



# 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

**4300**  
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	
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	Peak deviation		3		%Vout
		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)	Input to Output	4300			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

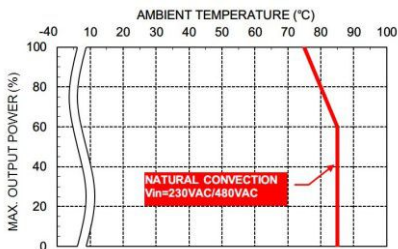
## ENVIRONMENTAL SPECIFICATIONS

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

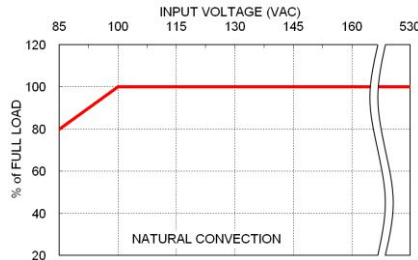
## EMC SPECIFICATIONS

Parameter	Conditions	Level
EMI	EN55032	Conducted Radiated Class B Class B Class A
Harmonic currents	EN61000-3-2	
Voltage flicker	EN61000-3-3	
EMS	EN55024	
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	

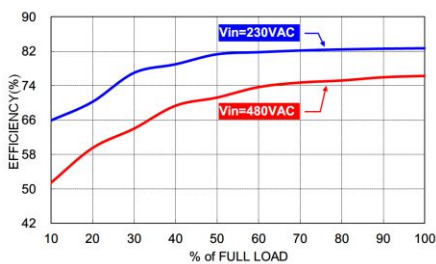
## CHARACTERISTIC CURVE



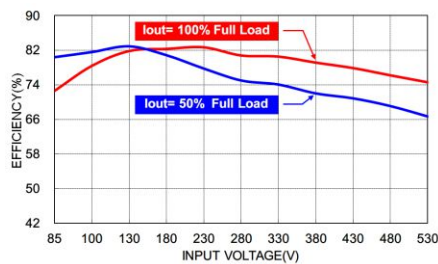
Derating Curve vs. Ambient Temperature



Derating Curve vs. Input Voltage

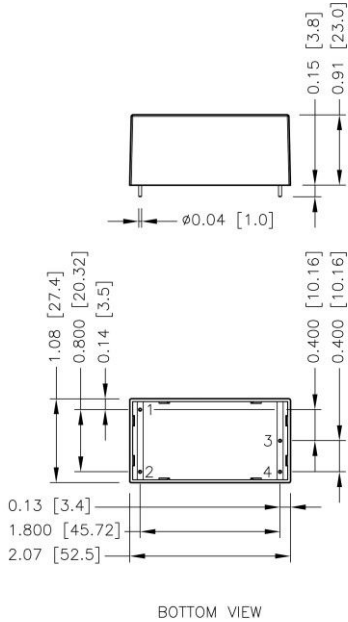


PSC06HS24B Efficiency vs. Output Load



PSC06HS24B Efficiency vs. Input Voltage

**MECHANICAL DRAWING**

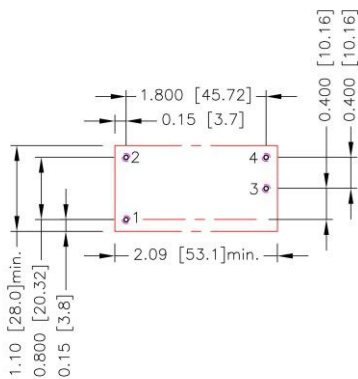


**PIN CONNECTION**

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**



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

All dimensions in inch[mm]  
 Pad size(lead free recommended)  
 Through hole 1.2.3.4:  $\phi 0.051$ [1.30]  
 Top view pad 1.2.3.4:  $\phi 0.064$ [1.63]  
 Bottom view pad 1.2.3.4:  $\phi 0.102$ [2.60]