



INSTRUCTIONS

GEK-34148 A
Supersedes GEK-34148
Insert Booklet GEK-34123

RECLOSING RELAY

NLR21G

GENERAL  ELECTRIC

RECLOSING RELAY

NLR21G

INTRODUCTION

These instructions are supplement to Instruction Book GEK-34123 which is included in this book. The combination of the two provide instructions for the NLR21G relay. All information pertinent to the NLR21G relay which is not covered by this supplement is as indicated in GEK-34123.

DESCRIPTION

The NLR21G relay is similar to the NLR21A relay except that it includes provisions for a fast lockout initiation. The internal connections diagram is shown in Figure 1 of this supplement.

Energizing the fast lockout unit L immediately steps the NLR21G to the lockout position. As the NLR21G steps to the lockout position relay closing signal outputs are blocked.

APPLICATION

The Type NLR21G relay is generally employed when it is desired to place the NLR relay in the lockout position and to prevent any relay closing signal outputs during certain trip conditions, such as supervisory trip, breaker failure trip, and differential relay trip. A typical external connections diagram is shown in Figure 2 of this supplement. Before applying this relay, the APPLICATION section in the attached booklet GEK-34123 should be read.

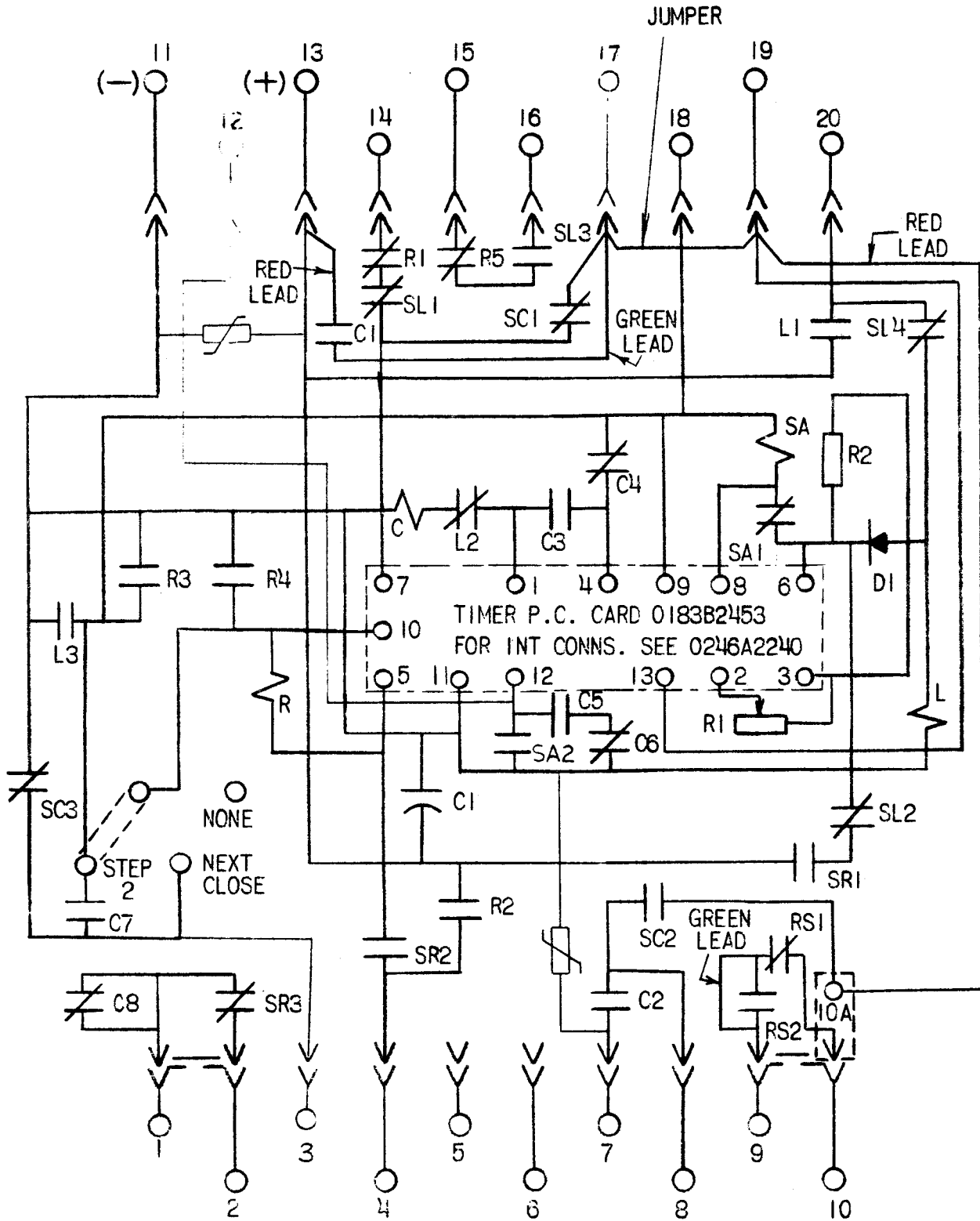
OPERATING PRINCIPLES

The NLR21G relay operating principles are similar to the NLR21A relay explained in GEK-34123 except as follows:

1. The internal connections are shown in Figure 1.
2. An added telephone relay (L) provides a fast lockout function similar to the fast reset function. When positive DC is applied to terminal 20, the L unit is picked up through SL4 except in the lockout position. A path for current is then provided through SL4, D1, SA1, SA, and L3 which rapidly steps the stepping switch to the lockout position. The L2 contact prevents any relay closing signal output by keeping the C unit de-energized during a fast lockout initiation.

These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to the General Electric Company.

To the extent required the products described herein meet applicable ANSI, IEEE and NEMA standards; but no such assurance is given with respect to local codes and ordinances because they vary greatly.



○ = POST NO. ON PRINTED CIRCUIT CARD

FIG.1 (246A3335-3 Sh.1) Type NLR21G Internal Connections Diagram

STEPPING SWITCH CONTACTS

| CONTACTS | SWITCH CONTACTS | | |
|----------|---|-----------------|---------|
| | RESET | STEPS 1-34 INC. | LOCKOUT |
| SL (≠) | CLOSED | CLOSED | OPEN |
| SL (⊥) | OPEN | OPEN | CLOSED |
| SR (⊥) | OPEN | CLOSED | CLOSED |
| SR (≠) | CLOSED | OPEN | OPEN |
| SC (≠) | CLOSED BY ADJUSTABLE CAMS IN ANY 3 NON-ADJACENT STEPS | | |
| SC (⊥) | CLOSED WHEN SC CONTACTS (≠) ARE OPEN | | |
| SA (⊥) | CLOSED WHEN STEPPING SW. COIL IS ENERGIZED | | |
| SA (≠) | OPEN WHEN STEPPING SW. COIL IS ENERGIZED | | |

| MODEL | FORM | | | |
|--------------------|--------|--|--|--|
| 12NLR21G(-)A | 1 | | | |
| VOLTS | 125 | | | |
| RESISTANCE IN OHMS | | | | |
| C COIL | 3,600 | | | |
| R COIL | 3,600 | | | |
| L COIL | 3,600 | | | |
| SA COIL | 400 | | | |
| | | | | |
| R1 | 1 MEG. | | | |
| R2 | 8,000 | | | |
| | | | | |
| | | | | |
| | | | | |
| CAPACITANCE VALUE | | | | |
| CI | 1uf | | | |

FIG. 1 (0246A3335-2 SH. 2) Type NLR21G Internal Connections Diagram



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