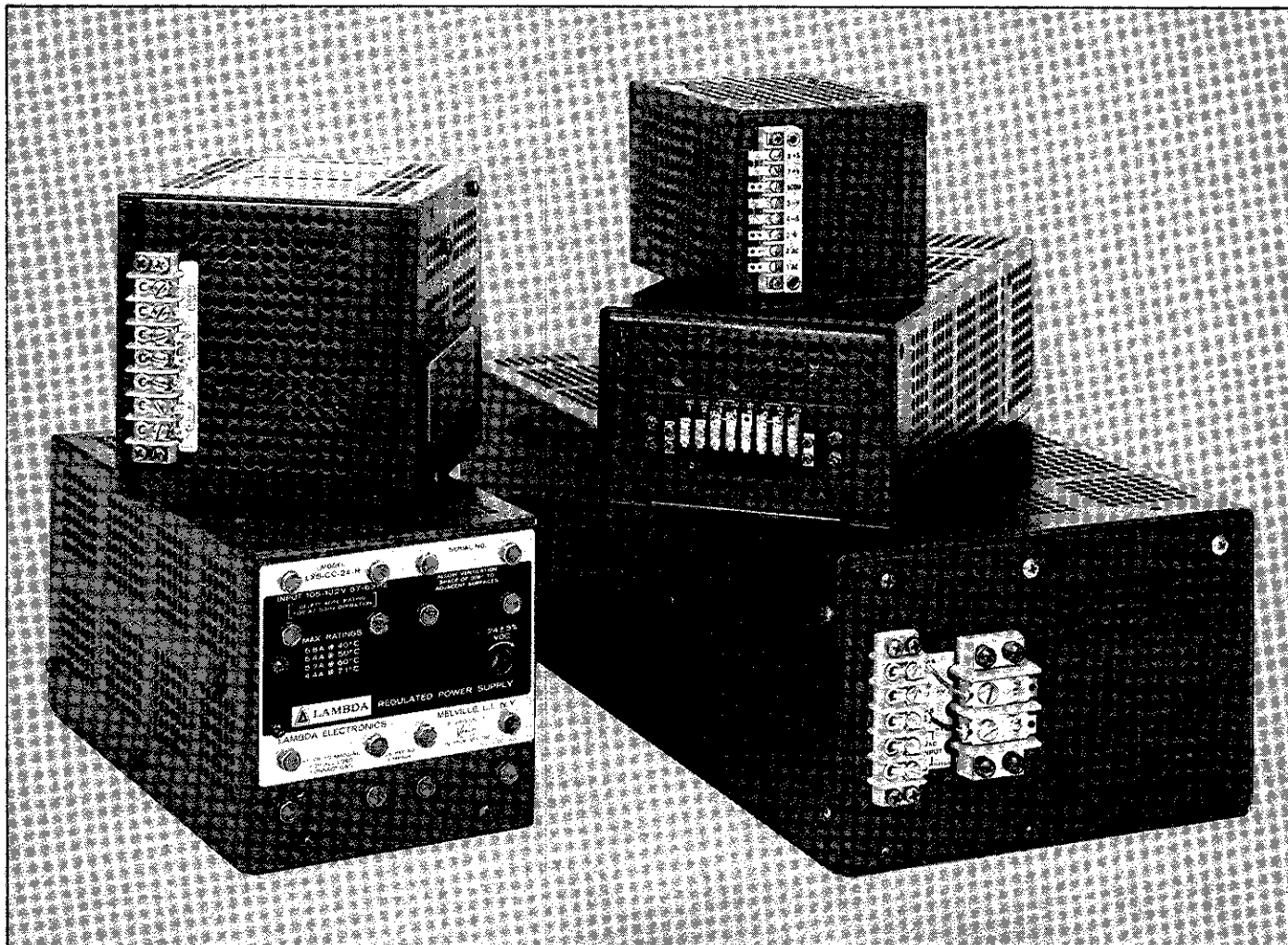


5 YEAR GUARANTEED LINEAR

Lambda LX series



Features — LX series

7 package sizes

5-year guaranteed

Lambda minimum component count, power hybrid voltage regulator replaces discrete components for higher reliability

Lambda Power Hybrid Voltage Regulator has 100,000 hours MTBF

Lambda MIL-T-27C grade 6 magnetics layer wound with electrostatic shield Class H, 180° C, UL approved

Lambda CC4®* Printed Circuit Board
plated thru-holes fungus inert, flame retardant
*Licensee of Photo Circuits Inc.

Lambda hybrid overvoltage protector

Meets military environmental specifications
MIL-STD-810B, MIL-E-5272C, MIL-I-6181D

MIL-W-16878 Wire UL approved

MIL-R-26 type wire wound resistors

Computer grade hermetically sealed 10-year life electrolytic capacitors

MIL-R-22684 type film resistors

Rugged convection-cooled chassis

MIL-R-11 composition resistors

 Recognized

Specifications—LX Series

DC Output

Voltage ranges shown in tables.

REGULATED VOLTAGE

regulation, line 0.1%
regulation, load 0.1%
ripple and noise 1.5 mV RMS, 5 mV pk-pk with either
positive or negative terminal
grounded
temperature
coefficient 0.03%/°C
remote programming
resistance
(LXS units only) 1000 ohms/volt, nominal for package A,
CC, D, E, EE and G models
200 ohms/volt nominal for C models.

remote programming
voltage volt/volt (LXS units only)

AC Input

line 105-132 VAC; 47-440 Hz. For
187-242 VAC, see AC input options.
For operation of package LX-G units
at 50 Hz or at 400 Hz, consult factory.
Ratings apply to 57-63 Hz. For all
other models delete 40° C rating for
50 Hz operation.
power LXS-A 91 watts; LXD-C 185 watts;
LXS-C 215 watts; LXS-CC 300 watts;
LXS-D 450 watts; LXS-E 600 watts;
LXS-EE 750 watts; LXD-CC 300 watts;
LXD-D 425 watts; LXT-D 500 watts;
LXD-EE 850 watts; LXS-G 2000 watts

Ambient Operating Temperature Range

Continuous duty from 0° to +71° C with corresponding load
current ratings for all modes of operation.

Storage Temperature Range

—55° C to +85° C.

Tracking Accuracy (Dual Models)

2% absolute voltage difference (3% on LXD-C models); 0.2%
change for all conditions of line, load and temperature.

Overload Protection

THERMAL

Thermostat, automatic reset when over-temp. condition is
removed. Circuit breaker must be reset on LX-G models.

ELECTRICAL

External overload protection, automatic electronic current
limiting circuit limits the output current to the preset value,
thereby providing protection for load as well as power supply.

Overshoot

No overshoot on turn-on, turn-off or power failure.

Input and Output Connections

Through terminal block on chassis; output terminals on LX-G
models are two heavy duty studs.

Power Hybrid Voltage Regulator or Integrated Circuit Regulator

Most models have Power Hybrid Voltage Regulator providing
complete regulation system while others have an integrated
circuit providing regulation system.

Convection Cooled

No external heat sinking or forced air required.

Number of Package Sizes

Seven (7) packages A, C, CC, D, E, EE, and G.

Controls

DC Output Control

Screwdriver voltage adjustment over entire voltage range.

Remote Sensing

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

Transformer

MIL-T-27C, Grade 6.

Mounting

Three mounting surfaces, designed to mount in Lambda
standard rack adapters. LX-E, LX-EE, and LX-G models have only one
mounting surface in horizontal plane.

MIL Specs.

Altitude: MIL-STD-810 Meth. 500.1, Procedure I, high temperature:
MIL-STD-810B, Meth. 501.1, Procedures I & II, MIL-E-5272C,
Para. 4.1.2, Procedure II, low temperature: MIL-STD-810B,
Method 502.1, Procedure I, temp. shock: MIL-STD-810B,
Meth. 503.1, Procedure I, MIL-E-5272C, Para. 4.3.1, Procedure I,
Humidity: MIL-STD-810B, Meth. 507.1, Procedure I, MIL-E-5272C,
Para. 4.4.1, Procedure I, shock: MIL-STD-810B, Meth. 516.1,
Procedures I, III, MIL-E-5272C, Para. 4.15.5.1, 4.15.5.2, vibration:
MIL-STD-810B, Notice 1, Meth. 514, Procedures X, XI, emi:
MIL-I-6181D.

Physical Data

Package Model	Weight		Size Inches
	Lbs. Net	Lbs. Ship	
LX-A	6	7	3-3/16 x 3-3/4 x 6-1/2
LX-C	10	11	3-3/16 x 4-15/16 x 9-3/8
LX-CC	15	17	4-15/16 x 4-15/16 x 9-3/8
LX-D	23	26	4-15/16 x 7-1/2 x 9-3/8
LX-E	27	29	4-15/16 x 7-1/2 x 11-3/4
LX-EE	37	47	4-15/16 x 7-1/2 x 16-1/2
LX-G	90	102	5-3/16 x 19 x 16-1/2

Finish

Gray, FED. STD. 595 No. 26081.

Accessories

Rack adapters, blank panels, chassis slides; fixed and
wide-range overvoltage protectors are available for all models
except for models with built-in fixed overvoltage protection.
All LXS-G units have built-in continuously adjustable overvoltage
protection see pages 66-68.

Meters

All LXS-G units include separate voltmeter and ammeter to
monitor output voltage and load current respectively.

AC Input

Add Suffix	For Operation at:	Price Qty. 1-14	Price Single Model Qty. 15 & up	Price Mixed Models Qty. 15 & up
—V	187-242 VAC 47-440 Hz	12% or \$30*	10%	12% or \$30*
—V1	205-265 VAC 47-440 Hz	12% or \$30*	10%	12% or \$30*

*Whichever is greater.

Fungus Proofing

All fungi nutrient components are rendered fungi inert.

Guaranteed for 5 Years

5-year guarantee includes labor as well as parts. Guarantee
applies to operation at full published specifications at end of
5 years.

RI Recognized

5-year guaranteed linear selector guide

Single output fixed voltage
Models LD, LN, LC, LX and LM.

MODEL	REGULATION (line load)	RIPPLE (RMS)	40°C	MAX AMPS AT AMBIENT OF			71°C	COMPLETE ELEC. SPEC. PG	PKG. SIZE	DIMENSIONS (inches)	COMPLETE MECH. SPEC. PG	PRICE
5 VOLTS ±5% ADJ.												
LXS-A-5-OV-R ^{(5) (11)}	0.1%, 0.1%	1.5 mV	4.0	3.4	2.7	2.0	41	A	3-3/16 x 3-3/4 x 6-1/2		127	261
LXS-C-5-OV-R ^{(5) (11)}	0.1%, 0.1%	1.5 mV	9.0	8.0	6.8	5.3	41	C	3-3/16 x 4-15/16 x 9-3/8		127	427
LXS-CC-5-OV-R ^{(5) (11)}	0.1%, 0.1%	1.5 mV	16.0	14.5	12.7	10.5	41	CC	4-15/16 x 4-15/16 x 9-3/8		128	585
LXS-D-5-OV-R ^{(5) (11)}	0.1%, 0.1%	1.5 mV	27.5	24.2	20.5	16.5	41	D	4-15/16 x 7-1/2 x 9-3/8		128	691
LXS-E-5-OV-R ^{(5) (11)}	0.1%, 0.1%	1.5 mV	35.0	30.0	24.0	17.5	41	E	4-15/16 x 7-1/2 x 11-3/4		129	855
LXS-EE-5-OV-R ^{(5) (11)}	0.1%, 0.1%	1.5 mV	45.0	39.0	32.0	25.0	41	EE	4-15/16 x 7-1/2 x 16-1/2		129	1170

(2,3,4,5,11,14) See page 33. For other voltages or currents not listed see page 65 or consult your local Lambda Sales Engineer.

(6) Ratings in parenthesis for LD and LN series when cover is used.

5-year guaranteed linear selector guide

Single output fixed voltage
Models LD, LN, LC, LX and LM.

MODEL	REGULATION (line, load)	RIPPLE (RMS)	MAX AMPS AT AMBIENT OF				COMPLETE ELEC. SPEC. PG	PKG. SIZE	DIMENSIONS (inches)	COMPLETE MECH. SPEC. PG	PRICE
			40°C	50°C	60°C	71°C					
6 VOLTS ±5% ADJ.											
LXS-C-6-R ⁽¹⁾	0.1%, 0.1%	1.5 mV	8.8	7.8	6.7	5.2	41	C	3-3/16 x 4-15/16 x 9-3/8	127	416
12 VOLTS ±5% ADJ.											
LXS-A-12-R ⁽¹⁾	0.1%, 0.1%	1.5 mV	2.7	2.2	1.8	1.5	41	A	3-3/16 x 3-3/4 x 6-1/2	127	249
LXS-C-12-R ⁽¹⁾	0.1%, 0.1%	1.5 mV	6.5	6.1	5.5	4.6	41	C	3-3/16 x 4-15/16 x 9-3/8	126	416
LXS-CC-12-R ⁽¹⁾	0.1%, 0.1%	1.5 mV	10.5	9.4	8.2	5.0	41	CC	4-15/16 x 4-15/16 x 9-3/8	128	554

^(4,11) See page 33. For other voltages or currents not listed see page 55 or consult your local Lambda Sales Engineer.

⁽⁶⁾ Ratings in parenthesis for LD and LN series when cover is used.

5-year guaranteed linear selector guide

Single output fixed voltage
Models LD, LN, LC, LX and LM.

MODEL	REGULATION (line, load)	RIPPLE (RMS)	MAX AMPS AT AMBIENT OF				COMPLETE ELEC. SPEC. PG	PKG. SIZE	DIMENSIONS (inches)	COMPLETE MECH. SPEC. PG	PRICE
			40°C	50°C	60°C	71°C					
15 VOLTS ±5% ADJ.											
LXS-A-15-R ⁽¹⁾	0.1%, 0.1%	1.5 mV	2.4	2.0	1.6	1.3	41	A	3-3/16 x 3-3/4 x 6-1/2	127	249
LXS-C-15-R ⁽¹⁾	0.1%, 0.1%	1.5 mV	6.0	5.6	5.1	4.5	41	C	3-3/16 x 4-15/16 x 9-3/8	127	416
LXS-D-15-R ⁽¹⁾	0.1%, 0.1%	1.5 mV	14.0	12.3	10.4	7.5	41	D	4-15/16 x 7-1/2 x 9-3/8	128	679
LXS-E-15-R ⁽¹⁾	0.1%, 0.1%	1.5 mV	19.0	17.0	14.0	12.0	41	E	4-15/16 x 7-1/2 x 11-3/4	129	844
20 VOLTS ±5% ADJ.											
LXS-CC-20-R ⁽¹⁾	0.1%, 0.1%	1.5 mV	7.7	7.2	6.5	4.4	41	CC	4-15/16 x 4-15/16 x 9-3/8	128	554

(2,4,11,12) See page 33. For other voltages or currents not listed see page 65 or consult your local Lambda Sales Engineer.

(16) Ratings in parenthesis for LD and LN series when cover is used

5-year guaranteed linear selector guide

Single output fixed voltage
Models LD, LN, LC, LX and LM.

MODEL	REGULATION (line, load)	RIPPLE (RMS)	MAX AMPS AT AMBIENT OF				COMPLETE ELEC. SPEC. PG	PKG. SIZE	DIMENSIONS (inches)	COMPLETE MECH. SPEC. PG	PRICE
			40°C	50°C	60°C	71°C					
24 VOLTS ±5% ADJ.											
LXS-CC-24-R ⁽¹⁾	0.1%, 0.1%	1.5 mV	6.8	6.4	5.7	4.4	41	CC	4-15/16 x 4-15/16 x 9-3/8	128	554
LXS-D-24-R ⁽¹⁾	0.1%, 0.1%	1.5 mV	10.0	8.8	7.5	6.0	41	D	4-15/16 x 7-1/2 x 9-3/8	128	679
LXS-E-24-R ⁽¹⁾	0.1%, 0.1%	1.5 mV	13.0	11.0	9.5	6.0	41	E	4-15/16 x 7-1/2 x 11-3/4	129	844
LXS-EE-24-R ⁽¹⁾	0.1%, 0.1%	1.5 mV	19.0	16.5	13.0	9.5	41	EE	4-15/16 x 7-1/2 x 16-1/2	129	1115
LXS-G-24-OV-R-M ⁽¹⁾⁽²⁾	0.1%, 0.1%	1.5 mV	40.0	35.0	30.0	25.0	41	G	5-3/16 x 19 x 16-1/2	130	2576

28 Volts $\pm 5\%$ continued next page.

(1),(2) See page 33. For other voltages or currents not listed see page 65 or consult your local Lambda Sales Engineer

(*) Ratings in parenthesis for LD and LN series when cover is used.

5-year guaranteed linear selector guide

Single output fixed voltage

Models LD, LN, LC, LX and LM

MODEL	REGULATION (line, load)	RIPPLE (RMS)	40°C	MAX AMPS AT AMBIENT OF			71°C	COMPLETE ELEC. SPEC. PG	PKG. SIZE	DIMENSIONS (inches)	COMPLETE MECH. SPEC. PG	PRICE
28 VOLTS ± 5% ADJ. (Cont'd)												
LXS-CC-28-R ⁽¹⁾	0.1%, 0.1%	1.5 mV	6.0	5.6	5.0	4.3	41	CC	4-15/16 x 4-15/16 x 9-3/8		128	554
LXS-D-28-R ⁽¹⁾	0.1%, 0.1%	1.5 mV	9.0	8.0	6.8	5.5	41	D	4-15/16 x 7-1/2 x 9-3/8		128	679
LXS-E-28-R ⁽¹⁾	0.1%, 0.1%	1.5 mV	11.0	10.0	8.5	5.5	41	E	4-15/16 x 7-1/2 x 11-3/4		129	844
LXS-EE-28-R ⁽¹⁾	0.1%, 0.1%	1.5 mV	17.0	15.0	12.0	9.0	41	EE	4-15/16 x 7-1/2 x 16-1/2		129	1115
LXS-G-28- OV-R-M ⁽¹⁾⁽²⁾	0.1%, 0.1%	1.5 mV	35.0	31.0	27.0	22.0	41	G	5-3/16 x 19 x 16-1/2		130	2576
48 VOLTS ± 5% ADJ.												

^(2,3,7,13) See page 33. For other voltages or currents not listed see page 65 or consult your local Lambda Sales Engineer.

⁽¹⁾ Ratings in parenthesis for LN series when cover is used.

5-year guaranteed linear selector guide

Dual tracking, Dual and triple output Models LN, LC and LX.

MODEL	REGULATION (line, load)	RIPPLE (mV RMS)	ADJ. VOLT. RANGE VDC	40°C	50°C	60°C	71°C	COMPLETE ELEC. SPEC. PG	PKG. SIZE	DIMENSIONS (inches)	COMPLETE MECH. SPEC. PG	PRICE
± 6 VOLTS TO ± 3 VOLTS ADJ. (Dual Tracking)												
LXD-C-062-R ⁽¹¹¹⁾ ⁽¹¹²⁾	0.1%, 0.1%	1.5	± 6 to ± 3	3.5 2.5	3.3 2.4	2.7 1.9	1.7 1.3	41	C	3-3/16 x 4-15/16 x 9-3/8	127	482
± 15 VOLTS TO ± 12 VOLTS ADJ. (Dual Tracking) (also used as 24 to 30 VDC)												
LXD-C-152-R ⁽¹¹¹⁾ ⁽¹¹²⁾	0.1%, 0.1%	1.5	± 15 to ± 12	2.5 2.0	2.3 1.8	1.9 1.5	1.5 1.2	41	C	3-3/16 x 4-15/16 x 9-3/8	127	482
EXD-D-152-R ⁽¹¹¹⁾ ⁽¹¹²⁾	0.1%, 0.1%	1.5	± 15 to ± 12	6.2 4.5	5.6 4.1	4.9 3.7	4.0 3.0	41	D	4-15/16 x 7-1/2 x 9-3/8	128	805
LXD-EE- 152-R ⁽¹¹¹⁾ ⁽¹¹²⁾	0.1%, 0.1%	1.5	± 15 to ± 12	12.5 10.0	11.0 9.0	9.0 7.8	7.0 6.0	41	EE	4-15/16 x 7-1/2 x 16-1/2	129	1189
5 VOLTS ± 5% ADJ., ± 15 TO ± 12 VOLTS ADJ. (Triple Output)												
LXT-D- 5152-B-R ⁽¹¹¹⁾ ⁽¹¹²⁾	0.1%, 0.1%	1.5 mV	5 ± 5% ± 15 to ± 12	12.0 3.1 2.3	11.5 2.7 2.0	11.0 2.2 1.7	9.5 1.7 1.3	41	D	4-15/16 x 7-1/2 x 9-3/8	128	1042

NOTES TO VOLTAGE AND CURRENT RATING TABLES

⁽¹²⁾ Built-in continuously adjustable overvoltage protection that crowbars output when trip level is exceeded is included on this model.

⁽¹⁴⁾ The LM-F-M & LM-G-M fixed voltage models have meters included in the price. For non-metered models, delete suffix-M.

⁽¹⁵⁾ ⁽¹⁶⁾ ⁽¹¹¹⁾ Includes fixed overvoltage protection.

⁽¹¹¹⁾ All LX series models have fungus proofing standard and is included in model notation and price.

⁽¹¹²⁾ The LXS-G series models have included in the price and notation built-in continuously adjustable overvoltage protector, voltage and current meters, fungus proofing.

⁽¹⁵⁾ ± 15 to ± 12 Volts and ± 6 to ± 3 Volts are each dual tracking outputs.

⁽¹⁶⁾ Ratings in parenthesis for LD and LN series when cover is used.

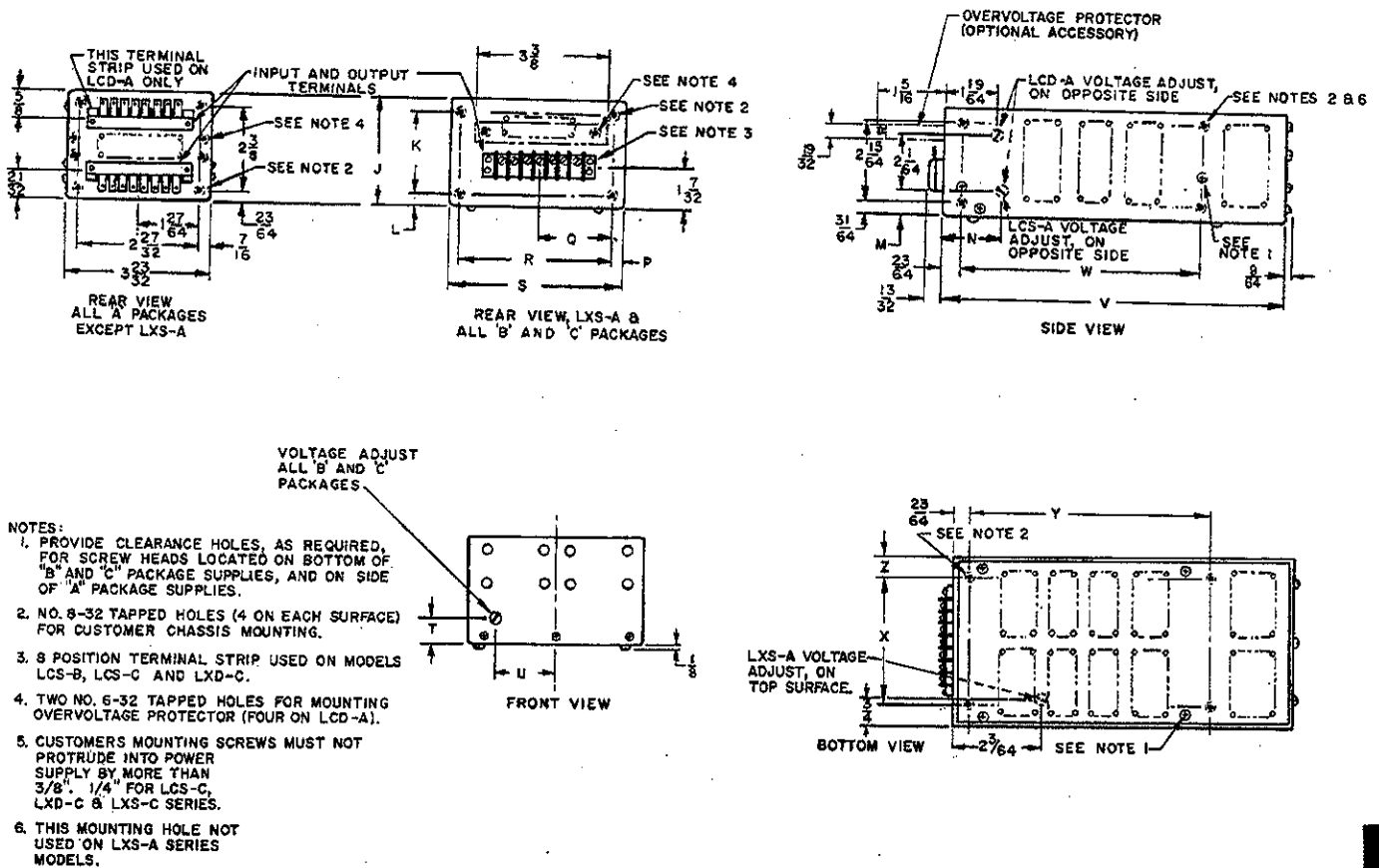
⁽¹⁴⁾ Current rating is from zero to I_{max}. With exception of LXD Series, current rating applies over entire output voltage range.

⁽¹⁶⁾ LD, LC, LM and LX Series power modules are available for operation at 360-440 Hz. Consult factory for ratings and specifications. For 50 Hz operation, derate LC Series by 10%; for LM Series delete 40°C rating; for LX Series delete 40°C rating.

⁽¹²⁾ Prices are U.S.A. list prices only, F.O.B. Melville, N.Y., McAllen, Texas, Tucson, Arizona. All prices and specifications are subject to change without notice.

PART IV—DIMENSIONAL DRAWINGS MODULAR SUPPLIES PACKAGE SIZES A, B, AND C

LXS-C, LXD-C, LXS-A Series



TERMINAL STRIP SCREW SIZE 5-40 X 5/16 FOR LXS-B, LXS-C, LM-B, LM-C
FOR ALL OTHERS, TERMINAL STRIP SCREW SIZE IS 2-56 X 3/16

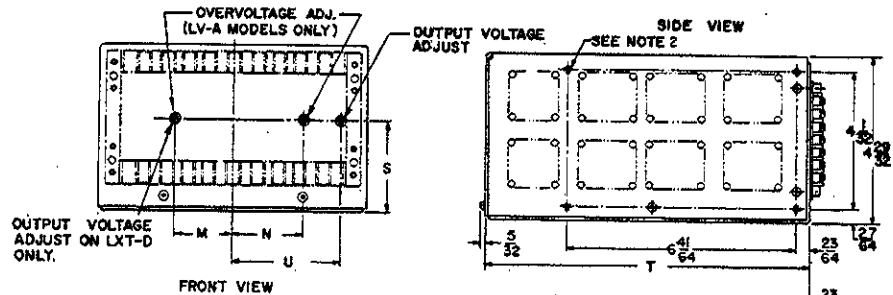
MODEL	M	N	P	Q	R	S	T	U	V	W	X	Y	Z	J	K	L
LXS-A SERIES	—	—	7/16	1 7/8	2 7/32	3 3/32	—	—	6 7/16	5 1/16	2 7/32	5 5/16	2 7/8	3 3/32	2 3/8	2 3/8
LCD-A, LCS-A SERIES	1 9/32	1 13/32	7/16	1 7/8	2 7/32	3 3/32	—	—	6 1/2	5 1/16	2 7/32	5 5/16	2 7/8	3 11/64	2 3/8	2 3/8
LCS-B, LXD-B SERIES	—	—	2 7/8	2 1/4	4 1/32	4 29/32	1 3/16	2 1/8	6 1/2	5 1/16	3 3/4	5 1/16	9/16	3 11/64	2 13/64	3 1/4
LCS-C, LXD-C, LXS-C SERIES	—	—	2 7/8	2 1/4	4 1/32	4 29/32	1 3/16	2	9 3/4	6 5/16	3 3/4	6 5/16	9/16	3 11/64	2 13/64	2 3/8
LM-B SERIES	—	—	2 7/8	2 1/4	4 1/32	4 29/32	2 13/64	3 1/32	6 1/2	5 1/16	3 3/4	5 1/16	9/16	3 11/64	2 13/64	3 1/4
LM-C SERIES	—	—	2 7/8	2 1/4	4 1/32	4 29/32	1 3/16	1 45/64	9 3/4	6 5/16	3 3/4	6 5/16	9/16	3 11/64	2 13/64	3 1/4

PART IV—DIMENSIONAL DRAWINGS MODULAR SUPPLIES PACKAGE SIZES CC AND D

LXS-CC Series

LXS-D Series

LXD-D, LXT-D Series

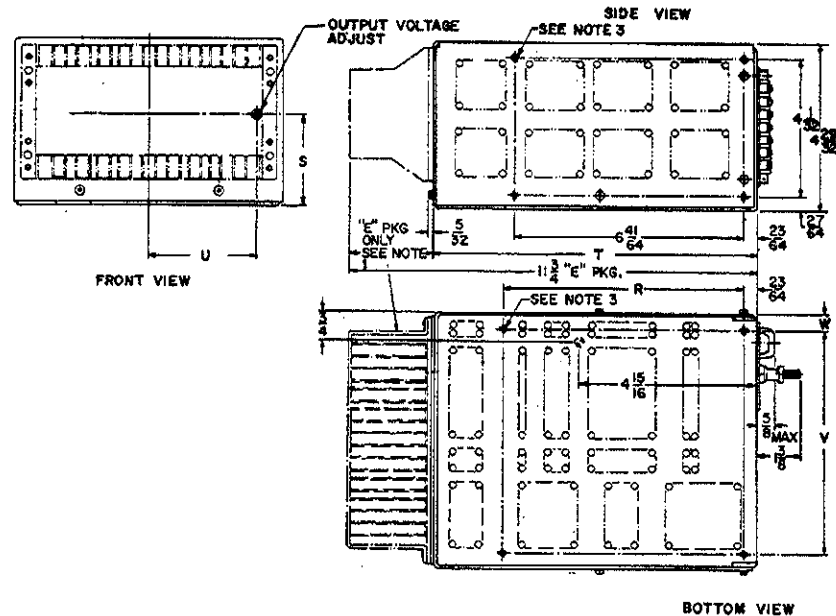


PART IV—DIMENSIONAL DRAWINGS MODULAR SUPPLIES PACKAGE SIZES E AND EE

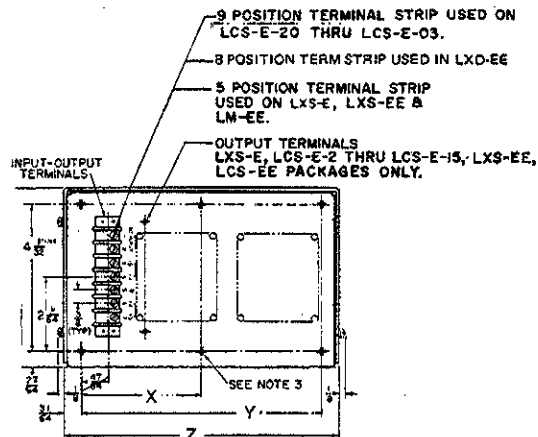
LXS-E,
LXS-EE, LXD-EE,

NOTES:

1. "E" PACKAGE MUST BE MOUNTED WITH RADIATOR FINS VERTICAL.
2. PROVIDE 5/16 DIA. CLEARANCE HOLES FOR SCREW HEADS ON SIDE OF ALL UNITS.
3. 8-32 TAPPED HOLES 6 ON REAR SURFACE OF "E" PACKAGES, 4 EACH ON BOTTOM AND SIDE SURFACES FOR CUSTOMER CHASSIS MOUNTING (4 ON BOTTOM ONLY OF "EE" PACKAGES).
4. TWO 6-32 TAPPED HOLES FOR MOUNTING OVERVOLTAGE PROTECTOR (4 ON LM-EE, LCS-EE & LXS-EE) ON ALL LC, LX & LM SERIES PACKAGES ONLY.
5. CUSTOMER'S MOUNTING SCREWS MUST NOT PROTRUDE INTO POWER SUPPLY BY MORE THAN 3/8".
6. TERMINAL STRIP SCREW SIZE
PACKAGE E & LXD-EE 5-40 X 1/4
PACKAGE EE 8-32 X 5/16



REAR VIEW(PARTIAL)
LM PACKAGES
LXS PACKAGES
LXD-EE PACKAGES
LCS PACKAGES



MODEL	P	Q	R	S	T	U	V	W	X	Y	Z
LM-E SERIES	31/64	47/64	6 57/64	2 11/16	9 3/8	3 1/64	6 9/16	31/64	3 1/4	6 33/64	7 1/2
LX-EE, LCS-EE SERIES	—	—	12 3/8	2 9/32	16 1/2	2 15/16	6 9/16	31/64	—	—	7 1/2
LCS-E-20 THRU LCS-E-03	31/64	1 3/32	6 57/64	2 11/16	9 3/8	3 1/64	6 9/16	31/64	3 61/64	6 33/64	7 1/2
LCS-E-2 THRU LCS-E-15, LXS-E SERIES	31/64	11/32	6 57/64	2 11/16	9 3/8	3 1/64	6 9/16	31/64	3 61/64	6 33/64	7 1/2