

Modernized Linear Power Supplies

LPS

The Abbott LPS Series is a family of rugged linear AC-DC power supplies designed for long-running critical applications requiring quiet, tightly regulated DC power.

Built with modern components and manufacturing practices for availability and long-term support, LPS units can be configured as form, fit, function replacements for legacy linear power supplies while preserving existing system interfaces and installation envelopes.



Specifications

AC Input:

105-125 VAC, 55-65Hz or 380-420Hz, single phase.

Efficiency:

30% minimum.(50% typ, 28 VDC Model at 100% load).

Line Regulation:

±0.1% of nominal over the full range of line input voltage.

Load Regulation:

±0.2% for change from no load to full load.

Ripple and Noise:

Peak-to-peak combined ripple and noise does not exceed 0.2% nominal output measured with a 25 MHz bandwidth.

Electromagnetic Compatibility:

Designed to meet MIL-STD-461.

Isolation:

Input to output: 500 VDC
Input to case: 500 VDC
Output to case: 500 VDC

Insulation Resistance:

50 megohms minimum between input and output, input and case, output and case when measured at 50VDC.

Temperature Range:

Storage: -55°C to +85°C.
Operating temperature: -20°C to +70°C baseplate with no power de-rating.

Input Transient Protection:

MIL-STD-1399, Section 103 (143.8VAC for 0.3 Seconds).
Optional MIL-STD-704 Figure 3, Limit 1 (180VAC for 0.1 Seconds).
Contact Factory.

Short Circuit Protection:

Completely protected against short circuit of any duration. Output automatically restores to normal after removal of short.

Load Transient Response:

Output voltage returns to regulation limits within 100 microseconds after 50% step change in load current.

Load Transient Overshoot:

2% maximum from nominal voltage set point.

Output Voltage and Current:

Overvoltage protection (crowbar) set to 20% nominal rated output.
Output adjust ±5% via adjustable potentiometer.

Reliability:

MTBF 69,700 hours at 50C baseplate calculated per MIL-HDBK-217 in naval sheltered environment (455,100 hours ground benign).

Environmental Conditions:

Encapsulated and hermetically sealed to meet the environmental requirements of MIL-STD-810, MIL-S-901.

OPTIONAL:

Hermetically Sealed Circular Connectors
Remote ON/OFF
Overtemperature Protection

Other outputs and/or inputs available upon request.

Dimensions and mechanical drawings on Page 3



Call us toll-free **1-800-367-8200**

MAIN OFFICE:

8203 Vineland Avenue, Sun Valley, CA 91352 – 818-504-0644 – FAX: 818-768-0395

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Model List

Model No.	Output Volts (VDC)	Output Current (A)	Power (W)	Size
LPS20S5	5	2.4	12	LPS20
LPS50S5	5	6	30	LPS50
LPS75S5	5	10	50	LPS75
LPS150S5	5	20	100	LPS150
LPS20S6.3	6.3	2.4	15.12	LPS20
LPS50S6.3	6.3	6	37.8	LPS50
LPS75S6.3	6.3	10	63	LPS75
LPS150S6.3	6.3	20	126	LPS150
LPS20S12	12	1.7	20.4	LPS20
LPS50S12	12	4	48	LPS50
LPS75S12	12	7.5	90	LPS75
LPS20S15	15	1.5	22.5	LPS20
LPS50S15	15	3	45	LPS50
LPS75S15	15	4	60	LPS75
LPS150S15	15	7.5	112.5	LPS150
LPS20S24	24	0.9	21.6	LPS20
LPS50S24	24	2.5	60	LPS50
LPS75S24	24	3.9	93.6	LPS75
LPS150S24	24	7.5	180	LPS150
LPS20S28	28	0.75	21	LPS20
LPS50S28	28	2	56	LPS50
LPS75S28	28	3.15	88.2	LPS75
LPS150S28	28	7.5	210	LPS150
LPD15S12	±12	0.5	12	LPD15
LPD15S15	±15	0.5	15	LPD15
LPD30S12	±12	0.9	21.6	LPD30
LPD30S15	±15	0.9	27	LPD30
LPD50S12	±12	1.5	36	LPD50
LPD50S15	±15	1.5	45	LPD50



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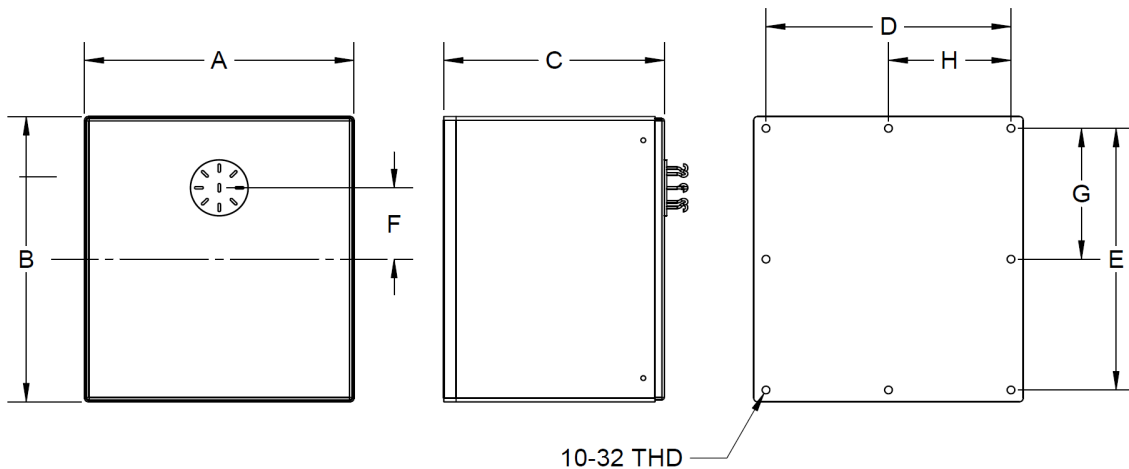
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Dimensions

Size	A	B	C	D	E	F	G	H	Weight lb. (Max)
LPS20	2.75	4.75	3.75	2.25	4.25	0.875			4.0
LPS50	4.25	5.25	4.00	3.75	4.75	1.875	2.38		7.0
LPS75	4.50	6.00	4.00	4.00	5.50	2.25	2.75		10.0
LPS150	5.50	6.50	5.00	5.00	6.00	2.00	3.00		14.0
LPD15	3.00	6.00	3.375	2.50	5.50	2.00			4.5
LPD30	4.00	6.25	3.375	3.50	5.75	0.875	2.88		6.0
LPD50	5.50	6.00	3.375	5.00	5.50	1.50	2.75	2.75	8.0

Mechanical Drawings



10-32 THD

Pin Assignment

PIN	FUNCTION
1	INPUT
2	INPUT
3	GND
4	N/C
5	+OUTPUT
6	+SENSE
7	-OUTPUT
8	-SENSE
9	TRIM

NOTES (UNLESS OTHERWISE SPECIFIED):

- DIMENSIONS ARE IN INCHES 2PL \pm .03 3PL \pm .010
- 10-32 THD INSERTS 5/32" MINIMUM DEPTH



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