



UNIVERSAL INPUT

DESCRIPTION

The SUP200P PFC series comprises single and multiple output models for 200 watts of continuous output power. All models have a power factor better than 0.95, and have the same mechanical dimensions and output pinning as their corresponding SU200P series models. All auxiliary outputs have a magnetic amplifier to keep regulation. The units are constructed on a printed circuit board with a U-bracket for mechanical support and heat sinking. Both "B" and "C" versions are with UL, CSA and TÜV approvals.

FEATURES

- ◆ Power Factor 0.98 typical
- ◆ Universal input range from 90 to 264 VAC
- ◆ Power Fail Detect (PFD) signal
- ◆ Overvoltage protection
- ◆ Thermal protection
- ◆ 100% burn-in at full-rated load
- ◆ In compliance with EN61000-3-2, EN61000-4-2 level 3, EN61000-4-3 level 2 and EN61000-4-4 level 2

INPUT SPECIFICATION

Input Voltage: 90 to 264 VAC
 Input Frequency: 47 to 63 Hz
 Input Current: 3.6A (rms) for 115 VAC
 1.8A (rms) for 230 VAC
 Leakage Current: 0.4mA max. at 115 VAC, 60Hz
 0.8mA max. at 230 VAC, 50Hz

PFD Signal: TTL logic high for normal operation and TTL logic low upon loss of input power. This signal appears at least 1mS prior to master output dropping 5% below its nominal value. This signal also provides a min. delay of 100mS after master output is within regulation.

SUP200P PFC SERIES 200 WATT POWER FACTOR CORRECTED SWITCHING POWER SUPPLIES

OUTPUT SPECIFICATIONS

Output Voltage/Current: See Rating Chart
 Total Output Power: 200 watts maximum
 Ripple and Noise: 2% peak to peak max.
 Overvoltage Protection: Provided on output #1 only; set at 112-132% of its nominal output voltage
 Overcurrent Protection: All outputs protected to short circuit conditions
 Temperature Coefficient: All outputs, $\pm 0.04\%$ / °C maximum
 Transient Response: Maximum excursion of 4% or better on all models, recovering to 1% of final value within 500 μ s after a 25% step load change

GENERAL SPECIFICATIONS

Switching Frequency: 94KHz \pm 10 KHz
 Power Factor: 0.98 typical
 Efficiency: 70% min. on all models
 Hold-up Time: 12mS min. at 110 VAC
 Line Regulation: $\pm 0.5\%$ max. at 110 VAC
 Inrush Current (25° C cold start): 20A at 115 VAC
 40A at 230 VAC
 Withstand Voltage: 3000 VAC input to output
 1500 VAC input to ground
 500 VAC output to ground
 MTBF (25° C ambient): 300,000 hours at full load
 EMI Requirement: In compliance with CISPR 22 (EN 55022) class B and FCC class B
 Safety Requirements: Meets or exceeds:
 (1) UL 1950
 (2) CSA C22.2 No.950
 (3) IEC 950 (EN 60950)

ENVIRONMENTAL SPECIFICATION

Operating Temperature: 0°C to +70°C
 Storage Temperature: -40°C to +85°C
 Relative Humidity: 5% to 95% non-condensing
 Derating: Derate from 100% at +50°C linearly to 50% at +70°C
 Cooling: 25 CFM forced air, provided on "C" version, to be provided for "B" version by user

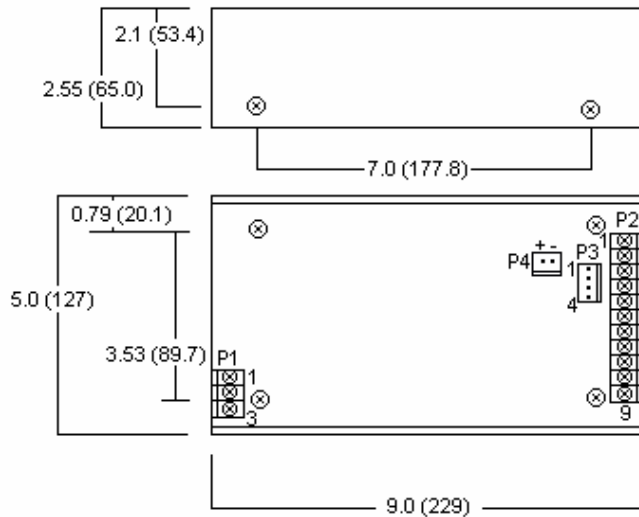


OUTPUT VOLTAGE/CURRENT RATING CHART

Model (1)(5)	Output #1				Output #2 (2)				Output #3				Output #4 (3)				Max. Power(4)
	Vnom	Imin	Imax	Tol.	Vnom	Imin	Imax	Tol.	Vnom	Imin	Imax	Tol.	Vnom	Imin	Imax	Tol.	
SUP200P10	5V	3.0A	40A	2%	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	200W
SUP200P12	12V	1.2A	16.7A	2%	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	200W
SUP200P13	15V	1.0A	13.4A	2%	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	200W
SUP200P14	24V	0.6A	8.4A	2%	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	200W
SUP200P16	30V	0.5A	6.7A	2%	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	200W
SUP200P18	48V	0.5A	4.2A	2%	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	200W
SUP200P23	+5V	3.0A	30A	2%	+12V	0A	8A	4%	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	200W
SUP200P24	+5V	3.0A	30A	2%	+15V	0A	6A	4%	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	200W
SUP200P25	+5V	3.0A	30A	2%	+24V	0A	4A	4%	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	200W
SUP200P30	+5V	3.0A	30A	2%	+12V	0A	8A	4%	-5V	0A	6A	4%	(N/A)	(N/A)	(N/A)	(N/A)	200W
SUP200P31	+5V	3.0A	30A	2%	+12V	0A	8A	4%	-12V	0A	4A	4%	(N/A)	(N/A)	(N/A)	(N/A)	200W
SUP200P32	+5V	3.0A	30A	2%	+15V	0A	6A	4%	-15V	0A	4A	4%	(N/A)	(N/A)	(N/A)	(N/A)	200W
SUP200P33	+5V	3.0A	30A	2%	+15V	0A	6A	4%	-12V	0A	4A	4%	(N/A)	(N/A)	(N/A)	(N/A)	200W
SUP200P40	+5V	3.0A	30A	2%	+12V	0A	8A	4%	-12V	0A	4A	4%	5V	0A	6A	4%	200W
SUP200P41	+5V	3.0A	30A	2%	+15V	0A	6A	4%	-15V	0A	4A	4%	24V	0A	4A	4%	200W
SUP200P42	+5V	3.0A	30A	2%	+12V	0A	8A	4%	-12V	0A	4A	4%	12V	0A	4A	4%	200W
SUP200P44	+5V	3.0A	30A	2%	+12V	0A	8A	4%	-15V	0A	4A	4%	15V	0A	4A	4%	200W
SUP200P45	+5V	3.0A	30A	2%	+12V	0A	8A	4%	-12V	0A	4A	4%	24V	0A	4A	4%	200W

- Notes:
- 1) Add suffix "B" for U-bracket format or "C" for enclosed format, e.g., SUP200-45C
 - 2) Peak current is 12A on +12V, 9A on +15V or 6A on +24V
 - 3) Output #4 is floating. It can be connected externally for positive or negative output
 - 4) 200 watts for "C" version with a cover-and-fan assembly, 150 watts for "B" version without moving air (maximum current of output #1 & #2 de-rated to 70%) or 200 watts with 25 CFM forced air provided by user
 - 5) All models may be operated at no-load. At no-load, output voltage tolerance increases to 10%

MECHANICAL SPECIFICATIONS



Notes:

1. Dimensions shown in inch (mm)
2. Tolerance 0.02 (0.5) maximum
3. Input connector P1 is Beau Inc. P/N 72-5-03C; output connector P2 is Beau Inc. P/N 72-5-09C. Screws are #6-32 on 0.375 inch centers
4. Connector P3 mates with Molex housing 22-01-1043 and Molex 40445 series crimp terminal
5. Connector P4 mates with Molex housing 22-01-1023 and Molex 40445 series crimp terminal
6. P4 is for DC fan rated 24V / 0.12A (models SUP200-14, -16, -25) or 12V / 0.2A (all other models)
7. The eight mounting holes are threaded for #8-32 or M4 screws
8. Weight:
1.30 kgs (2.86 lbs.) approx. for "B" version
1.50 kgs (3.30 lbs.) approx. for "C" version

PIN CHART

Connector		P1			P2						P3			
		1	2	3	1, 2	3, 4, 5	6	7	8	9	1	2	3	4
Model #	Pin	1	2	3	1, 2	3, 4, 5	6	7	8	9	1	2	3	4
SUP200P10 SUP200P12 SUP200P13 SUP200P14 SUP200P16 SUP200P18	SUP200P12 SUP200P14 SUP200P18	AC Live	AC Neutral	AC Ground	-Sense	Ret.	Output #1	Output #1	Output #1	+ Sense	FAN	Com. Ret.	Com. Ret.	PFD
SUP200P23 SUP200P25 SUP200P24	SUP200P24	AC Live	AC Neutral	AC Ground	Output #1	Com. Ret.	Output #2	N.C.	N.C.	N.C.	FAN	Com. Ret.	Com. Ret.	PFD
SUP200P30 SUP200P32 SUP200P33	SUP200P31 SUP200P33	AC Live	AC Neutral	AC Ground	Output #1	Com. Ret.	Output #2	Output #3	N.C.	N.C.	FAN	Com. Ret.	Com. Ret.	PFD
SUP200P40 SUP200P42 SUP200P45	SUP200P41 SUP200P44	AC Live	AC Neutral	AC Ground	Output #1	Com. Ret.	Output #2	Output #3	Output #4 Return	Output #4	FAN	Com. Ret.	Com. Ret.	PFD

Note: All data are subject to change without notice

