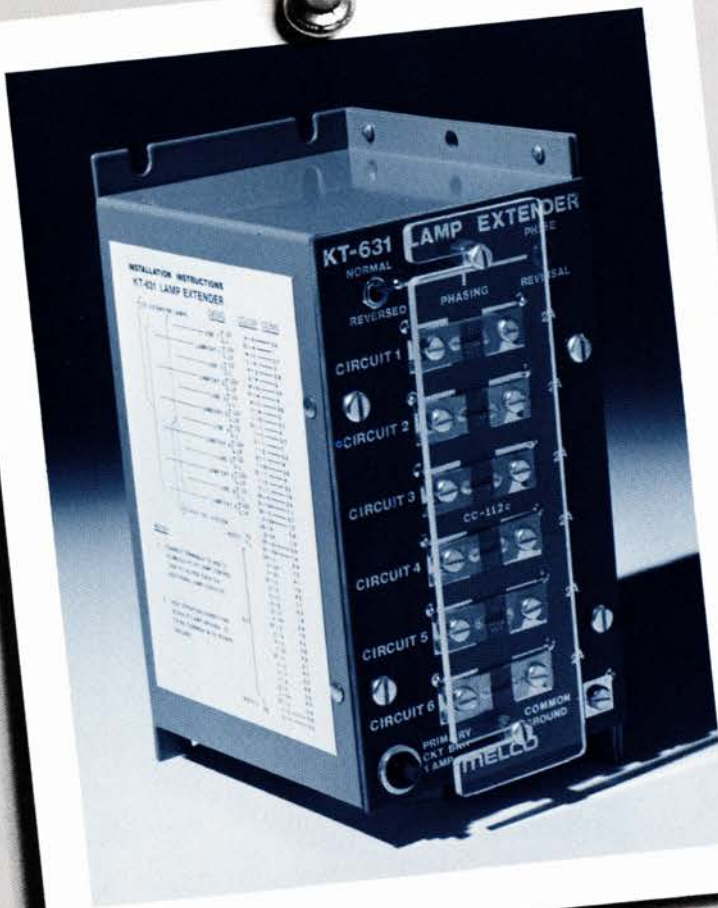


MELCO PRODUCT BULLETIN . . .

KT-631 Lamp Extender



DESCRIPTION

The Melco KT-631 provides auxiliary power for six key telephone lamp circuits. Each circuit powers 20 lamps. The KT-631 can be used when long lamp leads from line cards to stations require booster lamp voltage or when the number of lamps exceeds the capacity of the power supply.

DESIGN FEATURES

- mounting holes and slots allow easy installation in an apparatus cabinet, on a relay rack or on a wall.
- operates on standard 110 volt AC power.
- a phase reversal indicator (LED) on the front panel lights when the lamp extender and line card power is out of phase. A switch is provided to reverse the phases.
- lamp power can be extended beyond six circuits by adding Melco KT-63 Lamp Extenders. Each KT-63 powers six additional circuits.
- a two-amp fuse protects each lamp circuit.



- ## APPLICATION SCHEMATIC



SPECIFICATIONS

Current 2 amps per circuit max
5 amps total max

Operating temperature range . . . 0° to 50°C
32° to 122°F

Dimensions:



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KT-631™ LAMP EXTENDER

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4. MAINTENANCE
5. SPECIFICATIONS
6. ORDERING GUIDE

7. CONNECTIONS
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1. GENERAL

1.01 This Practice describes the KT-631 Lamp Extender and provides instructions on its installation and maintenance.

1.02 The KT-631 provides auxiliary power for key telephone lamps. It is used where long lamp leads from line cards to stations require booster lamp voltage and when the number of lamps exceeds the capacity of the power supply.

2. DESIGN FEATURES

2.01 The solid state circuit requires no adjustments or maintenance.

2.02 The KT-631 can be located anywhere near a 117 volt source.

2.03 Mounting holes and slots allow placement in an equipment cabinet, relay rack, or on a wall.

2.04 The KT-631 provides lamp power for 6 key telephone lamp circuits and can be expanded to 12 or 18 circuits with the addition of Melco KT-63 Lamp Extenders. An additional 120 lamps can be added beyond the capacity of the key system power supply.

2.05 The transformer has a capacity of 120 lamps total. Each circuit has a capacity of 20 lamps. If a KT-63 is added to the KT-631, the capacity of each circuit is reduced. If all 6 circuits of the KT-63 are used then only 10 lamps per circuit can be powered.

2.06 Each of the power amplifier circuits in the KT-631 turns on fully when the LC lead current exceeds 20 ma.

2.07 All connections are made with a standard A25B or equivalent 25 pair connector cable.

2.08 A circuit breaker limits input current to the transformer.

2.09 A phase reversal indicator on the front panel lights when the lamp extender power is out of phase with the lamp voltage from the KTU line-card. The indicator is associated only with lamp circuit 1.

2.10 A phase reversing switch is provided to conserve power.



FIGURE 1

3. INSTALLATION

3.01 No special installation tools are required. Instructions are provided on each unit. Locate and secure the housing in an apparatus mounting, relay rack or on plywood backboard.

3.02 Fasten the connector-ended 25-pair cable to the KT-631 plug. Secure the connector with the clamp provided.

3.03 Terminate the cable on a type 66 connecting block.

3.04 Cross connect as shown in Figure 2.

3.05 If the L.E.D. lights, the commercial 117 Vac to the KT-631 is out of phase with the line card power supply. Change phase reversal switch from NORMAL to REVERSE. On single-phase power, the lamp will go out. On 3-phase power, the lamp may not go out but should glow dimmer or brighter. Leave switch in position where the L.E.D. is dimmest.

3.06 If a fuse should blow, test for shorts by placing on ohmmeter from L lead to LG1. Resistance must exceed 5 ohms.

3.07 The primary circuit breaker limits the current drawn by the transformer. If all circuits should fail, reset circuit breaker. If the circuit breaker operates again, replace the unit. Do not attempt to bypass the circuit breaker.

3.08 Test all lamps with all lines in use.

4.03 If fuse blows check lamp circuits per section 3.06.

4.04 Return defective unit to supplier for servicing.

5. SPECIFICATIONS

5.01	Size	7" x 5" x 3.5"
	Weight	5-1/4 pounds
	Output	10 Vac \pm .5V.
	Current	2 amps per circuit
		5 amps total
	Circuit bkr.	1 amp

6. ORDERING GUIDE

6.01 Order as follows:

(QTY) LAMP EXTENDER KT-631

from the local supplier or from:

MELCO
P.O. Box 4026
Bellevue, Washington 98009

(206) 455-5661

4. MAINTENANCE

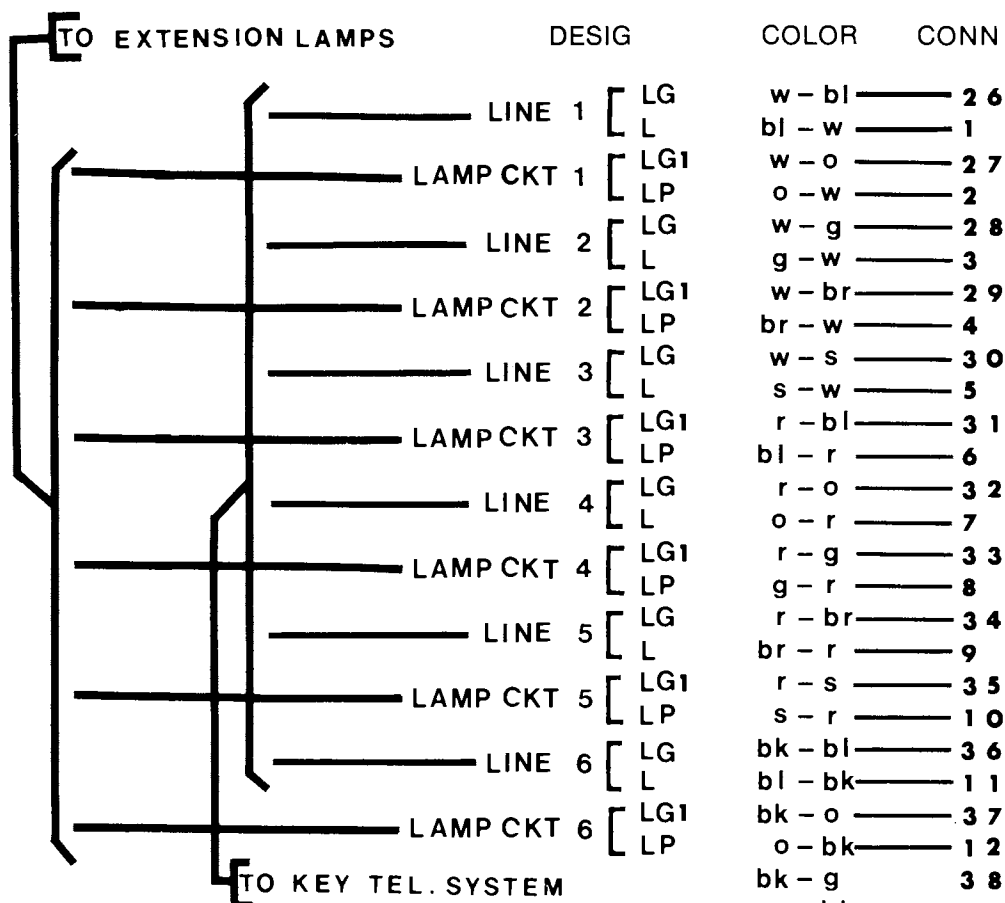
4.01 No provision is made for field adjustments. The unit can be tested by substitution with another KT-631 or by changing lines on the quick connect block.

4.02 Check voltages as follows:

Ground to L	10 Vac rms
Ground to LP	10 Vac rms \pm .5V

7. CONNECTIONS

FIGURE 2



NOTE 1. [TG
TL

NOTES

1. Connect terminals TG and TL to Melco KT-63 Lamp Extender (one KT-63 for each six additional lamp circuits).
2. Add strap on connecting block if lamp ground is to be common with power ground.
3. Phase indicator lamp is connected to circuit 1 only.

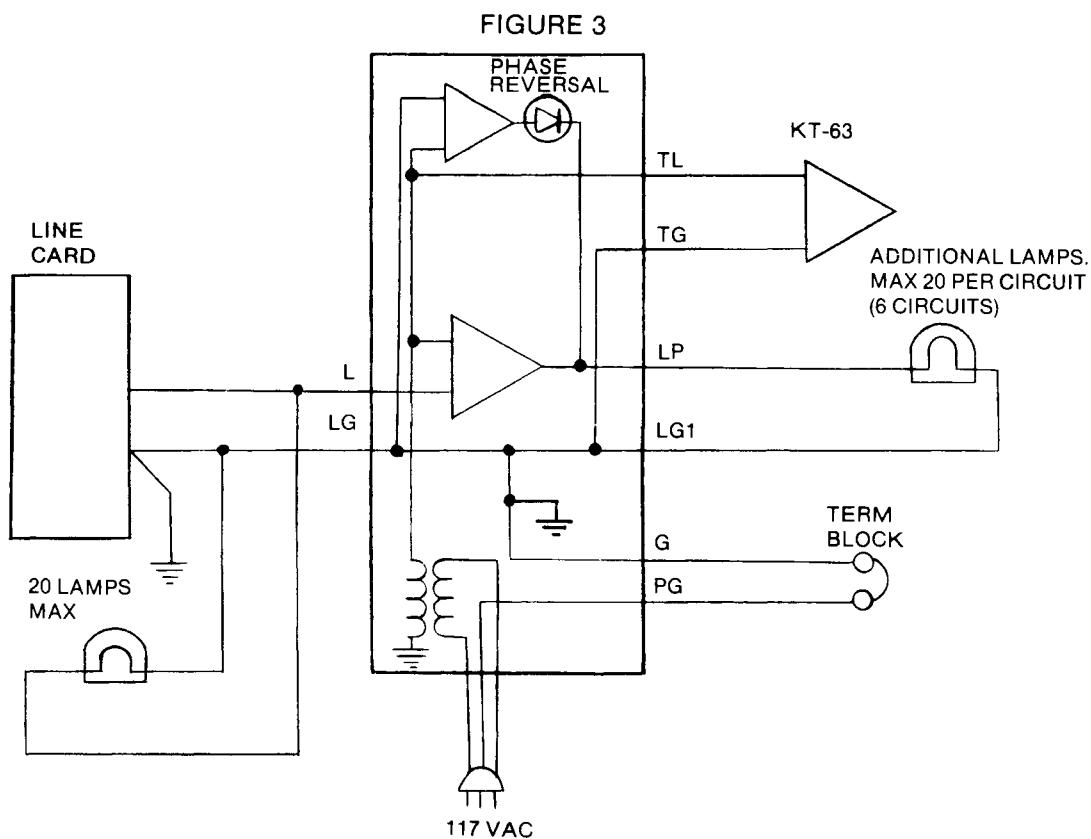
NC

NOTE 2. [G
PG

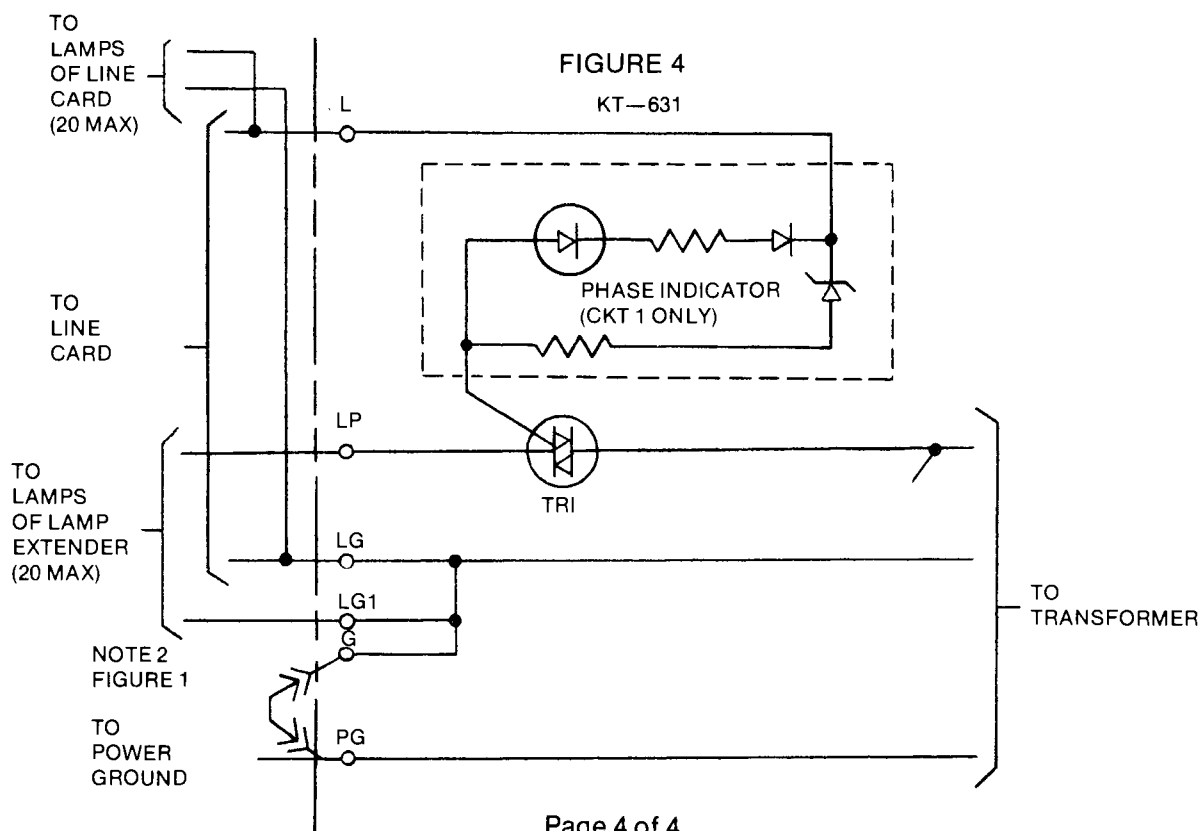
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s - bk	1 5
y - bl	4 1
bl - y	1 6
y - o	4 2
o - y	1 7
y - g	4 3
g - y	1 8
y - br	4 4
br - y	1 9
y - s	4 5
s - y	2 0
v - bl	4 6
bl - v	2 1
v - o	4 7
o - v	2 2
v - g	4 8
g - v	2 3
v - br	4 9
br - v	2 4
v - s	5 0
s - v	2 5

8. APPLICATION SCHEMATIC

KT-631
DEC. 1978
ISSUE 3



9. FUNCTIONAL SCHEMATIC



MELCO PRODUCT BULLETIN . . .

KT-63 Lamp Extender



DESCRIPTION

The Melco KT-63 provides an electronic equivalent of relay contacts for use where the number of lamps in the key telephone system exceeds the capacity of the line card contacts. It can be used to extend the Melco KT-631 Lamp Extender power beyond six circuits or it can be used as a power amplifier on a circuit-per-line basis. The KT-63 is equipped with six fused lamp circuits, each of which has a capacity of 20 lamps.

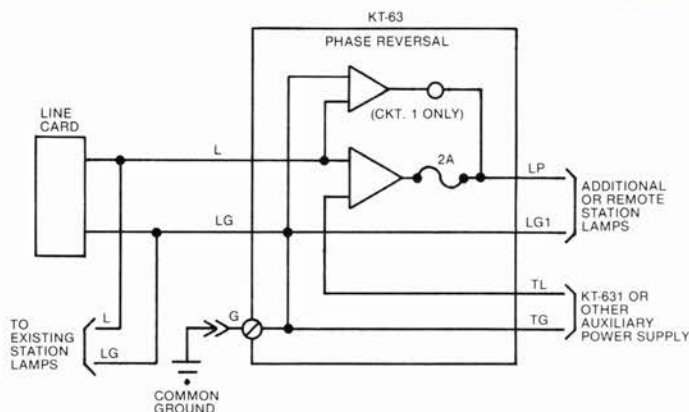
DESIGN FEATURES

- mounting holes and slots provide for easy installation in an apparatus cabinet, on a relay rack or on a wall.
- connections are made with a standard 25-pair connector cable.
- power can be supplied by the Melco KT-631 Lamp Extender or by an auxiliary power supply.



- an LED phase reversal indicator on the front panel lights when the auxiliary power supply is out of phase with the control voltage from the line card.

APPLICATION SCHEMATIC



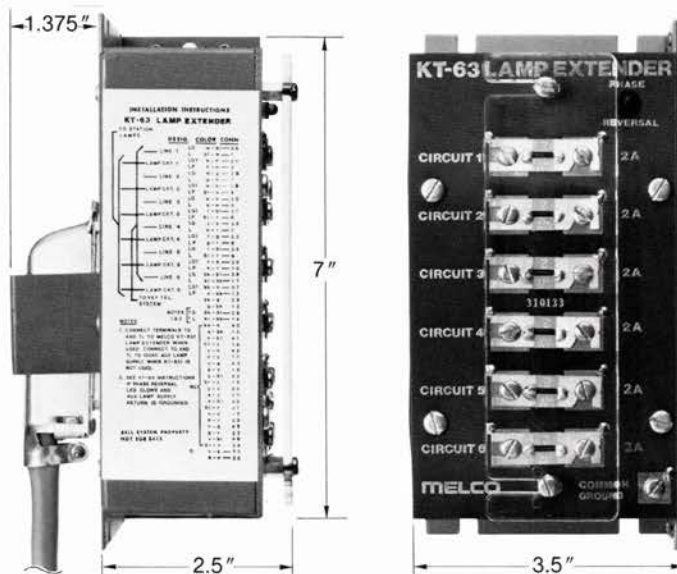
MAINTENANCE

The KT-63 is covered by a two-year warranty against manufacturing and material defects.

SPECIFICATIONS

AC output 10V AC nom
 Current 2 amps per circuit
 Operating temperature range 0° to 50°C
 32° to 122°F
 Housing epoxy coated aluminum

Dimensions:



HOW TO ORDER

Order the KT-63 Lamp Extender through your local supplier or distributor. For more information call or write:

MELCO LABS
 14408 N.E. 20th
 Bellevue, WA 98007
 206/643-3400

KT-63™ LAMP EXTENDER

1. GENERAL

1.01 The KT-63 provides an electronic equivalent of relay contacts for use where the number of lamps in the key telephone system exceeds the capacity of the line card contacts. It can also be used as a power amplifier on a circuit-per-line basis. The KT-63 requires an auxiliary power supply.

2. DESIGN FEATURES

- 2.01 The solid state circuit requires no adjustments or maintenance.
- 2.02 Mounting holes and slots allow placement in an equipment cabinet, relay rack, or on a wall.
- 2.03 The KT-63 is equipped with six fused lamp circuits. Each circuit has a capacity of 20 lamps; however, the capacity of the auxiliary power supply must be considered.
- 2.04 All connections are made with a standard 25-pair connector cable.
- 2.05 An LED phase reversal indicator on the front panel lights when the auxiliary power supply is out of phase with the control voltage from the line card.

3. INSTALLATION

- 3.01 No special installation tools are required. Instructions are provided on each unit. Locate and secure the housing in an apparatus mounting, a relay rack or directly on a wall.
- 3.02 Fasten a connector-ended 25-pair cable to the KT-63 plug. Secure the connector with the bracket provided with the unit.
- 3.03 Terminate the cable on a Type 66 connecting block.
- 3.04 Make circuit connections as shown in Fig. 4.
- 3.05 If the auxiliary lamp power is from a Melco KT-631 Lamp Extender, the phase position of the KT-63, relative to the line card lamp power, is controlled by the KT-631 phase reversal switch.
- 3.06 If the auxiliary lamp power supply is not a KT-631, and the KT-63 phase reversal LED glows, do not attempt to correct the phase posi-

tion until it is determined if the auxiliary lamp power supply lamp return is grounded.

- a. If the auxiliary lamp power supply return is *not* grounded, reverse leads TG and TL.
- b. If the auxiliary lamp power supply return is grounded, remove ground from the return and reverse leads TG and TL.
- c. If the lamp return ground cannot be removed readily it may be possible to reverse the 117 VAC line cord to the auxiliary lamp power supply.

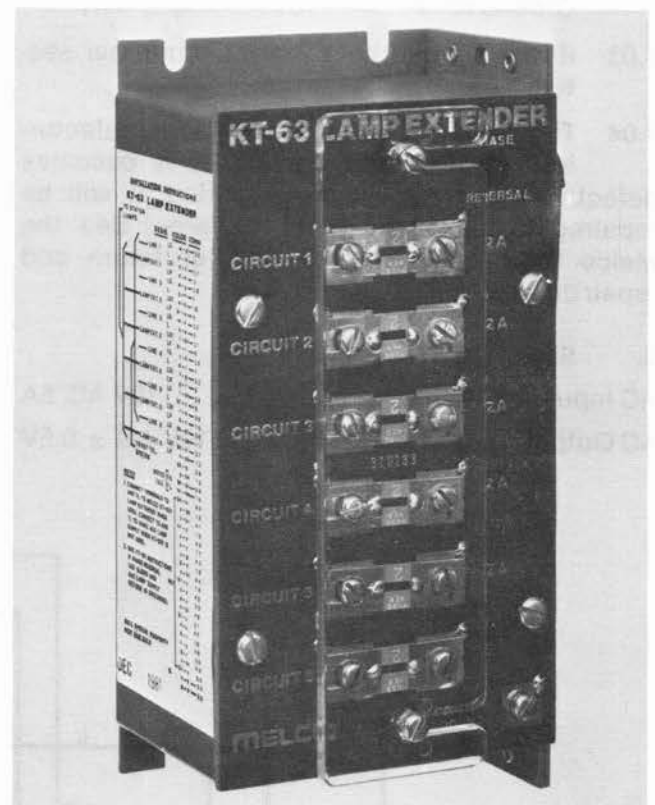


Fig. 1

- 3.07 The KT-63 will operate indefinitely in or out of phase, but will consume less power while in phase (LED indicator off).
- 3.08 On three-phase power the LED may not go when leads TG and TL or the line cord wires are reversed, but should glow dimmer or brighter. Leave wiring in position where the LED is dimmest.

- 3.09 If fuse should blow, test for shorts by placing on ohmmeter from LP lead to LG1.
- 3.10 Test all lamps.

4. MAINTENANCE

- 4.01 No provision is made for field adjustments. The unit can be tested by substitution with another KT-63 or by changing lines on the quick connect block.
- 4.02 Check voltages as follows:
Ground to L — 10V AC rms
Ground to LP — 10V AC rms \pm 0.5V
- 4.03 If fuse blows check lamp circuits per section 3.09.
- 4.04 The KT-63 is warranted against manufacturing and material defects. If it becomes defective within the warranty period, it will be repaired or replaced without charge. See the Melco Warranty Service Policy for return and repair details.

5. SPECIFICATIONS

AC Input 10V AC, 5A
AC Output 10V AC \pm 0.5V

Current rating per ckt. 2A
Operating temperature
range 0° to 50°C
32° to 122°F
Relative humidity 0 to 95%
(noncondensing)
Weight 1 pound
Dimensions 7" x 3.5" x 2.5"

6. ORDERING GUIDE

- 6.01 Order as follows:
(QTY) 120019 KT-63 LAMP EXTENDER
from your local supplier or distributor.
- 6.02 Further information or technical assistance on the KT-63 or any Melco product is available from:

MELCO LABS, INC.
P.O. Box 6909
Bellevue, WA 98008-0909
(206) 643-3400
TWX: 910-443-3040

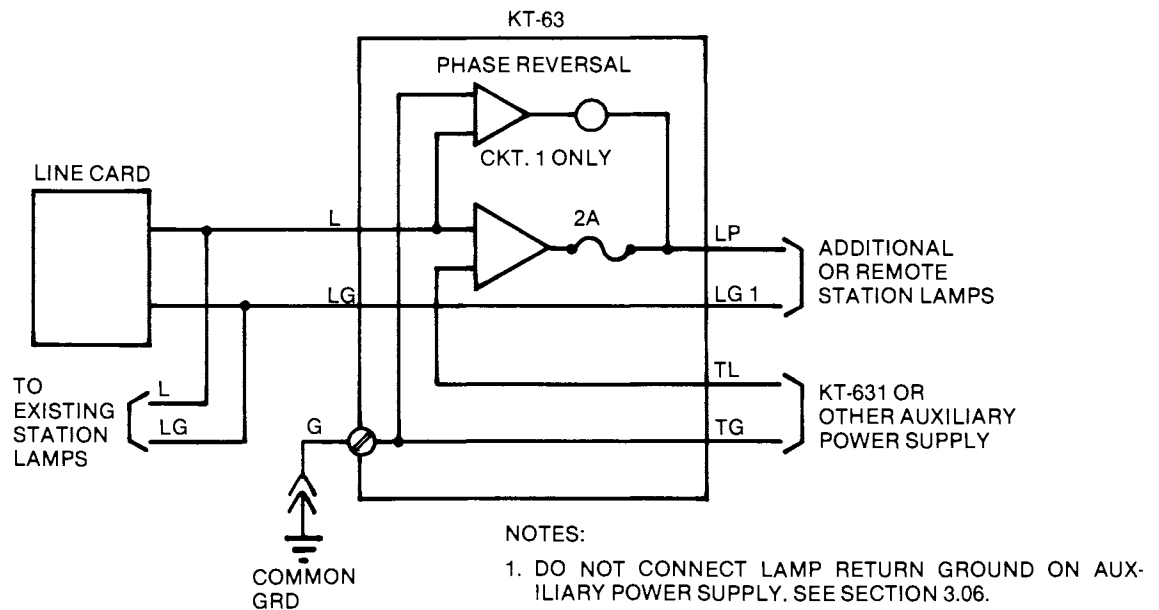


Fig. 2 — Application Schematic of KT-63.

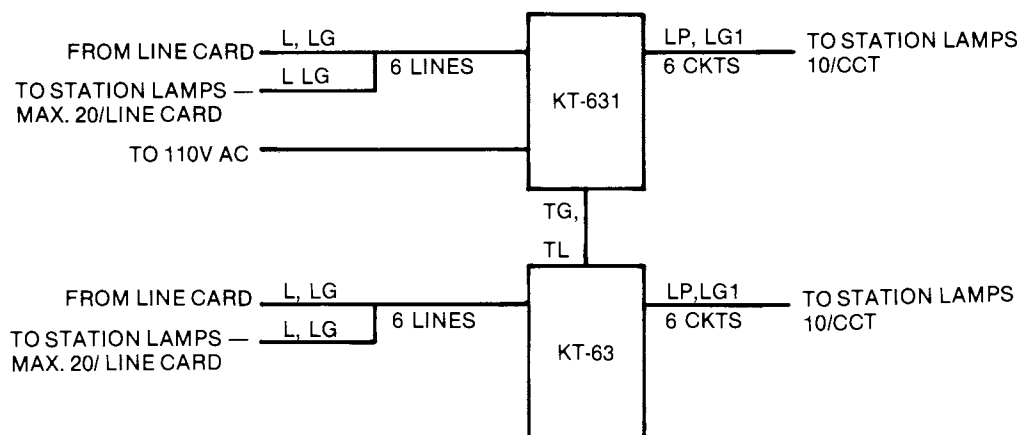
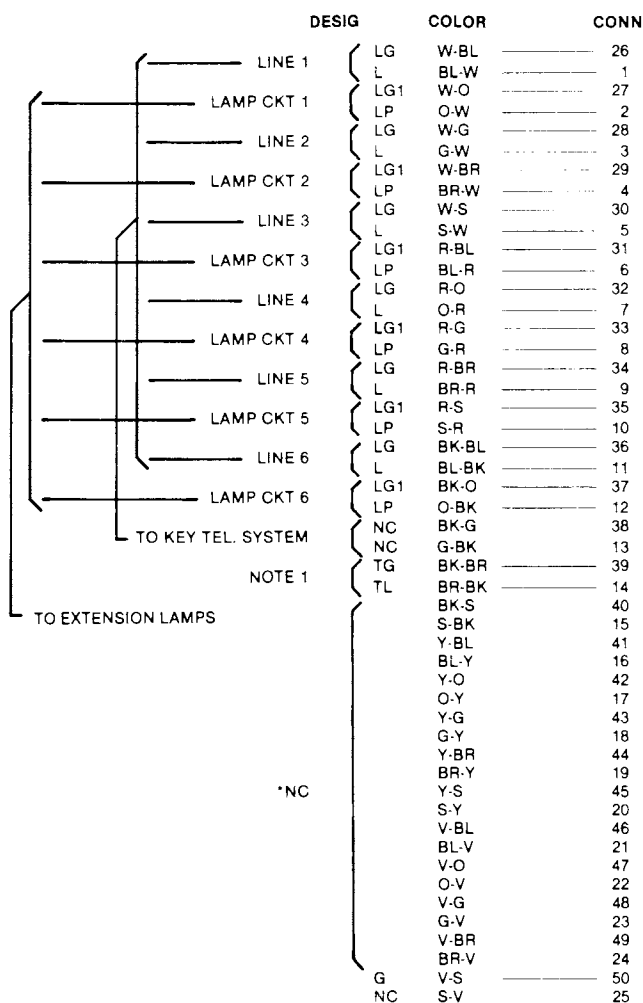


Fig. 3 — Application Schematic of KT-63 with KT-631.



NOTES:

1. CONNECT TERMINALS TG AND TL TO MELCO KT-631 LAMP EXTENDER WHEN USED. CONNECT TG AND TL TO 10V AC LAMP POWER SUPPLY WHEN KT-631 IS NOT USED.

*NO CONNECTIONS.

Fig. 4 — KT-63 Connections.