

## FEATURES

- 16 watts per cubic inch
- > 80% efficiency
- 2U high – SlimLine2 package
- Hot Pluggable or Field Terminations
- Power Factor Corrected
- EN 61000-3-2 compliant
- UL, CSA, TÜV (IEC, EN), CB
- FCC, CISPR Class B EMI
- IEC, EN Immunity
- **Standard features include:**
  - Pilot bias
  - Power Fail monitor
  - DC Good signal
  - Hi Temp signal
  - Fan Fail signal
  - Inhibit capability
  - Single wire current share
  - OVP on all models
  - Overload and short circuit protection
  - Reverse voltage protection
  - Integral cooling fan
- **Options and Accessories include:**
  - Redundancy with Or-ing diode
  - IEEE 802.3at Compliance
  - Field Terminations with LED indicators for AC, DC Good and Hi Temp
  - ℙC Serial Interface
  - 2U high racking systems



## DESCRIPTION

LD Series is part of Deltron's SlimLine2 group of 2U high-power, high-density supplies. Rated up to 2000 watts, these single output models measure only 3.16"H x 3.48"W x 12.93"L. System integration is facilitated through a choice of two interfaces. Standard configuration includes a Positronic PCI connector for a reliable, cost-effective hot pluggable interface. Optional field terminations enable the interfacing of units into an embedded system via studs and screw terminals. 48VDC models offer a high-density front-end solution for powering **Intermediate Bus Converters (IBCs)**.

LD Series modules fit a wide range of high power requirements ranging from heavy duty industrial applications to fault tolerant front-end networking and computing applications. Units can be paralleled for additional power or used in combination with other models to meet multiple output requirements. When used in Deltron's RA120A or RA120B racking system, up to four LD Series units can be mounted in a 2U high rack space, providing up to 8000 watts.

Designed to meet applicable NEBS standards, units feature a proven topology coupled with excellent thermal management to achieve outstanding performance and safety. Power Fail, DC Good, Hi Temp, and Fan Fail features provide TTL-compatible logic signals for monitoring power supply status. **IEEE 802.3at** compliance option is available for **Power over Ethernet (PoE)** applications. All models are available with redundancy option for parallel or N+1 hot pluggable applications.

## MODELS

AC Input	90-264	180-264	Models
Output	Watts	Watts	
12VDC	1400	1400	LD12-116-YY
24VDC	1620	1800	LD24-75-YY
28VDC	1620	1800	LD28-64-YY
48VDC	1600	2000	LD48-42-YY

Other ratings available on special order.  
Replace the YY with the sum of the Option Codes below.

## OPTIONS

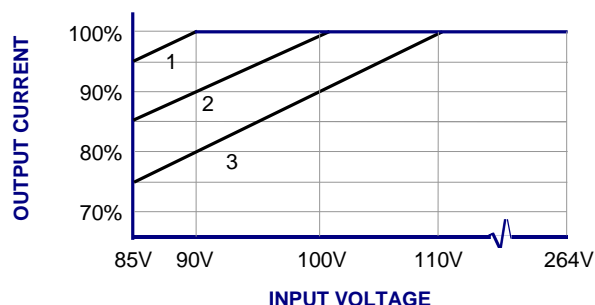
Code	Function
00	None
01	Redundancy
08	Field Terminations
16	IEEE 802.3at Compliance

Option 16 is available for 48V models only.

## LD SERIES RACK SYSTEMS

Two racking systems are available, each 2U-high and accommodating up to four LD units providing a total output of 8kW. The **RA120A** rack offers hot-pluggable configuration for paralleling or N+1 redundant operations. Each power supply plugs into the backplane and is securely held in place. Individual output and signal connections are made via rear accessible studs and shrouded headers. A heavy-duty barrier block is provided for input connections. The **RA120B** rack holds field-terminated units. Accessory bus bars are available for paralleling outputs. Racks are designed to accept either EIA or Bellcore NEBS mounting.

## MODEL DERATING



1	LD12
2	LD24, 28
3	LD48

# LD SERIES SPECIFICATIONS

## INPUT

90-264 VAC, 47-63 Hz.

## POWER FACTOR

0.99 typical.

## EMISSIONS

EN 55022/CISPR 22, Class B Conducted.  
EN 61000-3-2, Class A Harmonics.

## IMMUNITY

EN 61000-4-2, Level 3 Electrostatic Discharge.  
EN 61000-4-4, Level 3 Electrical Fast Transients.  
EN 61000-4-5, Level 3 Surge.

## INPUT SURGE

230VAC - 100 amps max. 115VAC - 50 amps max.

## EFFICIENCY

Greater than 80%.

## HOLDUP TIME

20 milliseconds from loss of AC power.

## OUTPUTS

See model selection table. Outputs are trim adjustable  $\pm 5\%$ .

## OUTPUT POLARITY

Output is floating from chassis and can be referenced to ground as required.

## LINE REGULATION

Less than 0.2% for full line change.

## LOAD REGULATION

Less than 1% for full load change.

## MINIMUM LOAD

None required.

## RIPPLE & NOISE

1% pk.-pk., 20 MHz bandwidth.

## OPERATING TEMPERATURE

0-70°C. Derate 2.5%/°C above 50°C.

## TEMPERATURE COEFFICIENT

0.02%/°C typical.

## DYNAMIC RESPONSE

Peak transient less than  $\pm 2\%$  for a step load change from 75% to 50% or 100% max. Output recovers within 300 microseconds.

## SAFETY

Units certified to UL 60950-1, CSA 22.2 No. 60950-1, EN 60950.

## ISOLATION

Conforms to safety agency standards.

## INPUT UNDERVOLTAGE

Protects against damage for undervoltage operation.

## SOFT START

Units have soft start feature to protect critical components.

## OVERVOLTAGE PROTECTION

Standard on all models. Latching action. Recycle input to re-start.

## REVERSE VOLTAGE PROTECTION

Output is are protected up to 100% load ratings.

## OVERLOAD & SHORT CIRCUIT

Output is current limited with automatic recovery when overload is removed.

## CURRENT SHARE

Single wire current share.

## THERMAL SHUTDOWN

Circuit cuts off supply in case of local over temperature. Units reset automatically when temperature returns to normal.

## POWER FAIL MONITOR

Standard circuit provides TTL ACFAIL signal providing 4 millisecond warning before output drops by 5% after an input failure.

## DC GOOD

Standard circuit provides an energized open collector when output is at least 90% of nominal value.

## HI TEMP

TTL compatible logic signal provides warning when unit approaches thermal shutdown.

## FAN FAIL

TTL compatible logic signal provides warning when fan speed is inadequate to cool unit.

## INHIBIT

TTL compatible system inhibit provided.

## PILOT BIAS

+5 VDC @ 0.5 Amps.

## ENABLE

Enable pin must be shorted to Common for proper operation.

## REMOTE SENSING

Standard on output.

## SHOCK & VIBRATION

Shock per MIL-STD 810-E Method 516.4, Procedure I. Vibration per MIL-STD 810-E Method 514.4, Category 1, Procedure I.

## MECHANICAL

Chassis dimensions are 3.16" H x 3.48" W x 12.93" L.

## CONNECTIONS

Connections via Positronic connector. Option 08 allows connection to power supply via screw terminals for output, Euro block for input and header for signals.

## WARRANTY

Deltron's 2 year Standard Warranty applies.

## OPTIONS:

### REDUNDANCY (Code 01)

Redundant operation with Or-ing diodes coupled with standard single wire current sharing for use as a hot pluggable N+1 redundant system.

### FIELD TERMINATIONS (Code 08)

Provides an alternative to Positronic hot pluggable interface enabling customer to connect to power supply via field connections. Output terminals are 10-32 screws. Input terminals are via Euro block. A 14 pin header handles signals and functions. Mating ribbon cable connectors provided. Option includes front panel LED indicators for AC, DC Good and Hi Temp.

### IEEE 802.3at COMPLIANCE (Code 16)

Option to provide 2250VDC output to ground isolation and 48-51VDC adjustment. Applicable to 48V models.

### I<sup>2</sup>C SERIAL INTERFACE

Consult factory for specifications.

### RACKING SYSTEM

The RA120A 2U high, 19" wide racking system measures 3.50" H x 14.0" D. The RA120B rack also measures 19" W x 3.5" H, but measures 11.3" deep. Each rack accommodates up to four LD Series power supplies providing up to 8000 watts.

*Specifications subject to change without notice.*

