



Mark* VIeS Functional Safety Relay Contact Output Module Summary Sheet

The Mark* VIeS Functional Safety Relay Contact Output module provides an interface between the discrete process actuators (12 discrete outputs), relay contact outputs, and the Mark VIeS Safety control logic. The Relay Contact Output module consists of two orderable parts: the discrete output I/O pack and the relay contact output terminal board. All safety discrete/contact output modules use the same I/O pack, IS420YDOAS1B. Multiple DIN-rail mounted terminal boards and I/O contact wetting/fusing daughterboards are available to provide the necessary contact voltages, contact wetting and fusing configurations, redundancy, and terminal block styles.

The Relay Contact Output module is available in both Simplex and Triple Modular Redundant (TMR) configurations. Users can select the configuration that best addresses their needs for availability and SIL level. This document discusses the Simplex Relay Contact Output (SRLY) terminal board and optional daughterboards for contact wetting and fusing, and the Contact Output (TRLY) terminal board. The TRLY terminal board offers TMR capability, but it can also be used in a Simplex configuration using a single YDOA I/O pack. In a TMR I/O configuration, the I/O terminal board performs 2-out-of-3 voting on the discrete outputs.

Simplex Relay Contact Output (SRLY) Terminal Board



Simplex Relay Contact Output Module

The SRLY terminal board is a simplex S-type terminal board that provides 12 Form-C relay output circuits through 48 customer terminals. The YDOA mounts directly on the SRLY terminal board. The SRLYS2A is available to meet customer safety requirements and there are three available optional daughterboards for contact wetting (WROx) that connect to the SRLYS2A. The [SRLY Terminal Board with YDOA I/O Pack Specifications table](#) provides the specifications for the SRLYS2A terminal board and daughterboard versions available for use in the Mark VIeS Functional Safety System.

Contact Output (TRLY) Terminal Board



Simplex Relay Contact Output Module



TMR Relay Contact Output Module

The TRLY terminal board is a relay output terminal board used for Simplex or TMR configurations. The TRLY provides integrity feedback on each relay circuit. The YDOA I/O pack(s) mount directly on the TRLY terminal board. The TRLY is available in multiple versions to meet customer requirements. The [TRLY Terminal Board with YDOA I/O Pack Specifications table](#) provides the specifications for the TRLY versions available for use in the Mark VIeS Functional Safety System.

For more information on the YDOA I/O pack, the SRLY terminal board and optional daughterboards, and the TRLY terminal board, refer to the *Mark VIeS Functional Safety Systems for General Market Volume II System Guide for General-purpose Applications* (GEH-6855_Vol_II), the chapter *YDOA Discrete Output Modules*.