

# D5091

## SIL3 Relay Out Module for 5 A ND Loads

The D5091 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. 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 ND/F&G loads with ND/NE driver
- Installation in Zone 2/Div. 2
- Up to 5 A functional / 6 A inrush current
- Compatible with DCS/PLC pulse testing
- Service contact available
- Input/Output isolation

### ORDERING INFORMATION

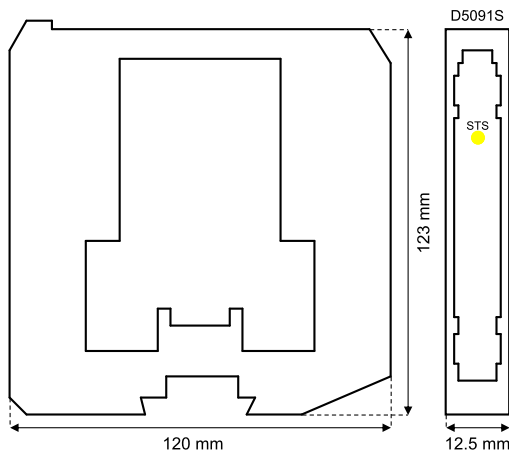
#### Ordering codes

D5091S: 1 channel

#### Accessories

DIN-Rail stopper MCHP196.

### OVERALL DIMENSIONS



### 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

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

Input/Output 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.

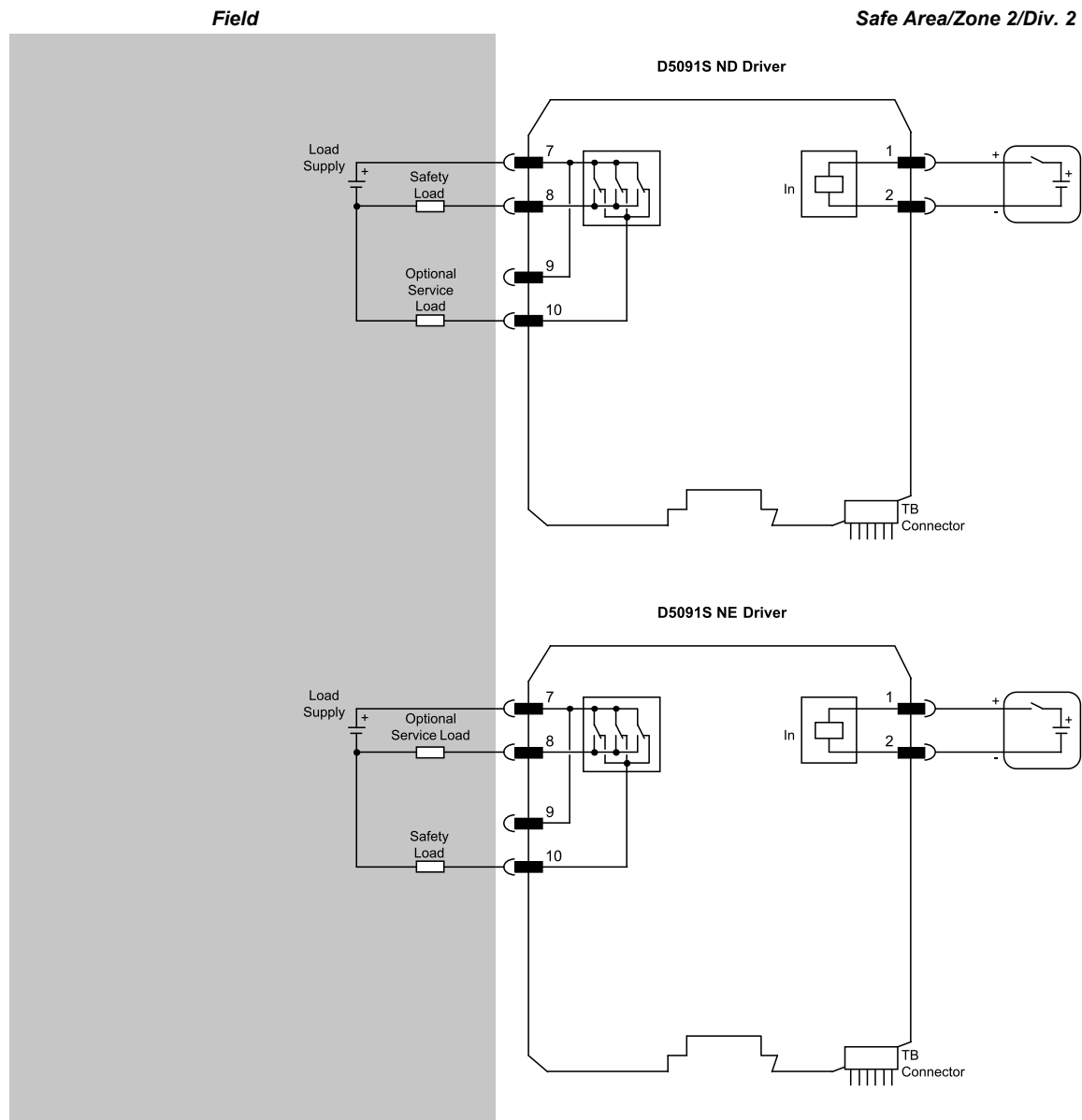
**Weight:** about 125 g.

**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.

Data specified in this document are merely descriptive of the products and should be integrated with relevant technical specifications. Our products are in constant development and the information presented herein refers to the time of document issue. No statements concerning a certain condition or suitability for a certain application can be derived from our information. The information given does not release the user from the obligation of own judgment and verification. Terms & Conditions can be found at our website. For more information refer to instruction manual.