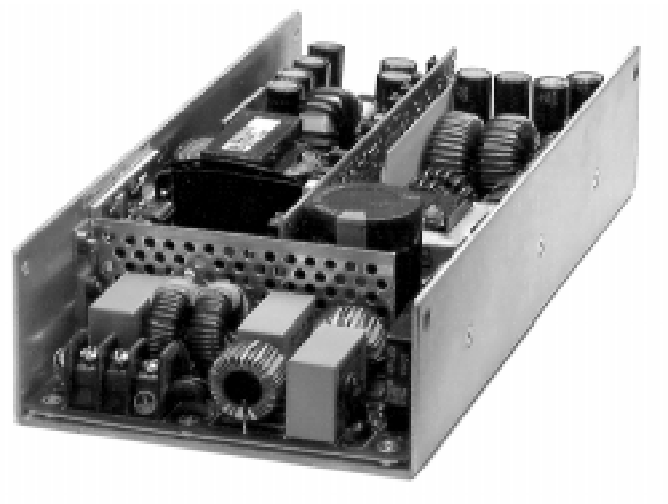
C&D TECHNOLOGIES

Product Data Sheet

400 WATT AC/DC POWER SUPPLY

PT400/402



DESCRIPTION

The PT400 is a family of compact, fully featured, multiple-output, 400W power supplies with a 3.3V main output. These high-current 3.3V output platforms will support requirements in which the logic has largely migrated from 5V to 3.3V. With active Power Factor Correction (PFC) to EN61000-3-2, wide-range input of 90-264VAC, EMI compliance to FCC and VDE Class B, and "CE" Marking, the PT400 series is ideal for systems targeting world-wide markets. The complement of standard features includes remote sense compensation, output voltage adjustment, remote inhibit, power fail warning, and thermal shutdown. All outputs are fully isolated and regulated. A complete array of output voltage configurations is available to handle a broad range of applications. Available options include a cover with integral fan and active current sharing for redundant applications.

FEATURES

- **Active Power Factor Correction**
- **3.3V Main Output**
- **High Surge Current Auxiliary Outputs**
- **FCC/VDE Class B EMI Filter**
- **Fully Isolated and Regulated Outputs**
- **Compact Size: 10" x 4.85" x 2.19"**
- **One, Two, Three and Four Output Models**
- **Optional Cover With Fan**
- **Active Current Sharing Optional (PT402)**

AGENCY APPROVALS

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Input Specifications

Parameters	Conditions	Min	Typ	Max	Units
Operating Range	47-63Hz	90		264	VAC
Input Current	Nominal line, full load			7	A
Inrush Current	120VAC, 25°C, cold start			30	Apk
	240VAC, 25°C, cold start			60	Apk
Efficiency	Nominal line, full load		70		%
Holdup	Full load	30			msec
Power Factor (1)	Full load		0.99		

Notes: (1) Harmonic currents meet EN61000-3-2

Output Voltages and Maximum Rated Loads

MODEL NUMBER	OUTPUT #1 V_{OUT}	OUTPUT #1 I_{MAX}	OUTPUT #2 V_{NOM}	OUTPUT #2 I_{MAX}/I_{PK}	OUTPUT #3 V_{NOM}	OUTPUT #3 I_{MAX}/I_{PK}	OUTPUT #4 V_{NOM}	OUTPUT #4 I_{MAX}
PT400/402-U1A	± 3.3V	70A						
PT400/402-U2A	± 3.3V	70A	± 12V	15A/17A				
PT400/402-U2B	± 3.3V	70A	± 15V	15A/17A				
PT400/402-U3A	± 3.3V	70A	± 12V	15A/17A	± 12V	15A/17A		
PT400/402-U3B	± 3.3V	70A	± 15V	15A/17A	± 15V	15A/17A		
PT400/402-U4C	± 3.3V	70A	± 5V	15A/17A	± 12V	12A/14A	± 12V	3.0A
PT400/402-U4D	± 3.3V	70A	± 5V	15A/17A	± 12V	12A/14A	± 24V	2.0A
PT400/402-U4E	± 3.3V	70A	± 12V	12A/14A	± 12V	12A/14A	± 5V	3.0A
PT400/402-U4F	± 3.3V	70A	± 5V	15A/17A	± 15V	12A/14A	± 15V	3.0A
PT400/402-U4G	± 3.3V	70A	± 5V	15A/17A	± 15V	12A/14A	± 24V	2.0A
PT400/402-U4H	± 3.3V	70A	± 12V	12A/14A	± 12V	12A/14A	± 5.2V	10.0A
PT400/402-U4I	± 3.3V	70A	± 15V	12A/14A	± 15V	12A/14A	± 5.2V	10.0A

Note: Peak current ratings are for 10sec maximum. Total power not to exceed 400 watts.

Output Specifications

Parameter	Conditions	Min	Typ	Max	Units
Output Power	All environmental and line conditions			400	Watts
Voltage Adjustment Range	Relative to nominal output voltage, all outputs		± 5		%
Output Regulation	Line			± 0.1	%
	Load			± 0.5	%
	Cross			± 0.01	%
Minimum Load	Output #1	2.5			A
PARD	V1, at output terminals, 20MHz B/W			50	mVp-p
	Auxiliary Outputs			1	% pk-pk
Temperature Coefficient	0° to 40°C, after 30 minute warm-up		± 0.02		%/°C

Environmental Specifications

Parameter	Conditions	Min	Typ	Max	Units
Ambient Temperature	Operating; output de-rated linearly to 50% of rated capacity between 40°C and 60°C	0		+60	°C
	Non-operating	-20		+85	°C
Altitude	Operating			+10,000	Feet
	Non-operating			+50,000	Feet
Shock	Per MIL-STD-810D, Method 516.3, Procedure I				
Vibration	Per MIL-STD-810D, Method 514.3, Procedure I				
Cooling	The PT400 is designed to operate with 40CFM airflow.				

Product Features

Features	Characteristic
Remote Sense	500mV compensation, Output V1
Active Current Sharing Option	Single Wire; 1% of max rated load
Cover w/Integral Fan	Optional on all models
OVP	4.3V ± 0.5V, Output V1, latching
Overcurrent Protection	All outputs individually current limited with automatic recovery
Thermal Shutdown	Automatic Restart
Output Isolation	All outputs are fully isolated
Power Fail Warning Signal (H)	Transition to Logic "0" at least 10msec before loss of output regulation
Remote Inhibit (H)	Logic "0" applied will inhibit output (referenced to –Sense terminal)

Product Compliances

Approval	Characteristic
UL	UL1950 and UL1012, File No. E14675
CSA	C22.2 No. 234-M90, Level 6. File No. LR9070-154C
TUV	EN60950, License No. R9576029
FCC	Class B requirements for conducted emissions
CISPR 22	Class B requirements for conducted emissions
CE Mark	Low Voltage Directive

Ordering Information

Model Designation (1)

BASE MODEL (2) **PT400**

Chassis: "U" = unfinned, "M" = modified

Number of Outputs (1, 2, 3 or 4)

Output Voltage: See chart on facing page

Input Filter: "B" designates Class B EMI filter (standard feature)

Cover: "C" = plain cover, "F" = fan cover, "N" = no cover (3)

Remote Inhibit: "H" designates that Logic "0" applied inhibits output (standard configuration)

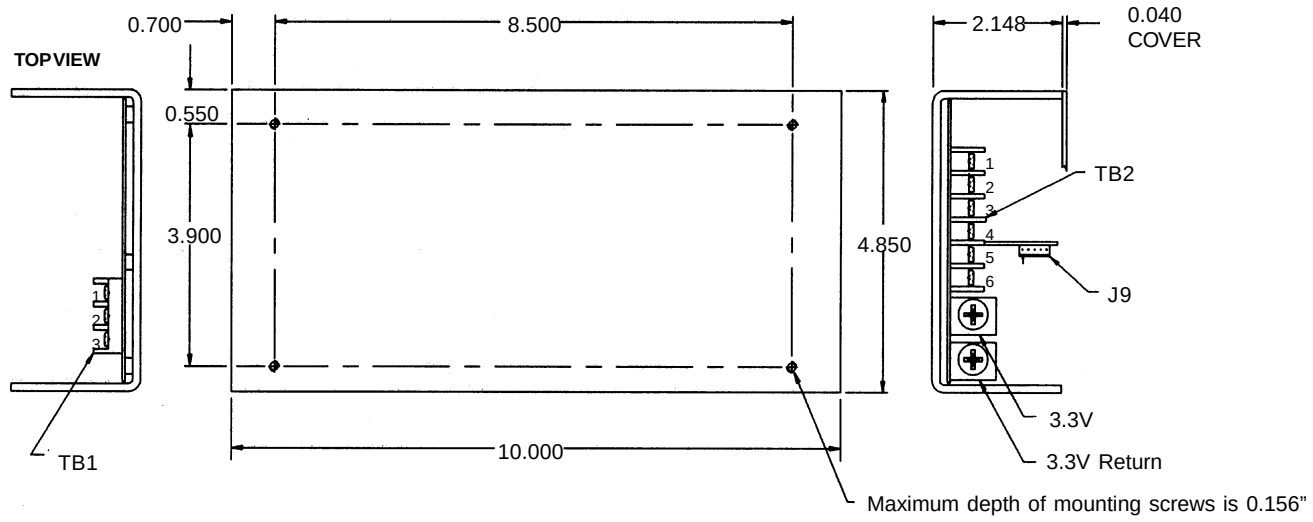
Input: "P" designates Power Factor Corrected wide range (90-264VAC) input (standard feature)

Power Fail Warning: "H" designates transition to Logic "0" upon loss of AC (standard configuration)

Current Share: "N" designates no current share option;
"M" designates active current sharing option (PT402 only)

NOTES: (1) Standard configurations shown; consult factory for other available options
(2) Use PT402 for base model when specifying active current sharing option
(3) Cover is required to meet EMI specifications

Mechanical



NOTES: All dimensions are in inches
FAN MOUNTED ON COVER ADDS 1.30”.
COOLING: The PT400/402 is designed to operate with 40 CFM airflow.
SHOCK AND VIBRATION: The PT400/402 family meets the requirements of MIL STD-810D. (Vibration-Method 514.3 Procedure I; Shock-Method 516.3 Procedure I.)
WEIGHT: Approximately 4 lbs.

Pin Specifications

Terminal Block 1		Terminal Block 2	
POS	**FUNCTION**	**POS**	**FUNCTION**
1	Ground	1	-V4
2	AC Neutral	2	+V4
3	AC Line	3	-V3
		4	+V3
		5	-V2
		6	+V2

Connector Specifications

J9 Connector		J9 Connector	
PIN	**FUNCTION**		**Molex No.**
1	- Sense	Connector	22-28-1050
2	+ Sense		
3	Current Share		
4	Remote Inhibit		
5	Power Fail		