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 B Filter | 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℃ 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 DC input	85 120		530 750	VAC VDC
Input frequency	AC input	47		63	Hz
Input current	100VAC and Full Load 480VAC and Full Load			150 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	%/℃
Transient response	Load step form 75 ~100% change at 0.25A/μs Peak deviation Recovery time		3 500		%Vout 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 10^6 hrs

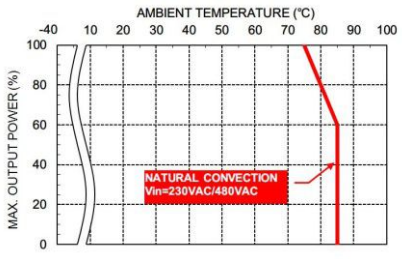
ENVIRONMENTAL SPECIFICATIONS

Parameter	Conditions		Min.	Typ.	Max.	Unit
Operating ambient temperature	Natural convection	With derating	-40		+85	℃
Storage temperature range			-40		+85	℃
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	

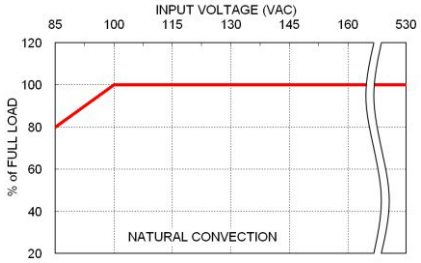
EMC SPECIFICATIONS

Parameter	Conditions		Level
EMI	EN55032		Conducted Class B Radiated Class B
Harmonic currents	EN61000-3-2	Full Load	Class A
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		

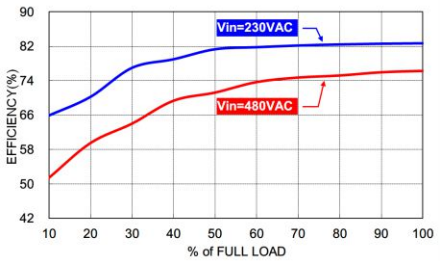
CHARACTERISTIC CURVE



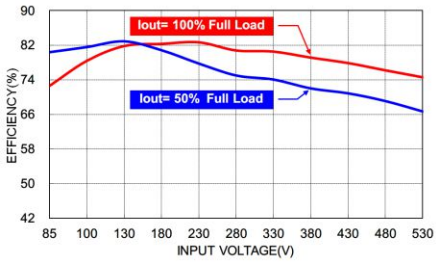
Derating Curve vs. Ambient Temperature



Derating Curve vs. Input Voltage

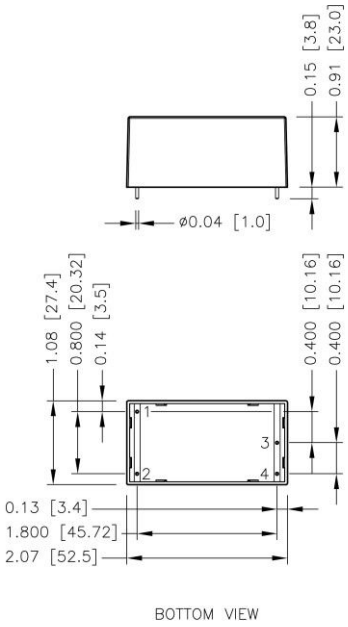


PSC06HS24B Efficiency vs. Output Load



PSC06HS24B Efficiency vs. Input Voltage

MECHANICAL DRAWING

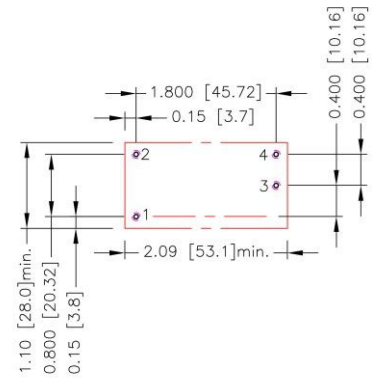


PIN CONNECTION

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

1. All dimensions in inch [mm]
2.Tolerance :x.xx±0.02 [x.x±0.5]
x.xxx±0.010 [x.xx±0.25]
3. Pin pitch tolerance ±0.010 [0.25]
4. 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: 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]

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