

# D5290-084

## SIL3 110 Vdc Relay Out Module for 5 A NE/ND Loads

The D5290-084 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 up to four NO contacts and two NC contacts, which can be externally connected for multiple Normally Energized (NE) or Normally De-energized (ND) loads, with single or both supply lines disconnection, and additional service loads. Compatibility with specific DO cards with pulse testing needs to be verified. This relay module is not suitable for low-current consumption applications (system-to-system signalling, driving LEDs, etc.).

### FEATURES

- SIL 3 / SC 3 for NE/ND loads with NE driver
- Up to 5 A functional / 8 A inrush current
- Load disconnection on both supply lines available
- Service contact available
- Multiple contacts (up to 4 NE or 2 ND loads)
- Input/Output isolation

### ORDERING INFORMATION

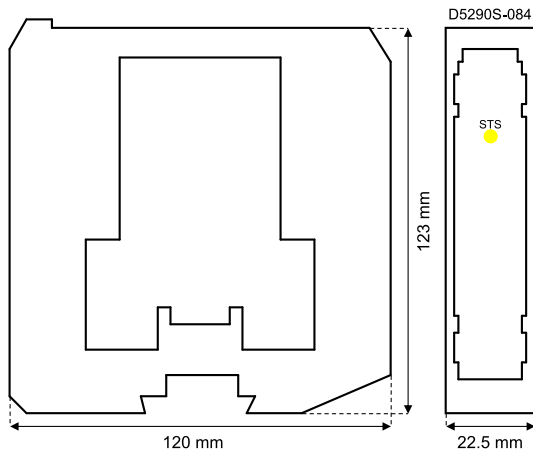
#### Ordering codes

D5290S-084: 1 channel

#### Accessories

DIN-Rail stopper MCHP196.

### OVERALL DIMENSIONS



### TECHNICAL DATA

#### Input

110 Vdc nom (100 to 125 Vdc), reverse polarity protected. Relay coils are internally protected with suppressor diodes.

**Current consumption:** 15 mA @ 110 Vdc, typical.

**Power dissipation:** 1.7 W @ 110 Vdc, typical.

#### Output

2 voltage free SPDT (= NO contact + parallel of 2 NC contacts) relay contacts identified with outputs: Out S\_1 & Out P\_1 and Out S\_3 & Out P\_2; 2 voltage free SPST (NO) relay contacts identified with: Out S\_2 and Out S\_4. Terminals 13-14 (Out S\_1), 15-16 (Out S\_2), 21-22 (Out S\_4) and 23-24 (Out S\_3) are: open when relay is de-energized, closed in energized relay condition. Terminals 17-18 (Out P\_1) and 19-20 (Out P\_2) are: closed when relay is de-energized, open in energized relay condition.

**Contact material:** Ag Alloy (Cd free).

**Contact rating:** 5 A 250 Vac 1250 VA, 5 A 250 Vdc 175 W (resistive load).

**Contact inrush current:** 8 A @ 30 Vdc, 250 Vac.

**Contact min. switching current:** 100 mA.

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

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

**Operate / release time:** 12 ms / 8 ms, typical.

#### Isolation

Input/All Outs 2.5 kV; Out S\_1 & Out P\_1/Out S\_3 & Out P\_2, Out S\_2, Out S\_4 500 V; Out S\_3 & Out P\_2/Out S\_2, Out S\_4 500 V; Out S\_2/Out S\_4 500 V.

#### Environmental conditions

**Operating temperature:** temperature limits -40 to +60 °C.

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

#### Mounting

DIN-Rail 35 mm.

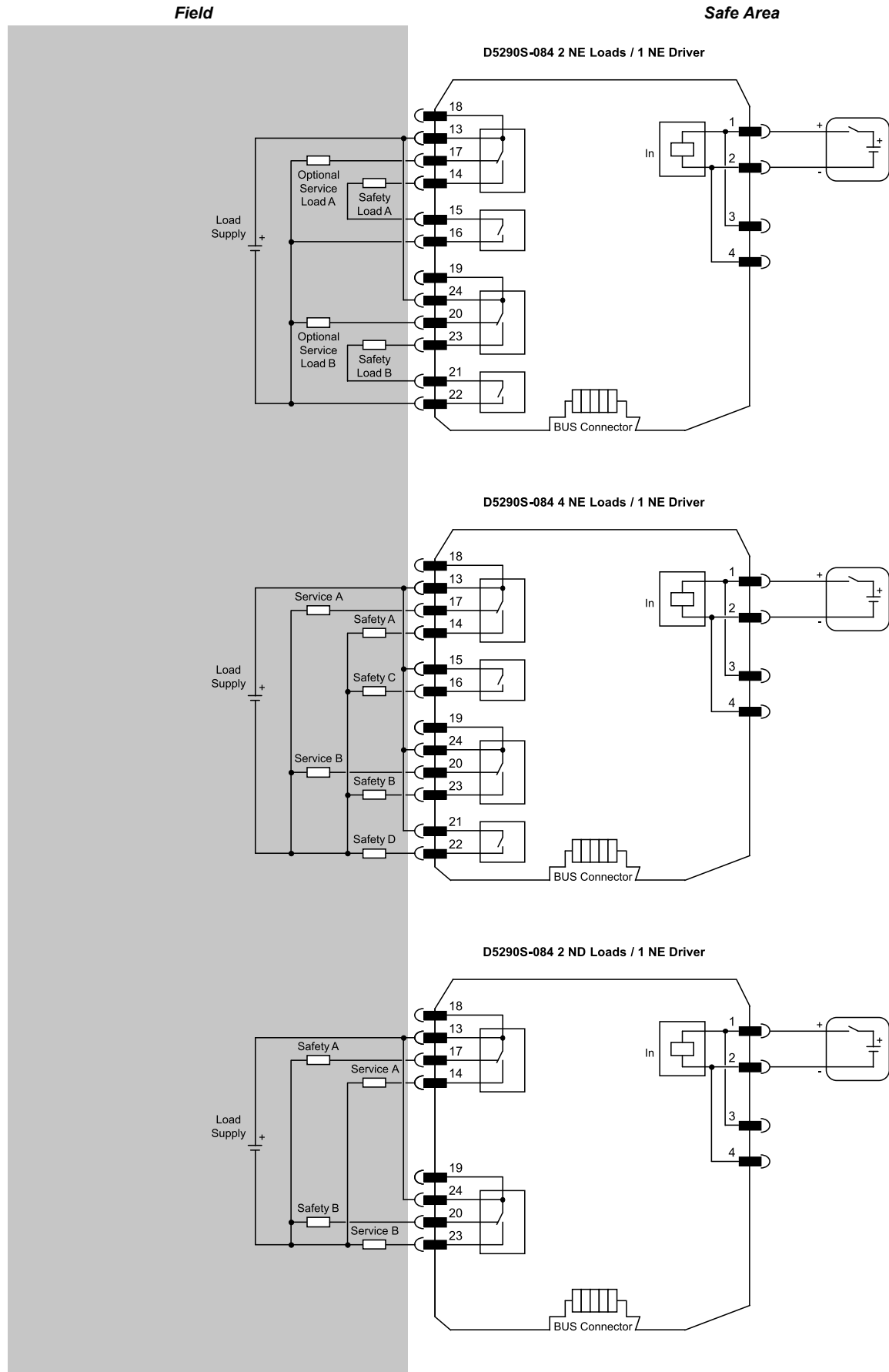
**Weight:** about 145 g.

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

**Dimensions:** Width 22.5 mm, Depth 123 mm, Height 120 mm.

# FUNCTION DIAGRAM

Additional installation diagrams may be found in Instruction Manual.



Temp. TMP0008 Rev.1



**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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