

500 WATT AC/DC POWER SUPPLY

PT500



DESCRIPTION

The PT500 Series is a family of compact, fully featured, multiple-output 500W 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 PT500 Series is ideal for systems targeting worldwide 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
- Fully Isolated Outputs
- One, Two, Three or Four Output Models
- N + 1 Current Sharing
- FCC/VDE Class B EMI Filter Standard
- Fast Transient Response
- Optional Cover With Fan

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			8	A
Inrush Current	120VAC, 25°C, cold start 240VAC, 25°C, cold start			30 70	Apk Apk
Efficiency	Nominal line, full load		70		%
Holdup	Full load	20			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		OUTPUT #2		OUTPUT #3		OUTPUT #4	
	V _{OUT}	I _{MAX}	V _{NOM}	I _{MAX} /I _{PK}	V _{NOM}	I _{MAX} /I _{PK}	V _{NOM}	I _{MAX} /I _{PK}
PT500-U1A	± 3.3V	80A						
PT500-U2A	± 3.3V	80A	± 12V	12A/15A				
PT500-U2B	± 3.3V	80A	± 15V	12A/15A				
PT500-U3A	±3.3V	80A	± 12V	12A/15A	± 12V	12A/15A	-	-
PT500-U3B	±3.3V	80A	± 15V	12A/15A	± 15V	12A/15A	-	-
PT500-U4C	±3.3V	80A	± 5V	12A/15A	± 12V	12A/15A	± 12V	4.0A
PT500-U4D	±3.3V	80A	± 5V	12A/15A	± 12V	12A/15A	± 24V	3.0A
PT500-U4E	±3.3V	80A	± 12V	12A/15A	± 12V	12A/15A	± 5V	4.0A
PT500-U4F	±3.3V	80A	± 5V	12A/15A	± 15V	12A/15A	± 15V	4.0A
PT500-U4G	±3.3V	80A	± 5V	12A/15A	± 15V	12A/15A	± 24V	3.0A
PT500-U4H	±3.3V	80A	± 5V	12A/15A	± 12V	12A/15A	± 5.2V	10.0A
PT500-U4I	±3.3V	80A	± 5V	12A/15A	± 15V	12A/15A	± 12V	4.0A
PT500-U4J	±3.3V	80A	± 24V	4A	± 24V	4A	± 5V	10.0A
PT500-U4K	±3.3V	80A	± 5V	15A	± 12V	12A	± 5V	4.0A
PT500-U4L	±3.3V	80A	± 12V	12A	± 12V	12A	± 12V	4.0A

Note: Peak current ratings are for 10sec maximum. Total power not to exceed 500 watts.

Output Specifications

Parameter	Conditions	Min	Typ	Max	Units
Output Power	All environmental and line conditions			500	Watts
Voltage Adjustment Range	Relative to nominal output voltage, all outputs		± 5		%
Output Regulation	Line			± 0.1	%
	Load			± 0.5	%
	Cross			± 0.1	%
Minimum Load	Output #1	4			A
PARD	V1, at output terminals, 20MHz B/W			50	mVp-p
	Auxiliary Outputs			1	% pk-pk
Temperature Coefficient	0° to 50°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 50°C and 70°C	0		+70	°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 PT500 is designed for full load operation in a 50°C ambient with 40 CFM airflow.				

Product Features

Features	Characteristic
Remote Sense	0.5V 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 \pm 0.5V, Output V1, latching
Overcurrent Protection	All outputs individually current limited with automatic recovery
Thermal Shutdown	Automatic Restart
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. R9576030
FCC, Part 15	Class B requirements for conducted emissions
VDE	Class B requirements for conducted emissions
EN61000-3-2	Harmonic Currents, Class A
CE Mark	Low Voltage Directive

Ordering Information

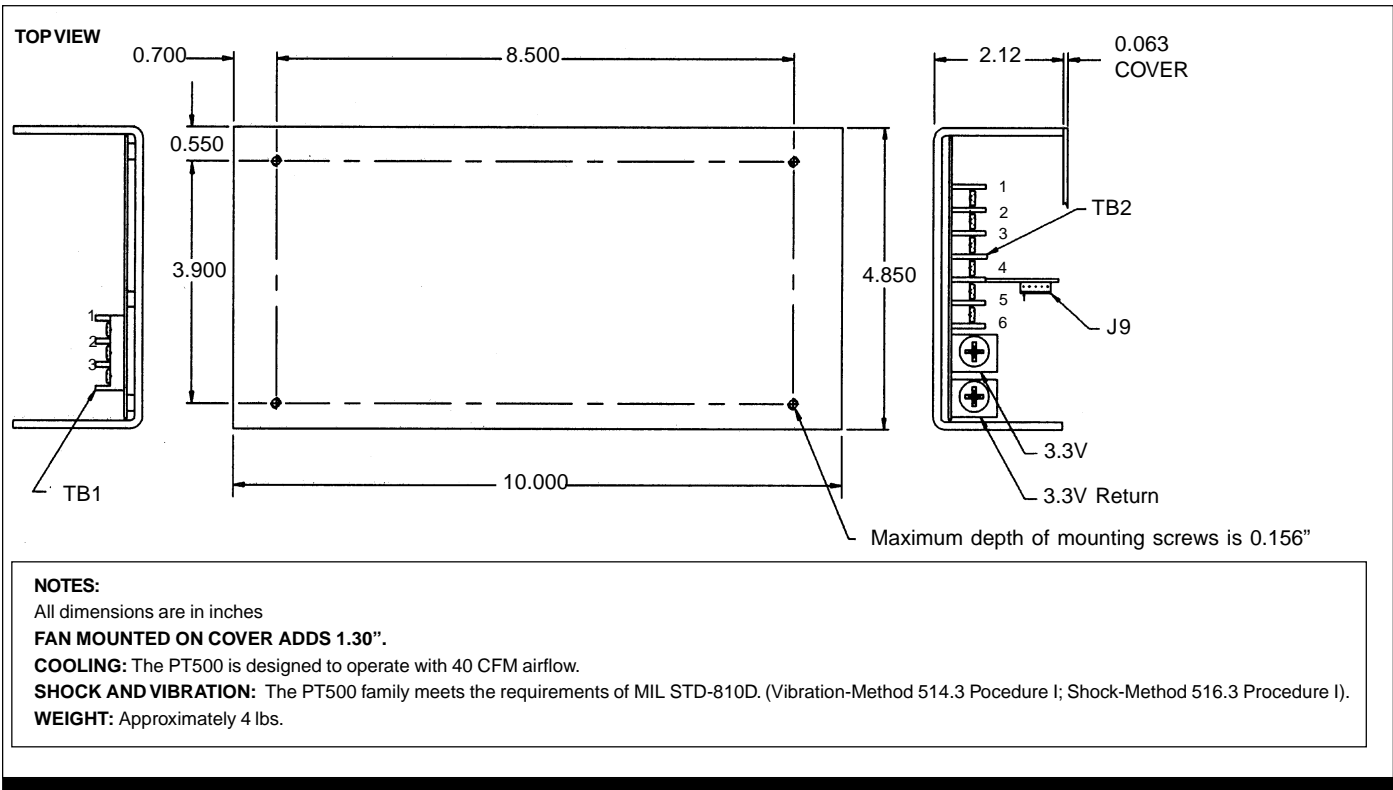
Model Designation ⁽¹⁾	
BASE MODEL	PT500
Chassis: "U" = unfinned, "M" = modified	
Number of Outputs (1,2,3 or 4)	
Output Voltage: See chart on facing page	
Input Filter: "B" designates Class B EMI filter (standard feature)	
Cover: "C" = plain cover, "F" = top mounted fan, "N" = no cover ⁽²⁾	
Remote Inhibit: "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)	
Active Current Share: "M" designates current sharing on main output (V1) (standard feature)	

NOTES: (1) Standard configurations shown; consult factory for other available options

(2) Cover required to meet EMI specification

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Mechanical



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

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		

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