



# P-DUKE POWER

## PSC06 Series

AC-DC POWER SUPPLIES  
Up to 6 Watts

### 3

YEARS  
WARRANTY

ROHS  
COMPLIANT

REACH  
COMPLIANT

+85°C  
-40°C  
AMBIENT TEMP.



Smart Meter



Smart Street  
Light



Three Phase  
Voltage



Automation



Datacom



IPC



Industry



Measurement



PV



Telecom



Automobile



Boat



Charger



Medical



Railway

4000  
VAC  
Reinforced  
Insulation

Internal  
EN55032  
Class  
Filter **B**

LOW  
Leakage  
Current

LOW  
Standby  
Power

Operating  
Altitude  
**5000**  
meter

Protection  
Class **II**

**OVCIII**

**OCP**

**OVP**

**SCP**

### PART NUMBER STRUCTURE

PSC06	H	S	12	B
Series Name	Input Voltage (VAC)	Output Quantity	Output Voltage (VDC)	Protection Type
	H: 85 ~ 530	S: Single	05:5 12:12 15:15 24:24	B: CLASS II

**TECHNICAL SPECIFICATION** All specifications are typical at 480VAC input, full load and 25°C unless otherwise noted

Model Number	Input Range	Output Voltage	Output Current Natural Convection	Max. Output Power	Input Power @ No Load	Efficiency	Maximum Capacitor Load
	VAC	VDC	mA	W	mW	%	µF
PSC06HS05B	85 ~ 530	5	1200	6	400	69	2400
PSC06HS12B	85 ~ 530	12	500	6	400	73	420
PSC06HS15B	85 ~ 530	15	400	6	400	74	270
PSC06HS24B	85 ~ 530	24	250	6	400	75	100

INPUT SPECIFICATIONS						
Parameter	Conditions	Min.	Typ.	Max.	Unit	
Operating input voltage range	AC input	85		530	VAC	
	DC input	120		750	VDC	
Input frequency	AC input	47		63	Hz	
Input current	100VAC and Full Load			150	mA	
	480VAC and Full Load			60	mA	
No load input power	480VAC		400		mW	
Leakage current	480VAC			100	µA	
Start up time				25	ms	
Rise time				20	ms	
Hold up time	480VAC and Full Load		180		ms	
Input inrush current	480VAC		20		A	
Input protection	Internal				Fusible resistor 8.2Ω	

OUTPUT SPECIFICATIONS						
Parameter	Conditions	Min.	Typ.	Max.	Unit	
Output power				6	Watts	
Initial set voltage accuracy	230VAC and Full Load	-1.0		+1.0	%	
Line regulation	Low Line to High Line at Full Load	-0.2		+0.2	%	
Load regulation	No Load to Full Load	-0.5		+0.5	%	
Minimum load			0		%	
Ripple and noise	Measured by 20MHz bandwidth With a 1µF/50V 1206 X7R MLCC		50		mVp-p	
Temperature coefficient		-0.02		+0.02	%/°C	
Transient response	Load step form 75 ~100% change at 0.25A/µs		3		%Vout	
	Peak deviation Recovery time		500		µs	
Over voltage protection	% of Vout(nom); Latch mode	115		140	%	
Over load protection	% of Iout rated; Hiccup mode		220		%	
Short circuit protection					Continuous, automatics recovery	

GENERAL SPECIFICATIONS						
Parameter	Conditions	Min.	Typ.	Max.	Unit	
Isolation voltage	1 minute (Reinforced insulation)	4000			VAC	
Isolation resistance	1000VDC	1			GΩ	
Switching frequency	480VAC		65		kHz	
Safety approvals (Pending)					EN/ UL 61010-1 IEC/ EN/ UL 62368-1 (OVC III)	
Potting material					Potting compound (UL94 V-0)	
Weight					60.0g (2.12oz)	
MTBF	MIL-HDBK-217F, Full load				1.841 x 10 <sup>6</sup> hrs	

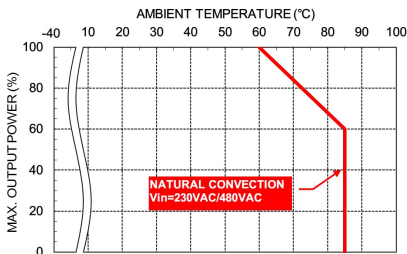
**ENVIRONMENTAL SPECIFICATIONS**

Parameter	Conditions	Min.	Typ.	Max.	Unit
Operating ambient temperature	Natural convection	-40		+85	°C
Storage temperature range	With derating	-40		+85	°C
Operating altitude	EN/ UL 61010-1 IEC/ EN/ UL 62368-1			4000 5000	m
Shock					IEC60068-2-27
Vibration					IEC60068-2-6
Relative humidity	Non-condensing				5% to 95% RH

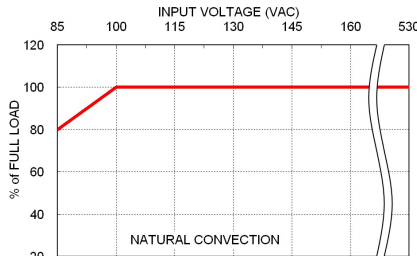
**EMC SPECIFICATIONS**

Parameter	Conditions	Level
EMI	EN55032 and FCC Part 15	Conducted Radiated
Harmonic currents	EN61000-3-2	Class B
Voltage flicker	EN61000-3-3	Class B
EMS	EN55024	Class A
ESD	EN61000-4-2	Perf. Criteria A
Radiated immunity	EN61000-4-3	Perf. Criteria A
Fast transient	EN61000-4-4	Perf. Criteria A
Surge	EN61000-4-5	Perf. Criteria A
Conducted immunity	EN61000-4-6	Perf. Criteria A
Power frequency magnetic field	EN61000-4-8	Perf. Criteria A
Dip and interruptions	EN61000-4-11	Perf. Criteria A

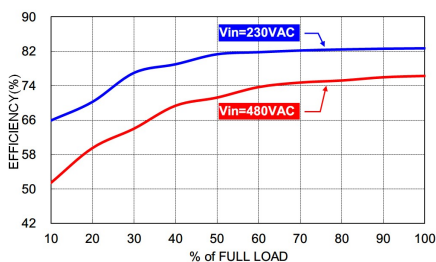
**CHARACTERISTIC CURVE**



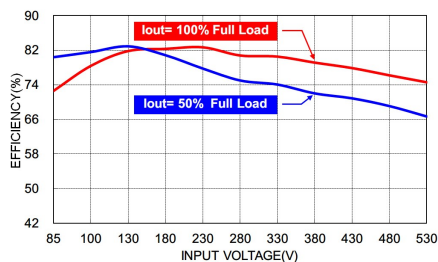
Derating Curve vs. Ambient Temperature



Derating Curve vs. Input Voltage

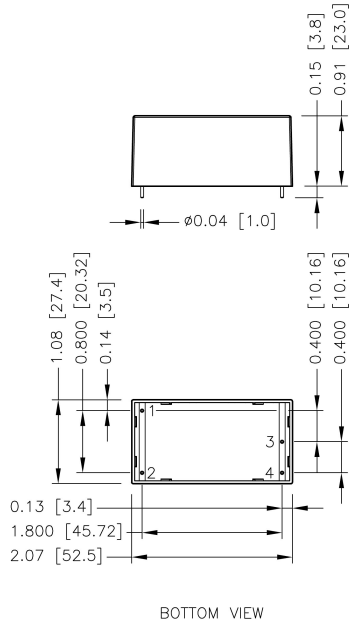


PSC06HS24B Efficiency vs. Output Load



PSC06HS24B Efficiency vs. Input Voltage

**MECHANICAL DRAWING**

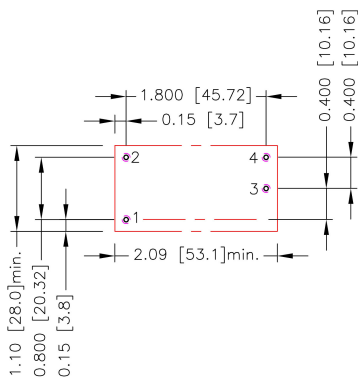


**PIN CONNECTION**

PIN	DEFINE
1	Line
2	Neutral
3	-Vout
4	+Vout

- All dimensions in inch [mm]
- Tolerance :x.xx±0.02 [x.x±0.5]  
x.xxx±0.010 [x.xx±0.25]
- Pin pitch tolerance ±0.010 [0.25]
- Pin dimension tolerance ±0.004[0.10]

**RECOMMENDED PAD LAYOUT**



All dimensions in inch[mm]  
 Pad size(lead free recommended)  
 Through hole 1.2.3.4: Φ0.051[1.30]  
 Top view pad 1.2.3.4: Φ0.064[1.63]  
 Bottom view pad 1.2.3.4: Φ0.102[2.60]

- \* There should be at least 8mm distance between primary and secondary circuit.
- \*\* For further information, please contact P-DUKE.