

Breaker Control Switch Relay with Time Delay Trip and Close for Arc Flash Protection of Personnel

The Time Delay Control Switch Relay (TD-CSR®) provides a means of protecting personnel from arc flash during local breaker operation. The time delay feature of the new TD-CSR expands the functionality of the field-proven CSR.

Integrated into the lighted nameplate package, two front panel-mounted push buttons provide the ability to manually initiate a time delayed breaker trip or close operation.

A flashing LED alerts the operator of either a pending trip or close operation, allowing adequate time to evacuate the arc flash area.

The TD-CSR is available with all of the features and options of the standard CSR. The lighted nameplate includes local LED indication, a remote SCADA contact alarm, and a single or dual trip coil monitoring option.



TD-CSR® Lighted Nameplate Showing Delay Trip and Delay Close Push Buttons

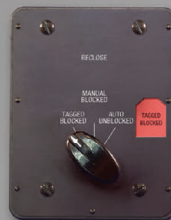
Features

- Local Trip or Close with 10 Second Delay via Push Button
- Flashing LED to Indicate Pending Operation
- Pending Operation Easily Cancelled
- Visible LED and Trip/Close Flag Indication
- Four Second Hold Requirement Prevents Accidental Push Button Operation
- Optional Factory Programmable Delay Time
- Traditional Manual Trip and Close via Pistol Grip

Safety and Cost-Saving Benefits

- Provides Safe On-Site Breaker Operation While Keeping Personnel Outside The "Arc Flash Zone"
- Fits Into Existing Breaker Control Switch Mounting
- No Special Wiring Required
- Includes Features of the Standard CSR
- Intuitive Push Button Operation Simplifies Training Requirements
- Provides a Reliable, Cost-Effective Method for Arc Flash Hazard Protection

Other Arc Flash Control Devices From Electroswitch



3 Position Tagging Relay

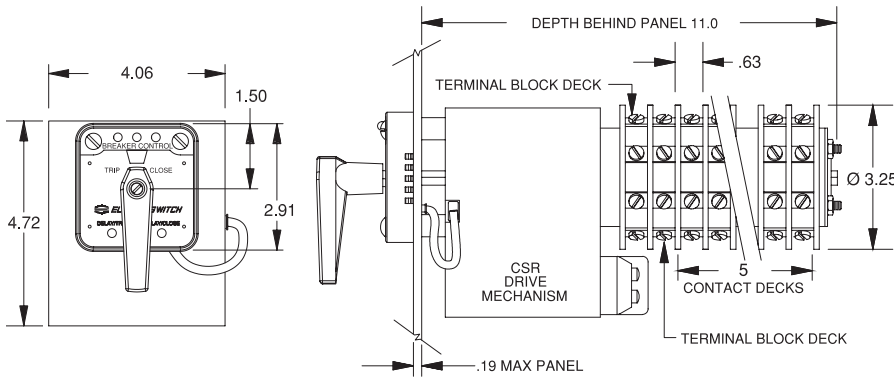
Position 1
Reclose Disabled

Position 2
Reclose Enabled

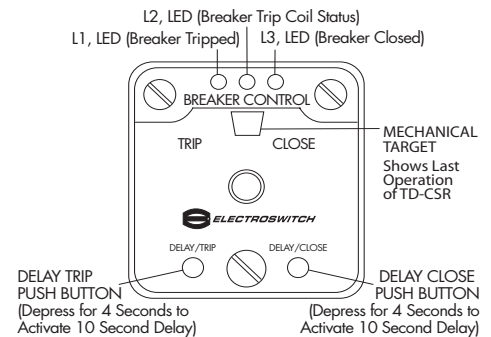
Position 3
Tagged, Relay Set to Instant Trip,
Reclose Disabled — One Shot to Lockout



2 Position Tagging Relay



Nameplate – Typical Configuration



Specifications

Electrical

Continuous Ratings: 30A–600V
 UL Interrupt Ratings: 20A–120VAC, 15A–240VAC, 6A–600VAC, 3A–125VDC, 1A–250VDC
 Overload Current (50 Ops): 95A–120VAC, 65A–240VAC, 35A–600VAC
 Making Ability for CB Coils: 95A–125VDC
 Contact Resistance: .01 Ohms Maximum

Electronic

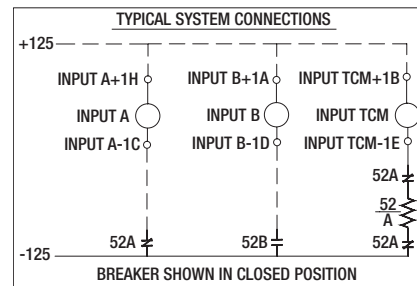
Transient Protection: Meets ANSI/IEEE C37.90.1
 Operation Hold Time: 1 Sec. Standard

Mechanical

Contacts: Break-Before-Make (Non-Shorting); Make-Before-Break (Shorting); Standard and Slip Contacts Available
 Action: 45° Spring Return
 Mounting: Panel Mount
 Panel Thickness: 3/16" Max. Standard – Others Available
 Rotor Contacts: Silver Overlay Phosphor-bronze, Double-Wiping
 Stationary Contacts: Silver Inlay Plated, with Integral Screw Type Terminals
 Construction: Contacts Enclosed in Molded Phenolic Insulation



Typical Breaker Input Connections



Use of Inputs

Input A controls the L3 (right) LED. In a typical application, it is used to monitor a 52A contact.

Input B controls the L1 (left) LED. In a typical application, it is used to monitor a 52B contact.

Input TCM controls the L2 (center) LED. In a typical application, it is used as a trip coil monitor.

The inputs are polarity sensitive. Reverse polarity causes no damage, but will not be sensed.

Contact Configuration

Flexible deck configuration offers multiple decks with two isolated contacts per deck; a total of twelve contacts each designed to handle full rated current.

NOTE: All features and configurations currently available on the CSR are available on the TD-CSR.

Consult factory for additional information.

Operational and Burden Voltage Data

Coil	Rated Voltage	Voltage Range	Coil Circuit DC Ohms @ 25°C (+/- 10%)	Burden (Amps) @ Rated Voltage (+/- 10%)
A	24VDC	21-28VDC	1.2	20.5
C	48VDC	41-56VDC	4.9	9.9
D	125VDC	106-140VDC	19	6.6
D	120VAC	106-140VAC	19	6.6
F	240VAC	216-264VAC	81	3.2
F	250VDC	212-280VDC	81	3.2

Required Ordering Information

- Handle: Pistol Grip Std.
- Voltage
- Engraving
- Turn to Latch Option
- Single or Dual Trip Coil Monitoring
- Contact Configuration
- Trip/Close Hold Time – Standard Setting 10 Sec.
- L1, L2, L3 (Replaceable LED Colors – Amber, Red, Green, Blue, White)

Effective July 1, 2014 This publication supersedes all previous editions. Specifications subject to change at the discretion of Electroswitch.