



# **Proven Protection for Critical Utility Equipment and Systems**

Lock-Out Relays (LORs) are designed to protect equipment and personnel in critical utility applications. In an emergency, LOR performance can mean the difference between a routine outage and the destruction of vital equipment. Proven in thousands of applications, Electroswitch Lock-Out Relays are the industry standard for safety and reliability. With Electroswitch Lock-Out Relays, there's NEVER A DOUBT!

# 15-Deck Lock-Out Relay

Designed for today's most demanding applications, the Electroswitch 15-Deck Lock-Out Relay:

- Provides 30 Normally Open (N/O) and 30 Normally Closed (N/C) contacts
- Trips in under 8 milliseconds
- Requires no special mounting

# Push-to-Trip Lock-Out Relay

Push-to-trip Lock-Out Relays provide a safe means of tripping circuits without opening the panel or exposing maintenance personnel to risk.

- Simplifies testing of connected circuits
- Eliminates the need to trip from rear of panel
- Allows tripping of LOR without using jumpers or trip signal
- Design prevents accidental tripping and ensures tripping of intended LOR
- Initial test is done electrically, subsequent testing can be done manually
- Trip button is easily accessed via a hole drilled in the panel











# Series 24 Lock-Out Relays

### **High Quality**

- Designed and manufactured to the highest standards in the industry
- Qualified to UL, CSA
- ANSI/IEEE C37.90-2005
- ANSI/IEEE C37.90.1-2012

### Versatility

- 9 Different trip coils to choose from
- Up to 30 N/O and 30 N/C contacts in one standard LOR
- Available with electric reset capability
- Available with built-in coil monitoring and fault signal detection/indication

## **High-Speed**

• Transition times of less than 8 milliseconds (½ cycle) are standard

#### Optional Lighted Nameplate

- Continuously lit left LED indicates LOR is in a ready state
- Continuously lit Right LED indicates presence of trip signal to warn against resetting into a fault
- Eliminates the need for pilot lights and expensive interwiring, and reduces panel space

### **Availability**

- Virtually all Series 24 Manual Reset LORs are available from stock for immediate delivery
- Most popular Electric Reset LORs (LOR/ER's) are also available from stock

#### Service

• Electroswitch Customer Service and Application Specialists can help you with product selection and application. Let us put over 50 years of know-how to work for you!

## **Specifications**

#### **Electrical**

Continuous Ratings: 30A-600V Making Ability for CB Coils: 95A-125VDC

20A-120VAC, 15A-240VAC, 6A-600VAC, UL Interrupt Ratings:

3A-125VDC, 1A-250VDC

Overload Current (50 Ops): 95A-120VAC, 65A-240VAC, 35A-600VAC

.01 Ohms Maximum Contact Resistance:

#### Electronic

Baud Rate: 9600 Std; 1200, 4800, 19200 Selectable Transient Protection: Meets IEEE C37.90.1 and IEC 61000-4-4 Self-Reset Time: Optional, Programmable, 0.1 to 60 Sec.

#### Mechanical

Decks 1-10, 12, 15 Std. - Consult Factory for Options

Contacts 2 N/O and 2 N/C Per Deck

Action 45°

Mounting Panel Mount, 3 Hole Mounting,

Panel Thickness 3/16" Max. Standard - Consult Factory for Options Double-Wiping Silver Overlay Phosphor-bronze Rotary Contacts Silver Inlay in Brass, Silver Plated with Integral Stationary Contacts

Screw Type Terminals

Construction Contacts Enclosed in Molded Phenolic Insulators

	Nominal Voltage	Trip Coil		Reset Coil and Electronics	
Voltage Range		Coil Circuit DC Ohms @ 25C	Burden (Amps) at Rated Voltage	Coil Circuit DC Ohms @ 25C	Burden (Amps) at Rated Voltage
С	48 VDC	13.0	3.7	3.0	15.9
D	125 VDC	27.0	4.6	12.4	10.1
F	250VDC	104.0	2.4	80.6	3.1

For additional trip coil options, consult factory or see LOR-1 Tech Pub on website.

Trip Coil Voltage Data								
Voltage Range	Nominal Voltage	Threshold Voltage	Operating Range					
А	24 VDC	6VDC	10-40VDC					
В	24 VDC	9VDC	18-50VDC					
С	48 VDC	12VDC	24-70 VDC					
D	125 VDC	16VDC	30-140 VDC					
D	120 VAC	20 VAC	30-140 VAC					
E	125 VDC	23 VDC	45-140 VDC					
F	250 VDC	33 VDC	70-280VDC					
F	240 VAC	40 VAC	60-280 VAC					
G	125 VDC	70 VDC	90-140 VDC					
Н	250 VDC	140VDC	180-280 VDC					
K	125 VDC	16VDC	100-150 VDC					

Depth Behind Panel (inches)					
Number of Decks	Manual Reset LOR	High-Speed Trip LOR/ER	LOR/ER and Instant LOR/SR Time Delay	Reset LOR/SR	
1	3.63		-		
2	4.38				
3	4.75	8.00	8.00	8.63	
4	5.50				
5	6.25	9.75	9.75	10.38	
6	7.50				
7	8.13			11.63	
8	8.50	11.63	11.63		
10	9.63	12.90			
12	10.40				
15	12.75				

