INSTRUCTION MANUAL
FOR
L-12-OV SERIES, L-20-OV SERIES, L-35-OV SERIES
OVERVOLTAGE PROTECTORS

The Lambda overvoltage protector prevents damage to the load caused by excessive power supply output voltage due to improper adjustment, improper connection, or failure of the power supply. Load protection is accomplished automatically by effectively short circuiting the output terminals of the power supply when a preset limit voltage has been exceeded. The trip-point limit voltage cannot be adjusted. To reset overvoltage protector, remove AC input to power supply, allow overvoltage protector to cool, and reapply power.

Although designed specifically for use with the Lambda power supplies, the overvoltage protector can be used with other similarly rated current-limited power supplies when certain basic precautions are observed. Refer to table I below for overvoltage protector performance specifications.

TABLE I
OVERVOLTAGE PROTECTOR PERFORMANCE SPECIFICATIONS

PARAMETER	SYMBOL	L-12-OV SERIES		L-20-OV SERIES		L-35-OV SERIES	
		MIN	MAX	MIN	MAX	MIN	MAX
On State Current	I_{DC}	—	12A	—	20A	—	35A
On State Voltage	V_{DC}	—	1.3V	—	1.4V	—	1.6V
Non-Repetitive Peak Surge Current*	I_P	—	200A	—	260A	—	350A
Standby Current	I_S	—	5mA	—	5mA	—	5mA
Operating Temperature (Blocking) **	T_{CB}	-40°C	+100°C	-40°C	+100°C	-40°C	+100°C
Operating Temperature (Conducting) ***	T_{CC}	-40°C	+140°C	-40°C	+140°C	-40°C	+140°C
Storage Temperature	T_S	-40°C	+125°C	-40°C	+125°C	-40°C	+125°C

*For sinusoidal current duration of 8.3 milliseconds max.
**Case temperature for overvoltage protector in non-conducting or "OFF" state.
***Case temperature for overvoltage protector in conducting or "ON" state. Power must be removed and case temperature allowed to drop to 100°C before application of output voltage.

The overvoltage protector requires on external heat sink to maintain case temperature below rated limit. When the overvoltage protector is used with a Lambda power supply, the power supply chassis acts as the heat sink.

The overvoltage protector will not provide protection against overvoltage conditions caused by storage batteries or other power sources used in conjunction with the Lambda power supply. Whenever additional power sources must be used with the Lambda power supply and overvoltage protector combination, consult the factory for proper installation information.

Recommended overvoltage protector application and trip-point voltage are listed in table II below:
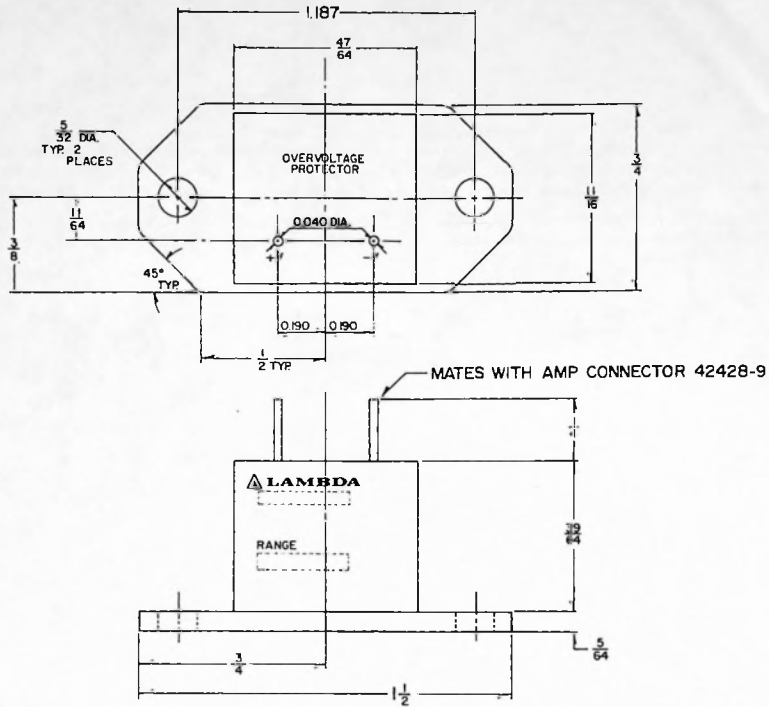
TABLE II

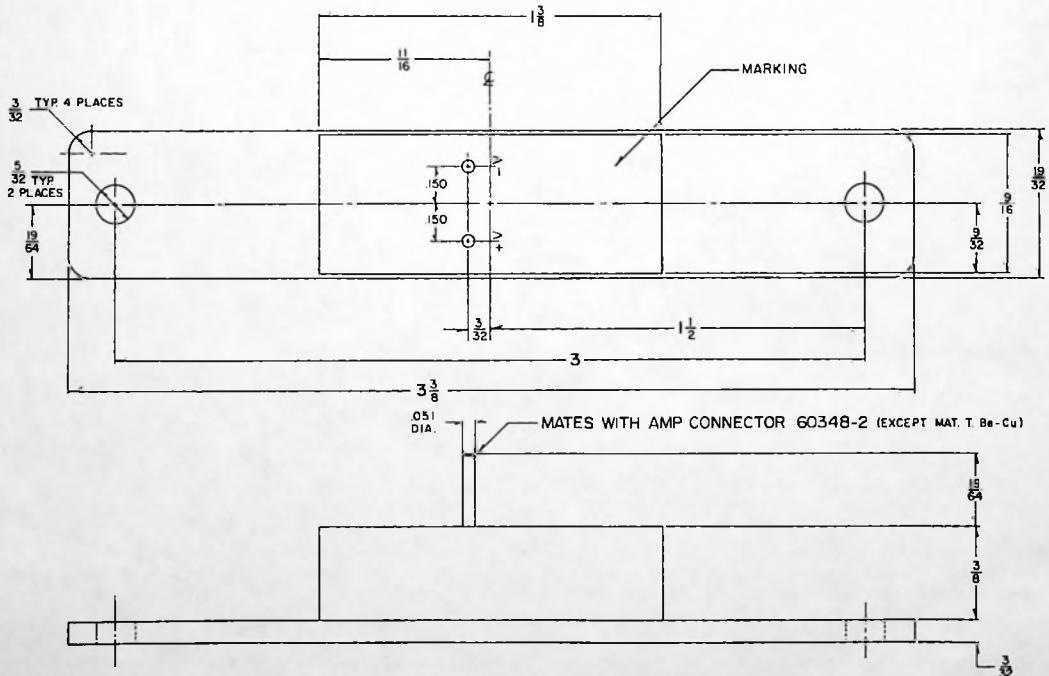| NOM SUPPLY VOLTAGE (VOLTS)	TRIP POINT(4) VOLTAGE (VOLTS)	12 AMP MODELS[1]	20 AMP MODELS[2]	35 AMP MODELS[3]
5	6.6 ± .2	L-12-OV-5	L-20-OV-5	L-35-OV-5
6	7.3 ± .2	L-12-OV-6	L-20-OV-6	L-35-OV-6
12	13.7 ± .4	L-12-OV-12	L-20-OV-12	L-35-OV-12
15	17.0 ± .5	L-12-OV-15	L-20-OV-15	
20	22.8 ± .7	L-12-OV-20	L-20-OV-20	
24	27.3 ± .8	L-12-OV-24	L-20-OV-24	
28	31.9 ± 1.0	L-12-OV-28	L-20-OV-28	

NOTES:
1. Use with LO-W,X,Y, and Z models
2. Use with all LT models rated below 20 Amps; all LO-V models; all LO-R models (except LOS-R-5 and LOS-R-6); all LXS-4,A,B,C,CC models; and with model LXT-D-5152 (5V output).
3. Use with all LT models rated 20 Amps or above, model LOS-R-5, and model LOS-R-6.
4. Overvoltage shutdown may occur anywhere within the voltage trip-point range. Trip point voltage applies over the temperature range of 0°C to 71°C.

Mount the overvoltage protector to the power supply using two 6-32 x 1/2" pan head screws, two #6 flat washers, two #6 split lockwashers, and two 6-32 hex nuts. (hex nuts only required for LO and LT models). See the outline drawing in the power supply instruction manual for mounting position of the overvoltage protector.

The overvoltage protector is supplied with mating connectors for pins on overvoltage protector (+V and -V engraved on unit.) Lambda models LOS-W, LOS-X, LOS-Z, LOT-R, LOT-V, LOT-W, and LOT-X are provided with +OV and -OV quick disconnect terminals and mating connectors. On all other Lambda power supply models solder wires to power supply +V and -V terminals. Wires are not supplied with the overvoltage protector.

1.187

47/64

5/32 DIA.
TYP. 2 PLACES

OVERVOLTAGE
PROTECTOR

3/4

11/16

11/64

0.040 DIA.

3/8

45° TYP.

0.190   0.190

1/2 TYP.

MATES WITH AMP CONNECTOR 42428-9

△ LAMBDA

RANGE

19/64

3/4

5/64

1 1/2

Outline Drawing, L-12-OV Series.

1 3/8

11/16

MARKING

3/32 TYP. 4 PLACES

5/32 TYP. 2 PLACES

.150

19/64

.150

19/32

9/16

9/32

3/32

1 1/2

3

3 3/8

.051 DIA.

MATES WITH AMP CONNECTOR 60348-2 (EXCEPT MAT. T. Be-Cu)

19/64

3/8

3/32

Outline Drawing, L-20-OV and L-35-OV Series.