

## ALQ12/AEQ12 Series

18 to 50.4 Watts

**Total Power:**  
132 Watts (for the 3.3 Vo device)  
48 Watts (for the 1.2 Vo device)  
**Input Voltage:** 36 - 75 VDC  
**# of Outputs:** Single

### Special Features

- Delivers up to 12 A output current (6.3 A for the 8 Vo)
- Basic Isolation
- Ultra High Efficiency
- Improved thermal performance: 12A (6.3A for the 8 V) at 55 °C at 1.5ms-1 (300LFM)
- High power density
- Low output noise
- Industry standard pinout
- 2:1 wide input voltage
- CNT function
- Remote sense
- Trim function: +10% / -20%
- Input under-voltage lockout
- Output over-current lockout
- Output over-voltage protection
- Over temperature protection
- RoHS Compliant

### Safety

UL cUL  
CSA  
EN0950



Rev. 01.10.07  
ALQ12/AEQ12 Series  
1 of 2



## Electrical Specifications

| Input                  |                                                                                                                          |
|------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Input Range            | 36 to 75 VDC                                                                                                             |
| Input Current (max.)   | 1.6 A                                                                                                                    |
| Input Reflected-ripple | 20 mAp-p 5Hz to 20MHz: 12uH source impedance, TA=25 °C                                                                   |
| Output                 |                                                                                                                          |
| Output voltage         | 8V, 3.3V, 1.8V, 1.5V nominal                                                                                             |
| Output Current         | 12A (6.3 A for the 8 Vo)                                                                                                 |
| Efficiency             | >80% (See ordering information)                                                                                          |
| Line output regulation | 5 mV (3 mV Typical) : 1.5 V & 1.8 V device<br>10 mV (5 mV Typical) : 3.3 V device<br>15 mV (8 mV Typical) : 8.0 V device |
| Load Output Regulation | 10 mV max ( 5 mV Typ) : 1.5 V and 1.8 V device<br>20 mV max (10 mV Typ) : 3.3 V and 8.0 V device                         |
| Switching Frequency    | 300 Khz                                                                                                                  |
| Isolation              |                                                                                                                          |
| I/O isolation          | 1500 Vdc                                                                                                                 |
| Isolation Capacitance  | 2200 pF                                                                                                                  |
| Isolation Resistance   | >10 Mohms                                                                                                                |

## Environmental Specifications

|                                     |                                                 |
|-------------------------------------|-------------------------------------------------|
| Operating ambient temperature range | -40 °C to 55 °C                                 |
| Storage temperature                 | -55 °C to 125 °C                                |
| Temperature Regulation              | 0.02 %Vo/°C                                     |
| Calculated MTBF                     | 3.080 Million hours (typ.); lo=lo-max; Tc=25 °C |

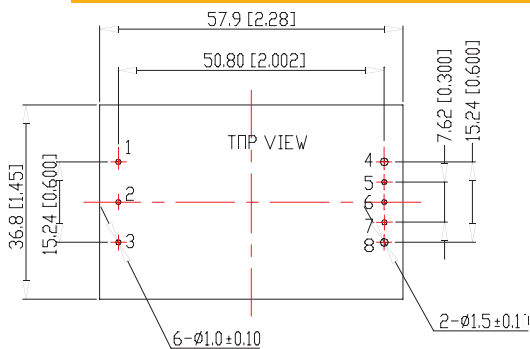


## Ordering Information

| Vin (V) | Vout (V) | Iout (A) | Effy | Model Number  |
|---------|----------|----------|------|---------------|
| 36-75   | 8        | 6.3      | 90%  | AEQ06L48(N)-L |
| 36-75   | 3.3      | 12       | 88%  | ALQ12F48(N)-L |
| 36-75   | 1.8      | 12       | 84%  | AEQ12Y48(N)-L |
| 36-75   | 1.8      | 12       | 84%  | ALQ12Y48(N)-L |
| 36-75   | 1.5      | 12       | 82%  | AEQ12M48(N)-L |
| 36-75   | 1.5      | 12       | 82%  | ALQ12M48(N)-L |

Note: Option "N" is for the negative enabled option, omit if converter is positive enabled.

## Mechanical Drawing

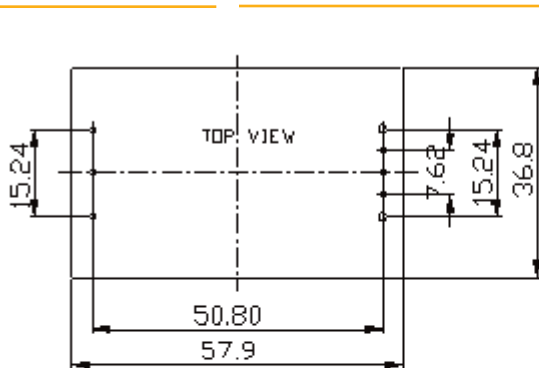


Open-Framed

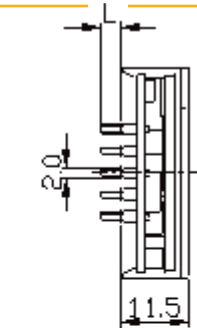
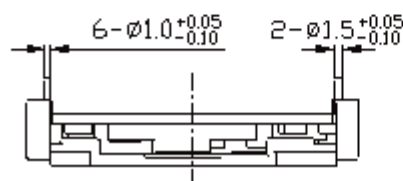
Pin Length Option

| Device Code Suffix | L              |
|--------------------|----------------|
| -4                 | 4.8mm+/-0.5mm  |
| -6                 | 3.8mm+/-0.5mm  |
| -8                 | 2.8mm+/-0.25mm |
| NONE               | 5.8mm+/-0.5mm  |

TOLERANCES: X.Xmm=+/-1.5mm



Baseplate



|       |      |       |        |
|-------|------|-------|--------|
| Pin 1 | +Vin | Pin 4 | +Vo    |
| Pin 2 | CNT  | Pin 5 | +Sense |
| Pin 3 | -Vin | Pin 6 | Trim   |
|       |      | Pin 7 | -Sense |
|       |      | Pin 8 | -Vo    |

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