TRUMPower

350 WATT POWER FACTOR CORRECTED SUPPLIES

DESCRIPTION

PFC350 SERIES CE (LVD + EMC)

The PFC350 series comprises single and multiple output models for 350 watts of continuous output power. All models meet EN 61000-3-2. All auxiliary outputs are with magnetic amplifier to keep regulation. The units are constructed on a printed circuit board with a U-bracket for mechnical 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 EN 61000-3-3**
- **Overvoltage and thermal protection**
- **Short-circuit protection**
- **Power Fail Detect (PFD) signal**
- **100% burn-in at full rated load**
- **Remote sense on master output**

Safety Standard Approvals:

UL 1950
File No. E137410

C22.2 No. 950
Certificate No. LR93632(157810)

EN 60950
Certificate No. 9955628

INPUT SPECIFICATIONS

Input voltage:	90 to 264 VAC
Input frequency:	47 to 63 Hz
Input current:	5.6A (rms) for 115VAC 2.8A (rms) for 230VAC
Leakage 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%/ ℃ maximun
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 1 ms prior to +5.1V output dropping 5% below its nominal value. This signal also provides a minimum delay of 100 ms 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:	38 CFM forced air, provided on "C" version, to be provided for "B" version by user

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 A @ 230 VAC, 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.
EMI requirements :	In compliance with EN 55022 and FCC, conducted emissions meeting Class B and radiated emissions meeting Class A
Safety reguirements :	Meets or exceeds: (a) UL 1950 (b) CSA C22.2 No. 950 (c) IEC 950 (EN 60950)

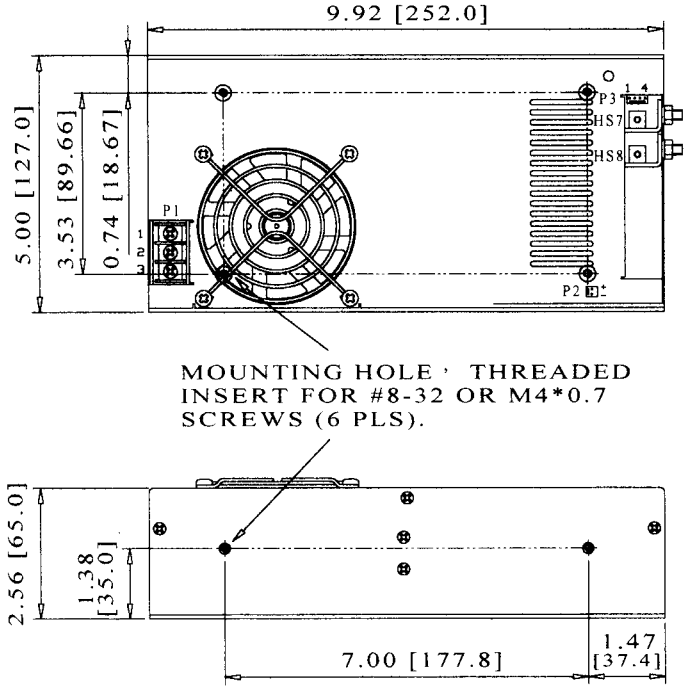
OUTPUT VOLTAGE/CURRENT RATING CHART

(1)(5) Model	Output #1 Vnom.	Imin.	Imax.	Tol.	Output #2 (2) Vnom.	Imin.	Imax.	Tol.	Output #3 Vnom.	Imin.	Imax.	Tol.	Output #4 (3) Vnom.	Imin.	Imax.	Tol.	Maximum Output Power (4)
PFC350-10	5.1V	1A	53.9A	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	5A	40A	2%	+12V	0A	9A	4%		(N/A)				(N/A)			300W
PFC350-24	+5.1V	5A	40A	2%	+15V	0A	8A	4%		(N/A)				(N/A)			300W
PFC350-25	+5.1V	5A	40A	2%	+24V	0A	4.5A	4%		(N/A)				(N/A)			300W
PFC350-30	+5.1V	5A	40A	2%	+12V	0A	9A	4%	-5V	0A	6A	4%		(N/A)			300W
PFC350-31	+5.1V	5A	40A	2%	+12V	0A	9A	4%	-12V	0A	4A	4%		(N/A)			350W
PFC350-32	+5.1V	5A	40A	2%	+15V	0A	8A	4%	-15V	0A	4A	4%		(N/A)			350W
PFC350-33	+5.1V	5A	40A	2%	+15V	0A	8A	4%	-12V	0A	4A	4%		(N/A)			350W
PFC350-40	+5.1V	5A	40A	2%	+12V	0A	9A	4%	-12V	0A	4A	4%	5V	0A	6A	4%	350W
PFC350-41	+5.1V	5A	40A	2%	+15V	0A	8A	4%	-15V	0A	4A	4%	24V	0A	4A	4%	350W
PFC350-42	+5.1V	5A	40A	2%	+12V	0A	9A	4%	-12V	0A	4A	4%	12V	0A	4A	4%	350W
PFC350-44	+5.1V	5A	40A	2%	+12V	0A	9A	4%	-15V	0A	4A	4%	15V	0A	4A	4%	350W
PFC350-45	+5.1V	5A	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 a 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

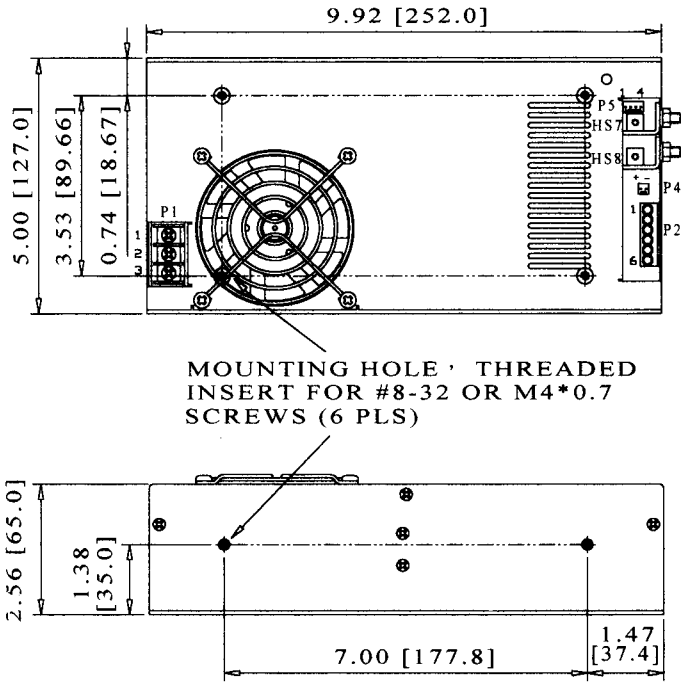
Single Output Models



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 (9.53mm) 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.

MECHANICAL SPECIFICATIONS

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 (9.53mm) centers.
4. P2 Output connector is Dinkle P/N 166-06P.
5. P4 is for DC fan rated 24V/0.12A (model 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 / PIN / MODEL	P1 (AC)			P3				HS7	HS8
	1	2	3	1	2	3	4		
PFC350-10	LIVE	NEUTRAL	GROUND	+S (VO1)	-S (VO1)	PFD	COM. RET.	OUTPUT # 1 RETURN	OUTPUT # 1
PFC350-12 PFC350-13 PFC350-14 PFC350-16 PFC350-18	LIVE	NEUTRAL		+S (VO1)	-S (VO1)	N.C.	COM. RET.	OUTPUT # 1 RETURN	OUTPUT # 1

Multiple Output Models

CONN / PIN / MODEL	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 (VO1)	-S (VO1)	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 (VO1)	-S (VO1)	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 (VO1)	-S (VO1)	PFD	COM. RET.		

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