

## 90-375 Watt, Benchtop Linear Power Supplies

The L Series is a family of linear DC power supplies designed for benchtop and portable applications. The family comprises fourteen models; outputs range from 0-8V to 0-300V at power levels from 90W to 375W. The supplies may be used as either voltage sources or current sources. Features such as isolated outputs, series/parallel operation, and tracking operation provide the flexibility for a variety of applications.



### Features

- ◆ **Constant Voltage/Constant Current Operation**  
The power supplies may be operated as either precisely regulated voltage sources or current sources. Crossover between modes is automatic, dependent only on load demand. Front panel LEDs indicate operating mode.
- ◆ **3½ Digit LED**  
LED displays are provided for each adjustable output. The LM and LH Series have two separate displays, one each for voltage and current. The LS and LT Series display is switch-selectable between voltage and current.
- ◆ **CE Mark (excluding LH Series)**
- ◆ **1 Year Warranty**
- ◆ **Series/Parallel Operation**  
Multiple power supplies may be connected in series to extend the output voltage range. The LS and LT Series have the capability to operate outputs in parallel for increased current range.
- ◆ **Universal AC Input**  
The AC input is externally switch-selectable for 100V/120V/220V/ 240V at 50/60 Hz



## L Series - Specifications

### OUTPUT

#### Voltage and Current

Model	Voltage	Current
LH 8-30	0-8	0-30
LM 18-10	0-18	0-10
LS 18-5	0-18	0-5
LT 18-5	0-18	0-5
LH 18-20	0-18	0-20
LS 30-3	0-30	0-3
LT 30-3	0-30	0-3
LM 30-6	0-30	0-6
LH 35-10	0-35	0-10
LM 60-3	0-60	0-3
LH 60-6	0-60	0-6
LH 75-5	0-75	0-5
LH 110-3	0-110	0-3
LH 300-1	0-300	0-1

\* LM, LS and LT series are CE marked.

#### Constant Voltage Mode

**Ripple (Bandwidth 5 Hz to 1 MHz):**  
 $\leq 1.0$  mV RMS

**Line Regulation:**  $\leq 0.01\% + 3$  mV  
 (LT models used in series  $\leq 0.01\% + 5$  mV)

**Load Regulation:** See table  
 (LT models in series operation  $\leq 300$  mV)

**Transient Response:**  $\leq 100$   $\mu$ s for 50% load change, 0.5A minimum load

**Temperature Coefficient:**  $\leq 300$  PPM/ $^{\circ}$ C

#### Constant Current Mode

**Ripple:**  $\leq 3$  mA RMS; LH Series  
 $\leq 5$  mA RMS; LH 8-30  $\leq 10$  mA RMS

**Line Regulation:**  $\leq 0.2\% + 3$  mA

**Load Regulation:**  $\leq 0.2\% + 3$  mA;  
 LH models  $\leq 0.2\% + 5$  mA

### INPUT

**Voltage and Frequency:**  
 100V/120V/220V/240V,  $\pm 10\%$  (externally switch-selectable), 50-60 Hz

### GENERAL

**Operating Temperature:**  $0^{\circ}$ C to  $40^{\circ}$ C

**Storage Temperature:**  $-10^{\circ}$ C to  $70^{\circ}$ C

**Operating Humidity:**  $< 80\%$  RH,  
 non condensing

**Storage Humidity:**  $< 70\%$  RH

**Isolation Voltage:**  $\pm 300$  VDC or peak AC,  
 either output lead to chassis ground

**Display Type:**  $3\frac{1}{2}$  digit LED

**Display Accuracy:**  $\pm 0.5\%$  of reading +  
 2 digits

**Display Parameters:** LM/LH models have separate displays for voltage and current; LS/LT models have a single display for voltage and current (switch-selectable) on each adjustable output; two display ranges for current on LS models

**Indicators:** LH/LM/LS models: CV and CC LEDs; LT models: CV, CC, parallel mode and overload (5V output) LEDs

**Output Termination:** Front panel binding posts, rated  $\leq 10$ A; LH 8-30 and LH 18-20 provide an additional rear panel terminal block

**Regulatory Compliance:** CE Mark (does not include the LH Series)

#### Dimensions

**LH:** 5.7" (144 mm) H x 10" (254 mm) W x 17.6" (419 mm) D

**LM:** 5.7" (144 mm) H x 10" (254 mm) W x 13.7" (335 mm) D

**LS:** 5.7" (144 mm) H x 5" (127 mm) W x 11.2" (284 mm) D

**LT:** 5.7" (114 mm) H x 10" (254 mm) W x 13.7" (335 mm) D

**Weight:** See table

### ACCESSORIES

One set of test leads for each output (except LH 8-30 and LH 18-20), grounding strap for each output, AC input line cord

### LS SERIES

**Analog Programming:** Full scale remote programming of output voltages and/or current by a 0-10V control signal varies the output proportionally from 0 to 100%

### LT SERIES

#### 5V, 3A Fixed Output

**Voltage:**  $5V \pm 0.25V$

**Current:** 3A (foldback current limit)

**Ripple:**  $\leq 2$  mV RMS

**Line Regulation:**  $\leq 5$  mV

**Load Regulation:**  $\leq 10$  mV

#### Operating Mode-Adjustable Output

**Independent:** Two independent and isolated outputs continuously adjustable, 0 to 100% of rating

**Series:** Master/slave configuration with a single or dual polarity output continuously adjustable by the master control  
 LT 18-5: 0-36V, 0-5A; LT 30-3: 0-60V, 0-3A

**Parallel:** Master/slave configuration with a single output continuously adjustable by the master control  
 LT 18-5: 0-18V, 0-10A;  
 LT 30-3: 0-30V, 0-6A

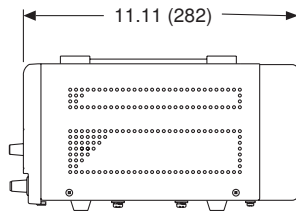
**Slave Tracking Error:**  $\leq 0.5\% + 10$  mV of the master output voltage

L Series - Table Data

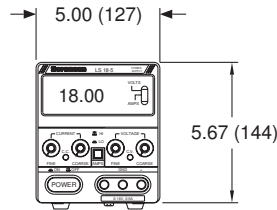
Model	Output Power		Voltage Load Regulation	Weight lb/kg
	Voltage VDC	Current ADC		
LH 8-30	0 to 8	0 to 30	< 0.02% + 5 mV	40.8/18.5
LM 18-10	0 to 18	0 to 10	< 0.01% + 5 mV	23.5/11.5
LS 18-5	0 to 18	0 to 5	< 0.01% + 5 mV	12.1/5.5
LT 18-5	0 to 18 (2 ea); 5	0 to 5 (2 ea); 3	< 0.02% + 5 mV	23.5/11.5
LH 18-20	0 to 18	0 to 20	< 0.02% + 5 mV	40.8/18.5
LS 30-3	0 to 30	0 to 3	< 0.01% + 3 mV	11.0/5.0
LT 30-3	0 to 30 (2 ea); 5	0 to 3 (2 ea); 3	< 0.01% + 5 mV	23.5/11.5
LM 30-6	0 to 30	0 to 6	< 0.01% + 5 mV	23.5/11.5
LH 35-10	0 to 35	0 to 10	< 0.01% + 5 mV	40.8/18.5
LM 60-3	0 to 60	0 to 3	< 0.01% + 5 mV	23.5/11.5
LH 60-6	0 to 60	0 to 6	< 0.01% + 5 mV	40.8/18.5
LH 75-5	0 to 75	0 to 5	< 0.01% + 5 mV	40.8/18.5
LH 110-3	0 to 110	0 to 3	< 0.01% + 5 mV	29.8/13.5
LH 300-1	0 to 300	0 to 1	< 0.01% + 5 mV	29.8/13.5

## L Series - LS, LT, LM, and LH Cases

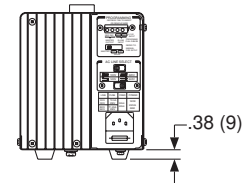
### LS Series



Side View

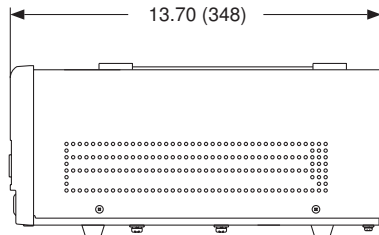


Front View

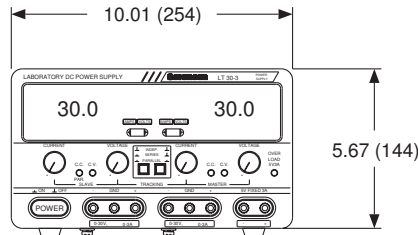


Rear View

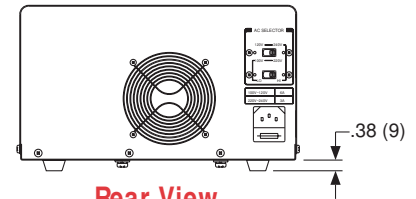
### LT Series



Side View

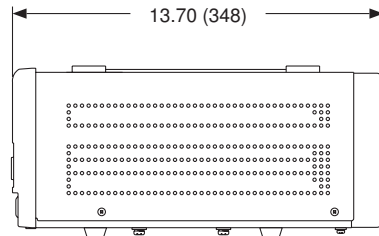


Front View

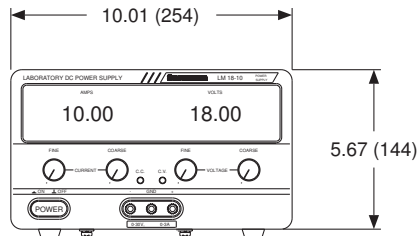


Rear View

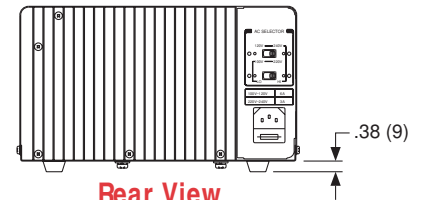
### LM Series



Side View

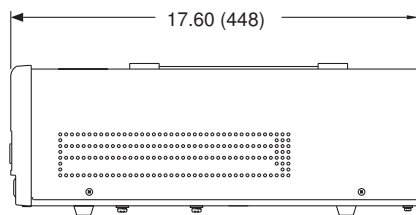


Front View

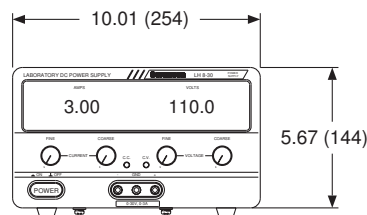


Rear View

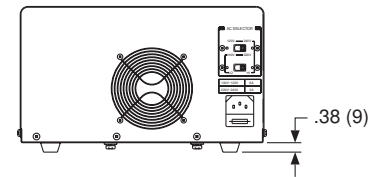
### LH Series



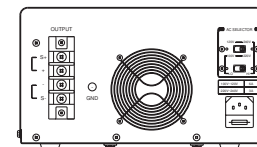
Side View



Front View



Rear View: 35V to 300V Models



Rear View: LH 8-30 & LH 18-20

Dimensions in inches (millimeters)