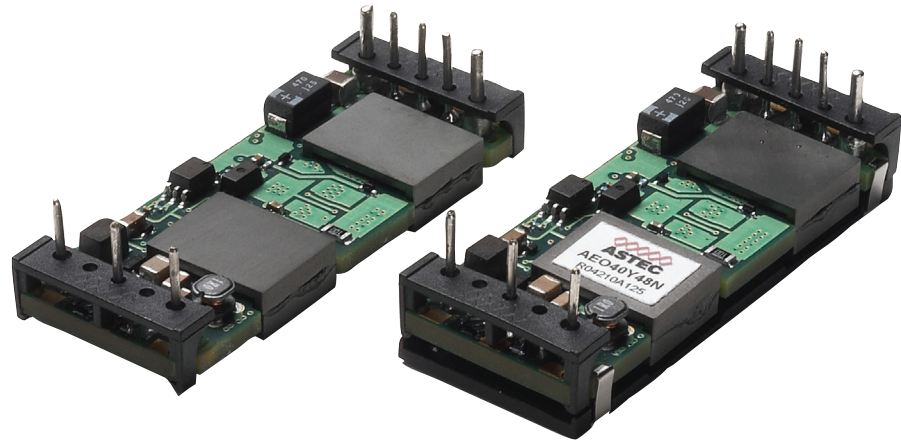


AEO/ALO Series

66/120 Watts

Total Power: Up to 120 Watts
Input Voltage: 48V
of Outputs: Single



Special Features

- 2.3" x 0.9" Industry Standard 8th brick outline
- Baseplate or Openframe construction
- Low Ripple and Noise
- Regulation to zero load
- High Capacitive load start-up
- Fixed Frequency Switching for EMI predictability
- Industry Standard features: Input UVLO with hysteresis, Enable, OVP, OCP, OTP, Output, VoltageTrim, Differential Remote Sense
- Meets Basic Insulation
- EU Directive 2002/95/EC compliant for RoHS

Electrical Specifications

| Input | |
|-------------------------------|---|
| Input range: | 36 - 75VDC |
| Input surge: | 100V / 100ms |
| Input UVLO: | 33-36 V (UVLO ON) 31-31 V (UVLO OFF) |
| Efficiency ² : | 93% @ 5V (typical) |
| Output | |
| Line / Load Regulation: | <0.1% v _O (typical) |
| Load Current: | Up to 25A for V _O ≤ 1.8V |
| Noise / Ripple ¹ : | 20mV _{PK-PK} (typical for V _O ≤ 2.5V) |
| Transient Response: | 2% typical deviation (50% to 75% Step Load) <100us settling time (typ) |
| Over Voltage Protection: | 130% V _O typ (autorecovery) |
| Over Current Protection: | 130% I _{O,max} typ (autorecovery) |
| Over Temperature Protection: | 115°C average PCB temperature (autorecovery) |
| Switching Frequency: | Fixed Frequency |
| Isolation Voltage: | 1500Vdc |
| Control | |
| Output Voltage Trim: | ±10% V _{O,NOM} |
| Enable: | TTL compatible (Positive or Negative logic) |

Safety

UL, cUL 60950-1 Recognized
TUV EN60950-1 Licensed



Environmental Specifications

| | |
|-------------------------------|--------------------------|
| Operating ambient temperature | |
| Openframe: | -40 °C to +85 °C Ambient |
| Baseplate: | -40 °C to +100 °C Case |
| Storage temperature: | -55 °C to +125 °C |
| MTBF: | >1 Million hours |

Ordering Information

| 120W Series | | | |
|---|----------------|------------|--------------|
| Output Voltage | Output Voltage | Efficiency | Model Number |
| 12.0 V | 10.0 A | 93.0% | ALO10B48N-L |
| 5.0 V | 20.0 A | 92.0% | ALO20A48N-L |
| 3.3 V | 30.0 A | 91.0% | ALO30F48N-L |
| 2.5 V | 35.0 A | 89.5% | ALO35G48N-L |
| 1.8 V | 40.0 A | 88.0% | ALO40Y48N-L |
| 1.5 V | 40.0 A | 86.0% | ALO40M48N-L |
| 1.2 V | 40.0 A | 85.0% | ALO40K48N-L |
| Not for New Designs - Please check LES A Series | | | |
| 66W Series | | | |
| Output Voltage | Output Voltage | Efficiency | Model Number |
| 12.0 V | 4.0 A | 93.0% | ALO4B48N-L |
| 5.0 V | 12.0 A | 92.0% | ALO12A48N-L |
| 3.3 V | 20.0 A | 91.0% | ALO20F48N-L |
| 2.5 V | 20.0 A | 90.0% | ALO20G48N-L |
| 1.8 V | 25.0 A | 88.5% | ALO25Y48N-L |
| 1.5 V | 25.0 A | 86.5% | ALO25M48N-L |
| 1.2 V | 25.0 A | 85.5% | ALO25K48N-L |
| Not for New Designs - Please check LES B Series | | | |

Options

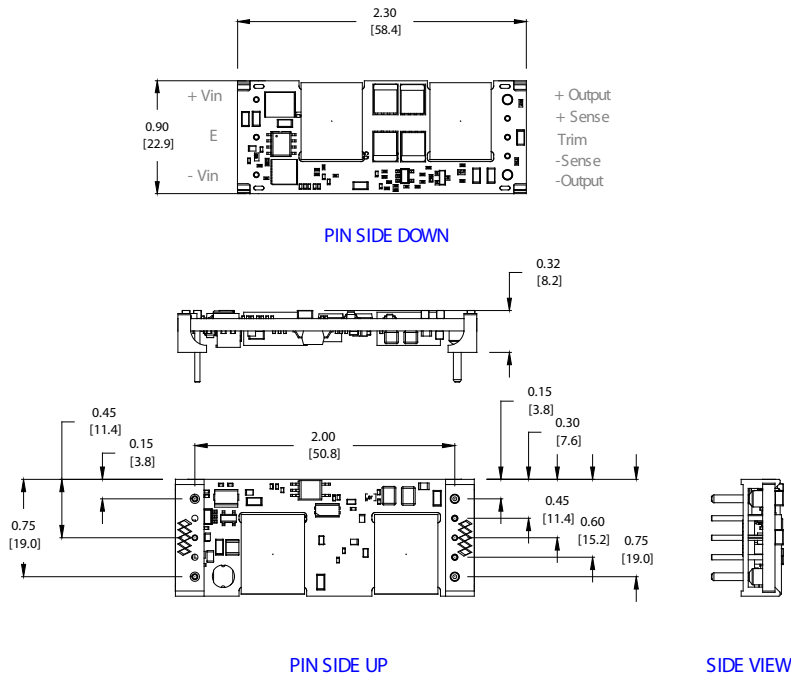
| | Construction | Size | Output Current | Output Voltage | Input Voltage | Remote ON/OFF Logic | | PIN Length O/P Termination | RoHS Designation |
|----------|--|---------------|--|---|-----------------------------|----------------------------------|---|---|----------------------------------|
| A | L | O | 10 | B | 48 | N | - | 6 | L |
| | L = Low Profile; Openframe E = Baseplate | O = 8th Brick | 10 = 10 Amps 20 = 20 Amps 30 = 30 Amps 35 = 35 Amps 40 = 40 Amps | B = 12.0V A = 5.0V F = 3.3V G = 2.5V Y = 1.8V M = 1.5V K = 1.2V | 48 = 48V (36-75 V Range) | N = Negative Blank = Positive | | Through Hole: 6 = 3.6mm Blank = 5mm S = Surface Mount* *Available for Low Profile; Openframe (ALO) Version only | L = RoHS 6/6 Blank = RoHS 5/6 |

Mechanical Drawing

OPEN FRAME THROUGH HOLE

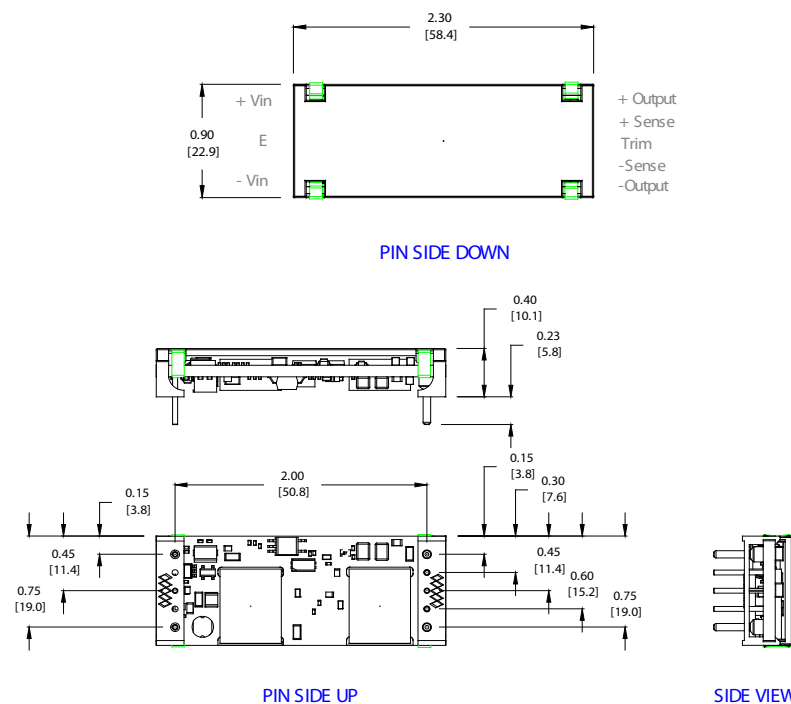
Rev. 09.30.08_100
AEO/ALO25 Series
3 of 4

ALO SERIES THRU HOLE PIN



BASEPLATE THROUGH HOLE

AEO SERIES THRU HOLE PIN



Pin Assignments

Single Output

1. +Vin
2. Enable (On/off)
3. -Vin
4. -VOUT
5. -Sense
6. Trim
7. +Sense
8. +VOUT

Notes:

1. Measured at 20 MHz bandwidth with external 10 μ F tant. capacitor in parallel with 0.1 μ F ceramic capacitor connected across +Vout and -Vout; 220 μ F e-cap or equivalent connected across +Vin and -Vin.
2. Efficiency measurements are typical values taken at full load, nominal line and $T_A = 25^\circ\text{C}$
3. All specifications are typical at nominal line, full load and $T_A = 25^\circ\text{C}$ unless otherwise noted.
4. All specifications subject to change without notice.
5. Mechanical drawings are for reference only. Dimensions are in inches [mm]. Pin placement tolerance ± 0.005 [0.127]. Mechanical Tolerance ± 0.02 [0.5], recommended surface mount pads (min: 0.080 x 0.112 [2.03 x 2.84] / max: 0.092 x 0.124 [2.34 x 3.15]); through hole pin diameter (Pins 4 & 8) $\phi = 0.062$ [1.57], others $\phi = 0.04$ [1.0] (6X).
6. Technical Reference Notes should be consulted for detailed information when available.
8. Warranty 2yrs.

| PIN LENGTH | A |
|-----------------|------------------------------------|
| Std Pin Length: | 0.189 [4.8] MIN 0.205 [5.2] MAX |
| "-6" Option: | 0.137 [3.5] MIN 0.152 [3.9] MAX |

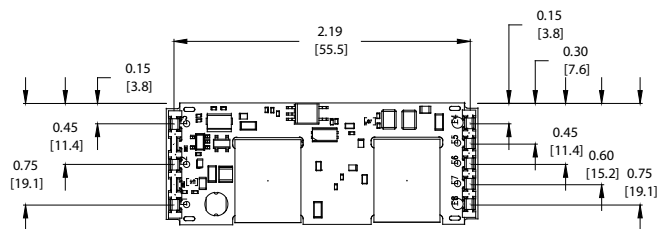
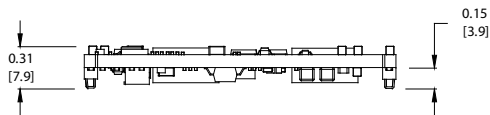
Mechanical Drawing

OPEN FRAME SURFACE MOUNT

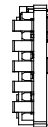
ALO OPEN FRAME SMT PIN



PIN SIDE DOWN



PIN SIDE UP



SIDE VIEW

Americas

5810 Van Allen Way
Carlsbad, CA 92008
USA
Telephone: +1 760 930 4600
Facsimile: +1 760 930 0698

Europe (UK)

Waterfront Business Park
Merry Hill, Dudley
West Midlands, DY5 1LX
United Kingdom
Telephone: +44 (0) 1384 842 211
Facsimile: +44 (0) 1384 843 355

Asia (HK)

14/F, Lu Plaza
2 Wing Yip Street
Kwun Tong, Kowloon
Hong Kong
Telephone: +852 2176 3333
Facsimile: +852 2176 3888

For global contact, visit:

www.powerconversion.com
techsupport.embeddedpower@emerson.com

While every precaution has been taken to ensure accuracy and completeness in this literature, Emerson Network Power assumes no responsibility, and disclaims all liability for damages resulting from use of this information or for any errors or omissions.

Emerson Network Power.
The global leader in enabling
business-critical continuity.

- AC Power
- Connectivity
- DC Power
- Embedded Computing
- **Embedded Power**
- Monitoring
- Outside Plant
- Power Switching & Controls
- Precision Cooling
- Racks & Integrated Cabinets
- Services
- Surge Protection

EmersonNetworkPower.com

Emerson Network Power and the Emerson Network Power logo are trademarks and service marks of Emerson Electric Co.
©2008 Emerson Electric Co.