



's Instrument and Control Switch is a heavy-duty rotary switch that satisfies the most demanding requirements of the industrial control and power applications. These switches are 600V AC rated and are recognized by Underwriters Laboratories in the United States and Canada.

Some of the typical standard applications for the Series 95 are:

- Circuit-breaker control
- Motor control
- Voltmeter Selector and Transfer
- Ammeter Selector and Transfer
- Synchroscope Control
- Control Selector Switch Applications

The Series 95 switches have the following standard features: Standard 3-hole Mounting #8-32 screw terminals

- Nema class A Insulating materials (105°C)
- Silver contact surfaces for long reliable life
- Double-sided, double-wiping, knife-type rotary contacts

Special Features for Circuit Breaker Control switches include:

- Mechanical red/green target
- Slip contact for alarm and indicator circuits
- Pull-to-Lock mechanism to return the switch handle to normal (vertical) position
- Selection of Lighted Escutcheon plates

Special features for Meter Control switches include:

- Make-Before-Break (shorting contacts for ammeter control)
- Common-input Tap-Switch arrangement whereby the meter may be sequentially connected to several lines using the same switching deck
- Positive positioning detent mechanism
- Pre-wired jumpers

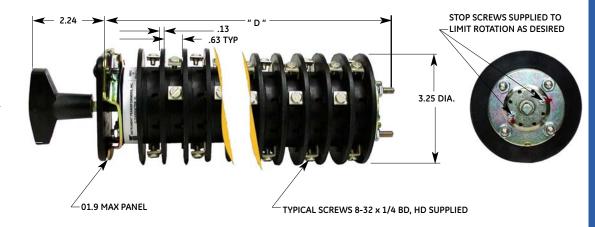
Special features for synchroscope applications include:

- Removable Oval Handles
- Key lockable arrangements

The following details the most common applications, contact arrangements and escutcheon plate markings. For combination of contact arrangements, handles, escutcheon plate marking and special features not shown, contact the factory for availability.







DEPTH BEHIND PANEL						
NUMBER OF DECKS	DEPTH INCHES " D"					
1	2.4					
2	2.9					
3	3.6					
4	4.3					
5	4.8					
6	5.4					
7	6.2					
8	6.6					
9	7.4					
10	8.0					

Slip Contact - add 1.5" Pull - to- lock- Add 1 " (these are approximate dimensions)

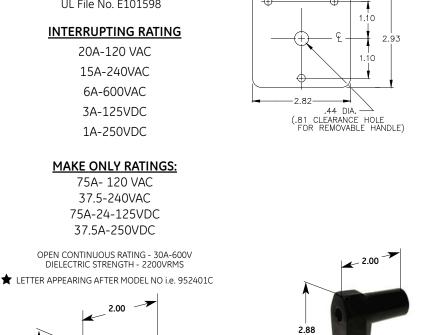
UL File No. E101598

INTERRUPTING RATING

20A-120 VAC 15A-240VAC 6A-600VAC 3A-125VDC 1A-250VDC

MAKE ONLY RATINGS:

75A- 120 VAC 37.5-240VAC 75A-24-125VDC 37.5A-250VDC



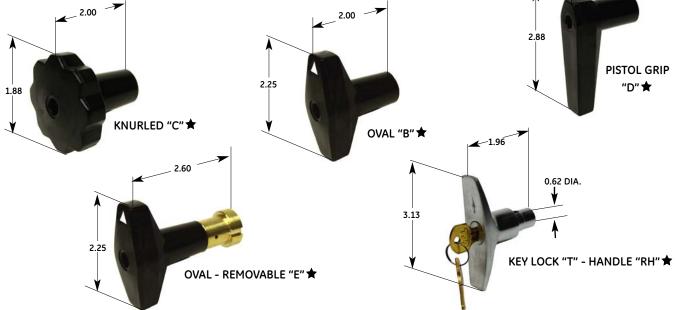
1.00+

-4

.22 DIA. (3 HOLES)

1.00

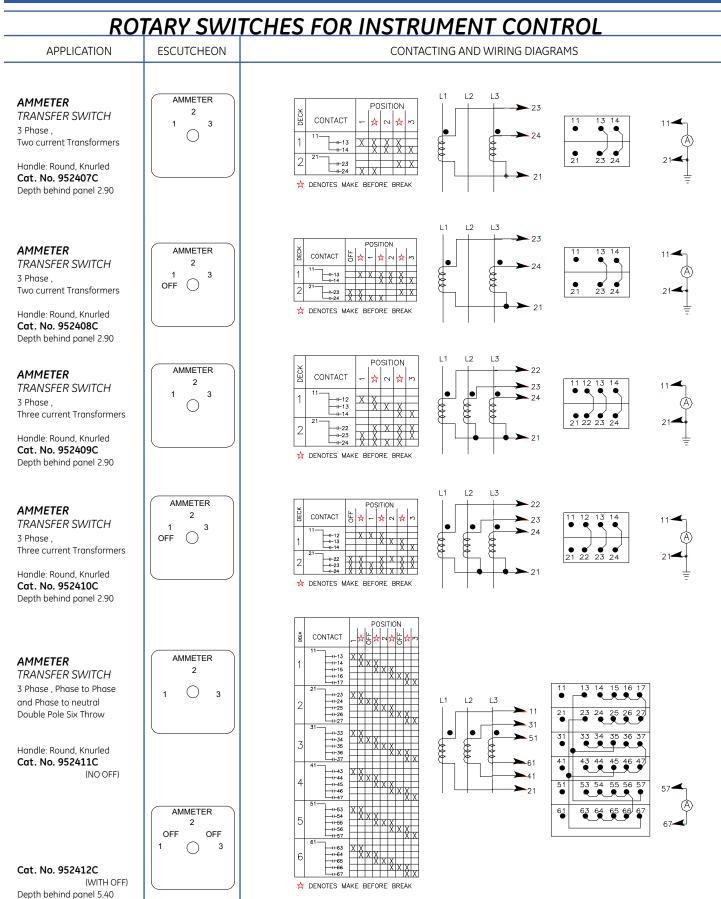
415





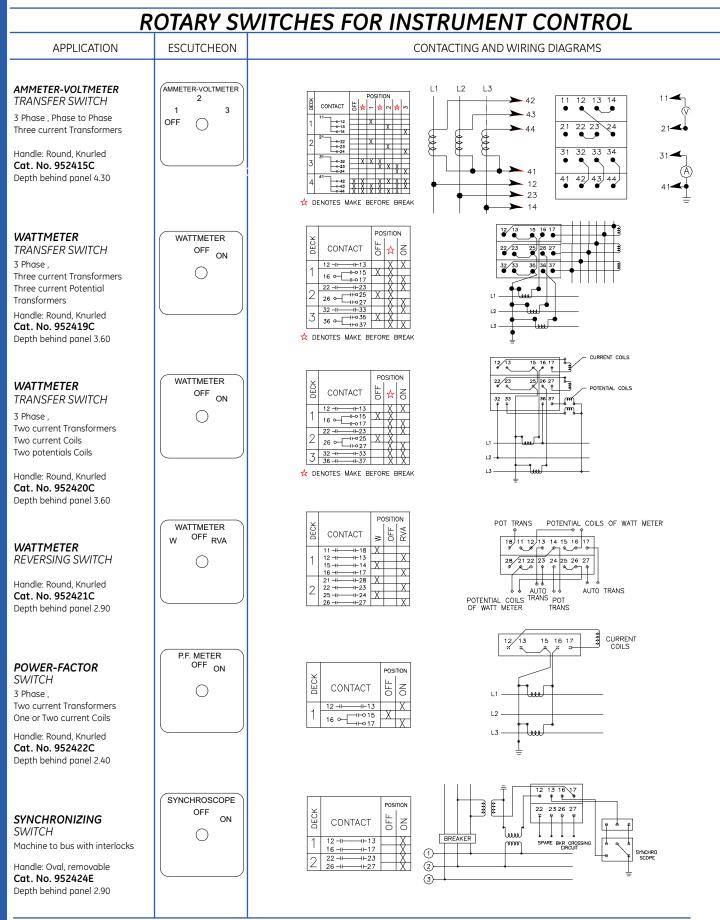
ROTARY SWITCHES FOR INSTRUMENT CONTROL **ESCUTCHEON** APPLICATION CONTACTING AND WIRING DIAGRAMS VOLTMETER L1 L2 L1 L2 VOLTMETER TRANSFER SWITCH OFF ON POSITION 2 Wire, Single Phase or D–C ▶ 12 13 16 12 DECK OFF aaaa mm CONTACT NO Double Pole / Single Pole Throw \bigcirc **>** 16 12⊣⊢13 1 Handle: Round, Knurled 16⊣⊢ ⊣⊢17 Cat. No. 952401C Depth behind panel 2.40 VOLTMETER VOLTMETER |1 |2 |3 |4 TRANSFER SWITCH OFF POSITION 4 Phase, Two Phase or Two 2 OFF DECK CONTACT separated D–C circuits - 18 \bigcirc \sim 18 11 12 13 14 15 16 Double Pole / Double Throw Χ 14 ⊩18 12⊣⊦ 15⊣⊦ ⊣⊢13 ⊣⊢14 Х ► 13 1 χ Handle: Round, Knurled 16i⊢17 17 Cat. No. 952402C Depth behind panel 2.40 L1 L2 L3 N > 22 VOLTMETER POSITION VOLTMETER •▶23 12 13 14 2 DECK • > 24 CONTACT TRANSFER SWITCH E C 3 1 $\langle 0 \rangle$ ▶ 14 OFF \bigcirc 3 Phase, Phase to neutral 21 22 23 24 ⊣⊢12 Double Pole / Triple Throw 1 ⊣⊢13 Χ ->>>22 3 X ⊣⊢14 Handle: Round, Knurled 21 ▶23 3 2 Cat. No. 952403C ⊣⊢23 Χ 3 >24 Depth behind panel 2.90 1⊢24 VOLTMETER VOLTMETER TRANSFER SWITCH POSITION 2-3 0FF 1-2 2-3 3 Phase, Phase to Phase 1-2 3-1 DECK CONTACT L1 L2 L3 L1 L2 L3 Double Pole / Triple Throw OFF \bigcirc 1 ⊣⊢12 > 12 •> 12 Handle: Round, Knurled nates mpm IXI ▶23 •>>23 Cat. No. 952404C ΊX ⊣⊢14 14 21 Depth behind panel 2.90 X 2 ⊣⊢22 ⊣⊢23 ____24 VOLTMETER POSITION TRANSFER SWITCH L2 L3 Ν 2-3 0FF 3 L1 DECK CONTACT 3 Phase, Phase to Phase > 22 VOLTMETER ⊣⊢12 ⊣⊢13 ⊣⊢14 ⊣⊢16 and Phase to neutral Ϋ́ OFF X Double Pole / Six Throw 1-2 1 24 26 27 ()2-3 2 Handle: Round, Knurled ⊣⊢22 ⊣⊢23 ⊣⊢24 ⊣⊢26 ⊣⊢27 x _x 3 -1 3 Cat. No. 952405C 2 Depth behind panel 2.90 Ιx VOLTMETER TRANSFER SWITCH POSITION 6 Wire, Two 3 Phase DECK CONTACT VOLTMETER L1 L2 L3 circuit, Phase to Phase L1 L2 L3 OFF Double Pole / Six Throw ⊫12 ⊫13 ⊫14 ⊫16 ⊫17 3 -1 1-2 2 - 3 O 2 -3 12 16 Handle: Round, Knurled > 23 > 27 1 - 2 3 -1 i⊢18 Cat. No. 952406C OFF ⊣⊢22 ⊣⊢23 ⊣⊢24 ⊣⊢26 ⊣⊢27 -18 -|x| XXX 2 Depth behind panel 2.90



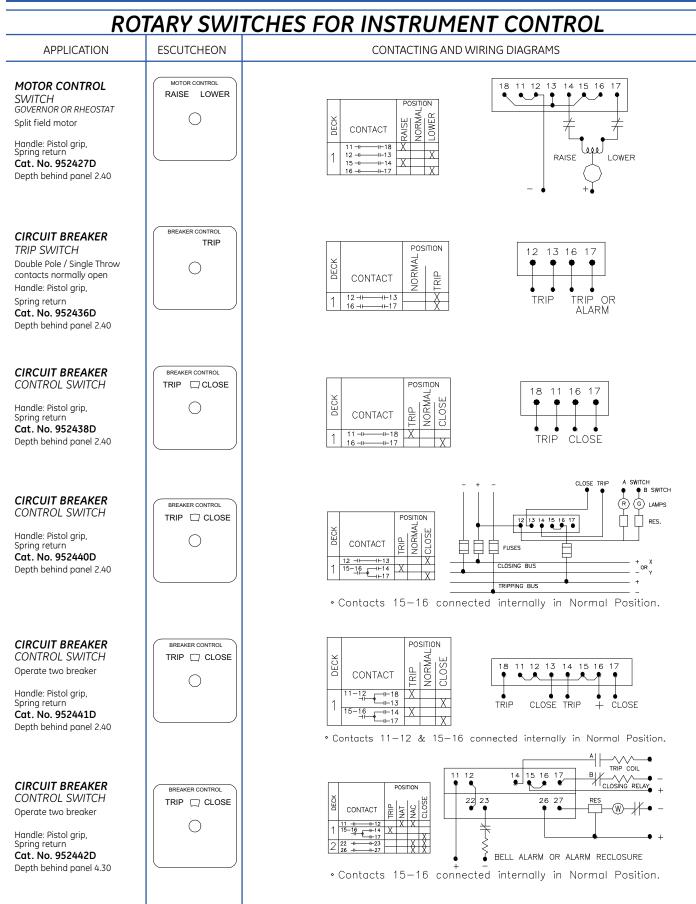


Consult Factory for non-standard Escutcheon Plates

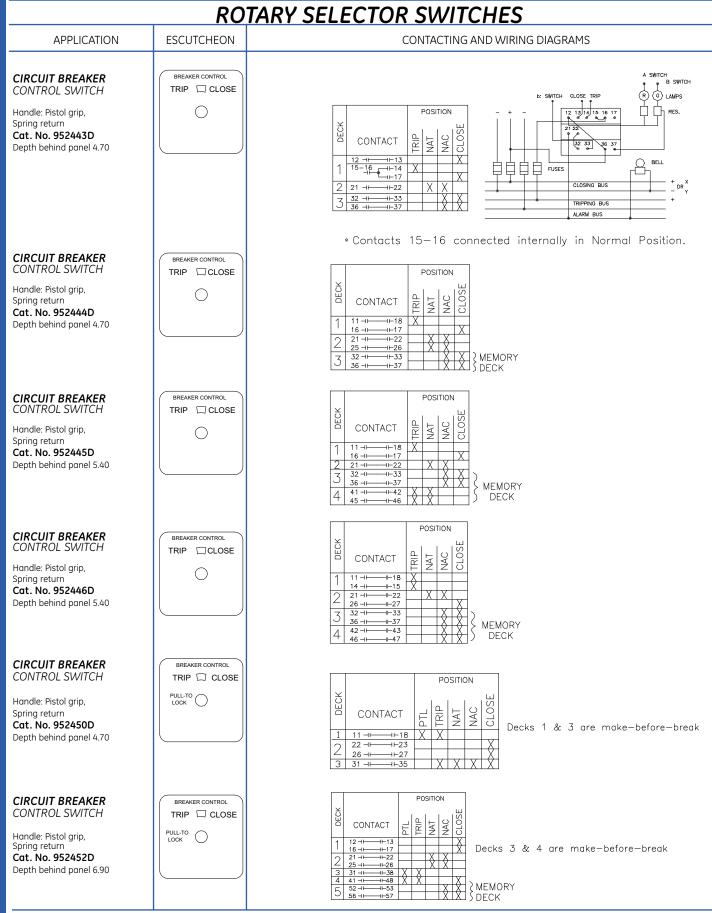




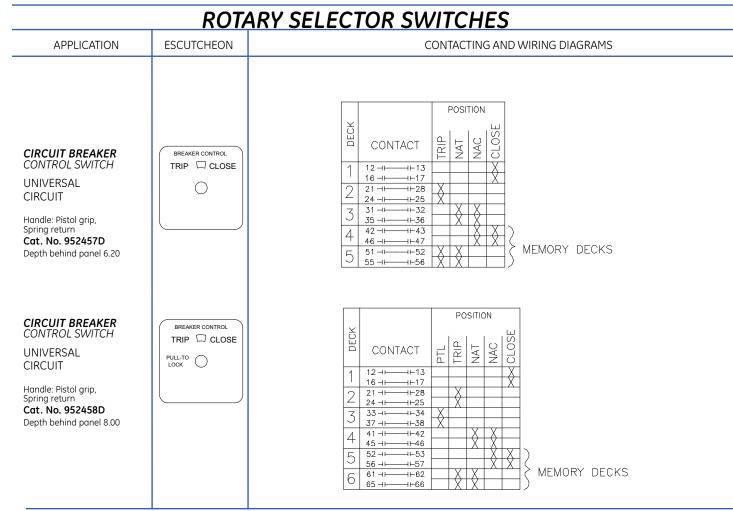






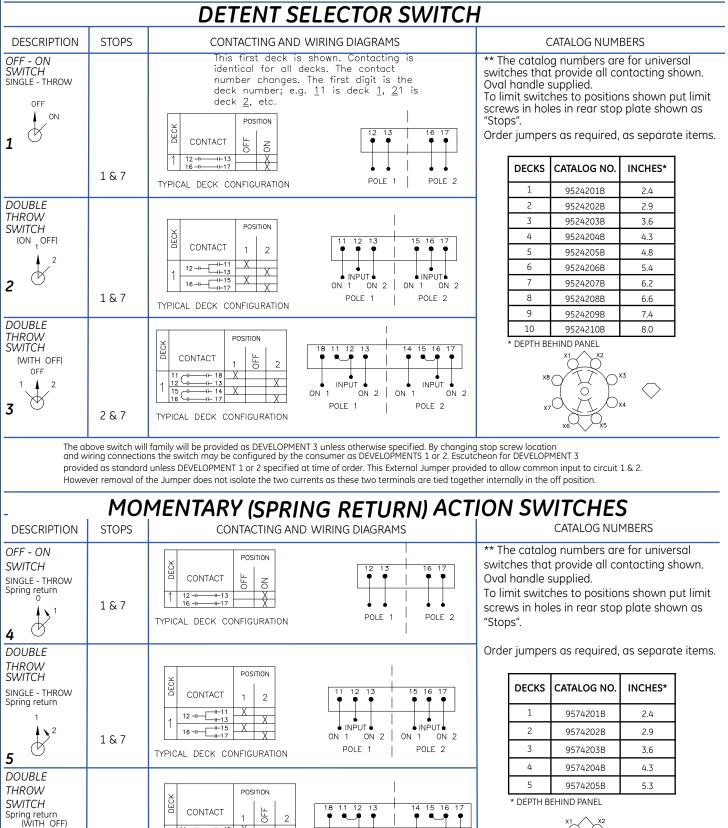


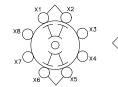




Consult Factory for non-standard Escutcheon Plates







6

The above switch will family will be provided as DEVELOPMENT 6 unless otherwise specified. By changing stop screw location and wiring connections the switch may be configured by the consumer as DEVELOPMENTS 4 or 5. Escutcheon for DEVELOPMENT 6 provided as standard unless DEVELOPMENT 4 or 5 specified at time of order.

INPUT

POLE 1

ON

Order the jumpers for this arrangement

separately (2 per deck P/N 02011-10)

1

ON 2

INPUT

POLE 2

ON 2

ON 1

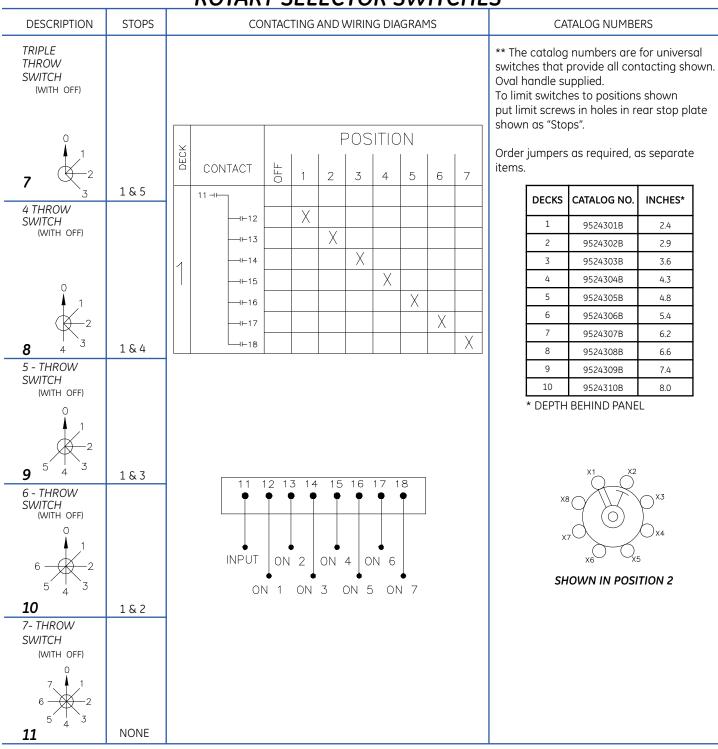
18 X 13 14 X

TYPICAL DECK CONFIGURATION

2&7

X





ROTARY SELECTOR SWITCHES

The above switch will family will be provided as DEVELOPMENT 11 unless otherwise specified. By changing stop screw location and wiring connections the switch may be configured by the consumer as DEVELOPMENTS 7 or 10. Escutcheon for DEVELOPMENT 11 provided as standard unless DEVELOPMENT 7 or 10 specified at time of order.

JUMPERS

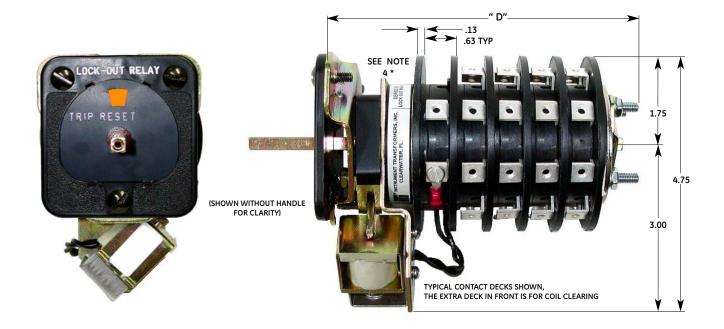
Strap jumpers are available for adjacent contacts, and wire lug assemblies are available for other terminal jumping. The strap jumpers ar available in packages of ten or twenty-five. The wire and lug assemblies are ordered individually Data is as follows:

	(Strap jumpers are silver-p	plated brass.)		
	CATALOG NO:	DESCRIPTION		
e	9502011-10-C3 9502012-2-C3	Jumper, adjacent term Jumper, same termina		
are	(Wire and lug assemblies	have #10 AWG wire and ins	ulated ring lugs.)	
e Ily.	CATALOG NO: 95002012-1 95002012-2 95002012-3	<u>LENGTH (L)</u> 3 - 1/16" 4 - 1/4" 3 - 5/8"		

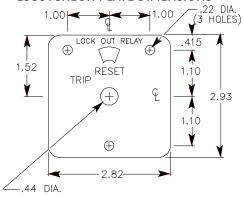




SERIES 95 LOCK OUT RELAY SWITCHES



DRILL PATTERNS & ESCUTCHEON PLATE DIMENSIONS



Notes:

All switch assemblies include the following

1 - Escutcheon plate.

3 - No.10 - 32 x 5/8" screw.

Pistol grip is shown on front cover.

Switches with 6 or more decks require 2nd torsion spring assembly.

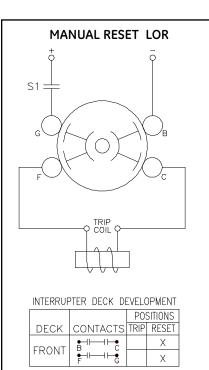
Complete technical data is outlined in Technical Publication ITLOR95. (DTS-ITILOR95)

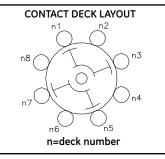
DEPTH BEHIND PANEL						
NUMBER OF DECKS	DEPTH INCHES" D"					
1	3.6					
2	4.3					
3	4.7					
4	5.5					
5	6.2					
6	7.5					
7	8.1					
8	8.5					
9	9.2					
10	9.6					

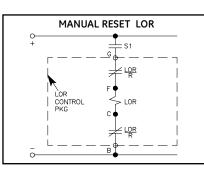
GENERAL PURPOSE RATING						
	30A	600V Open	CARRY			
	20A	600V enclosed	CARRY			
	20A	120VAC	.8 PF, MAKE & BREAK			
C The US	15A	240VAC	.8 PF, MAKE & BREAK			
UL File No. E101598	6A	600VAC	.8 PF, MAKE & BREAK			
	3A	125VAC	RESISTIVE MAKE & BREAK			
	1A	250VAC	RESISTIVE MAKE & BREAK			



LOCK OUT RELAY SWITCHES







LOR TRIP COIL	C	NO ADDITIONAL CIRCUITY (TARGET)		RESIS	2A TARGET RESISTOR (R0) IN PARALLEL		RGET RCUIT		A TARGI SERIES SISTOR (
	.2A	.6A	.2A	25 OHMS	50 OHMS	40 OHMS	20 OHMS	7 OHMS	12.3 OHMS	16.7 OHMS
A B	12	12	42						90	90
C D	24	40	118		80	95	105	95		
E F	40	150		75 70	150 125					

COIL	COIL CKT VOLTAGE	COIL CURRENT @ NORMAL VOLTAGE	OPERATING RANGE	COIL CURRENT @ MAXIMUM VOLTAGE OF OPERATING RANGE	COIL RESISTANT @ 25 C
А	24VDC	7.3	10-40VDC	12.2 AMPS DC	3.3
В	24VDC	3.2	18-50VDC	6.5 AMPS DC	7.7
С	48VDC	3.7	24-70VDC	5.4 AMPS DC	13
D	125VDC	4.6	30-140VDC	5.2 AMPS DC	27
E	125VDC	2.5	45-150VDC	2.8 AMPS DC	50
F	250VDC	2.4	70-280VDC	2.7 AMPS DC	104

DECKS	10-40 VDC A COIL	18-50 VDC B COIL	24-70 VDC C COIL	30-140 VDC D COIL	45-140 VDC E COIL	70-280 VDC F COIL
1	957801A	957801B	957801C	957801D	957801E	957801F
2	957802A	957802B	957802C	957802D	957802E	957802F
3	957803A	957803B	957803C	957803D	957803E	957803F
4	957804A	957804B	957804C	957804D	957804E	957804F
5	957805A	957805B	957805C	957805D	957805E	957805F
6	957806A	957806B	957806C	957806D	957806E	957806F
7	957807A	957807B	957807C	957807D	957807E	957807F
8	957808A	957808B	957808C	957808D	957808E	957808F
9	957809A	957809B	957809C	957809D	957809E	957809F
10	957810A	957810B	957810C	957810D	957810E	957810F

* D COIL HAS BEEN TESTED AND APPROVED FOR USE AT 120V AC

TYPICAL SWITCH DEVELOPMENT FOR DECKS 1 THRU 10

		POS	SITIONS			
DECKS	CONTACTS	TRIP	RESET			
	n1 ⊷ ⊢– ⊢• n3		Х			
n	n2 ← -• n8	Х				
	n5 ⊷ ⊢– ⊢• n7		Х			
	n4 ⊷⊣ ├──┤ ├─● n6	Х				
WHERE "p" IS DECK NILIMBER						

WHERE "n" IS DECK NUMBER

OPERATING DC VOLTS	LOR TRIP COILS TO USE					
DC VOLIS	.2 A TARGET	2 A TARGET				
150 125	A, B, C B,C,D,E					
150 125 140	D,E,F D,E,F D,E,F	D D				
190 250	F	D D				



LIGHTED ESCUTCHEON PLATES

OPERATION - 4 ROWS OF LEDS:

Style 1. Standard Light Configuration

When the handle is turned to the CLOSE position, The flag shows red and the red lights are turned on by an auxiliary switch contact in the circuit breaker. If there is a fault and the circuit breaker trips, an auxiliary switch contact (bell circuit) in the Circuit breaker will close and the yellow lights

flash - see typical circuit on page 14. When the handle is turned to the TRIP position, the flag shows green and the green lights are turned on by an auxiliary switch contact in the circuit breaker.

Style 2, (Reversed light Configuration) is selected, the above operation will apply but exchange red to green and green to red.

OPERATION - 2 ROWS OF LEDS:

Style 1, Standard Light Configuration When the handle is turned to the CLOSE position, the flag shows red and lights are turn on by an auxiliary switch contact in the circuit breaker. When the handle is turned to the TRIP position, the flag shows green and the areen lights are turned on by an auxiliary switch contact in the circuit breaker.

Style 2, (Reversed light Configuration) is selected, the above operation will apply but exchangered to green and green to red.

MATERIALS LIST:

- All lighted flag assemblies include the following-
- Escutcheon plate with flag assembly.
- Pistol grip handel with #6-32 x 5/8" screw
- Wire connections are made with $#6-32 \times 3/9"$ slotted brass screws with lock washers.
- Switch mounting hardware, 3 ea #10-32 x 1"



slotted truss head, black zinc plated screws.

Notes:

- 1. Panel Mounting 2. Jumper may be added to terminals D. E and/or F for common circuit connections for LEDs. 3. Voltage input is
- not polarity sensitive.

ORDERING INSTRUCTIONS:

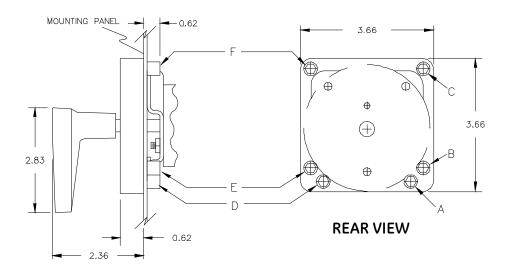
Specify standard switch catalog number and add Lighted Escutcheon DASH NUMBER, ex: 952438D-L4R120. The Lighted Escutcheon requires a special handle and length mounting screws, so the DASH NUMBER must be included on the initial switch order.

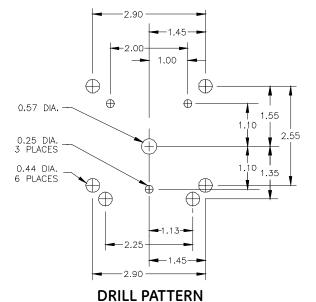
	<u>STYLE 1</u>				STYLE 2 REVERSED LIGHT CONFIGURATION				
LED VOLTA	AGE RATING	ROWS OF LEDS	SERIES 95 DASH #		LED VOLTAG		ROWS OF LEDS	-	S 95 DASH #
120 VAC 50/60 H	IZ or 125VDC	2	-L2R120		120 VAC 50/60 HZ	or 125VDC	2	-L	2R120R
240 VAC 50/60 H	IZ or 250VDC	2	-L2R240	i	240 VAC 50/60 HZ	or 250VDC	2	-L	.2R240R
48VDC		2	-L2R48	4	48VDC		2	-	L2R48R
120 VAC 50/60 H	IZ or 125VDC	4	-L4R120		120 VAC 50/60 HZ	or 125VDC	4	-L	4R120R
240 VAC 50/60 H	IZ or 250VDC	4	-L4R240	í	240 VAC 50/60 HZ	or 250VDC	4	-L	4R240R
48VDC		4	-L4R48	4	48VDC		4	-	L4R48R
INDICATION	COLOR	TERMINAL DESIGNATIONS	DISPLAY		INDICATION	COLOR	TERMINAL DESIGNATIOI		DISPLAY
OPEN	GREEN	A & D	STEADY		OPEN	RED	A & D		STEADY
CLOSED	RED	B & E	STEADY		CLOSED	GREEN	B & E		STEADY
*TRIPPED	YELLOW	C & F	FLASHING		*TRIPPED	YELLOW	C & F		FLASHING

Patented Feature: Leds are removable. If any Led fails and it is removed all others in the row remain lit.



LIGHTED ESCUTCHEON PLATES





QTY	PART #	COLOR
6	LED-MV6351	YELLOW
6	LED-MV6451	GREEN
6	LED-MV6951	RED

Notes:

1. LEDS are removable and inserted by the use of needle nose pliers 2. Polarity should be observed during installation.

3. Molded escutcheon panel LED ports are polarized.

