



INSTRUCTIONS

GEK-34208A

Insert Booklet- GEK-34123

RECLOSING RELAY

TYPE NLR21P

INTRODUCTION

This supplement in addition to GEK-34123 constitutes the instructions for the NLR21P relay.

DESCRIPTION

The NLR21P relay is similar to the NLR21A except it is AC operated and the first step has a separate adjustable time delay of 4.0 to 24.0 milliseconds for step times of 5.0 seconds.

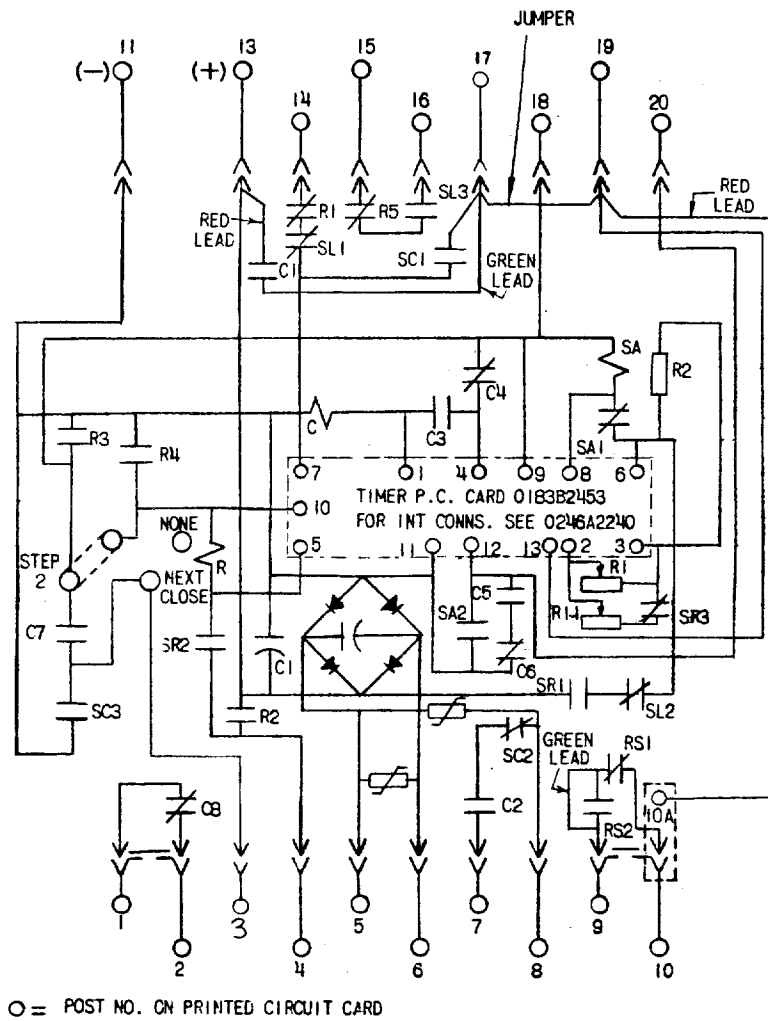
Figure 1 of this supplement shows the internal connections for the NLR21P relay.

APPLICATION

The Type NLR21P relay is applied whenever it is desirable to obtain a separate adjustable time delay for the first reclosure. To accomplish this, the first SC lobe must be placed in the STEP ONE position. The other two SC lobes can be placed in any two non-adjacent steps to obtain the desired time delay reclosures. More specific information relative to application is given in the section entitled APPLICATION in the attached book GEK-34123. The external connections diagram for the NLR21P is shown in figure 2 of this supplement.

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.



* Fig. 1 (0246A3336 Sh.1 [3]. Type NLR21P Internal Connections Diagram

STEPPING SWITCH CONTACTS			
CONTACTS	SWITCH CONTACTS		
	RESET	STEPS 1-34 INC.	LOCKOUT
SL ($\overline{\text{X}}$)	CLOSED	CLOSED	OPEN
SL ($\overline{\text{X}}$)	OPEN	OPEN	CLOSED
SR ($\overline{\text{X}}$)	OPEN	CLOSED	CLOSED
SR ($\overline{\text{X}}$)	CLOSED	OPEN	OPEN
SC ($\overline{\text{X}}$)	CLOSED BY ADJUSTABLE CAMS IN ANY 3 NON-ADJACENT STEPS		
SC ($\overline{\text{X}}$)	CLOSED WHEN SC CONTACTS ($\overline{\text{X}}$) ARE OPEN		
SA ($\overline{\text{X}}$)	CLOSED WHEN STEPPING SW. COIL IS ENERGIZED		
SA ($\overline{\text{X}}$)	OPEN WHEN STEPPING SW. COIL IS ENERGIZED		

MODEL	FORM			
12NLR21P(-)A	1			
VOLTS AC	120			
RESISTANCE IN OHMS				
C COIL	5000			
R COIL	6500			
SA COIL	100			
R1	114FC.			
R2	10,000			
R11	50K			
CAPACITANCE VALUE				
C1	70+			

Fig. 1 (0246A3336 Sh.2 [1] Type NLR21P Internal Connections Diagram

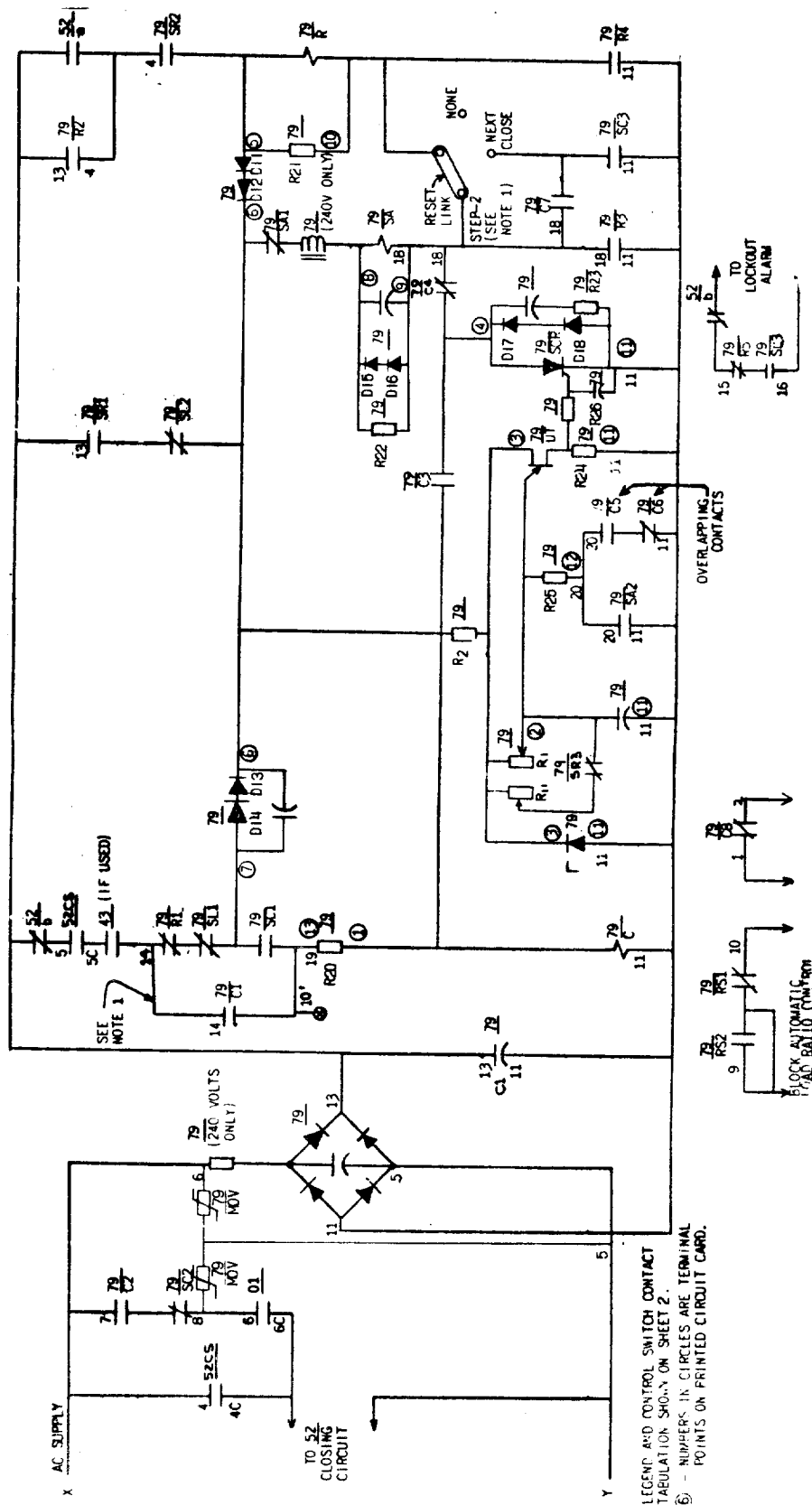


FIG. 2 (0165B2639-0 SH. 1) Type NLR21P External Connections Diagram

NUMBERS ON CONTACTS (79/R1,79/SC1,ETC)
ARE ARBITRARILY ASSIGNED FOR
IDENTIFICATION PURPOSES.

DESCR. OF DEVICE	INT. CONNS.	OUTLINE
NLR21P(-)A	024BA333B	K-6209272

LEGEND

DEVICE NO.	TYPE	INCL. ELEM.	DESCRIPTION
52CS	SB		CONTROL SWITCH
52			AC CIRCUIT BREAKER
79	NLR		AC RECLOSING RELAY
		C	CLOSING UNIT
		R	RESETTING UNIT
		RS	CAM OPER. AUX-FUNCTION SW.
		SA	ARMATURE OF STEPPING SW.
		SC	CLOSING CONTS. OF STEPPING SW.
		SL	LOCKOUT CONTS. OF STEPPING SW.
		SR	RESETTING CONTS. OF STEPPING SW.

CAM OPERATED CONTACTS	RESET STEP #0	STEPS 1-34	LOCKOUT STEP 35
SL — —			X
SR — —	X		
SR — —		X	X
SL — —	X	X	
SC — —	X, ANY 3 NON-ADJACENT STEPS		
SC — —	OPEN WHEN SC — — IS X		
RS — —	X IN ANY 4 ADJACENT STEPS		
RS — —	OPEN WHEN RS — — IS X		

BREAKER CONTROL SWITCH MODEL 16SB1B12					
CONTACT NUMBER		CLOSE	NORMAL AFTER CLOSE	NORMAL AFTER TRIP	TRIP
1 — — 2	1				X
3 — — 4	2				X
5 — — 6	3		X	X	
7 — — 8	4	X			
9 — — 10	5	X	X		
11 — — 12	6	X	X		

FIG. 2 (0165B2639-0 SH. 2) Type NLR21P External Connections Diagram