

D5290-078

SIL3 Relay Out Module for 5 A NE/ND Loads

The D5290-078 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. 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. 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/ND driver
- Installation in Zone 2/Div. 2
- Up to 5 A functional / 8 A inrush current
- Load disconnection on both supply lines available
- Compatible with DCS/PLC pulse testing
- Service contact available
- Multiple contacts (up to 4 NE or 2 ND loads)
- Input/Output isolation

ORDERING INFORMATION

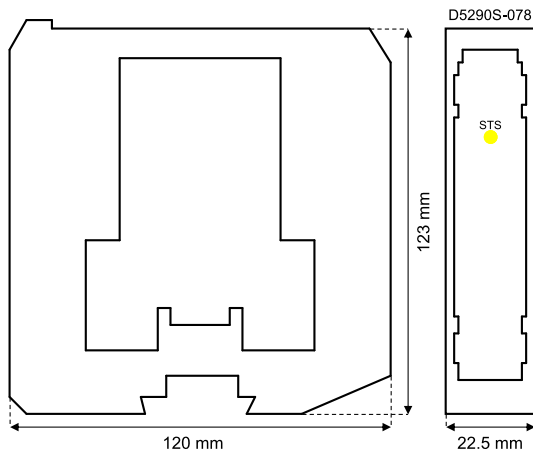
Ordering codes

D5290S-078: 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: 60 mA @ 24 Vdc, typical.

Power dissipation: 1.5 W @ 24 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) or AgSnO₂.

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 * 10⁶ / 5 * 10⁴ operation, typical.

Operate / release time: 55 ms / 25 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, or on custom Term. Board.

Weight: about 145 g.

Connection: by polarized plug-in disconnect screw terminal blocks to accommodate terminations up to 2.5 mm² (13 AWG).

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

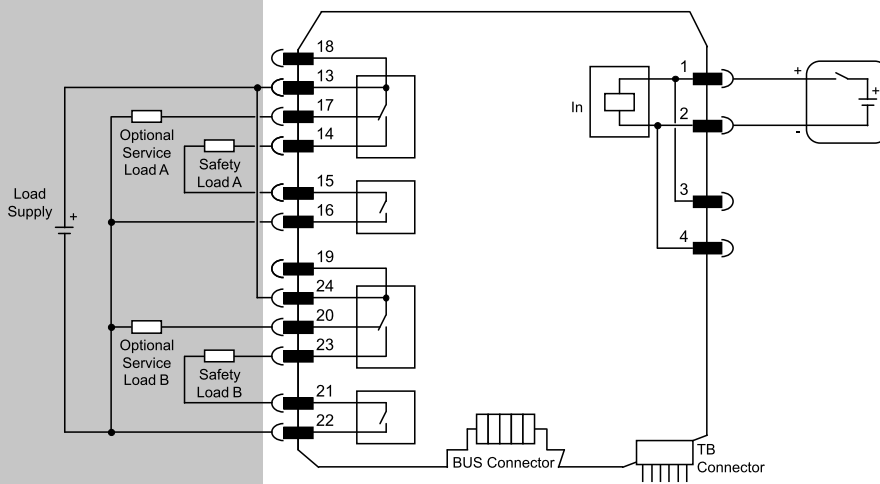
FUNCTION DIAGRAM

Additional installation diagrams may be found in Instruction Manual.

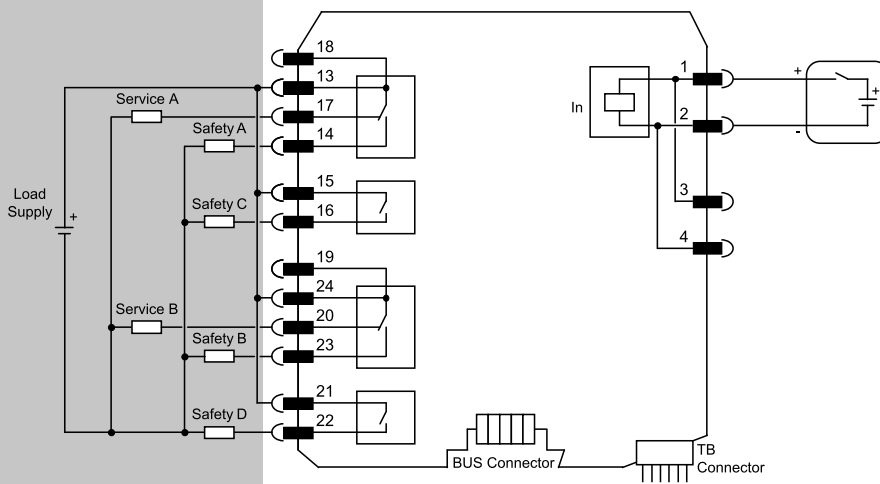
Field

Safe Area/Zone 2/Div. 2

D5290S-078 2 NE Loads / 1 NE Driver



D5290S-078 4 NE Loads / 1 NE Driver



D5290S-078 2 ND Loads / 1 NE Driver

