50/80/120 Watts

PCM Series

- 4000 VAC Isloation
- Low Leakage Current
- Single, Dual and Triple Outputs
- Worldwide Medical Approvals
- CCC Approved (PCM80)
- Both Line and Neutral Fused
- Non–standard Connectors Available

Specification

Input

Input Voltage	• 90-264 VAC
Input Frequency	• 47-63 Hz
Input Current	• PCM50: 1.35 A max PCM80: 1.30 A max PCM120: 1.60 A max
Inrush Current	• 30 A at 115 VAC or 60 A at 230 VAC at 25 ˚C cold start
Power Factor	• PCM50: 0.55 typical PCM80/120: 0.94 min
Earth Leakage Current	• 180 µA max at 132 VAC/60Hz 300 µA max at 264 VAC/50Hz

Output

Output Voltage	• See tables
Minimum Load	• No minimum load required for single output models. See tables for multi output models
Start Up Delay	• 2 s max
Hold Up Time	• 10 ms min at low line
Line Regulation	• ±1% max at full load
Load Regulation	• ±5% max
Transient Response	• 5% max. deviation, 500 µs recovery time for a 50% load change
Ripple & Noise	• 2% pk-pk, 20MHz BW
Overvoltage Protection	• 112-132%
Overcurrent Protection	• 110-200% with auto recovery on all outputs
Temperature Coefficient	• ±0.05% /˚C

General

Efficiency	• Single output models: 80% typical Multi output models: 75% typical 230 VAC 100% load
Isolation	• 4000 VAC Input to Output 1500 VAC Input to Ground 500 VAC Output to Ground
Switching Frequency	• PCM50: 64 kHz typical PCM80: 55 kHz typical PCM120: 120 kHz typical (PWM), 70 kHz (PFC)
MTBF	• 100 kHrs at full load and 25 ˚C ambient per MIL-HDBK-217F

Environmental

Operating Temperature	• PCM50: 0 ˚C to +70 ˚C, derate from 100% load at 50 ˚C to 50% load at +70 ˚C PCM80: 0 ˚C to +70 ˚C, derate from 100% load at 40 ˚C to 50% load at +70 ˚C PCM120: 0 ˚C to +60 ˚C, derate from 100% load at +40 ˚C to 50% load at +60 ˚C
Storage Temperature	• PCM50/80: -40 ˚C to +80 ˚C PCM120: -20 ˚C to +85 ˚C

EMC & Safety

Emissions	• EN55022, level B conducted & radiated
Harmonic Currents	• EN61000-3-2, class A
Voltage Flicker	• EN61000-3-3
ESD Immunity	• IEC61000-4-2, level 3 Perf Criteria A
Radiated Immunity	• IEC61000-4-3 10 V/m, level 3 Perf Criteria A
EFT/Burst	• IEC61000-4-4, level 3, Perf Criteria A
Surge	• IEC61000-4-5, level 3, Perf Criteria A
Conducted Immunity	• IEC61000-4-6 10 V/m, level 3 Perf Criteria A
Power Frequency Magnetic Fields	• IEC61000-4-8 10 A/m, Perf Criteria A
Dips & Interruptions	• IEC61000-4-11, 30% 500 ms, 60% 100 ms, 100 % 5000 ms Perf Criteria A, B, B
Safety Approvals	• PCM80/120: UL60601-1, CSA C22.2 No. 601.1 per cUL PCM50: EN60601-1, PCM80: CCC

Models and Ratings

Maximum Output Power	Output Voltage	Output Current	Regulation[1]	Model Number
40 W	3.3 V	8.00 A	5%	PCM50US3V3
40 W	5.0 V	8.00 A	5%	PCM50US05
42 W	7.0 V	6.00 A	5%	PCM50US07
45 W	9.0 V	5.00 A	4%	PCM50US09
45 W	12.0 V	3.75 A	3%	PCM50US12
45 W	15.0 V	3.00 A	3%	PCM50US15
50 W	18.0 V	2.77 A	3%	PCM50US18
50 W	24.0 V	2.08 A	2%	PCM50US24
50 W	28.0 V	1.78 A	2%	PCM50US28
50 W	36.0 V	1.38 A	2%	PCM50US36
50 W	48.0 V	1.04 A	2%	PCM50US48

Output Power	Output 1				Output 2				Output 3				Model Number
	Vnom	Imin	Imax	Tol.[1]	Vnom	Imin[4, 5]	Imax	Tol.[1]	Vnom	Imin	Imax	Tol.[1]	
26.5 W	+3.3 V	1.0 A	5.0 A	7%	+5.0 V	0.4 A	2.0 A	5%					PCM50UD00
42.0 W	+3.3 V	0.5 A	5.0 A	7%	+12.0 V	0.2 A	2.0 A	5%					PCM50UD01
42.0 W	+5.0 V	0.5 A	5.0 A	5%	+12.0 V	0.2 A	2.0 A	5%					PCM50UD03
42.0 W	+5.0 V	0.5 A	5.0 A	5%	+15.0 V	0.2 A	1.5 A	6%					PCM50UD04
42.0 W	+5.0 V	0.5 A	5.0 A	5%	+24.0 V	0.1 A	1.0 A	5%					PCM50UD05
42.0 W	+5.0 V	0.5 A	5.0 A	5%	-24.0 V	0.1 A	1.0 A	5%					PCM50UD06
42.0 W	+12.0 V	0.5 A	3.0 A	5%	-12.0 V	0.2 A	1.0 A	5%					PCM50UD07
42.0 W	+15.0 V	0.5 A	2.0 A	5%	-15.0 V	0.2 A	1.0 A	5%					PCM50UD08
42.0 W	+3.3 V	0.5 A	5.0 A	7%	+12.0 V	0.2 A	2.0 A	5%	-12.0 V	0.0 A	0.8 A	5%	PCM50UT02
42.0 W	+5.0 V	0.5 A	5.0 A	5%	+12.0 V	0.2 A	2.0 A	5%	-5.0 V	0.0 A	0.8 A	5%	PCM50UT03
42.0 W	+5.0 V	0.5 A	5.0 A	5%	+12.0 V	0.2 A	2.0 A	5%	-12.0 V	0.0 A	0.8 A	5%	PCM50UT04
42.0 W	+5.0 V	0.5 A	5.0 A	5%	+15.0 V	0.2 A	2.0 A	6%	-15.0 V	0.0 A	0.8 A	5%	PCM50UT05
42.0 W	+5.0 V	0.5 A	5.0 A	5%	+24.0 V	0.1 A	1.0 A	5%	-12.0 V	0.0 A	0.8 A	5%	PCM50UT06
42.0 W	+5.0 V	0.5 A	5.0 A	5%	+24.0 V	0.1 A	1.0 A	5%	-24.0 V	0.0 A	0.5 A	5%	PCM50UT07

Notes

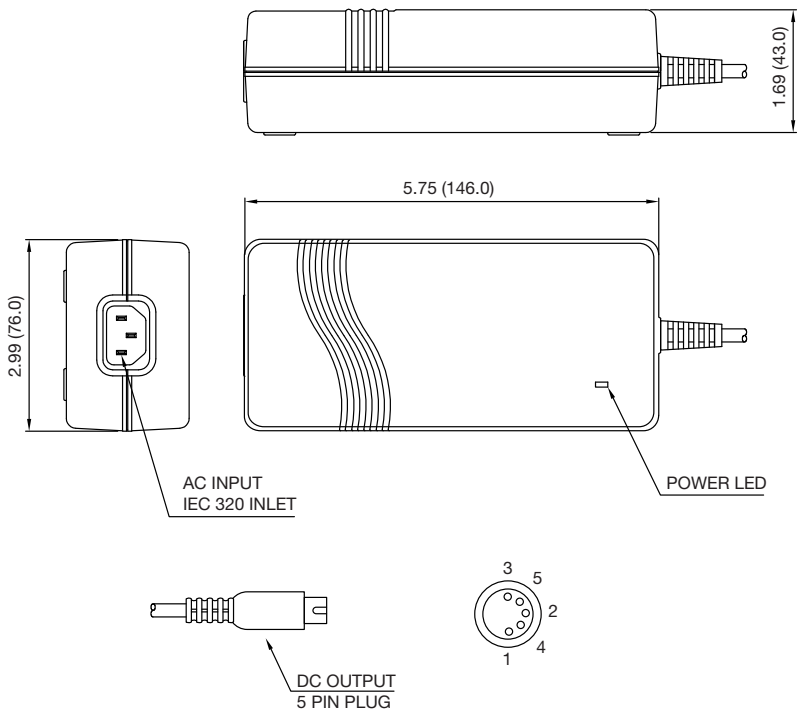
1. Regulation includes initial set tolerance, line regulation and load regulation.

Mechanical Details

All dimensions are in inches (mm)

Weight: 0.88-1.21 lb (400-550 g) approx.

Tolerance: 0.04 (1.0) maximum



PIN CONNECTIONS			
Pin	Single	Dual	Triple
1	Common	Common	Common
2	Common	Common	Common
3	Output	Output 1	Output 1
4	Common	Common	Output 3
5	Output	Output 2	Output 2

Notes:

1. Cable length is 48.0" (1.22m) approx.
2. For mating connector, use standard 5 pin din 180° socket.
3. Optional output connectors available, contact sales office.
4. Multi output models include a ferrite bead on the output connector.

Models and Ratings

Output Power	Output 1				Output 2				Output 3				Model Number
	Vnom	Imin	Imax	Tol.[1]	Vnom	Imin[4, 5]	Imax	Tol.[1]	Vnom	Imin	Imax	Tol.[1]	
50.0 W	3.3 V	0.0 A	15.1 A	7%									PCM80PS3V3
65.0 W	5.0 V	0.0 A	13.0 A	5%									PCM80PS05
70.0 W	7.0 V	0.0 A	10.0 A	5%									PCM80PS07
75.0 W	9.0 V	0.0 A	8.3 A	5%									PCM80PS09
75.0 W	10.0 V	0.0 A	7.5 A	5%									PCM80PS10
80.0 W	12.0 V	0.0 A	6.7 A	5%									PCM80PS12
80.0 W	13.5 V	0.0 A	5.9 A	5%									PCM80PS13V5
80.0 W	15.0 V	0.0 A	5.3 A	5%									PCM80PS15
80.0 W	16.0 V	0.0 A	5.0 A	5%									PCM80PS16
80.0 W	17.5 V	0.0 A	4.6 A	5%									PCM80PS17V5
80.0 W	18.0 V	0.0 A	4.4 A	5%									PCM80PS18
80.0 W	24.0 V	0.0 A	3.3 A	5%									PCM80PS24
80.0 W	27.0 V	0.0 A	3.0 A	5%									PCM80PS27
80.0 W	30.0 V	0.0 A	2.7 A	5%									PCM80PS30
80.0 W	36.0 V	0.0 A	2.2 A	3%									PCM80PS36
80.0 W	48.0 V	0.0 A	1.7 A	3%									PCM80PS48
38.0 W	3.3 V	0.5 A	7.0 A	5%	5.0 V	0.3 A	3.0 A	5%					PCM80PD00
53.0 W	3.3 V	0.5 A	7.0 A	5%	12.0 V	0.2 A	2.5 A	5%					PCM80PD01
60.0 W	5.0 V	0.5 A	7.0 A	5%	12.0 V	0.2 A	2.5 A	5%					PCM80PD02
60.0 W	5.0 V	0.5 A	7.0 A	5%	15.0 V	0.2 A	2.0 A	5%					PCM80PD03
60.0 W	5.0 V	0.5 A	7.0 A	5%	24.0 V	0.2 A	2.0 A	5%					PCM80PD04
60.0 W	5.0 V	0.5 A	7.0 A	5%	-24.0 V	0.2 A	2.0 A	5%					PCM80PD05
65.0 W	12.0 V	0.5 A	5.0 A	5%	-12.0 V	0.1 A	0.8 A	5%					PCM80PD06
65.0 W	15.0 V	0.5 A	4.0 A	5%	-15.0 V	0.1 A	0.8 A	5%					PCM80PD07
65.0 W	24.0 V	0.5 A	2.1 A	5%	-24.0 V	0.1 A	0.8 A	5%					PCM80PD08
51.0 W	3.3 V	0.5 A	7.0 A	5%	12.0 V	0.2 A	2.0 A	5%	-5.0 V	0.1 A	0.8 A	5%	PCM80PT01
60.0 W	5.0 V	0.5 A	6.0 A	5%	12.0 V	0.2 A	2.5 A	5%	-5.0 V	0.1 A	0.5 A	5%	PCM80PT03
60.0 W	5.0 V	0.5 A	6.0 A	5%	12.0 V	0.2 A	2.1 A	5%	-12.0 V	0.1 A	0.5 A	5%	PCM80PT04
65.0 W	5.0 V	0.5 A	6.0 A	5%	15.0 V	0.2 A	2.1 A	5%	-15.0 V	0.1 A	0.5 A	5%	PCM80PT05
60.0 W	5.0 V	0.5 A	6.0 A	5%	24.0 V	0.1 A	1.2 A	5%	-12.0 V	0.1 A	0.5 A	5%	PCM80PT06
65.0 W	5.0 V	0.5 A	7.0 A	5%	24.0 V	0.2 A	2.0 A	5%	-24.0 V	0.1 A	0.5 A	5%	PCM80PT07

Notes

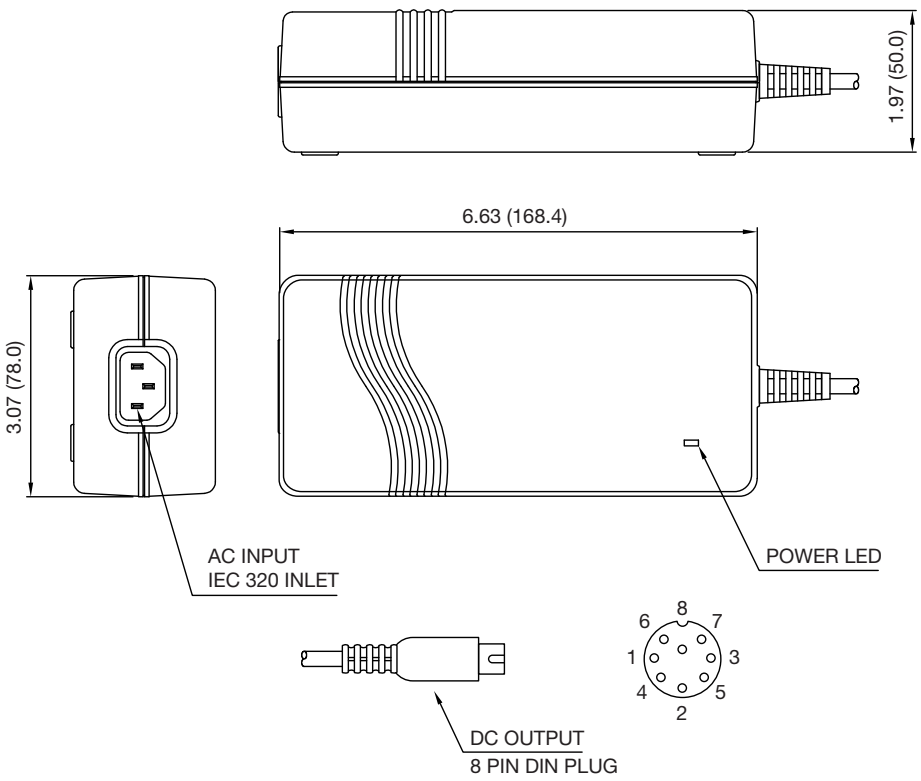
1. Regulation includes initial set tolerance, line regulation and load regulation.

Mechanical Details

All dimensions are in inches (mm)

Weight: 1.76-1.98 lb (800-900 g) approx.

Tolerance: 0.04 (1.0) maximum



PIN CONNECTIONS			
Pin	Single	Dual	Triple
1	Common	Common	Common
2	Common	Output 2	Output 3
3	Output 1	Output 1	Output 1
4	Common	Output 2	Output 2
5	Output 1	Output 1	Output 2
6	Common	Common	Common
7	Output 1	Output 1	Output 1
8	Output 1	Common	Output 3
Shell	Ground	Ground	Ground

Notes:

1. Cable length is 48.0” (1.22m) approx.
2. Optional output connectors available, contact sales office.
3. Multi output models include a ferrite bead on the output connector.

Models and Ratings

Maximum Output Power	Output Voltage	Output Current	Peak Current[1]	Model Number
108 W	12.0 V	9.00 A	15.00 A	PCM120PS12
113 W	15.0 V	7.50 A	10.00 A	PCM120PS15
120 W	18.0 V	6.50 A	9.00 A	PCM120PS18
120 W	24.0 V	5.00 A	7.00 A	PCM120PS24
120 W	48.0 V	2.50 A	4.00 A	PCM120PS48

Notes

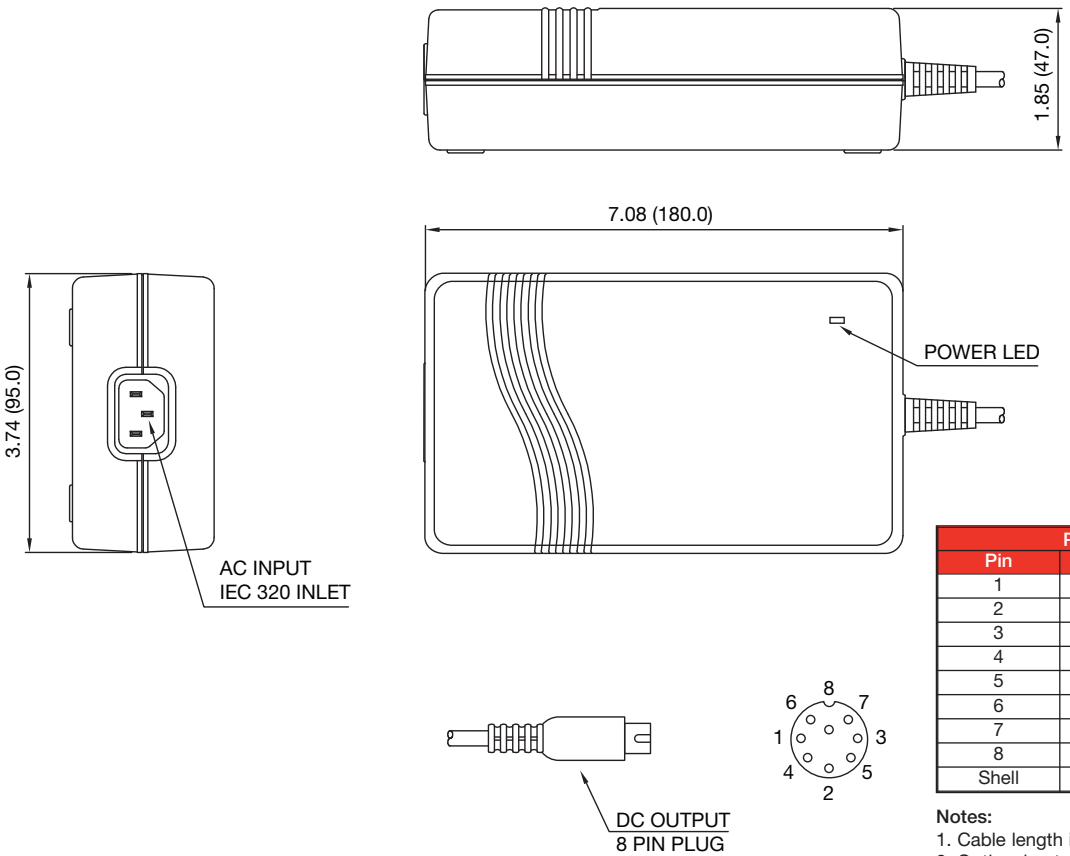
1. Peak current is 5 seconds maximum duration with a 10% duty cycle.

Mechanical Details

All dimensions are in inches (mm)

Weight: 1.90 lb (860 g) approx.

Tolerance: 0.04 (1.0) maximum



PIN CONNECTIONS	
Pin	All models
1	Return
2	Return
3	Output +V
4	Return
5	Output +V
6	Return
7	Output +V
8	Output +V
Shell	Ground

Notes:

1. Cable length is 72.0" (1.83m) approx.
2. Optional output connectors available, contact sales office.

Derating Curve