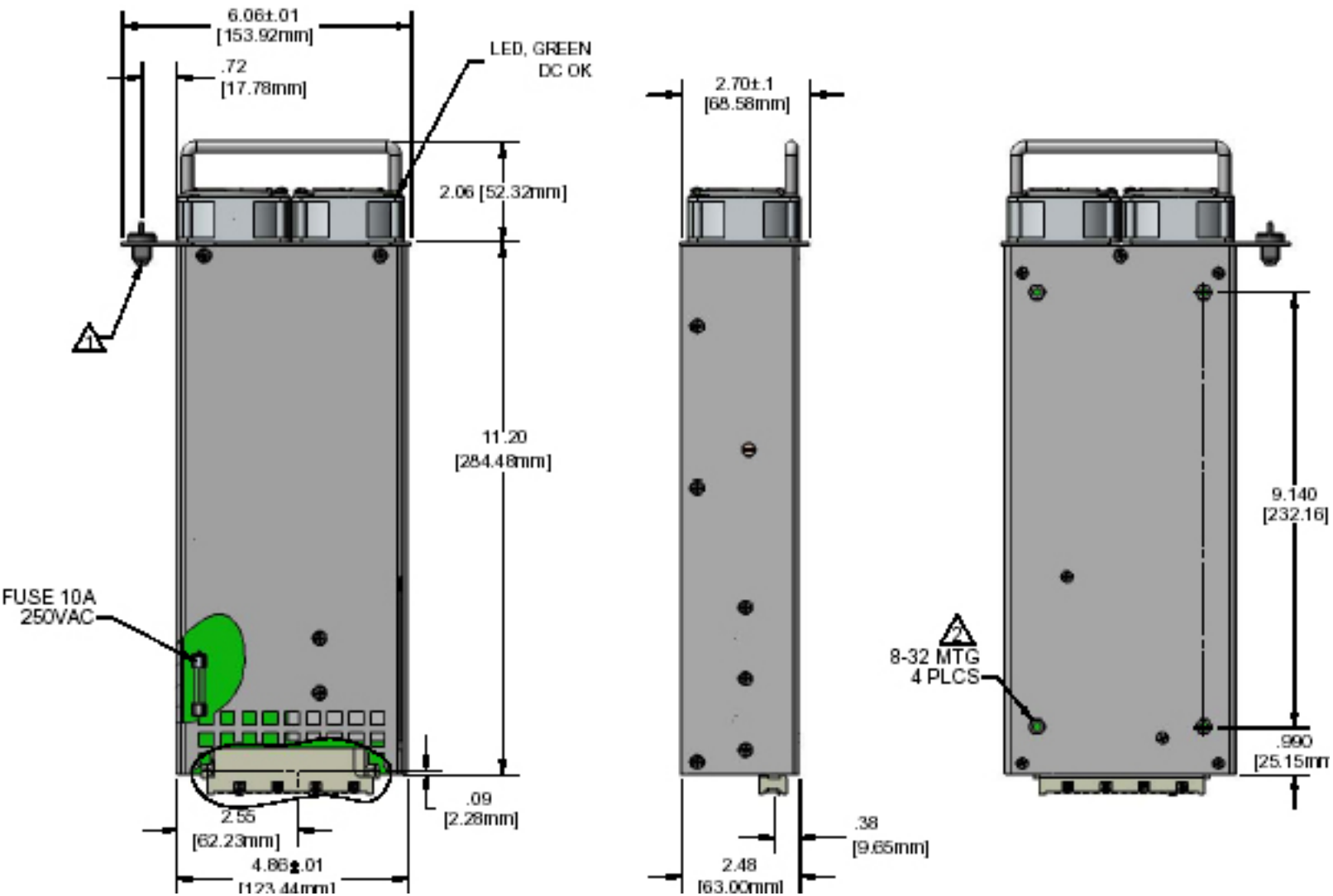
NOTES
1. Integral forced air cooling
2. Peak rating is for 1 minute maximum 10% duty cycle
3. Noise measurent 20 MHz Bandwidth, differential mode. Measured with scope probe directly across output terminals of the power supply.
4. Regulation includes provision for 'droop' sharing

MECHANICAL NOTES
The GPHP series is factory configured for rack mounting installation with Condor CRA series racks. Other mounting configurations and connector options are available, Please contact factory.

POWER CONNECTOR DIN # 41612 Type H	
INPUT PINS	
Z-32	AC Line
D-30	AC Neutral
Z-28, D26	GROUND
OUTPUT PINS	
Z12, D14, Z16,D18	OUTPUT
Z4, D6, Z8, D10	RETURN (COMMON)
STATUS & CONTROL PINS	
Z20	DC POWER GOOD
Z24	INHIBIT
D22	AC POWER FAIL

# OUTLINE AND MOUNTING DRAWING

Other drawings and SolidWorks™ 3D Models are available on request.



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