

## FEATURES

- 11 watts per cubic inch
- 80% typical efficiency
- 1U high – SlimLine package
- Hot Pluggable
- Power Factor Corrected
- EN 61000-3-2 compliant
- Universal input
- UL, CSA, TÜV (IEC, EN)
- FCC, CISPR Class B EMI
- IEC, EN Immunity
- **Standard features include:**
  - Integral ball bearing fan
  - DC Good signal
  - Inhibit capability
  - OVP on all models
  - Overload and short circuit protection
  - Reverse voltage protection
- **Options and Accessories include:**
  - Redundancy via ultra low drop Or-ing circuit with droop current share
  - Hi-Temp and Fan Fail signals
  - Nylon slides
  - 1U high racking system



## DESCRIPTION

The LE Series is part of Deltron's SlimLine group of 1U high power supplies. This series of single output self-cooled models is rated up to 400 watts, with each unit measuring 1.58"H x 2.10"W x 11.32"L. Uniquely packaged and highly compact, LE Series modules fit a wide range of industrial, telecom and computer networking applications. These hot pluggable units can be paralleled for additional power or used in combination with other models to meet multiple output requirements. When used in Deltron's RA30A racking system, as many as six LE Series units can be mounted in a 1U high rack space, providing up to 1800 watts.

Designed to meet applicable NEBS standards, units feature a proven topology coupled with excellent thermal management to achieve outstanding performance and safety. DC Good feature provides logic signal for monitoring power supply status. All models are available with redundancy option for parallel or N+1 hot pluggable applications. Low voltage models include N channel ultra low drop Or-ing circuit to maintain power supply efficiency.

## MODELS

### 300 Watt

Output	Model
1.8V @ 56A	LE1.8-56-YY
2.5V @ 56A	LE2.5-56-YY
3.3V @ 56A	LE3.3-56-YY
5V @ 56A	LE5-56-YY
12V @ 25A	LE12-25-YY
24V @ 12.5A	LE24-12.5-YY
48V @ 6.3A	LE48-6.3-YY

### 400 Watt

Output	Model
12V @ 33A	LE12-33-YY
24V @ 16.7A	LE24-16.7-YY
48V @ 8.3A	LE48-8.3-YY

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

## LE SERIES RACK SYSTEM

The **RA30A** 1U high, 19"-wide racking system is available for paralleling or N+1 redundant systems. The 1.75"-high by 12.0"-deep rack can accommodate six LE Series power supplies, providing up to 1800 watts. Racks include a top cover for added strength and protection.

Each power supply plugs into the backplane and is securely held in place by removable front panels. Individual output and signal connections are made via rear accessible Euro-style terminals and headers. Two 3-terminal Euro-style input connectors are provided, one for each half of the rack. Racks are designed to accept either EIA or Bellcore NEBS mounting and heavy-duty solid-bearing slides.

## OPTIONS

Code	Function
00	None
01	Redundancy
02	Nylon slides
04	Hi-Temp and Fan Fail
08	Field Terminations

Option 04 is available for models with voltage ratings of 12 volts or greater.  
Not available in combination with Option 08.

Option 08 is available for models with current ratings of 25 amps maximum.

# LE SERIES SPECIFICATIONS

## INPUT

85-264 VAC, 47-63 Hz. For operation from 100 VAC to 85 VAC derate output current linearly to 85%.

## POWER FACTOR

0.99 typical.

## EMISSIONS

EN 55022/CISPR 22, Class B Conducted. EN 61000-3-2, 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 - 50 amps max. 115VAC - 25 amps max.

## EFFICIENCY

78-80% typical.

## HOLDUP TIME

16 milliseconds typical 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  $\pm 0.5\%$  for input changes from nominal to min. or max. rated values.

## LOAD REGULATION

$\pm 0.5\%$  or  $\pm 10\text{mV}$  for load changes from 50% to 0% or 100% of max. When redundancy option 01 is specified, load regulation is 3%, which includes lossless, programmed current share droop.

## MINIMUM LOAD

None required.

## RIPPLE & NOISE

1% or 50mV, pk-pk. whichever is greater, 20 MHz bandwidth.

## OPERATING TEMPERATURE

0-70°C. Derate 2.5%/°C above 50°C.

## COOLING

Forced air cooling with built in fan.

## TEMPERATURE COEFFICIENT

$\pm 0.02\%/^{\circ}\text{C}$  typical.

## RECOVERY TIME

500 microseconds typical for a step load change from 50% to 25% or 75%.

## SAFETY

Units certified to UL 60950-1, CSA 22.2 No. 60950-1-03, EN 60950-1:2001. 400 watt units pending.

## ISOLATION

Conforms to safety agency standards.

## INPUT UNDERVOLTAGE

Protects against damage from undervoltage operation.

## SOFT START

Units have soft start feature to protect critical components.

## OVERVOLTAGE PROTECTION

Standard on all models.

## REVERSE VOLTAGE PROTECTION

Standard on output.

## OVERLOAD & SHORT CIRCUIT

Output protected by duty cycle current foldback circuit with automatic recovery when overload is removed.

## THERMAL SHUTDOWN

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

## DC GOOD

Standard circuit provides TTL compatible open collector Output Fail signal referenced to the common pin when the output drops by 10% or more.

## INHIBIT

TTL compatible system inhibit provided.

## 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 1.58" H x 2.10" W x 11.32" L.

## CONNECTIONS

Connections via Positronic connector. Option 08 allows connection to power supply via screw terminals and 8 pin header.

## WARRANTY

Deltron's 2 year Standard Warranty applies.

## OPTIONS:

### REDUNDANCY (Code 01)

Redundant operation with either Or-ing diode for higher voltage models or ultra low drop N channel Or-ing circuit in low voltage models coupled with wireless droop current sharing for use as a hot pluggable N+1 redundant system.

### NYLON SLIDES (Code 02)

Power supply chassis mounted slides provide ease of pluggability for use with Deltron model RA30A or equivalent racking system.

### HI-TEMP & FAN FAIL (Code 04)

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.

### FIELD TERMINATIONS (Code 08)

Provides an alternative to Positronic hot pluggable interface allowing customer to connect to power supply via screw terminals and 8 pin header. Includes mating connector for the header. Applicable for models with current ratings of 25 amps maximum. Minimum order quantity applies.

### LC-1

Mating connector kit consisting of Positronic PCIC right angle board mount connector.

*Specifications subject to change without notice.*

