

# PAH Series

## 48V Input Half brick DC-DC Converters

- Industry Standard Footprint & Pinouts
- 12V output for driving non-isolated converters
- Safety Approved
- Full power at 100°C baseplate
- Wide Adjustable Output Range

### Key Market Segments & Applications

Central Office: ATM, Sonet, DSL, ISDN, Frame relay  
 Broadband: Switching Equipment, Routers  
 Wireless/Cellular: Micro Cells (larger in size/10 sq. mi.)  
 Pico Cells (smaller in size/1 to 2 sq. mi.)  
 Remote Electronics: Fixed Local Loop, Fiber Optic  
 Transmission, Microwave Transmission,  
 Wireless Local Loop  
 Customer Premise: PBX, PABX, Datacomm, Voice Systems,  
 Video Conferencing

### PAH Features and Benefits

#### Features

- ◆ Wide adjustment range
- ◆ Zero Pre-load
- ◆ ASIC Design
- ◆ No potting materials

#### Benefits

- ◆ Reduces need for custom modules
- ◆ Eliminates heat dissipation in system
- ◆ Reduced component count, increased MTBF
- ◆ Lower weight

### Specifications

MODELS		2.5V	3.3V	5V	12V	15V	24V	28V	48V
ITEMS									
Efficiency (Typ)	%	75-76	79-80	83-84	85-86		86-88		88
Input Voltage range	VDC	36-76							
Output Voltage Accuracy	%	±1.6							
Max Ripple & Noise	mV	150			200		280		250
Max Line Regulation	mV	10			24	30	48	56	96
Max Load Regulation	mV	10			24	30	48	56	96
Overcurrent Protection	A	105 - 150% automatic recovery							
Overvoltage Protection (1)	%	120-160	120-140	125-145				135-155	
Remote Sense	-	Yes							
Remote On/Off	-	Standard; Low = ON, Open = OFF /P option; Low = OFF, Open = ON)							
Operating Temperature	-	-40°C to +100°C baseplate							
Overtemperature	-	Shutdown between 105 - 130°C, Auto restart							
Cooling	-	Conduction (See Installation Manual for heatsink selection)							
Isolation Voltage	V	Input - Baseplate 1500VAC, Input - Output 1500VAC, Output-Baseplate 500VDC							
Shock	-	196.1m/s <sup>2</sup>							
Vibration	-	Non Operating, 10-55Hz (sweep for 1 min.)							
Amplitude	-	0.825mm constant (Max 49 m/s <sup>2</sup> ) X,Y,Z 1 hour each							
Safety Agency Approvals	-	UL1950, CSA950, EN60950, CE LVD							
Weight (Typ)	g	80							
Size (WxHxD)	in(mm)	2.28x0.5x2.4 (57.9x12.7x61) See outline drawing							
Warranty	-	2 Years							

(1) See options table.

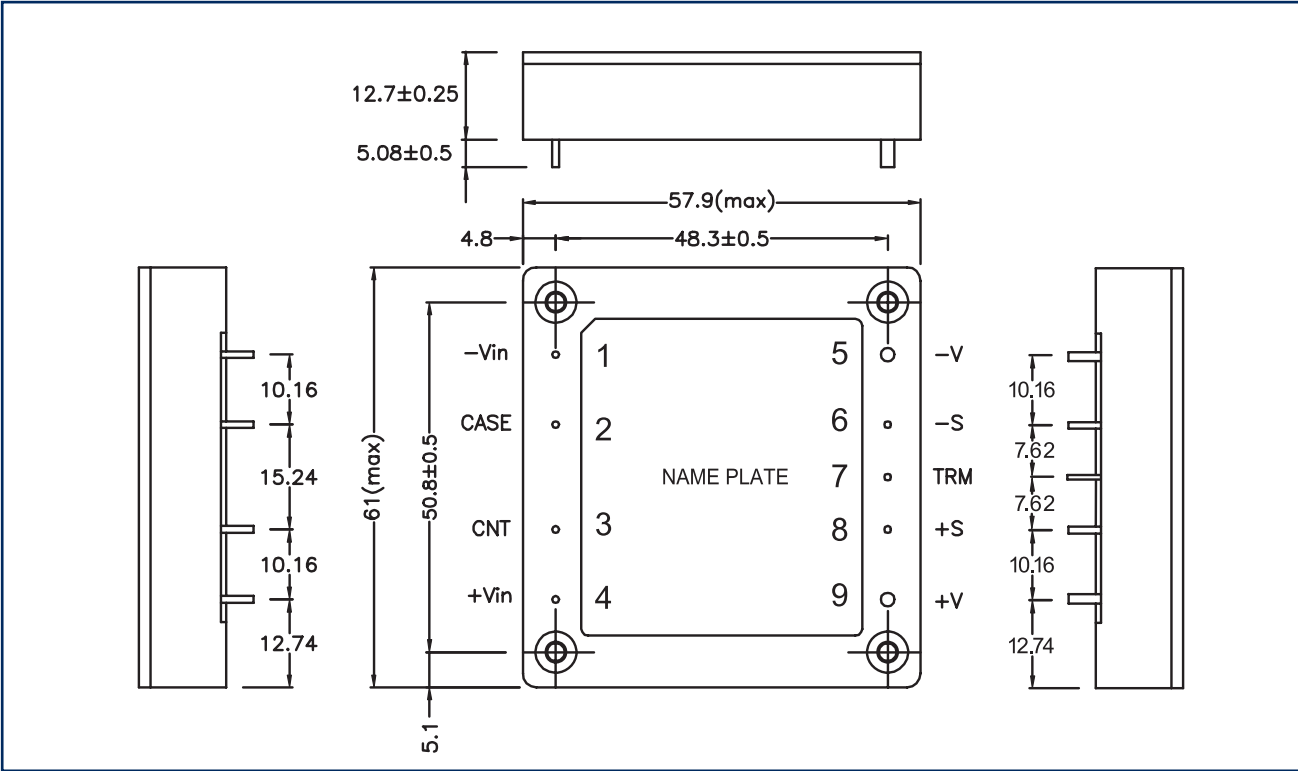
General: See Installation Manual for full details, test methods of parameters and application notes

<b>Model Selector</b>				
Model Name	Output Voltage	Adjustment	Output Current	Maximum Power
PAH50S48-2.5	2.5	2.25 - 2.75	11.70	29.3
PAH75S48-2.5	2.5	2.25 - 2.75	17.50	43.8
PAH100S48-2.5	2.5	2.25 - 2.75	23.40	58.5
PAH150S48-2.5	2.5	2.25 - 2.75	35.00	87.5
PAH50S48-3.3	3.3	2.97 - 3.63	11.70	38.6
PAH75S48-3.3	3.3	2.97 - 3.63	17.50	57.8
PAH100S48-3.3	3.3	2.97 - 3.63	23.40	77.2
PAH150S48-3.3	3.3	2.97 - 3.63	35.00	115.5
PAH50S48-5	5.0	3.0 - 5.75	10.00	50.0
PAH75S48-5	5.0	3.0 - 5.75	15.00	75.0
PAH100S48-5	5.0	3.0 - 5.75	20.00	100.0
PAH150S48-5	5.0	3.0 - 5.75	30.00	150.0
PAH50S48-12	12.0	7.2 - 13.2	4.20	50.4
PAH75S48-12	12.0	7.2 - 13.2	6.30	75.6
PAH100S48-12	12.0	7.2 - 13.2	8.40	100.8
PAH150S48-12	12.0	7.2 - 13.2	12.50	150.0
PAH200S48-12	12.0	7.2 - 13.2	16.70	200.4
PAH50S48-15	15.0	9.0 - 16.5	3.40	51.0
PAH75S48-15	15.0	9.0 - 16.5	5.00	75.0
PAH100S48-15	15.0	9.0 - 16.5	6.70	100.5
PAH150S48-15	15.0	9.0 - 16.5	10.00	150.0
PAH200S48-15	15.0	9.0 - 16.5	13.40	201.0
PAH50S48-24	24.0	14.4 - 26.4	2.10	50.4
PAH75S48-24	24.0	14.4 - 26.4	3.20	76.8
PAH100S48-24	24.0	14.4 - 26.4	4.20	100.8
PAH150S48-24	24.0	14.4 - 26.4	6.30	151.2
PAH200S48-24	24.0	14.4 - 26.4	8.40	201.6
PAH50S48-28	28.0	16.8 - 30.8	1.80	50.4
PAH75S48-28	28.0	16.8 - 30.8	2.70	75.6
PAH100S48-28	28.0	16.8 - 30.8	3.60	100.8
PAH150S48-28	28.0	16.8 - 30.8	5.40	151.2
PAH200S48-28	28.0	16.8 - 30.8	7.20	201.6
PAH150S48-48	48.0	38.4 - 57.6	3.20	153.6

<b>Options</b>		
Suffix	ON/OFF Control	Overvoltage
-	Negative	Manual Reset
/P	Positive	Manual Reset
/V*	Negative	Auto Reset
/PV	Positive	Auto Reset

\* Standard US Stock Item.

**Outline Drawing**



<b>Pinout</b>	
Pin Description	Function
-Vin	Negative Input Terminal
+Vin	Positive Input Terminal
Case	Baseplate Terminal
CNT	On / Off Control terminal
+V	Positive Output Terminal
-V	Negative Output Terminal
TRIM	Output adjustment Trim pin
+S	Positive Remote sense
-S	Negative Remote sense

## LAMBDA EUROPE

### AUSTRIA

LAMBDA ELECTRONICS GmbH  
Aredstraße 22  
A-2544 Leobersdorf

Telephone: +43 (0) 2256 655 84  
Facsimile: +43 (0) 2256 645 12  
www.lambda-austria.com

### FRANCE

LAMBDA SAS  
ZAC des Delaches, BP1077 - Gometz le Chatel  
91940 Les Ulis

Telephone: +33 (0) 1 60 12 71 65  
Facsimile: +33 (0) 1 60 12 71 66  
Web: www.lambda-f.com

### GERMANY

LAMBDA GmbH  
Karl-Bold-Straße 40  
D-77855 Achern

Telephone: +49 (0) 78 41 666 0  
Facsimile: +49 (0) 78 41 5000  
Web: www.lambda-germany.com

### ISRAEL

NEMIC LAMBDA LTD  
Kibbutz Givat  
Hashlosha 48800

Telephone: +972 (0) 3 902 4333  
Facsimile: +972 (0) 3 902 4777  
Web: www.nemic.co.il

### ITALY

LAMBDA s.r.l.  
Via dei Laboratori 128/130,  
20092, Cinisello Balsamo (Mi)

Telephone: +39 (0) 02 61 29 38 63  
Facsimile: +39 (0) 02 61 29 09 00  
Web: www.lambda-italy.com

### SWEDEN

LAMBDA SCANDINAVIA  
PO Box 546, Rallarvägen 41  
SE-184 25. Akersberga

Telephone: +46 (0) 8 598 94 090  
Facsimile: +46 (0) 8 540 66 096  
Web: www.lambda-scandinavia.com

### UK

LAMBDA UK  
Kingsley Avenue  
Ilfracombe Devon EX34 8ES

Telephone: +44 (0) 1271 856666  
Facsimile: +44 (0) 1271 864894  
Web: www.lambda-gb.com

## LAMBDA NORTH AMERICA

visit [www.lambdapower.com](http://www.lambdapower.com) for a list of Lambda offices and distributors

## LAMBDA ASIA

visit [www.densei-lambda.com](http://www.densei-lambda.com) for a list of Lambda offices and distributors

## LOCAL DISTRIBUTION

