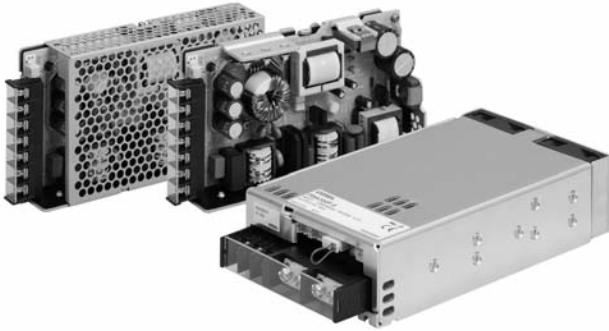


PBA150/300 Series



- Universal Input
- Single Outputs from 3.3 V to 48 V
- Convection-cooled (150 W)
- Fan-cooled (300 W)
- Level B Conducted Emissions
- 12 V Auxiliary Output (300 W)
- Low Earth Leakage Current Option

Specification

Input

Input Voltage	• 85-264 VAC (120-370 VDC). Operation down to 50 VAC possible, contact sales for details (150 W unit).
Input Frequency	• 47 - 63 Hz
Input Current	• 150 W unit: 2.0 A at 100 VAC 300 W unit: 4.1 A at 100 VAC
Inrush Current	• 150 W unit: 20 A typical at 100 VAC, 40 A typical at 200 VAC 300 W unit: 40 A typical at 100 VAC,
Power Factor	• 0.98 typical
Earth Leakage Current	• 0.75 mA max at 240 VAC 60Hz
Input Protection	• 150 W unit: 4 A internal fuse 300 W unit: 10 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	• 350 ms typical
Start Up Rise Time	• 11 ms typical
Hold Up Time	• 20 ms typical
Drift	• 0.4% max
Line Regulation	• 0.4% max
Load Regulation	• See tables
Transient Response	• 2% max. deviation, recovery to within 0.25% in 10 ms for a 50% load change
Ripple & Noise	• See tables
Overvoltage Protection	• See tables
Overtemperature Protection	• Fitted, recycle mains to reset (300 W only)
Overload Protection	• >105% constant current until voltage drops to 50% then trip & restart, automatic recovery
Short Circuit Protection	• Trip and restart (Hiccup mode)
Temperature Coefficient	• 0.5 %/°C
Remote Sense	• 150 W unit: Not fitted (Optional 3.3V & 5V output only). 300 W unit: Compensates for 0.3 V drop max.
Remote On/Off	• 150 W unit: Optional, 300 W unit: Standard
Current Share	• Standard (300 W unit only)
Aux Output	• 12 V at 100 mA (300 W unit only)

General

Efficiency	• See tables
Isolation	• 3000 VAC Input to Output 2000 VAC Input to Ground 500 VAC Output to Ground
Switching Frequency	• 150 W unit: 60-550 kHz PFC, 120 kHz PWM. 300 W unit: 230 kHz PFC, 330 kHz PWM.
Power Density	• 6.7 W/In ³
Signals	• 150 W unit: None 300 W unit: Power Good, Remote On/Off Current Share
MTBF	• 150 W: >364 kHrs per EIAJ RCR 9102 300 W: >106 kHrs per EIAJ RCR 9102

Environmental

Operating Temperature	• -20 °C to +71 °C. Operation above +50 °C derate linearly to 50% load at +71 °C (300 W unit). For 150 W unit derating curve see pg.9.
Cooling	• 150 W: Convection-cooled 300 W: Forced air-cooled (internal fan)
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
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	Overvoltage Protection	Ripple & Noise (pk-pk max)	Load (2) Regulation (max)	Efficiency (1) (Typ)	Model Number
99.0 W	3.3 VDC	30.00 A	2.85-3.63 VDC	4.00-5.25 VDC	160 mV	40 mV	82%	PBA150F-3R3
150.0 W	5 VDC	30.00 A	4.00-5.50 VDC	5.75-7.00 VDC	160 mV	40 mV	86%	PBA150F-5
150.3 W	9 VDC	16.70 A	7.50-10.0 VDC	11.5-14.0 VDC	180 mV	100 mV	85%	PBA150F-9
156.0 W	12 VDC	13.00 A	10.0-13.2 VDC	15.0-18.0 VDC	180 mV	100 mV	86%	PBA150F-12
150.0 W	15 VDC	10.00 A	13.2-18.0 VDC	20.0-25.0 VDC	180 mV	120 mV	87%	PBA150F-15
156.0 W	24 VDC	6.50 A	19.2-27.0 VDC	30.0-37.0 VDC	180 mV	150 mV	88%	PBA150F-24
154.8 W	36 VDC	4.30 A	28.8-39.6 VDC	43.0-50.0 VDC	300 mV	240 mV	88%	PBA150F-36
158.4 W	48 VDC	3.30 A	39.0-53.0 VDC	58.0-65.0 VDC	300 mV	240 mV	88%	PBA150F-48
198.0 W	3.3 VDC	60.00 A	2.64-3.96 VDC	4.30-6.30 VDC	160 mV	40 mV	71%	PBA300F-3R3
300.0 W	5 VDC	60.00 A	3.96-6.00 VDC	6.50-8.00 VDC	160 mV	40 mV	77%	PBA300F-5
300.0 W	7.5 VDC	40.00 A	5.25-8.25 VDC	9.00-11.6 VDC	180 mV	60 mV	79%	PBA300F-7R5
324.0 W	12 VDC	27.00 A	8.25-13.2 VDC	14.4-18.6 VDC	180 mV	100 mV	81%	PBA300F-12
330.0 W	15 VDC	22.00 A	10.5-16.5 VDC	18.0-23.3 VDC	180 mV	120 mV	81%	PBA300F-15
336.0 W	24 VDC	14A(16.5A) ⁽³⁾	16.5-26.4 VDC	28.8-37.2 VDC	180 mV	150 mV	82%	PBA300F-24
324.0 W	36 VDC	9.00 A	25.2-39.6 VDC	43.2-54.0 VDC	240 mV	150 mV	84%	PBA300F-36
336.0 W	48 VDC	7.00 A	38.4-56.0 VDC	57.6-80.0 VDC	500 mV	300 mV	82%	PBA300F-48

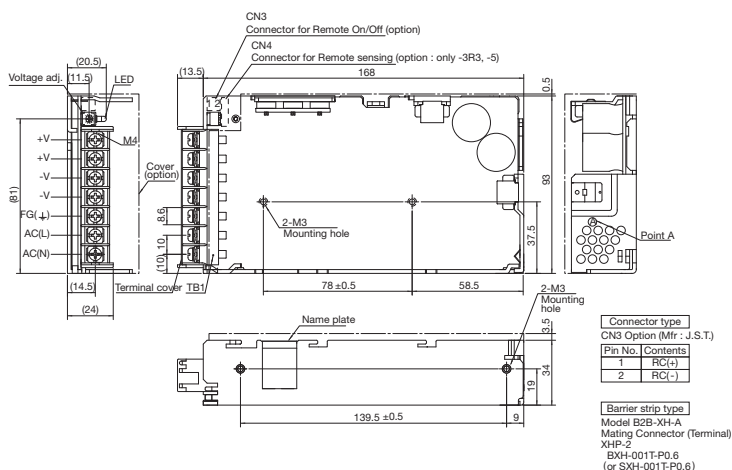
Notes

- 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

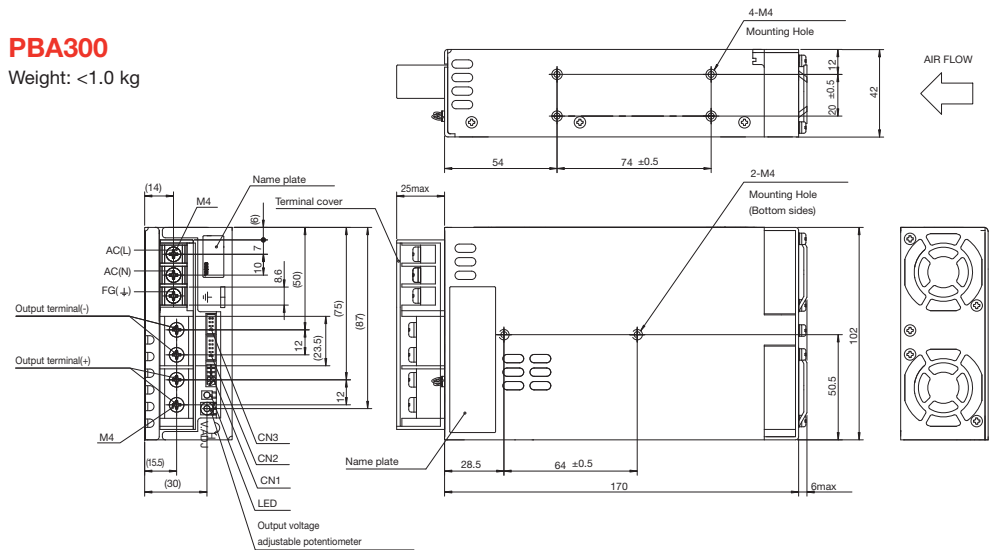
PBA150

Weight: <560g (without cover)



PBA300

Weight: <1.0 kg



Notes

- All measurements are in mm. Tolerance: ±1 mm
- Mounting torque: PBA150: 0.49 Nm, PBA300: 1.2 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-P0.5M4: 1.6 Nm
Manufacturer: J.S.T.

Options

- C : Conformal Coating
- E : Low Leakage current and EMI class A ^(#)
- G : Low Leakage current
- J : Molex Connectors* ^(#)
- K : Remote Sense (3.3-5 V models only) ^(#)
- N : Cover fitted* ^(#)
- N1 : Din Rail mountable*
- R : Remote On/Off* (standard 300 W unit)
- T : Vertical terminal block* ^(#)
- U : Low input voltage (300 W)
- V : Remote potentiometer* ^(#)

Contact sales for option details

* These options will alter the dimensions shown.

^(#) 150 W unit only.

PBA300 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)

PBA300 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)