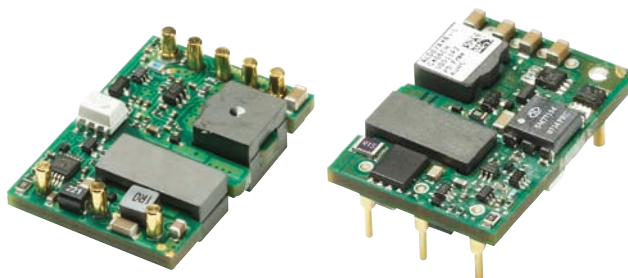


## ALD15 Series

### 15 Amps

**Total Power:** 35 Watts  
**Input Voltage:** 48V  
**# of Outputs:** Single



### Special Features

- High Efficiency
- -40 °C to + 85 °C ambient air operation
- 1.30" x 0.90" x 0.35" TH or SMT package
- High capacitive load limit on start-up
- Industry standard feature sets: UVLO, OVP, OCP, OTP, on/off enable, remote sense, output trim
- Basic insulation
- Regulation to zero load
- Fixed frequency switching
- EU directive 2002/95/EC compliant for RoHS

### Safety

- UL, cUL: 60950-1
- TUV: EN60950-1

## Electrical Specifications

| Input                       |                                                                                             |
|-----------------------------|---------------------------------------------------------------------------------------------|
| Input range:                | 36 to 75 Vdc                                                                                |
| Input surge:                | 100 V / 100 ms                                                                              |
| Efficiency:                 | 90.5% @ 12 V                                                                                |
| Output                      |                                                                                             |
| Line regulation:            | $\pm 0.1\% V_O$ (typical)                                                                   |
| Load regulation:            | $\pm 0.1\% V_O$ (typical)                                                                   |
| Noise/ripple <sup>1</sup> : | 40 mVp-p (typical)                                                                          |
| Remote sense:               | Up to 10% of $V_O$                                                                          |
| Transient response:         | 3% $V_O$ (typical) deviation<br>50% to 75% load change<br>80 $\mu$ s setting time (typical) |
| Overvoltage protection:     | 125% $V_O$ typical (autorecovery)                                                           |
| Overcurrent protection:     | 115% $I_O$ typical (autorecovery)                                                           |
| Overtemperature protection: | 115 °C average PCB temperature (autorecovery)                                               |
| Switching frequency:        | Fixed frequency                                                                             |
| Isolation voltage:          | 1500 Vdc minimum (2000 Vdc ALD10F48N)                                                       |
| Control                     |                                                                                             |
| Voltage adjust:             | 90 to 110% $V_O$                                                                            |
| Enable:                     | TTL compatible                                                                              |

## Environmental Specifications

|                                          |                   |
|------------------------------------------|-------------------|
| Ambient air operating temperature range: | -40 °C to +85 °C  |
| Storage temperature:                     | -40 °C to +125 °C |
| MTBF:                                    | 1 million hours   |

## Ordering Information

| Input Voltage | Output Voltage | Output Current | Efficiency <sup>2</sup> | Model Number              |
|---------------|----------------|----------------|-------------------------|---------------------------|
| 36 - 75 V     | 12.0 V         | 2.75 A         | 90.5%                   | ALD03B48(N)-(L)/(6L)/(SL) |
| 36 - 75 V     | 5.0 V          | 7.00 A         | 91%                     | ALD07A48(N)-(L)/(6L)/(SL) |
| 36 - 75 V     | 3.3 V          | 10.00 A        | 90%                     | ALD10F48(N)-(L)/(6L)/(SL) |
| 36 - 75 V     | 2.5 V          | 11.00 A        | 89%                     | ALD11G48(N)-(L)/(6L)/(SL) |
| 36 - 75 V     | 1.8 V          | 13.00 A        | 87%                     | ALD13Y48(N)-(L)/(6L)/(SL) |
| 36 - 75 V     | 1.5 V          | 15.00 A        | 85%                     | ALD15M48(N)-(L)/(6L)/(SL) |
| 36 - 75 V     | 1.2 V          | 15.00 A        | 84%                     | ALD15K48(N)-(L)/(6L)/(SL) |

### Notes:

Efficiency values taken at nominal input full load condition, 25 °C ambient temperature.

### Options

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

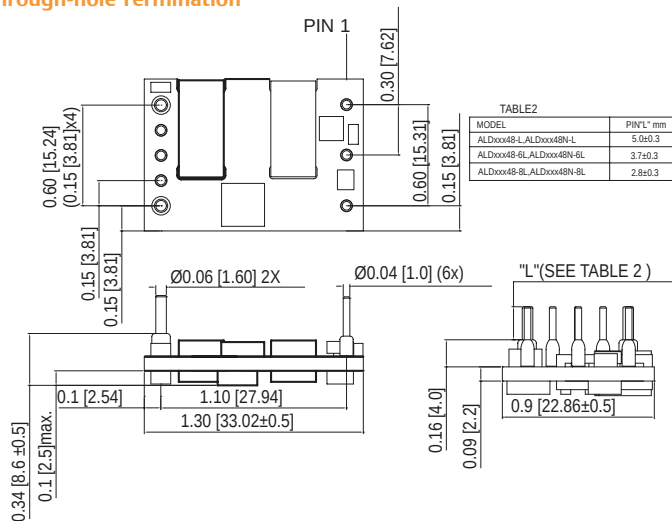
"L" = RoHS compliant

"-6L" = 3.7 mm nominal pin length (default is 5 mm nominal pin length with no suffix "-6" required), RoHS compliant

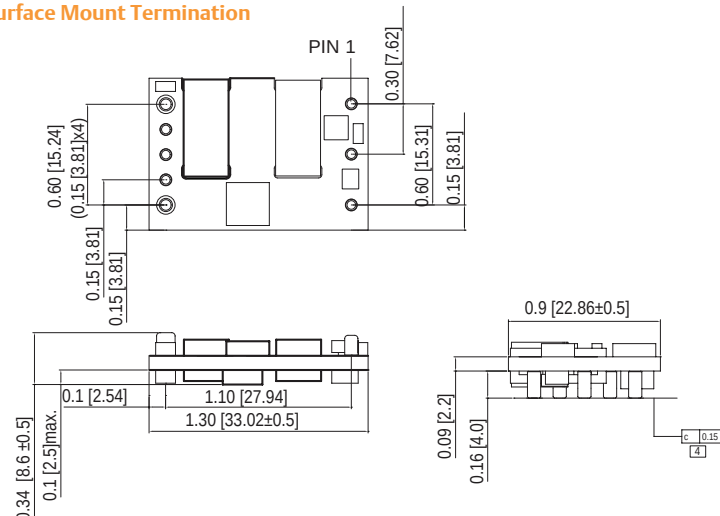
"-SL" = Surface Mount Termination (default is thru hole termination with no suffix "-S" required) RoHS compliant. STRL designates Taped and Reeled option for SMT

## Mechanical Drawings

### Through-hole Termination



### Surface Mount Termination



## Pin Assignments

### Single Output

- +Vin
- Enable
- Vin
- Vout
- Sense
- Trim
- +Sense
- +Vout

### Notes:

- 20 mHz bandwidth. External 10 µF tant. capacitor in parallel with 0.1 µF ceramic capacitor placed across + Vout and -Vout; 33 µF e-cap or equivalent placed across +Vin and -Vin.
- Efficiency measurements taken at full load, nominal line and  $T_A = 25^\circ\text{C}$
- All specifications are typical at nominal line, full load and  $T_A = 25^\circ\text{C}$  unless otherwise noted.
- Mechanical drawings are for reference only. Dimensions are in inches [mm]. Mechanical tolerance  $\pm 0.020 [\pm 0.50]$
- Technical Reference Notes should be consulted for detailed information when available.
- All specifications subject to change without notice.
- Warranty 2 years.
- The through-hole terminated modules are intended for wave soldering process.

# Mechanical Drawings

### Recommended PAD/ Hole Pattern

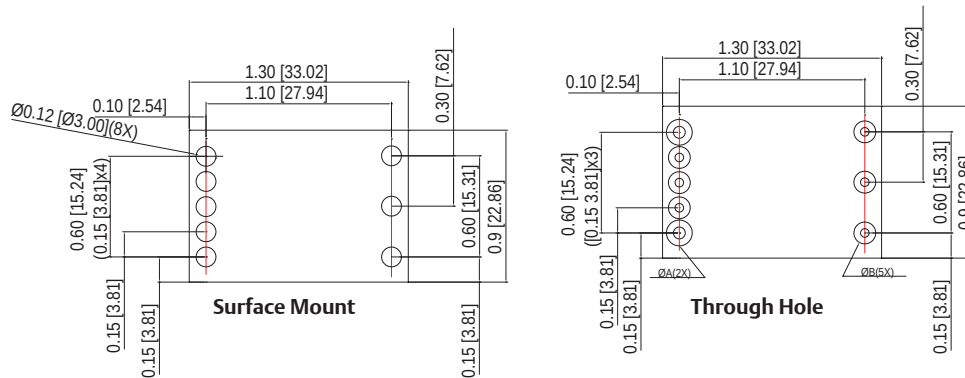
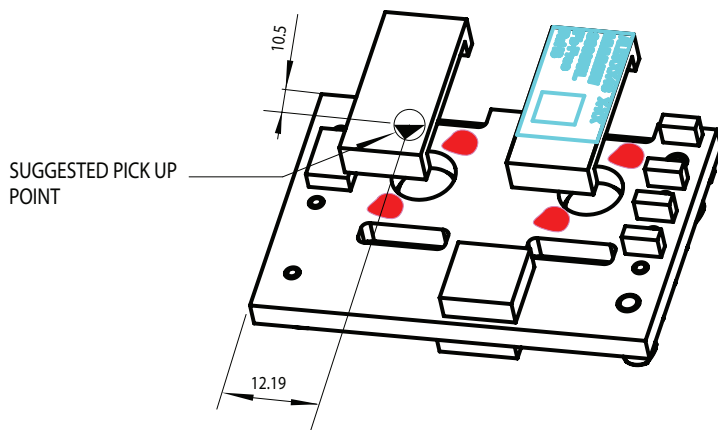


TABLE1

|    |                                                |                   |
|----|------------------------------------------------|-------------------|
|    | HOLE & PAD DIAMETER FOR CUSTOMER (RECOMMENDED) |                   |
|    | HOLE DIAMETER (ØD)                             | PAD DIAMETER (ØD) |
| ØA | Ø1.9                                           | Ø2.9              |
| ØB | Ø1.3                                           | Ø2.3              |

### Recommended Pick-up Point



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