

300W to 450W Half Brick Converters

Features

- ◆ Standard Half Brick Footprint
- ◆ 18-36 or 36-76VDC Inputs
- ◆ 12V 29A - 48V 9.4A Nominal Outputs
- ◆ Through Hole Mounting
- ◆ Low 12.7mm Profile
- ◆ High operating efficiencies (up to 92%)
- ◆ Constant switching frequency
- ◆ Baseplate cooling



Key Market Segments & Applications



| Specifications | | | | |
|---------------------------------|--------|--|-------------|----------------|
| Model | | PAH300S, 350S, 450S (see model selector) | | |
| Nominal Output Voltage | VDC | 12V | 28V | 48V |
| Input Voltage range | VDC | 18-36 or 36-76 | | |
| Input Current (max) | A | 6.8-17.4A (model dependant) | | |
| Output Voltage Adjustment | VDC | 7.2 - 13.2 | 16.8 - 33 | 28.8 - 57.6(5) |
| Ripple & Noise (max) (pk to pk) | mV | 200 | 280(1) | 480 |
| Line Regulation (max) | mV | 24 | 56 | 96 |
| Load Regulation (max) | mV | 24 | 56 | 96 |
| Overload Protection | % | 105 - 140%, constant current with auto recovery | | |
| Overvoltage Protection (3) | % | 115-135% | 125-140%(2) | 125-145%(6) |
| Remote Sense | - | Yes | | |
| Remote On / Off (See options) | - | Standard; Low = ON, Open = OFF /P option; Low = OFF, Open = ON | | |
| Temperature (operating) | °C | -40°C to +100°C baseplate, full power(4) | | |
| Temperature (storage) | °C | -40°C to +100°C | | |
| Temperature Coefficient | - | 0.02%/°C | | |
| Humidity (operating) | - | 5-95% RH Non condensing | | |
| Humidity (storage) | - | 5-95% RH Non condensing | | |
| Cooling | - | Conduction (See Installation Manual for heatsink selection) | | |
| Isolation Voltage | VDC | 1500VDC Input to output & baseplate, 500VDC Output to baseplate | | |
| Vibration | - | Non Operating, 10-55Hz (sweep for 1 min.) | | |
| Amplitude | - | 0.825mm constant (Max 49 m/s ²) X,Y,Z 1 hour each | | |
| Shock | - | 196.1m/s ² | | |
| Safety Agency Approvals | - | UL60950-1, CSA60950-1, EN60950-1, CE LVD (48V input models only) | | |
| Weight (Typ) | g | 110 | | |
| Size (WxHxD) | in(mm) | 2.4x0.5x2.28 (61x12.7x57.9) See outline drawing | | |
| Warranty | yrs | 2 Years | | |

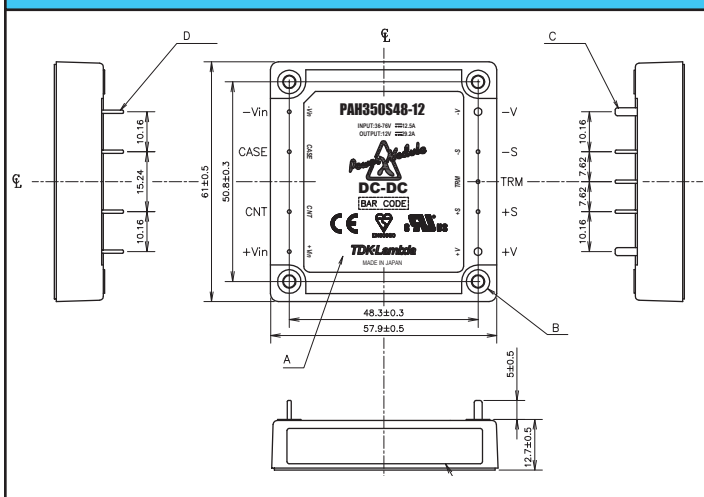
Note: See Installation Manual for full details, test methods of parameters and application notes

- (1) 240mV for PAH300
- (2) 125-145% for PAH450S48-28
- (3) Manual reset
- (4) PAH350S24-28 & -48: derate linearly to 85% load from 90°C to 100°C
- (5) 28.8-52.8 PAH350S28-48
- (6) 115-140% PAH350S28-48

Model Selector

| Model | Input Voltage (V) | Output Voltage (V) | Max. Curr. (A) | Max. Output Power (W) | Efficiency Typ. (%) |
|--------------|-------------------|--------------------|----------------|-----------------------|---------------------|
| PAH300S24-12 | 18 - 36 | 12 | 25 | 300 | 87 |
| PAH300S48-12 | 36 - 76 | 12 | 25 | 300 | 90 |
| PAH350S48-12 | 36 - 76 | 12 | 29.2 | 350 | 89 |
| PAH300S24-28 | 18 - 36 | 28 | 11 | 308 | 88 |
| PAH350S24-28 | 18 - 36 | 28 | 12.5 | 350 | 88 |
| PAH350S24-48 | 18 - 36 | 48 | 7.3 | 350 | 87 |
| PAH300S48-28 | 36 - 76 | 28 | 11 | 308 | 90 |
| PAH350S48-28 | 36 - 76 | 28 | 12.5 | 350 | 89 |
| PAH450S48-28 | 36 - 76 | 28 | 16 | 448 | 92 |
| PAH450S48-48 | 36 - 76 | 48 | 9.4 | 451 | 92 |

Outline Drawing



Pinout

| Pin Description | Function |
|-----------------|----------------------------|
| -Vin | Negative Input Terminal |
| +Vin | Positive Input 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 |

Options

| Suffix | Description |
|--------|---|
| - | M3 Tapped inserts for mounting |
| /T | M3 clearance inserts for mounting |
| /P | Positive logic remote On/Off (Not on PAH450S) |

Other DC-DC Products

| | |
|-----|-----------------------------------|
| PAF | 400-700W Full brick DC-DC |
| PAH | Other half brick DC-DC converters |
| PAQ | Quarter brick DC-DC converters |
| PAE | Eighth brick DC-DC converters |
| PX | 10-48W, 12-48V DC-DC |

For Additional Information, please visit
us.tdk-lambda.com/lp/products/pah300-series.htm

