



# 'Automation That Keeps A Handle On System Protection And Control'

The Series 24 Serial (Communication) Lock-Out Relay (SLOR) with Certified DNP 3.00 expands the functionality of our field proven Series 24 Electric Reset and Self Reset Lock-Out Relay in a single unit.

As an addressable network device, the SLOR provides Remote Trip Capability, Trip Coil Monitoring, Sequence of Events Reporting, System Battery Monitoring and Self-Diagnostic Reporting.

Most importantly, the SLOR design maintains the reliable hard-wired protective device trip and manual reset functions.

#### Additional Features

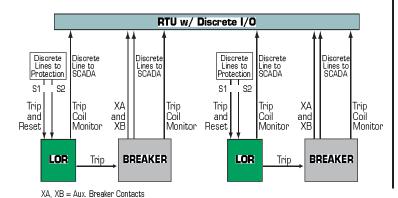
- Manual Reset
- Construction and Contacting Based on the Field Proven LOR Device
- Mechanical Target Flag
- SLOR Trip Coil Integrity LED Monitors
   in Either Trip or Reset Position
- Serial Bus Xmit/Rec Bicolor LED
- Local/Remote Mode Control with LED Status Indication
- LED Trip Signal Indication
- SLOR Position Status via SCADA
- 2 Additional Auxiliary Monitoring Inputs are Included
- Optional Programmable Self-Reset Timing and Logic

## **Cost-Saving Benefits**

- Free up RTU Points
- Reduce Point to Point Wiring
- Simplify Testing for Easier Commissioning
- Minimal Training Required
- Simplify Load Shedding Applications
- May Eliminate Separate Devices
   RTU
  - Discrete Battery Monitors
  - Local/Remote Control Switch
  - Coil Monitoring Lamp
  - Reclosing Relay
- Precise Sequence of Events Log with IRIG-B Input



#### Traditional LOR Installation



New Simplified SLOR Installation

RS485 Bus

TRIP
S1

SLOR

XA and XB
BREAKER
Trip
IRIG-B

XA, XB = Aux. Breaker Contacts

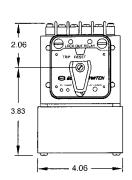
The simplified SLOR installation provides cost savings associated with wiring (wiring errors), testing, and commissioning.

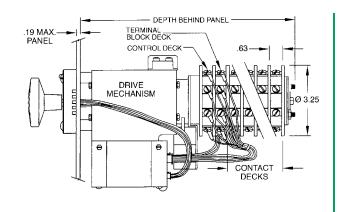












# **Nameplate Configuration** L1 , LED (Integral Coil Monitor) L2, LED (Trip Signal Detection) TRIP RESET Shows Trip (Orange) Reset Status (Black) of SLOR **ELECTROSWITCH** 9 XMIT – RED RCV – GREEN BI-COLOR LED LOCAL/REMOTE SWITCH (Push 3' Seconds to Toggle) REMOTE STATUS LED (Lighted = SCADA Operation Enabled)

### **Specifications**

#### **Electrical**

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

UL Interrupt Ratings:

20A-120VAC, 15A-240VAC, 6A-600VAC, 3A-125VDC, 1A-250VDC 95A-120VAC, 65A-240VAC, 35A-600VAC Overload Current (50 Ops):

Contact Resistance: .01 Ohms Maximum

#### Electronic

9600 Std; 1200, 4800, 19200 Selectable Baud Rate: Transient Protection: Meets IEEE C3/.90.1 and IEC 61000-4-4 Optional, Programmable, 0.1 to 60 Sec. Self-Reset Time:

Mechanical

3. 5. 8 Std. - Consult Factory for Options Decks

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

45° Action

Mounting Panel Mount, 3 Hole Mounting,

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

Sarew Type Terminals

Contacts Enclosed in Molded Phenolic Insulators Construction

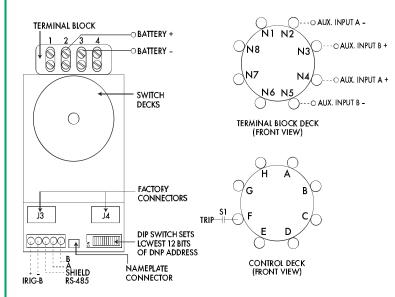
### Coil Burden Data

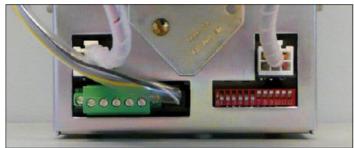
		Trip Coil		Reset Coil and Electronics	
Voltage Range	Nominal Voltage	Coil Circuit DC Ohms @ 25C	Burden (Amps) at Rated Voltage	Coil Circuit DC Ohms @ 25C	Burden (Amps) at Rated Voltage
С	48VDC	13.0	3.7	3.0	15.9
D	125VDC	27.0	4.6	12.4	10.1

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

DNP 3.00 Protocol Note: Refer to ES-SLOR-1 Tech Pub on website or consult factory regarding DNP 3.00 implementation for your application.

### **Installation Connections** (Rear View)





# **Required Ordering Information**

- Protocol: DNP 3.00 Std. Consult Factory for Other Protocols
- Baud Rate: 9600 Std., Others Available • Reset: Electrical Reset Std., Self-Reset Available
- Handle: Oval Std.
- Voltage: 125VDC Std. or 48 VDC Std.
- Engraving, Std. Shown Above (Other Engravings Available)
- Decks: Select 3, 5, or 8
- L1, L2 Replaceable LEDs Green L1 & Red L2 are Std.

Color Options – (Amber, Red, Green, Blue, White)

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