

## PBA1500 Series



- Universal Input
- Single Outputs from 3.3 V to 48 V
- Fan-cooled
- Level B Conducted Emissions
- EN61000-3-2, -3 Compliant
- Low Earth Leakage Current Option
- Fan Options

## Specification

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### Input

Input Voltage	• 85-264 VAC (120-370 VDC). For operation below 95 VAC output derates linearly to 80% load at 85 VAC
Input Frequency	• 47 - 63 Hz
Input Current	• 19 A typical at 100 VAC, 10 A typical at 200 VAC
Inrush Current	• 20 A typical at 100 VAC, 40 A typical at 200 VAC
Power Factor	• 0.98 typical
Earth Leakage Current	• 1.5 mA max at 240 VAC 60Hz
Input Protection	• 30 A internal fuse

### Output

Output Voltage	• See tables
Output Voltage Trim	• See tables
Initial Set Accuracy	• -0%/+4% max
Minimum Load	• No minimum load required
Start Up Delay	• 600 ms typical
Start Up Rise Time	• 3 ms typical
Hold Up Time	• 20 ms typical
Drift	• 0.4% max
Line Regulation	• 0.4% max
Load Regulation	• See tables
Transient Response	• 1% max. deviation, recovery to within 0.5% in 2 ms for a 50% load change
Ripple & Noise	• See tables
Oversvoltage Protection	• See tables, recycle mains to reset
Overtemperature Protection	• Fitted, recycle mains to reset
Overload Protection	• >105% constant current for 5 s then output will shut down, recycle mains to reset.
Short Circuit Protection	• Trip, recycle mains to reset
Temperature Coefficient	• 0.5 %/°C
Remote Sense	• Compensates for 0.5 V drop max.
Remote On/Off	• Fitted
Current Share	• Fitted
Aux Output	• 12 V at 100 mA

### General

Efficiency	• See tables
Isolation	• 3000 VAC Input to Output 2000 VAC Input to Ground 500 VAC Output to Ground
Switching Frequency	• 130 kHz PFC, 200 kHz PWM
Power Density	• 8.5 W/In <sup>3</sup>
Signals	• Power Good, Remote On/Off, Current Share
MTBF	• >70 kHrs per EIAJ RCR 9102

### Environmental

Operating Temperature	• -20 °C to +71 °C, see derating curve
Cooling	• Fan-cooled
Operating Humidity	• 20-90% RH, non-condensing
Storage Temperature	• -20 °C to +75 °C
Operating Altitude	• 3000 m max
Shock	• 20 g once on each axis
Vibration	• 10-55 Hz, 2 g 3 minute period, 60 minutes along each axis

### EMC & Safety

Emissions	• EN55022 (CISPR22), level B conducted Additional filter required (NAC-20-472)
Harmonic Currents	• EN61000-3-2, class A
Voltage Flicker	• EN61000-3-3
ESD Immunity	• EN61000-4-2, level 4 Perf Criteria A
Radiated Immunity	• EN61000-4-3, level 3 Perf Criteria A
EFT/Burst	• EN61000-4-4, level 4 Perf Criteria A
Surge	• EN61000-4-5, level 4 Perf Criteria A
Conducted Immunity	• EN61000-4-6, level 3 Perf Criteria A
Dips & Interruptions	• EN61000-4-11, 30 % 10 ms, 60 % 100 ms, 100 % 5000 ms Perf Criteria A, B, B
Safety Approvals	• UL60950-1, C-UL(CSA60950-1), EN60950-1, EN50178

**Models and Ratings**

Output Power	Output Voltage	Output Current	Output Voltage Trim	Oversvoltage Protection	Ripple & Noise (pk-pk max)	Load Regulation (max)	Efficiency (Typ)	Model Number
990 W	3.3 VDC	300 A	2.64-3.96 VDC	3.96-4.62 VDC	160 mV	40 mV	75%	PBA1500F-3R3
1500 W	5 VDC	300 A	3.96-6.00 VDC	6.00-7.00 VDC	160 mV	40 mV	81%	PBA1500F-5
1500 W	7.5 VDC	200 A	5.25-8.25 VDC	9.00-10.5 VDC	180 mV	60 mV	83%	PBA1500F-7R5
1500 W	12 VDC	125 A	8.25-13.2 VDC	14.4-16.8 VDC	180 mV	100 mV	84%	PBA1500F-12
1500 W	15 VDC	100 A	10.5-16.5 VDC	18.0-21.0 VDC	180 mV	120 mV	86%	PBA1500F-15
1680 W	24 VDC	70 (105) A <sup>(3)</sup>	16.5-26.4 VDC	28.8-33.6 VDC	180 mV	150 mV	87%	PBA1500F-24
1692 W	36 VDC	47 (70) A <sup>(3)</sup>	25.2-39.6 VDC	43.2-50.4 VDC	240 mV	150 mV	87%	PBA1500F-36
1680 W	48 VDC	35 A	38.4-56.0 VDC	52.8-60.0 VDC	500 mV	300 mV	87%	PBA1500F-48

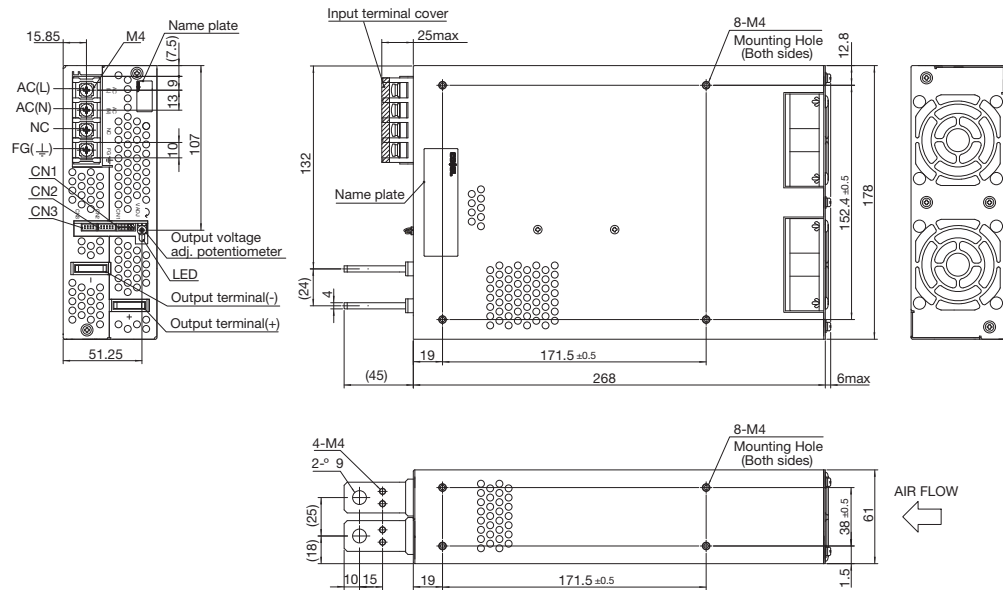
**Notes**

- Efficiency measured at 200 VAC and full load.
- Ripple & noise measured at 20 MHz bandwidth.
- Peak current 10 seconds max, 35% duty cycle.

**Mechanical Details**

**PBA1500**

Weight: <3.4 kg



Pin Connections - CN1 & CN2	
Pin	Function
1	+M: +Sense return
2	+S: +Sense
3	-M: -Sense return
4	-S: -Sense
5	VB: Voltage balance
6	CB: Current balance
7	TRM: Output voltage trim
8	-S: -Sense
9	RC2: Remote On/Off
10	RCG: Remote On/Off (RTN)

Pin Connections - CN3	
Pin	Function
1	-S: -Sense
2	-S: -Sense
3	AUX: Auxiliary output (12V@0.1A)
4	RC1: Remote On/Off
5	AUXG: Auxiliary output (RTN)
6	N/C
7	PG: Alarm
8	PGG: Alarm (RTN)

**Options**

- C : Conformal Coating
- F1 : With long life fan
- F3 : Reverse air exhaust type
- F4 : Low speed fan
- G : Low Leakage current
- U : Low input voltage

Contact sales for option details

**Notes**

- All measurements are in mm. Tolerance: ±1 mm.
- Mounting torque: 1.2 Nm
- Screw tightening torque: 1.6 Nm
- Connectors: CN1/2: S10B-PHDSS, CN3: S8B-PHDSS.  
Housing: CN1/2: PHDR-10VS, CN3: PHDR-08VS.  
Terminal: Reel: SPHD-002T-P0.5, Loose: BPHD-001T-P0.5  
Manufacturer: J.S.T.

**Derating Curve**

