

# D5091-103

## SIL3 Relay Out Low-Power Module for 5 A ND Loads

The D5091-103 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 a NO and a NC contact for Normally De-energized (ND) loads, with either Normally De-energized or Normally Energized coil, and a contact for service purpose. This model is specifically designed to reach high functional safety at minimum power consumption and low input voltage. Compatibility with specific DO cards with pulse testing needs to be verified.

### FEATURES

- SIL 3 / SC 3 for ND/F&G loads with ND/NE driver
- Installation in Zone 2/Div. 2
- Up to 5 A functional / 6 A inrush current
- Low current consumption
- Service contact available
- Input/Output isolation

### ORDERING INFORMATION

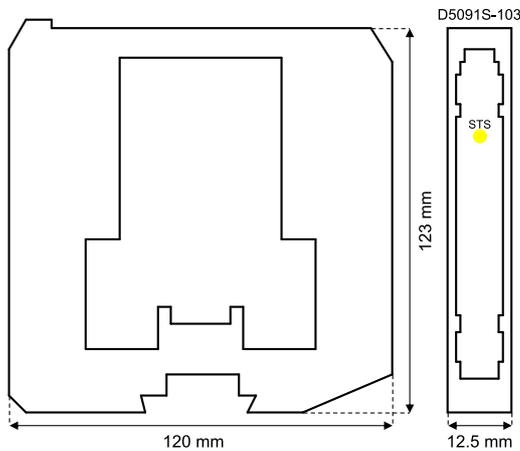
#### Ordering codes

D5091S-103: 1 channel

#### Accessories

DIN-Rail stopper MCHP196.

### OVERALL DIMENSIONS



### TECHNICAL DATA

#### Input

24 Vdc nom (20 to 28.8 Vdc), reverse polarity protected. Relay coils are internally protected with suppressor diodes.

**Current consumption:** 30 mA @ 24 Vdc, typical.

**Power dissipation:** 0.72 W @ 24 Vdc, typical.

#### Output

Voltage free SPDT relay contact. Terminals 7-8, open when relay de-energized, close in energized condition. Terminals 9-10, close when relay de-energized, open in energized 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

In/Out 2.5 kV.

#### 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.

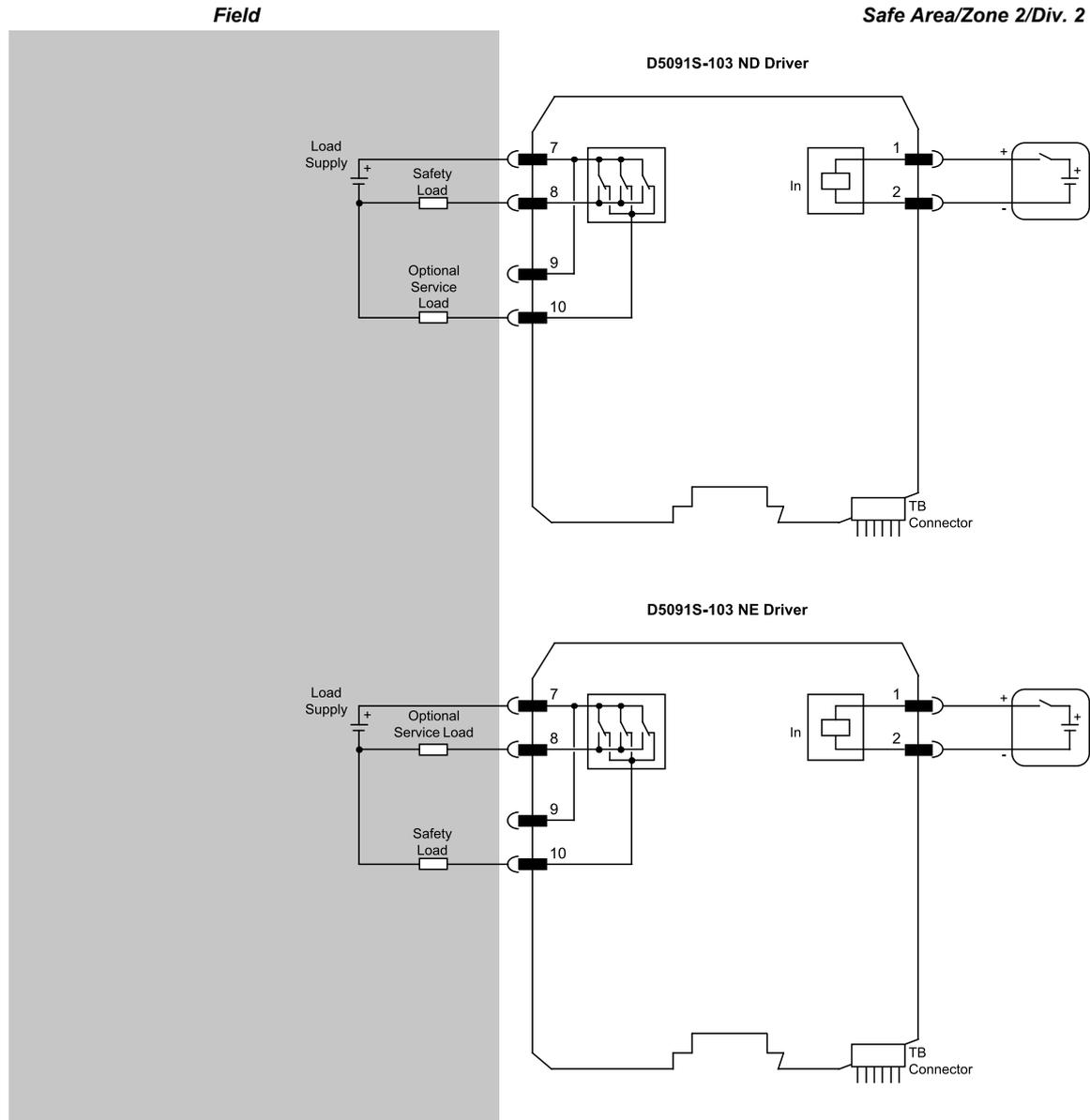
**Weight:** about 125 g.

**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.

## FUNCTION DIAGRAM

Additional installation diagrams may be found in Instruction Manual.



Functional Safety Management Certification:  
GM International is certified to conform to IEC61508:2010 part 1 clauses 5-6 for safety related systems up to and included SIL3. In addition, GM International products have been granted I.S. certificates from the most credited Notified Bodies in the world.

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