

### RECLOSING RELAY NLR21B

## INTRODUCTION

This supplement in addition to GEK-34123 constitutes the instructions for the NLR21B type relay.

## DESCRIPTION

Relay NLR21B is similar to relay NLR21A in the insert booklet GEK-34123 except it is an AC operated relay. The relay contains a bridge rectifier to rectify the AC input. The internal and external connections diagram are shown in Figures 1 and 2 respectively in this supplement. For <u>APPLICATION AND SETTINGS</u> refer to the sections in the attached booklet.

### RATINGS

The relay has standard ratings of 120 and 240 volts AC.

## BURDENS

The AC burden of the NLR21B is at unity power factor as given in Table Below

VOLTS	FREQUENCY	RESISTANCE-OHMS MINIMUM
240	60 HZ	1500
120	60 HZ	400

#### ACCEPTANCE TESTS

Apply AC power to stude 5 and 6 instead of DC power to stude 13 and 11. See internal connections Figure 1.

# INSTALLATION PROCEDURE

Connections are to be made per attached Field Test Connections (Figure 3).

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.



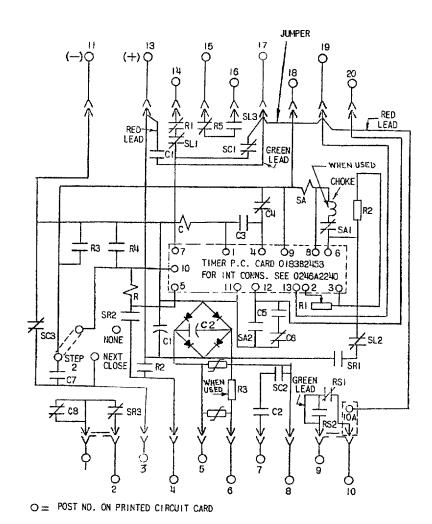


FIG. 1 (0246A3327-3 SH. 1) TYPE NLR21B RELAY INTERNAL CONNECTIONS DIAGRAM

STEPPING SWITCH CONTACTS						
CONTACTS		SWITCH CONTACTS				
		RESET	STEPS 1-34 INC.	LOCKOUT		
SL	(米)	CLOSED	CLOSED	OPEN		
SL	(十)	OPEN	OPEN	CLOSED		
SR	<del>(</del> 十	OPEN	CLOSED	CLOSED		
SR	(字)	CLOSED	OPEN	OPEN		
$sc \left(\frac{1}{1}\right)$	1-1	CLOSED	BY ADJUSTABLE (	CAMS IN		
	\ <del>\</del> \	ANY 3 NON-ADJACENT STEPS				
sc (	1-41	CLOSED WHEN SC CONTACTS (=)				
L	イイ	ARE OPEN '				
SA (	1-1	CLOSED WHEN STEPPING SW.				
	「丁/	COIL IS ENERGIZED				
SA	1-41		WHEN STEPPING S	W.		
JA	141	ωIL I	S ENERGIZED			

MODEL	I		ra z				
	FORM						
12NLR21B(-)A		2	3	4-			
12NLR21D(-)A	1	2.					
VOLTS AC	120	5,10	240	802			
	RESISTANCE IN OHMS						
C COIL	5,000	21,000	21,000	21,000			
R COIL	6,500	28,500	28,500	28,500			
SA COIL	400	1.500	1,500	1,500			
RI	I MEG.	IMEG.	IMEG.	IMEG.			
R2	10,000	20,000	20,000	20,000			
R3		100	100	250			
CHOKE		3	3	3			
CAPACITANCE VALUE							
CI	<b>7</b> u f	2u f	2u f	2uf			

FIG. 1A (0246A3327-1 SH. 2) TYPE NLR21B RELAY INTERNAL CONNECTIONS DIAGRAM

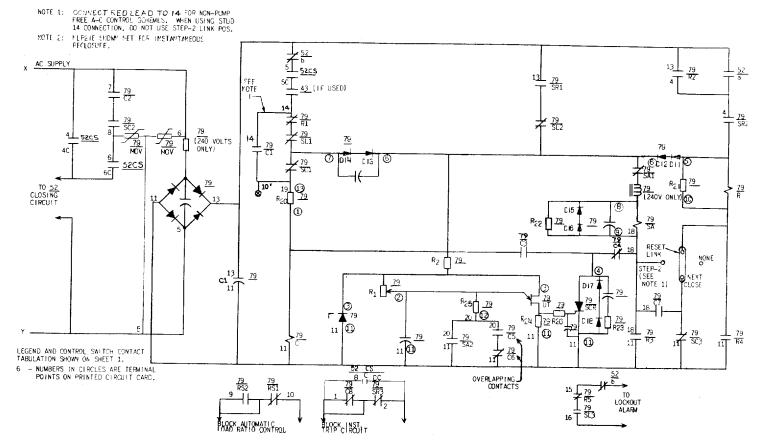


FIG. 2 (0165B2632-2 SH. 1) TYPE NLR21B RELAY EXTERNAL CONNECTIONS DIAGRAM

CAM OPERATE	CAM OPERATED CONTACTS		RESET STEP #0		STEPS	Τ	LOCKOUT STEP 35		
			ZIEP BU		1-24	+	SIEP X	"	
SR -	ir.	H	X			十		_	
SR -	F	Г	<u> </u>		×		х	$\overline{}$	
SL -			х		X			_	
SC -	4	x	X, ANY 3 NO		ON-ADJACENT STEPS				
SC -	ŀF	0	OPEN SHEN SC TIS X						
RS 7	<u> </u>				ADJAÇENT :		·		
RS -	<u>I</u>	٥	PEN WH	IEN 8	s+F is:	Χ			
				LI	GEND				
DEVICE NO.	TYF	_	INCL.		DESCRIPTION				
52CS	SE	Ч		CONTROL SWITCH AC CIRCUIT BREAKER					
79	NLE	ᆸ			RECLOSING			-	
	-	4	30	d	SING UNIT				
<b>-</b>	-	┪	RS .	I	ETTING UNI	_	CTION	SW	
		SA AR			M OPER, AUX-FUNCTION SW. MATURE OF STEPPING SW.				
<b></b>	├	-	-sc-		OSING CONTS.OF STEPPING SW.				
		+	SR SR		ETTING CON				
Language	- 001				MODEL				
	U 64	207	0:02 70:02	ICH	NORMAL AFTER	NOR		6	
CONTACT NUMBER			CLOS	E	AFTER CLOSE	AFT:	MAL R	TR	P
141-4	F .	1							
3	<u>-</u>	3	-		×	١.,	,	_	
भान्न	F.	4	X						
1511	49	5 6	X		X	<u> </u>			
411001	禹	Ž	÷	=	Ŷ			=	
DESCR. 0	F DE	VΙ	E	$\Box$	INT. CONN	s.	ΟÙ	TLINE	
NLR. 218	NLR. 218 & NLR21D			コ	0246AS327 K-62092		09272		
				+					
			CIRCLE		RE TERMIÑA	L PO	NTS 0	N	
NUMBERS O ARE ARBIT IDENTIFIC	RARII	LY.	ASSIGN	IED I	1, 79/SC1, FOR	ETC)			

FIG. 2A (0165B2632-2 SH. 2) TYPE NLR21B RELAY INTERNAL CONNECTIONS DIAGRAM

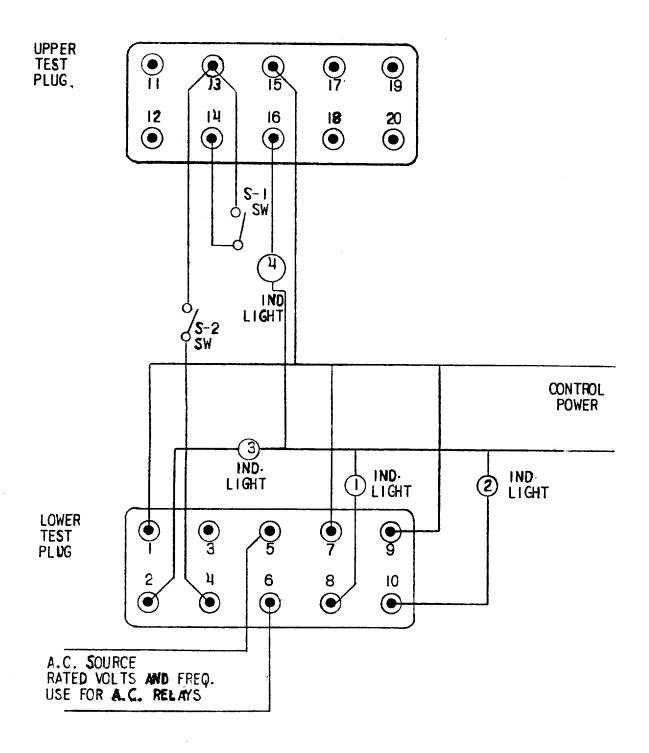


FIG. 3 (-246A6856-0) Type NLR21B Relay Field Test Connections