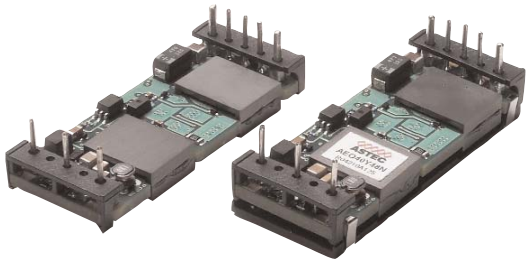
Astec Industry Standard

120Watts

AEO/ALO40

High Efficiency

Total Power:	120 Watts
Input Voltages:	48V
No. 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

Environmental

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 Hrs

Safety

UL, cUL 60950-1 Recognized

TUV EN60950-1 Licensed

Electrical Specs

Input

Input Range	36 to 75 VDC
Input Surge	100V /100ms
Input UVLO	33 - 36 V (UVLO ON) 31 - 34 V (UVLO OFF)
Efficiency[2]	93% @ 5 V (typical)

Output

Line / Load Regulation	< 0.1% V_O (typical)
Load Current	Up to 40A for Vo ≤ 1.8V
Noise/Ripple[1]	30mV_{PK-PK} (typical)
Transient Response	2% typical deviation (50% to 75% Step Load) < 100µs settling time (typ)
Over Voltage Protection	130% V_O Typ (autorecovery)
Over Current Protection	130% $I_{O,max}$ Typ (autorecovery)
Over Temperature Protection	115ºC 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)

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5810 Van Allen Way
Carlsbad, CA 92008
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Facsimile: 760-930-0698

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Merry Hill, Dudley
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ASIA
Units 2111-2116, Level 21
Tower1, Metroplaza
223, Hing Fong Road
Fwai Fong, New Territories
Hong Kong
Telephone: 852-2437-9662
Facsimile: 852-2402-4426

Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency[2]	Model Number
36V to 75V	12.0V	10A	93.0%	A(X)O10B48 (N) - (6)(S)(L)
36V to 75V	5.0V	20A	92.0%	A(X)O20A48 (N) - (6)(S)(L)
36V to 75V	3.3V	30A	91.0%	A(X)O30F48 (N) - (6)(S)(L)
36V to 75V	2.5V	35A	89.5%	A(X)O35G48 (N) - (6)(S)(L)
36V to 75V	1.8V	40A	88.0%	A(X)O40Y48 (N) - (6)(S)(L)
36V to 75V	1.5V	40A	86.0%	A(X)O40M48 (N) - (6)(S)(L)
36V to 75V	1.2V	40A	85.0%	A(X)O40K48 (N) - (6)(S)(L)

OPTIONS:

(X) : "L" = Open Frame / Low Profile
"E" = Baseplate Construction

(N) : "N" = designates Negative Logic Enable (default is Positive Enable with no suffix "N" required)

(6) : "-6" = 3.7mm nominal pin length (default is 5mm nominal pin length with no suffix "-6" required)

(S) : "-S" = Surface Mount Termination (default is Through Hole Termination with no suffix "-S" required)[7]

(L) : "L" = RoHS compliant (RoHS 6) / "Blank" - RoHS compliant with Lead (PB) in solder exemption (RoHS 5)

Pin Assignment

Single Output

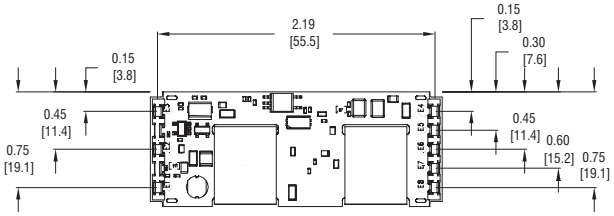
1. +Vin
2. Enable (On/Off)
3. -Vin
4. $-V_{OUT}$
5. -Sense
6. Trim
7. +Sense
8. $+V_{OUT}$

Notes:

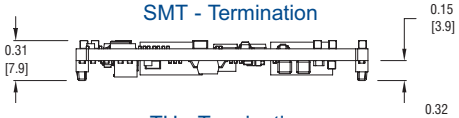
1. Measured at 20 MHz bandwidth with external 10 µF tant. capacitor in parallel with 0.1 µF ceramic capacitor connected across +Vout and -Vout; 220 µF e-cap or equivalent connected across +Vin and -Vin.
2. Efficiency measurements are typical values taken at full load, nominal line and T_A = 25°C.
3. All specifications are typical at nominal line, full load and T_A = 25°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: 0092 x 0.124 [2.34 x 3.15]); through hole pin diameter (Pins 4 & 8) ∅ = 0.062 [1.57], others ∅ = 0.04 [1.0] (6X).
6. Technical Reference Notes should be consulted for detailed information when available.
7. AEOxxxxxx-Sx series (surface mount termination with baseplate) are not reflow compatible.
8. Warranty 2 yrs.

Astec reserves the right to make changes to the information contained herein without notice and assumes no liability as a result of its use and application. (REV 02: MARCH 7, 2007)

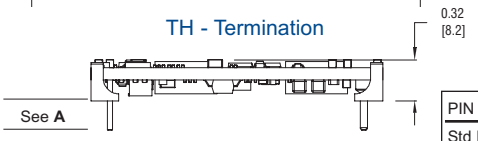
ALO - OPENFRAME



SMT - Termination

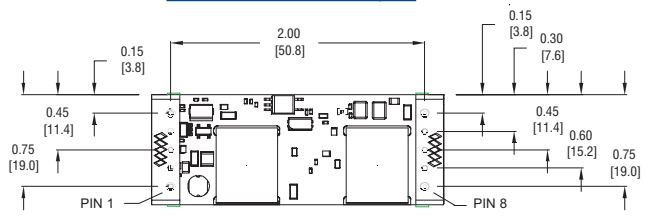


TH - Termination

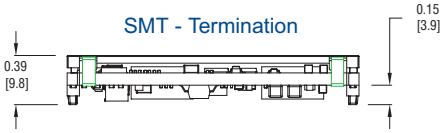


PIN LENGTH	A
Std Pin Length:	0.189 [4.8] MIN 0.205 [5.2] MAX
"-6" Option:	0.137 [3.5] MIN 0.152 [3.9] MAX

AEO -BASEPLATE



SMT - Termination



TH - Termination

