275-350 WATT POWER FACTOR CORRECTED SUPPLIES

DESCRIPTION

The PFC350 series comprises single and multiple output models for 275-350 watts of continuous output power. All models meet EN61000-3-2. All auxiliary outputs are with 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**
- **90 VAC to 264 VAC universal input**
- **In compliance with EN 55024, EN 61000-3-2 and EN61000-3-3**
- **Overvoltage and thermal protection**
- **Short-circuit protection**
- **Power Fail Detect（PFD）signal**
- **100% burn-in at full rated load**
- **Remote sense on master output**
- **Compliant with RoHS requirements**

INPUT SPECIFICATIONS

Input voltage:	90 to 264VAC
Input frequency:	47 to 63Hz
Input current:	5.6A（rms）for 115VAC 2.8A（rms）for 230VAC
Earth leakage current: (Touch current)	0.4mA max. @ 115VAC, 60Hz 0.8mA max. @ 230VAC, 50Hz

OUTPUT SPECIFICATIONS

Output voltage/current:	See rating chart
Total output power:	350 watts maximum
Ripple and noise:	2% peak to peak maximum
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 ±0.04% /℃ maximum
Transient response:	Maximum excursion of 4% or better on all models, recovering to 1% of final value within 500us after a 25% step load change
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 +5.1V output dropping 5% below its nominal value. This signal also provides a minimum delay of 100ms after +5.1V is within regulation.

ENVIRONMENTAL SPECIFICATIONS

Operating temperature:	0℃ to +70℃
Storage temperature:	-40℃ to +85℃
Relative humidity:	5% to 95% non-condensing
Derating:	Derate from 100% at +50℃ linearly to 50% at 70℃
Cooling:	38CFM forced air provided on “C” version, to be provided for “B” version by user

PFC350 SERIES

CE (LVD)
RoHS

Safety Standard Approvals：

UL 60950-1
File No. E137410

CSA C22.2 No. 60950-1
Certificate No. LR93632 (157810)

TÜV EN60950-1
Certificate No. 2055856

GENERAL SPECIFICATIONS

Switching frequency:	76KHz ±8KHz
Power factor:	0.98 typical
Efficiency:	70% typical
Hold-up time:	12 msec minimum at 115VAC
Line regulation:	±0.5% maximum at full load
Inrush current：	40 A @ 115VAC or 80 amps @ 230VAC, at 25℃ cold start
Withstand voltage:	3000VAC from input to output 1500VAC from input to ground 500VAC from output to ground
MTBF:	350,000 hours minimum at full load at 25℃ ambient, calculated per MIL-HDBK-217F, excluding DC fan.

EMC Performance (EN55024)

EN55022:	Class B conducted, Class A radiated
FCC:	Class B conducted, Class A radiated
VCCI:	Class B conducted, Class A radiated
EN61000-3-2:	Harmonic distortion , Class A and D
EN61000-3-3:	Line flicker
EN61000-4-2:	ESD,± 8KV air and ± 4KV contact
EN61000-4-3:	Radiated immunity, 3V/m
EN61000-4-4:	Fast transient/burst, ± 1KV
EN61000-4-5:	Surge, ± 1KV diff., ± 2KV com.
EN61000-4-6:	Conducted immunity, 3Vrms
EN61000-4-8:	Magnetic field immunity, 1A/m
EN61000-4-11:	Voltage dips, 30% reduction for 500ms and >95% reduction for 10ms

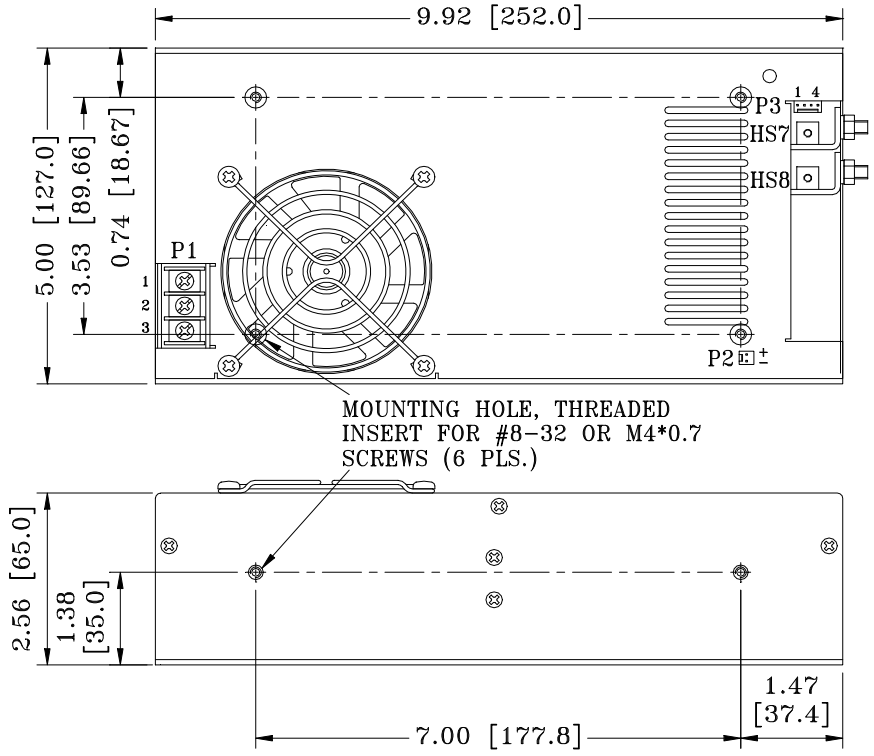
OUTPUT VOLTAGE/CURRENT RATING CHART

(1)(5) MODEL	Output #1 Vnom.	Imin.	Imax.	Tol.	Output #2 (2) Vnom.	Imin.	Imax.	Tol.	Output #3 Vnom.	Imin.	Imin.	Tol.	Output #4 (3) Vnom.	Imax.	Imax.	Tol.	Maximum Output Power (4)
PFC350-10	5.1V	1.0A	54A	2%		(N/A)				(N/A)				(N/A)			275W
PFC350-12	12V	0.5A	29.2A	2%		(N/A)				(N/A)				(N/A)			350W
PFC350-13	15V	0.4A	23.4A	2%		(N/A)				(N/A)				(N/A)			350W
PFC350-14	24V	0.3A	14.6A	2%		(N/A)				(N/A)				(N/A)			350W
PFC350-16	30V	0.2A	11.7A	2%		(N/A)				(N/A)				(N/A)			350W
PFC350-18	48V	0.1A	7.3A	2%		(N/A)				(N/A)				(N/A)			350W
PFC350-23	+5.1V	5.0A	40A	2%	+12V	0A	9A	4%		(N/A)				(N/A)			300W
PFC350-24	+5.1V	5.0A	40A	2%	+15V	0A	8A	4%		(N/A)				(N/A)			300W
PFC350-25	+5.1V	3.0A	40A	2%	+24V	0A	4.5A	4%		(N/A)				(N/A)			300W
PFC350-30	+5.1V	3.0A	40A	2%	+12V	0A	9A	4%	-5V	0A	6A	4%		(N/A)			300W
PFC350-31	+5.1V	3.0A	40A	2%	+12V	0A	9A	4%	-12V	0A	4A	4%		(N/A)			350W
PFC350-32	+5.1V	3.0A	40A	2%	+15V	0A	8A	4%	-15V	0A	4A	4%		(N/A)			350W
PFC350-33	+5.1V	3.0A	40A	2%	+15V	0A	8A	4%	-12V	0A	4A	4%		(N/A)			350W
PFC350-40	+5.1V	3.0A	40A	2%	+12V	0A	9A	4%	-12V	0A	4A	4%	5V	0A	6A	4%	350W
PFC350-41	+5.1V	3.0A	40A	2%	+15V	0A	8A	4%	-15V	0A	4A	4%	24V	0A	4A	4%	350W
PFC350-42	+5.1V	3.0A	40A	2%	+12V	0A	9A	4%	-12V	0A	4A	4%	12V	0A	4A	4%	350W
PFC350-44	+5.1V	3.0A	40A	2%	+12V	0A	9A	4%	-15V	0A	4A	4%	15V	0A	4A	4%	350W
PFC350-45	+5.1V	3.0A	40A	2%	+12V	0A	9A	4%	-12V	0A	4A	4%	24V	0A	4A	4%	350W

NOTES:
1. Add suffix “B” for U-bracket format or “C” for enclosed format, e.g. PFC350-45C.
2. The peak current of output #2 is limited to 12A on +12V, 9.6A on +15V or 6.0A on +24V.
3. Output #4 is floating. It can be connected externally for positive or negative output.
4. Peak output current with 10% maximum duty cycle for less than 60 seconds. Total peak power must not exceed 350 watts.
5. All models may be operated at no-load. At no-load, output voltage tolerance increases to 10%.The output #1 of multiple output models requires 5A to support other outputs at their maximum rated loads.

MECHANICAL SPECIFICATIONS

Single Output Models



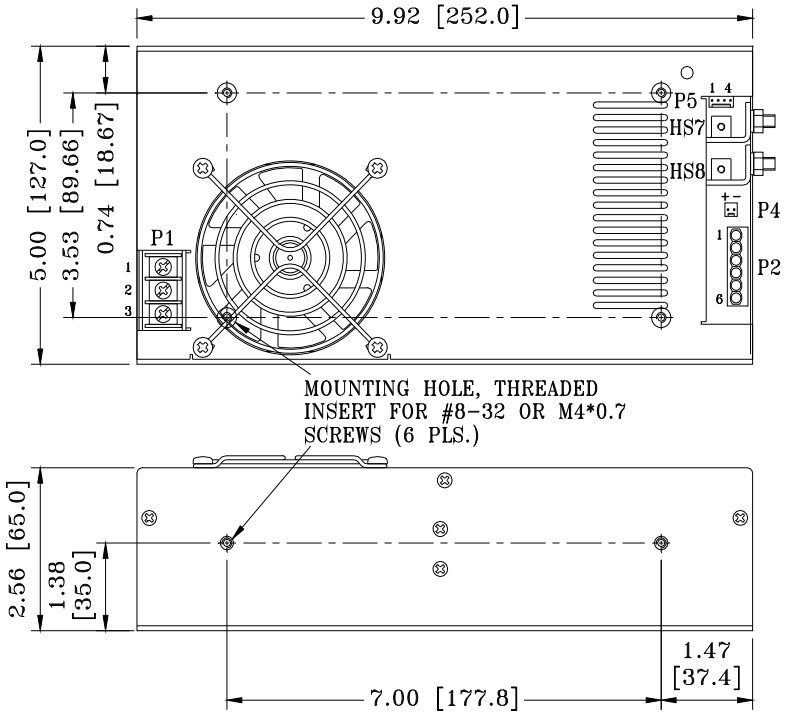
NOTES:

1. Dimensions shown in inch [mm]
2. Tolerance 0.02 [0.5] maximum
3. P1 input connector is Beau Inc. P/N 72-5-03C. Screws are #6-32 on 0.375 inch (9.53 mm) centers.
4. P2 is for DC fan rated 24V/0.12A (models PFC350-14, -16), or 12V/0.22A (the other models).
5. P3 connector mates with Molex housing 22-01-1043 and Molex 40445 series crimp terminal.
6. Main output studs HS7/HS8 are with M5*0.8 screws.
7. Weight::

   1.40 kgs (3.08 lbs.) approx. for “B” version

   1.70 kgs (3.74 lbs.) approx. for “C” version..

Multiple Output Models



NOTES:

1. Dimensions shown in inch [mm]
2. Tolerance 0.02 [0.5] maximum
3. P1 input connector is Beau Inc. P/N 72-5-03C. Screws are #6-32 on 0.375 inch (9.53 mm) centers.
4. P2 output connector is Dinkle P/N 166-06P
5. P4 is for DC fan rated 24V/0.12A (models PFC350-25), or 12V/0.22A (the other models)
6. P5 connector mates with Molex housing 22-01-1043 and Molex 40445 series crimp terminal
7. Main output studs HS7/HS8 are with M5*0.8 screws.
8. Weight::

   1.40 kgs. (3.08 lbs.) approx. for "B" version
   1.70 kgs. (3.74 lbs.) approx. for "C" version

PIN CHART

Single Output Models

CONN / MODEL / PIN	P1 (AC)			P3				HS7	HS8
	1	2	3	1	2	3	4		
PFC350-10	LIVE	NEUTRAL	GROUND	+S (V01)	-S (V01)	PFD	COM RET.	OUTPUT #1 RETURN	OUTPUT #1
PFC350-12 PFC350-13 PFC350-14 PFC350-16 PFC350-18	LIVE	NEUTRAL	GROUND	+S (V01)	-S (V01)	N.C.	COM RET.	OUTPUT #1 RETURN	OUTPUT #1

Multiple Output Models

CONN / MODEL / PIN	P1 (AC)			P2 (DC OUTPUT)					P5				HS7	HS8
	1	2	3	1	2,3	4	5	6	1	2	3	4		
PFC350-23 PFC350-24 PFC350-25	LIVE	NEUTRAL	GROUND	OUTPUT #2	COM. RET.	N.C.	N.C	N.C	+S (V01)	-S (V01)	PFD	COM. RET.	OUTPUT#1	OUTPUT #1 RETURN
PFC350-30 PFC350-31 PFC350-32 PFC350-33	LIVE	NEUTRAL	GROUND	OUTPUT #2	COM. RET.	OUTPUT #3	N.C	N.C.	+S (V01)	-S (V01)	PFD	COM. RET.		
PFC350-40 PFC350-41 PFC350-42 PFC350-44 PFC350-45	LIVE	NEUTRAL	GROUND	OUTPUT #2	COM. RET.	OUTPUT #3	OUTPUT #4	OUTPUT #4 RETURN	+S (V01)	-S (V01)	PFD.	COM. RET.		

NOTE: "OUTPUT #1 RETURN "is connected to "COM. RET" (common return), but "OUTPUT #4 RETURN" is isolated.