

# 60 Amps AEQ/ALQ60

High Efficiency Quarter Brick



Total Power: 108W  
Input Voltages: 48V  
No. of Outputs: Single

## Electrical Specs

### Input

Input Range 36 to 75 VDC  
Input Surge 100V /100ms  
Efficiency > 90%@1.8V (50% to 100% load)

### Output

Line Regulation  $\pm 0.2\%V_o$   
Load Regulation  $\pm 0.2\%V_o$   
Noise/Ripple 25mV typ  
Remote sense Up to 10% of  $V_o$   
Transient Response 4% deviation typical  
50% to 75% Load change  
0.1A/ $\mu$ s Slew Rate  
150 $\mu$ s recovery

Overvoltage Protection 125%  $V_o$   
Current Limit 115% nominal output  
Switching Frequency 480kHz

### Control

Voltage Adjust 90 to 110%  $V_o$   
Enable TTL compatible  
(Positive or Negative enable options)

## Special Features

- High efficiency
- Industry standard package 1.45" x 2.30"
- Baseplate (AEQ) or Openframe (ALQ) construction
- High capacitive load limit on start-up
- Remote sense compensation
- Regulation to zero load
- Fixed frequency switching
- Basic insulation
- EU Directive 2002/95/EC Compliant for RoHS

## Environmental

Operating temperature range:  
-40°C to +85°C ambient (ALQ - Openframe)  
-40°C to +105°C baseplate (AEQ - Baseplate)

Storage temperature: -40°C to +125°C

Overtemperature protection: 115°C PCB temperature (Typical)

MTBF: > 1 million hours

## Safety

UL,cUL 60950

TUV EN60950

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AEQ / ALQ60Y48

## Ordering Information

| Input Voltage | Output Voltage | Output Current | Efficiency | Model Number            |
|---------------|----------------|----------------|------------|-------------------------|
| 36V to 75V    | 1.8V           | 60A            | 90% Typ    | AEQ60Y48(N) - (6)(3)(L) |
| 36V to 75V    | 1.8V           | 60A            | 90% Typ    | ALQ60Y48(N) - (6)(3)(L) |

**OPTIONS**

suffix "N" = Negative Logic Enable (without suffix "N" designates Positive Logic Enable)  
 suffix "6" = 3.7mm pin length (5mm nominal default pin length)  
 suffix "-3" = single pair of output pins (Pins 4 and 10 unstuffed)  
 without suffix "-3" = double pair of output pins (Pins 4,5, 9 and 10 are present)  
 suffix "L" = RoHS compliant (RoHS 6) / "Blank" = RoHS compliant with Lead (Pb) in solder exemption (RoHS 5)

## Pin Assignments

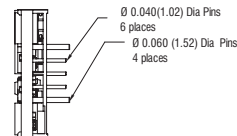
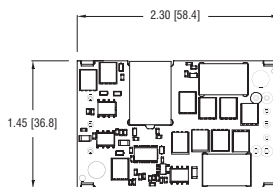
Single Output

- +Vin
- Enable
- Vin
- Common (OPTIONAL)
- Common
- Sense
- Trim
- + Sense
- + Vout
- + Vout (OPTIONAL)

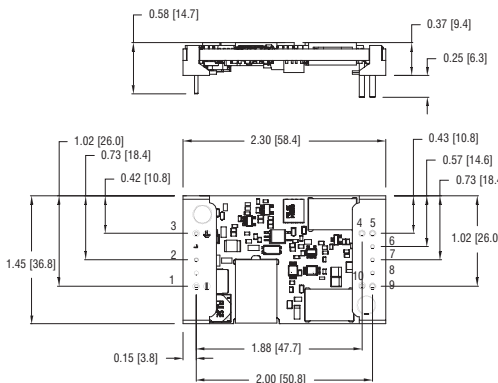
Notes:

- Nominal values apply with sense pins connected to +Vout and Ground Return with other control pins unconnected.
- Consult the Technical Reference Notes for more detailed information.
- Dimensions provided in the mechanical outline are nominal values.
- At high line,  $V_{IN} = 75V$  and no load,  $V_O = 0A$ , the module requires 1500 $\mu$ F capacitive load to provide greater than 45° of phase margin.
- Specifications subject to change without notice.
- 2 Years warranty.

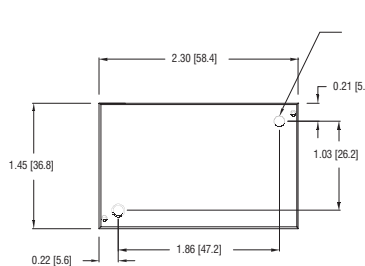
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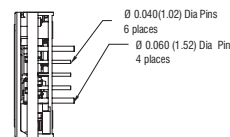
ALQ - Open Frame Series



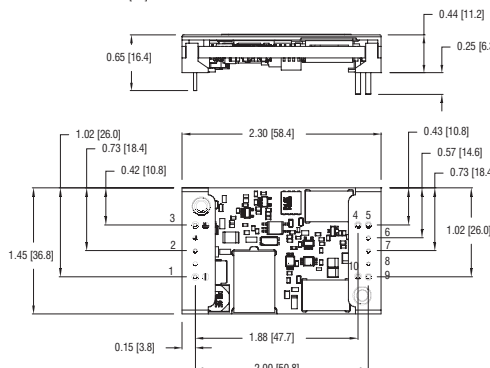
All dimensions are in Inches [mm].  
 Pin placement tolerance 0.005[0.127].



MOUNTING INSERT (2 PLCS)  
 M3 X 0.5 THROUGH  
 MAXIMUM SCREW TORQUE 3.9 IN LBS (0.44 N -m)



AEQ - Baseplate Series



Astec Industry Standard