



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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PBM200 Series



- Worldwide Medical Approvals
- Single, Dual, Triple and Quad Outputs
- Power Fail Detect
- Remote On/Off
- U-Channel and Enclosed Versions
- 100 Watt Convection-cooled Rating
- 3 Year Warranty

Specification

Input

Input Voltage	• 90-264 VAC
Input Frequency	• 47-63 Hz
Input Current	• 3.2 A rms at 115 VAC, 1.6 A rms at 230 VAC
Inrush Current	• 20 A at 115 VAC, 40 A at 230 VAC cold start 25 °C
Power Factor	• 0.98 typical
Earth Leakage Current	• 90 µA max at 115 VAC/60 Hz 150 µA max at 230 VAC/50 Hz
Input Protection	• Internal T4 A/250 V in line and neutral

Output

Output Voltage	• See table
Output Voltage Trim	• Not user-adjustable
Initial Set Accuracy	• ±2%
Minimum Load	• See table & note 5
Start Up Delay	• 2 s max
Start Up Rise Time	• 18 ms typical
Hold Up Time	• 20 ms minimum at full load & 110 VAC
Drift	• ±0.2%
Line Regulation	• ±0.5% max
Load Regulation	• See note 7
Transient Response	• 4% max deviation, recovery to within 1% in 500 µs for a 25% load change
Ripple & Noise	• 2% max pk-pk, 20 MHz bandwidth with a 22 µF electrolytic & a 0.47 µF tantalum capacitor
Oversvoltage Protection	• 112-140% Vnom output 1 only, recycle input to reset
Overtemperature Protection	• Shutdown at +85 °C (singles) or +105 °C (multi outputs) with auto recovery, measured internally
Overload Protection	• 110-150% typical, auto recovery
Short Circuit Protection	• Trip and restart (Hiccup mode)
Temperature Coefficient	• 0.04%/°C
Remote Sense	• Single output models only. Compensates for up to 0.5 V drop
Remote On/Off	• On = Logic low or open circuit Off = Logic high

General

Efficiency	• 80% maximum
Isolation	• 4000 VAC Input to Output 1500 VAC Input to Ground 500 VAC Output to Ground
Switching Frequency	• 100 kHz ±12 kHz
Signals	• Power fail detect, remote on/off
Power Density	• 4.76 W/In ³
Power Fail Detect	• AC OK = TTL logic high AC not OK = TTL logic low
MTBF	• 350 kHrs to MIL-HDBK-217F at +25 °C, GB

Environmental

Operating Temperature	• 0 °C to +70 °C, derate linearly from 100% power at +50 °C to 50% power at +70 °C
Cooling	• 'C' versions have internal fan, 'B' versions are derated with convection cooling or require 25 CFM (see note 4)
Operating Humidity	• Up to 95% RH, non-condensing
Storage Temperature	• -40 °C to +85 °C
Operating Altitude	• 2500 m
Shock	• Half sine pulse. acceleration 50 g, 11 ms duration, 3 shocks in each direction, unpacked, non-operating
Vibration	• Sinusoidal 10-55 Hz, amplitude 0.15 mm, 30 min/axis, unpackaged, non-operating

EMC & Safety

Emissions	• EN55011 & FCC Class B conducted & radiated
Harmonic Currents	• EN61000-3-2, Class A
Voltage Flicker	• EN61000-3-3
ESD Immunity	• EN61000-4-2, level 3 Perf Criteria A
Radiated Immunity	• EN61000-4-3, level 3 Perf Criteria A
EFT/Burst	• EN61000-4-4, level 3 Perf Criteria A
Surge	• EN61000-4-5, level 3 Perf Criteria A
Conducted Immunity	• EN61000-4-6 3 V, Perf Criteria A
Dips & Interruptions	• EN61000-4-11, 30% 10 ms, 60% 100 ms, >95% 5000 ms, Perf Criteria A, B, B
Safety Approvals	• EN60601-1, UL60601-1, CSA22.2 No. 601-1 per cUL

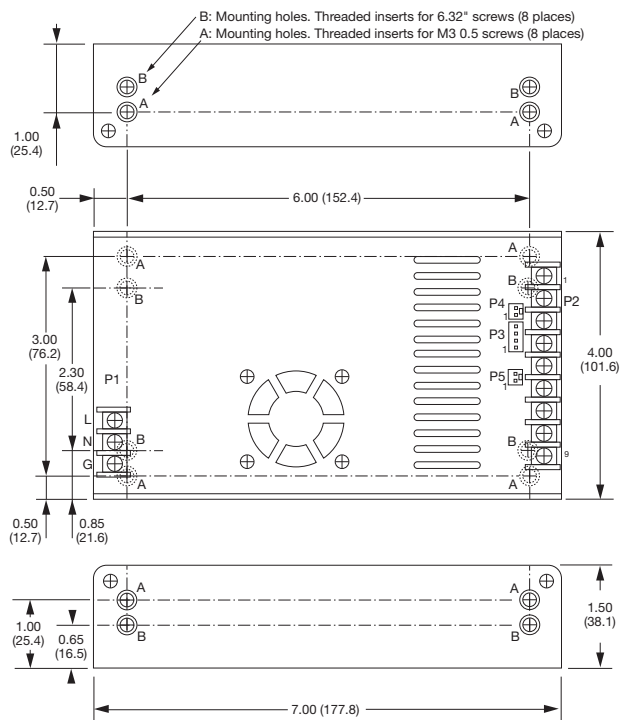
Models and Ratings

Output Power ⁽⁴⁾	Output 1 ⁽⁸⁾				Output 2 ^(2,5)			Output 3 ⁽⁵⁾			Output 4 ^(3,5)			Model Number ⁽¹⁾
	Vnom	Imin ⁽⁹⁾	I _{max}	Reg ⁽⁷⁾	Vnom	I _{max}	Reg ⁽⁷⁾	Vnom	I _{max}	Reg ⁽⁷⁾	Vnom	I _{max}	Reg ⁽⁷⁾	
150 W	3.3 V	3.0 A	46.0 A	3%										PBM200PS3V3-C
175 W	5.1 V	3.0 A	35.0 A	2%										PBM200PS05-C
200 W	12.0 V	1.2 A	16.7 A	2%										PBM200PS12-C
200 W	15.0 V	1.0 A	13.4 A	2%										PBM200PS15-C
200 W	24.0 V	0.6 A	8.4 A	2%										PBM200PS24-C
200 W	30.0 V	0.5 A	6.7 A	2%										PBM200PS30-C
200 W	48.0 V	0.5 A	4.2 A	2%										PBM200PS48-C
200 W	+5.1 V	3.0 A	30.0 A	2%	+12 V	8.0 A	4%							PBM200PD01-C
200 W	+5.1 V	3.0 A	30.0 A	2%	+15 V	6.0 A	4%							PBM200PD02-C
200 W	+5.1 V	3.0 A	30.0 A	2%	+24 V	4.0 A	4%							PBM200PD03-C
200 W	+12.0 V	1.0 A	8.7 A	2%	+24 V	4.0 A	4%							PBM200PD04-C
200 W	+5.1 V	3.0 A	30.0 A	2%	+12 V	8.0 A	4%	-5 V	6.0 A	4%				PBM200PT01-C
200 W	+5.1 V	3.0 A	30.0 A	2%	+12 V	8.0 A	4%	-12 V	4.0 A	4%				PBM200PT02-C
200 W	+5.1 V	3.0 A	30.0 A	2%	+15 V	6.0 A	4%	-15 V	4.0 A	4%				PBM200PT03-C
200 W	+5.1 V	3.0 A	30.0 A	2%	+12 V	8.0 A	4%				F 24 V	4.0 A	4%	PBM200PT04-C
200 W	+5.1 V	3.0 A	30.0 A	2%	+15 V	6.0 A	4%	-12 V	4.0 A	4%				PBM200PT05-C
200 W	+5.1 V	3.0 A	30.0 A	2%	+12 V	8.0 A	4%	-12 V	4.0 A	4%	F 5 V	6.0 A	4%	PBM200PQ01-C
200 W	+5.1 V	3.0 A	30.0 A	2%	+15 V	6.0 A	4%	-15 V	4.0 A	4%	F 24 V	4.0 A	4%	PBM200PQ02-C
200 W	+5.1 V	3.0 A	30.0 A	2%	+12 V	8.0 A	4%	-12 V	4.0 A	4%	F 12 V	4.0 A	4%	PBM200PQ03-C
200 W	+5.1 V	3.0 A	30.0 A	2%	+12 V	8.0 A	4%	-15 V	4.0 A	4%	F 15 V	4.0 A	4%	PBM200PQ04-C
200 W	+5.1 V	3.0 A	30.0 A	2%	+12 V	8.0 A	4%	-12 V	4.0 A	4%	F 24 V	4.0 A	4%	PBM200PQ05-C
175 W	+3.3 V	3.0 A	30.0 A	3%	+5.1 V	8.0 A	4%	-12 V	4.0 A	4%	F 12 V	4.0 A	4%	PBM200PQ06-C

Notes

- For U-bracket format, replace suffix '-C' with suffix '-B'.
- Output 2 peak current is 12 A on +12 V, 9 A on +15 V, and 6 A on +24 V. Maximum 2 s duration with total load <200 W.
- Output 4 is floating and can be connected externally for positive or negative output.
- 200 W for '-C' version with a cover and fan assembly. 100 W for '-B' version with convection cooling (maximum current of output 1 & 2 derated to 50%). 200 W for '-B' version with 25 CFM forced air provided by user.
- Zero minimum load for outputs 2, 3 & 4. 10% minimum load required on output 1 for all outputs to meet regulation.
- When the Remote Sense facility is not used, +Sense must be connected to +V, and -Sense to return, on P2 connector.
- Total regulation includes initial tolerance, line regulation and load regulation.
- Peak current for single output models is 110% of I_{max}. Maximum 2 s duration with 10% duty cycle.

Mechanical Details



Conn	Pin	Model Number(s)				
		PSXX	PDXX	PTXX (except 04)	PT04	PQXX
P2	1	-SENSE	OP1	OP1	OP1	OP1
	2	Return	OP1	OP1	OP1	OP1
	3	Return	Com Ret	Com Ret	Com Ret	Com Ret
	4	Return	Com Ret	Com Ret	Com Ret	Com Ret
	5	Return	Com Ret	Com Ret	Com Ret	Com Ret
	6	OP1	OP2	OP2	OP2	OP2
	7	OP1	N.C.	OP3	N.C.	OP3
	8	OP1	N.C.	N.C.	OP4 Ret	OP4 Ret
	9	+SENSE	N.C.	N.C.	OP4	OP4
P3	1	Fan				
	2	Com Ret				
	3	Com Ret				
	4	PFD	PFD	PFD	PFD	PFD

Notes

- Dimensions shown in inches (mm).
- Tolerance 0.02 [0.5] maximum.
- Input connector P1 is Dinkle DT-35-B01W-03, output connector P2 is Dinkle DT-35-B01W-09 screws are M3, Nickel plated.
- Connector P3 mates with Molex housing 22-01-1043 & Molex 40445 series crimp terminal.
- Connectors P4 & P5 mate with Molex housing 22-01-1023 & Molex 40445 series crimp terminal.
- P4 is for DC fan rated at 24 V/0.2 A (models PBM200PD03 & PD04), 5 V/0.38 A (PBM200PQ06), or 12 V/0.2 A (all other models). Pin 1 Fan+, pin 2 Fan-.
- P5 is for Remote On/Off. Pin 1 is positive, pin 2 is return.
- Weight: 1.83 lb (0.82kg) approx. for '-B' version, 2.14 lb (0.96kg) approx. for '-C' version.
- Maximum mounting screw length from surface of chassis is 0.17 inch (4.3 mm)