SPECIFICATIONS AND FEATURES

Specifications apply for the non-metered and the metered models.

DC OUTPUT--Voltage regulated for line and load

Voltage Range.....TABLE I

VOLTAGE RANGE

MODEL	LP-410	LP-411	LP-412	LP-413	LP-414	LP-415
VOLTAGE RANGE VDC	0-10	0-20	0-40	0-60	0-120	0-250

Multi-Current Ranges.....Current range must be chosen to suit the appropriate maximum ambient temperature. Current ratings apply for entire voltage range.

TABLE II

MAX. CURRENT

MODEL	MAX. CURRENT AT AMBIENT OF:			
	30°C	40°C	50°C	60°C
LP-410	2A	1.8A	1.6A	1.4A
LP-411	1.2A	1.1A	1.0A	0.8A
LP-412	0.70A	0.65A	0.60A	0.50A
LP-413	0.45A	0.41A	0.37A	0.33A
LP-414	0.20A	0.18A	0.16A	0.12A
LP-415	80MA	72MA	65MA	60MA

REGULATED VOLTAGE OUTPUT

Regulation (line).....0.01 percent plus 1.0 millivolt for input variations from 105-132 or 132-105 volts AC

Regulation (load).....0.01 percent plus 1.0 millivolt for load variations from no load to full load or full load to no load

Remote Programming

External Resistor .....Nominal 200 ohms/volt output

Programming Voltage.....One-to-one voltage change

Ripple and Noise .....500 microvolts rms; 1.5 millivolts peak-to-peak with either positive or negative terminal grounded, for all units except LP415-FM; 1.0MV rms; 3.0MV peak-to-peak for LP415-FM

Temperature Coefficient .....Output change in voltage less than (0.015% + 0.5 mv) /°C

DC OUTPUT--Current regulated for line and load; automatic crossover with voltage limit

Multi-Current Ranges .....Current range must be chosen to suit the appropriate maximum ambient temperature. Current ratings apply for entire voltage range. For maximum current range see Table II. Minimum current 1% of 30° ambient rating in Table II or 5 ma., whichever is greater.

Voltage Range .....For voltage range see Table I; voltage ratings apply for entire current range.

REGULATED CURRENT OUTPUT; AUTOMATIC CROSSOVER

Regulation (line) .....Less than 0.2% or 5 milliamperes, whichever is greater, variations from 105-132 or 132-105 volts AC

Regulation (load) .....Less than 0.2% or 5 milliamperes, whichever is greater, for load voltage changes from 0 to max. or max. to 0 volts DC

AC INPUT--105-132 volts AC at 57-63 Hz. For input power see Table III. For 440 HZ input, consult factory.

TABLE III
INPUT POWER, WATTS*

MODEL	INPUT POWER
LP-410	85 Watts
LP-411	75 Watts
LP-412	70 Watts
LP-413	65 Watts
LP-414	60 Watts
LP-415	50 Watts

*With output loaded to full 30°C rating and input voltage 132 volts AC, 60 Hz

OVERLOAD PROTECTION

Thermal ..... Thermostat, resets automatically when over-temperature condition is eliminated

Electrical

External ..... Adjustable, automatic, electronic current-limiting circuit, settable to 105 percent of rated current; limits output current to preset limit for protection of load and power supply when external overloads and direct shorts occur

Internal ..... Fuse, "SLO-BLO", 1.5A, fuse F1 protects the AC input circuit. Overload of the supply does not cause fuse failure

Fuse F2 provides protection against internal circuit failure in conjunction with overvoltage protector option

INPUT AND OUTPUT CONNECTIONS--Heavy duty terminal block on rear of chassis with 5-foot, 3-wire detachable line cord for all models; five-way binding posts provide for additional positive (+), ground, and negative (-) DC output connections, on front panel of FM models

OVERSHOOT--No overshoot of output voltage under conditions of power turn-on, power turn-off or power failure

OPERATING AMBIENT TEMPERATURE RANGE AND DUTY CYCLE--Continuous duty from 0°C to 60°C ambient with corresponding load current ratings for all modes of operation

STORAGE TEMPERATURE-(non-operating) -55°C to +85°C

METERS-Voltmeter and ammeter on metered suffix (FM) models

CONTROLS

DC output controls ..... Coarse and fine voltage controls and coarse and fine current controls permit adjustment of DC output; located on front panel of all models

Binding Posts (+) (-) (GND).... Five-way binding posts on all models.

Remote Sensing. . . . . Provision is made for remote sensing to eliminate effect of power output lead resistance on DC regulation.

Power. . . . . Panel mounted switch and indicator light for all units

Test Jacks (+) (-). . . . . Test jacks for non-metered models permit checking DC voltage output with external meters

PHYSICAL DATA

Size	5-3/16"H x 4-3/16"W x 10"D
Weight	7 lbs. net; 8 lbs. shipping wt.
Panel Finish	Brushed aluminum clear anodized panels with grey inlay (standard); special finishes available to customer's specifications at moderate surcharge

MOUNTING:

Laboratory bench, table top	Bumpers secured to the base of all LP units permit proper circulation of air through the unit. Removal of bumpers will restrict free-flow of air through the unit, avoid removing bumpers
Standard 19" Rack	All LP units can be used with rack adapters: LRA-1 (slide accomodation provided) LRA-2 (conventional mount) See figure 13

MODEL OPTIONS

Suffix "R" Fungus Proofing Option	Standard LP power supplies can be obtained with fungus proofing treatment with MIL V 173 varnish for all fungi nutrient components
Suffix "FM" Meter Option	Standard LP power supplies can be obtained with voltmeter and ammeter.
Suffix "V" Option	Standard LP power supplies can be obtained for 205-265 VAC, 50 Hz input

ACCESSORIES

Rack Adapters	Rack adapter LRA-1, with or without chassis slides is available as well as rack adapter LRA-2 which is used for simple rack installations where chassis slides are not required
Blank Panels	Half-rack and quarter-rack panels can be used with the Lambda rack adapters, see figure 13
Overvoltage Protector	Externally mounted, Overvoltage Protectors LHOV-4, LHOV-5 and LHOV-6 are available for use with LP power supplies LP-410, LP-411, LP-412 and LP-413