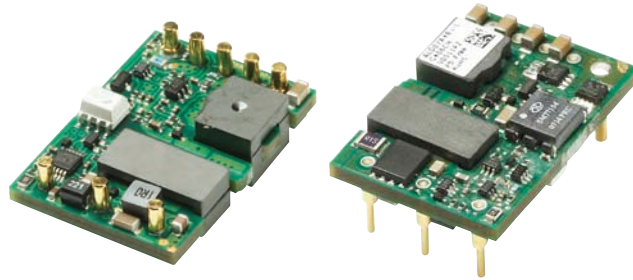


## ALD15 Series

### 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:	± 0.1% V <sub>O</sub> (typical)
Load regulation:	± 0.1% V <sub>O</sub> (typical)
Noise/ripple <sup>1</sup> :	40 mVp-p (typical)
Remote sense:	Up to 10% of V <sub>O</sub>
Transient response:	3% V <sub>O</sub> (typical) deviation 50% to 75% load change 80 μs setting time (typical)
Overvoltage protection:	125% V <sub>O</sub> typical (autorecovery)
Overcurrent protection:	115% I <sub>O</sub> 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 <sub>O</sub>
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)

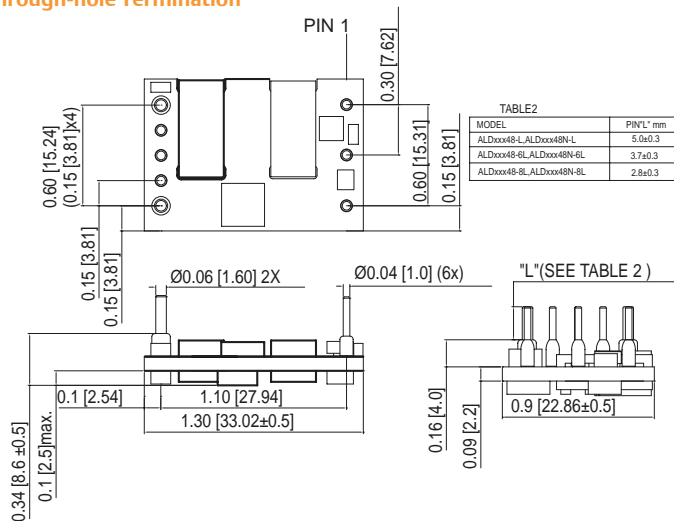
“L” = RoHS compliant

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

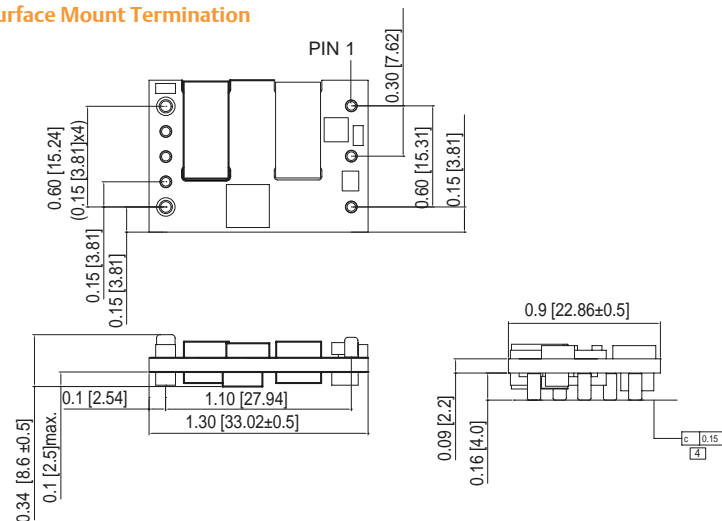
“-SL” = Surface Mount Termination (default is thru hole termination with no suffix “-S” required) RoHS compliant. STRL designates Taped and Reeled option for SMT

## 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  $\mu$ F tant. capacitor in parallel with 0.1  $\mu$ F ceramic capacitor placed across + Vout and -Vout; 33  $\mu$ F 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

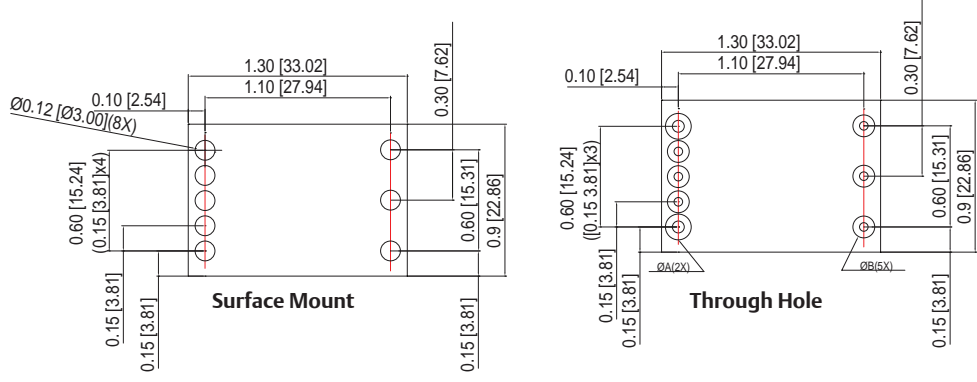
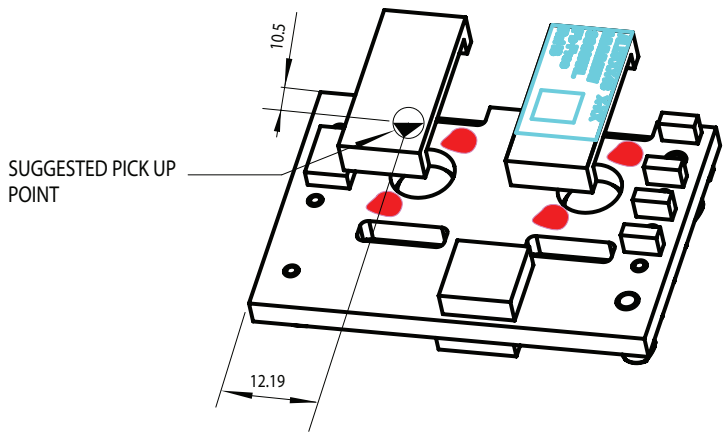


TABLE 1

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



Americas

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

Europe (UK)

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West Midlands, DY5 1LX  
United Kingdom  
Telephone: +44 (0) 1384 842 211  
Facsimile: +44 (0) 1384 843 355

Asia (HK)

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2 Wing Yip Street  
Kwun Tong, Kowloon  
Hong Kong  
Telephone: +852 2176 3333  
Facsimile: +852 2176 3888

For global contact, visit:

[www.Emerson.com/EmbeddedPower](http://www.Emerson.com/EmbeddedPower)  
[techsupport.embeddedpower@emerson.com](mailto:techsupport.embeddedpower@emerson.com)

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- Services
- Surge Protection

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