

# AC-DC Chassis Mount

## 400-650 Watts CPB600 Series



## THE XPERTS IN POWER

- Universal PFC Input
- Low Profile (61mm)
- Wide Output Voltage Adjustment
- Remote ON/OFF
- Power Good Signal
- Remote Sense
- Peak Current Available

### Specification

#### Input

- *Input Voltage* 95-264 VAC (120-370 VDC)
- *Input Frequency* 47-63 Hz
- *Input Current* 8.2 A max at 115 VAC
- *Inrush Current* 40 A max at 230 VAC
- *Power Factor* 0.98/0.95 at 115/230 VAC
- *Earth Leakage Current* 0.75 mA max at 230 VAC 60 Hz

#### Output

- *Output Voltage* See Table
- *Output Voltage Adjustment* See Table
- *Minimum Load* No minimum load required
- *Start-Up Time* 400 ms typical at 230 VAC, 100% load
- *Hold-up Time* 20 ms typical at 100% load
- *Drift* ±0.4% max
- *Line Regulation* ±0.5% max
- *Load Regulation* ±1.0% max 0-100% load
- *Ripple & Noise* ± 1% max pk-pk 20 MHz bandwidth
- *Overvoltage Protection* 110-130% of Vnom  
Recycle input to reset
- *Overload Protection* Operates at 105% of rated current (101% of pk rating), <5 s auto recovery  
>5 s recycle input to reset
- *Temperature Coefficient* ±1.25% max -20 °C to +50 °C
- *Overtemperature Protection* Operates in the event of fan failure or if the operating temperature/derating criteria is exceeded
- *Remote Sense* Compensates for 0.3 V drop max  
If not required sense terminals must be connected locally  
ie: +S to +M and -S to -M on CN1

#### Remote ON/OFF

- 12 V 3 mA applied between RCG & RC2 will inhibit the output of the unit & the fan

#### General

- *Efficiency* See Table
- *Isolation* 3000 VAC Input to Output  
2000 VAC Input to Ground  
500 VAC Output to Ground
- *Switching Frequency* 130kHz PFC, 330 kHz PWM

#### Environmental

- *Operating Temperature* -20 °C to +70 °C, derate linearly above +50 °C to 50% at +70°C
- *Storage Temperature* -20 °C to +75 °C
- *Relative Humidity* 20-90% non condensing
- *Shock* 20 G 11 ms, once each x, y and z axis
- *Vibration* 2 G 10-55Hz for 3 min periods for 60 min along each x, y and z axis

#### EMC & Safety

- *Emissions* EN55022 Level B conducted  
EN55022 Level A radiated
- *ESD Susceptibility* EN61000-4-2 Level 2 contact, Level 3 air
- *Radiated Susceptibility* EN61000-4-3 Level 3
- *EFT/Burst* EN61000-4-4 Level 3
- *Surge* EN61000-4-5 Level 3 line to line  
Level 4 line to ground
- *Safety Approvals* UL60950, C-UL (CSA 60950) EN60950

## OUTPUT VOLTAGE & CURRENT RATINGS

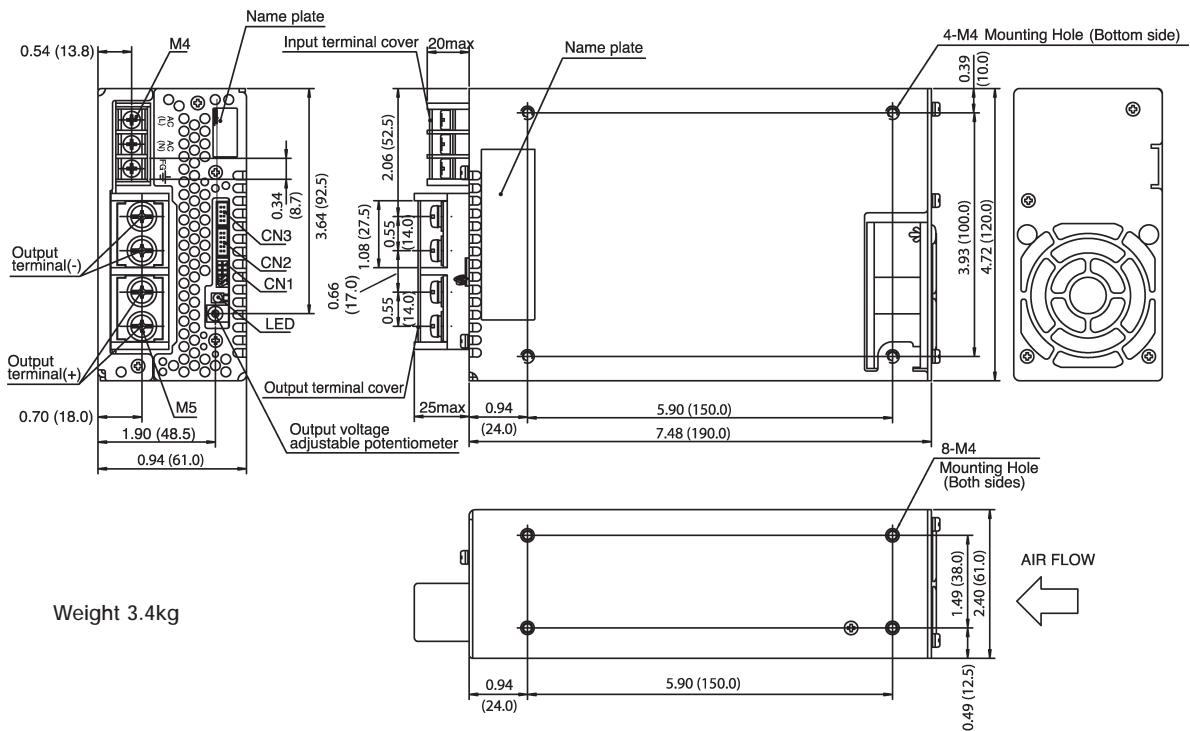
CPB

Output Voltage	Current		Regulation		Ripple Noise <sup>(2)</sup>	Efficiency <sup>(3)</sup>	Model
	Max	Peak	Line	Load			
3.3 V (2.64-3.96)	120 A	-	20 mV	40 mV	120 mV	72%	CPB600PS3V3
5.0 V (3.96-6.00)	120 A	-	20 mV	40 mV	120 mV	77%	CPB600PS05
7.5 V (5.25-8.25)	80 A	-	36 mV	60 mV	150 mV	79%	CPB600PS7V5
12.0 V (8.25-13.2)	53 A	-	48 mV	100 mV	150 mV	82%	CPB600PS12
15.0 V (10.50-16.5)	43 A	-	60 mV	120 mV	150 mV	82%	CPB600PS15
24.0 V (16.5-26.4)	27 A	31 A <sup>(1)</sup>	96 mV	150 mV	150 mV	84%	CPB600PS24
36.0 V (25.2-39.6)	18 A	-	144 mV	150 mV	200 mV	84%	CPB600PS36
48.0 V (38.4-56.0)	13 A	-	192 mV	300 mV	200 mV	83%	CPB600PS48

### Notes

1. Peak current duration 100 ms max with a duty cycle ≤35% 170-264 VAC only.
2. Measured over a 20 MHz bandwidth and from 0 °C to +50 °C.
3. Measured at nominal 230 VAC input and 100% load.

## Mechanical Details



Weight 3.4kg

AIR FLOW



CN1/CN2 PIN CONNECTIONS	
Pin	Function
1	+M + Output Voltage Monitoring
2	+S + Remote Sensing
3	-M - Output Voltage Monitoring
4	-S - Remote Sensing
5	VB Voltage Balance
6	CB Current Balance
7	TRM Adjustment of Output Voltage
8	-S - Remote Sensing
9	RC2 Remote ON/OFF
10	RCG Remote ON/OFF Ground

CN3 PIN CONNECTIONS	
Pin	Function
1	-S - Remote Sensing
2	-S - Remote Sensing
3	AUX Auxiliary Output (12 V/0.1A)
4	RC1 Remote ON/OFF
5	AUXG AUX Ground
6	N.C. No Connection
7	PG Power Good Signal
8	PGG Power Good Ground

### Output Voltage Adjustment

60-110% of the rated output voltage is achieved by:

1. Using on-board potentiometer.
2. Applying a voltage externally between TRM & -S on CN1 or CN2.
3. Connecting a resistor externally between TRM & -S on CN1 or CN2.

The external voltage level is calculated below & should not be less than -0.7 V or more than 3.0 V.

$$\text{External Trim Voltage} = \frac{\text{Required Vout} \times 2.5}{\text{Vnom}}$$

### Mating Connector & Terminal for CN1, CN2 & CN3

Connector	Mating Connector	Terminal	Mfr
CN1 CN2	S10B-PHDSS PHDR-10VS	Reel Loose	SPHD-002T-P0.5 BPHD-001T-P0.5 J.S.T
CN3	S8B-PHDSS PHDR-8VS		BPHD-002T-P0.5