

# D5090

## SIL3 Relay Out Module for 5 A NE Loads

The D5090 is a relay module suitable for switching safety related circuits, up to SIL 3 level, for high risk industries. It provides isolation between input and output contacts. It makes available two NO contacts for Normally Energized (NE) loads, in order to disconnect the load on both supply lines, and a NC contact for service purpose. A wide compatibility towards different DCS/PLC is guaranteed: driving pulse testing is permitted by a dedicated internal circuit, which prevents contact and LED flickering.

### FEATURES

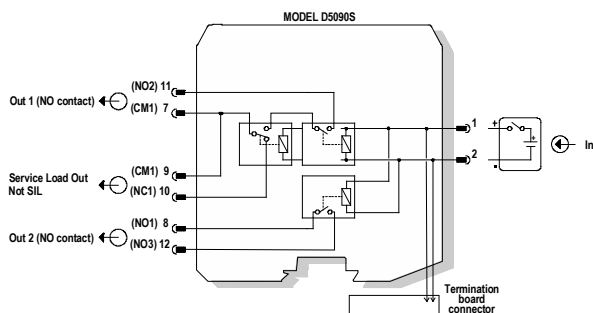
- SIL 3 / SC 3 for NE loads with NE driver
- Installation in Zone 2/Div. 2
- Up to 5 A functional / 6 A inrush current
- Load disconnection on both supply lines available
- Compatible with DCS/PLC pulse testing
- Service contact available
- Input/Output isolation

### FUNCTION DIAGRAM

Additional installation diagrams may be found in Instruction Manual.

Field

Safe Area/Zone 2/Div. 2



### TECHNICAL DATA

#### Input

24 Vdc nom (21.6 to 27.6 Vdc), reverse polarity protected. Relay coils are internally protected with suppressor diodes.

**Current consumption:** 45 mA @ 24 Vdc, typical.

**Power dissipation:** 1.1 W @ 24 Vdc, typical.

#### Output

1 voltage free SPDT relay contact identified with outputs: Out 1 (NO contact) terminals 7-11 and Service Load Out (NC contact) terminals 9-10; 1 voltage free SPST relay contact identified with output Out 2 (NO contact) terminals 8-12. Terminals 7-11 (Out 1) and 8-12 (Out 2) are open when relay is de-energized, closed in energized relay condition. Service load output (not SIL) at terminals 9-10 is normally close when relay is de-energized, open in energized relay condition.

**Contact material:** Ag Alloy (Cd free), gold plated.

**Contact rating:** 5 A 250 Vac 1250 VA, 5 A 250 Vdc 140 W (resistive load).

**Contact min. switching current:** 1 mA.

**Contact inrush current:** 6 A @ 24 Vdc, 250 Vac.

**DC and AC load breaking capacity:** refer to Instruction Manual.

**Mechanical / electrical life:** 5 \* 10<sup>6</sup> / 3 \* 10<sup>4</sup> operation, typical.

**Operate / release time:** 55 / 30 ms, typical.

#### Isolation

Input / All Outputs 2.5 kV; Out 1 / Out 2: 500V.

#### Environmental conditions

**Operating temperature:** temperature limits -40 to +70 °C.

**Storage temperature:** temperature limits -45 to +80 °C.

#### Mounting

DIN-Rail 35 mm, or on custom Term. Board.

**Weight:** about 125 g.

**Connection:** by polarized plug-in disconnect screw terminal blocks to accommodate terminations up to 2.5 mm<sup>2</sup> (13 AWG).

**Dimensions:** Width 12.5 mm, Depth 123 mm, Height 120 mm.

### ORDERING INFORMATION

D5090S: 1 channel

#### Accessories

DIN-Rail stopper MCHP196.