

PH-S Series

Simple function, 50 to 600W DC-DC converters



- High Density
- ◆ Wide Range Input
- Output adjustment Capability
- ◆ Remote On/Off
- Fixed Switching Frequency
- International Safety Approvals

Key Market Segments & Applications

Telecom **Custom Power Supplies** Point of Load

PH Features and Benefits

Feature

- ◆ High density
- ♦ Low component count
- Fixed operating frequency
- Variety of input voltages

Benefit

- ◆ Smaller package size
- ◆ High reliability Demonstrated 5 million hours MTBF
- ◆ Easier system filtering
- Systems can operate from different input voltages ata Sher

Date Obsert 411 ages								
Specifications								
		3.3V	5V	12V	15V	24V	28V	48V
ITEMS		3.5					251	
Input range	VDC	24V nom:	: 18-36, 48	V nom: 36-76	6V, 110V nom	: 82-185V, 28	0V nom: 200	-400V
Output Voltage Adj. Range	VDC	2.97~3.63	4.5~5.5	10.8~13.2	13.5~16.5	21.6~26.4	25.2~30.8	43.2~52.8
Line Regulation					ter) over entire			
Load Regulation		0.8% or 40mV (whichever is greater) from no load to full load with constant input line				nput line		
Ripple and Noise	pk-pk	100)mV	150)mV	240mV	280mV	480mV
Series Operation	-	Possible - Refer to installation manual						
Over Voltage Protection	-	150 - 180%				125 - 145%		
Overload Protection	-	Approximately 105 - 140%, automatic recovery						
Remote On/Off	-	Low = ON, Open = OFF						
Remote Sensing	-	PH100S, PH150S, PH300S, PH600S models						
Parallel operation	-	PH300S & PH600S only: Requires external circuitry						
Inverter Good signal	-	PH300S & PH600S only: Signal available for status of inverter						
Thermal Protection	-	Internal sensing, self resetting						
Cooling	-	Conductio	on or forced	air. See app	lication notes	for cooling ar	nd heatsink se	lection
Operating Temperature Range	-	Baseplate temperature -20°C to +85°C (100°C on PH300 & PH600).						
	-	-40°C start up possible with 30 minute warm up period						
Storage Temperature	-	-40°C to +85°C (+100°C on PH300 & PH600)						
Temperature Coefficient	-	0.02%/°C						
Isolation	-	Input to output: 3000VAC, Input to Baseplate: 2500VAC(1)						
Isolation Resistance	-	Output to Baseplate -100MOhm at 500VDC and 70%RH						
Safety Agency Approval	-	UL1950, CSA234, EN60950 and CE Mark.						
Warranty	-	Two years						

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Note: See Installation Manual for full details, test methods of parameters and application notes

(1) PH300S48 models: Input to output 1.5kVAC, input to baseplate 1.5kVAC

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	Model S	elector					
	Nominal Output Voltage (V)	Output Current (A)	Output Power (W)	24V input	48V input	110V input	280V input
	3.3 3.3 3.3 3.3 3.3 5.0 5.0 5.0	10.0 15.0 20.0 30.0 50.0 100.0 10.0 15.0 20.0 30.0	33.0 49.5 66.0 99.0 165.0 330.0 50.0 75.0 100.0 150.0	- - - - - - PH50\$24-5 - -	PH50S48-3.3 PH75S48-3.3 PH100S48-3.3 PH150S48-3.3 PH300S48-3 - PH50S48-5 PH75S48-5 PH100S48-5 PH150S48-5	- - - - - PH50S110-5 PH75S110-5 - PH150S110-5	PH50S280-3.3 PH75S280-3.3 PH100S280-3.3 PH150S280-3.3 PH300S280-3 PH600S280-3 PH50S280-5 PH75S280-5 PH100S280-5 PH150S280-5
	5.0 5.0 12.0 12.0 12.0 12.0 12.0 12.0	50.0 100.0 4.2 6.3 8.4 12.5 25.0 50.0	250.0 500.0 50.0 75.0 100.0 150.0 300.0 600.0	- PH50S24-12 - - -	PH300S48-5 - PH50S48-12 PH75S48-12 PH100S48-12 PH300S48-12	- PH50S110-12 PH75S110-12 - PH150S110-12 -	PH300S280-5 PH600S280-5 PH50S280-12 PH75S280-12 PH100S280-12 PH150S280-12 PH300S280-12 PH600S280-12
at4U	15.0 15.0 15.0 15.0 15.0 24.0 24.0 24.0 24.0 24.0 24.0	3.4 5.0 6.7 10.0 20.0 40.0 2.1 3.2 4.2 6.3 12.5 25.0	50.0 75.0 100.0 150.0 300.0 600.0 50.0 75.0 100.0 150.0 300.0 600.0	PH50S24-15 PH50S24-24	PH50S48-15 PH75S48-15 PH100S48-15 PH150S48-15 PH300S48-15 - PH50S48-24 PH75S48-24 PH100S48-24 PH150S48-24 PH300S48-24	PH50S110-15 PH75110-15 - PH150S110-15 - - PH50S110-24 PH75S110-24 - PH150S110-24	PH50S280-15 PH75S280-15 PH100S280-15 PH150S280-15 PH300S280-15 PH600S280-15 PH50S280-24 PH75S280-24 PH100S280-24 PH150S280-24 PH300S280-24 PH600S280-24
	28.0 28.0 28.0 28.0 28.0 28.0 48.0 48.0	1.8 2.7 3.6 5.4 10.8 21.5 6.3 12.5	50.0 75.0 100.0 150.0 302.0 602.0 302.0 600.0	PH50S24-28	PH50S48-28 PH75S48-28 PH100S48-28 PH150S48-28 PH300S48-28 - PH300S48-48	PH50S110-28 PH75S110-28 - PH150S110-28 - -	PH50S280-28 PH75S280-28 PH100S280-28 PH150S280-28 PH300S280-28 PH600S280-28 PH300S280-48 PH600S280-48

Pinout	
Pin Description	Function
-Vin	Negative Input Terminal
+Vin	Positive Input Terminal
+S	Positive Remote sense
-S	Negative Remote sense
+V	Positive Output Terminal
-V	Negative Output Terminal
IOG	Inverter Good Signal
TRIM	Output adjustment trim pin
CNT	On/Off Control Terminal
CS	Current Monitor Signal

Other Lam	bda DC-DC Products
	50 - 300W, full function versions of PH 50 -600W quarter, half & full bricks 10 - 20W, 24 & 48V input DC-DC converters Surface Mount 20W, 24 & 48 input DC-DC converters

For Additional Information, please visit www.lambdapower.com/products/ph-series-sf.htm

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