

D5032

I.S. SIL3 Switch/Proximity Relay-Out Repeater

The Switch/Proximity Detector Repeater D5032 is a module suitable for applications requiring SIL 3 level in safety related systems for high risk industries. The unit can be configured for switches or proximity detectors, located in Hazardous Area, and repeats the input state to a relay contact in Safe Area. The selectable fault detection circuit is available for proximity sensors or switches equipped with end of line resistors. In the double-channel model, the second output can be configured to repeat the second input, to duplicate the first input or to report the first input fault. If needed, the output can also be inverted.

FEATURES

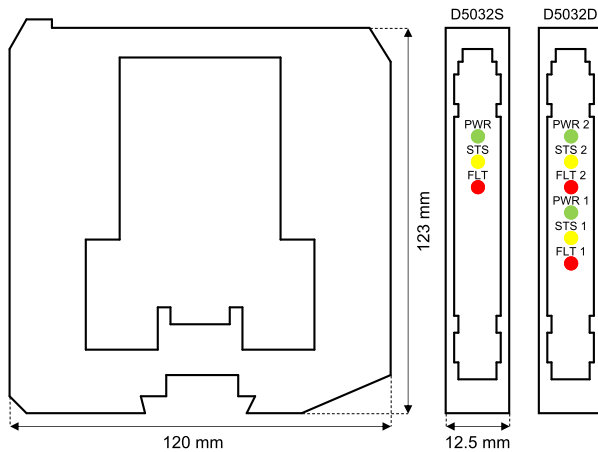
- SIL 3 / SC 3
- Input from Zone 0/Div. 1
- Installation in Zone 2/Div. 2
- 2 fully independent channels
- Field open and short circuit detection
- In-field programmability by DIP Switch
- Three port isolation, Input/Output/Supply
- High Density, two channels per unit

ORDERING INFORMATION

Ordering codes

D5032S: 1 channel
D5032D: 2 channels

OVERALL DIMENSIONS



TECHNICAL DATA

Supply

24 Vdc nom (18 to 30 Vdc), reverse polarity protected.

Current consumption: 35 mA (D5032D), 18 mA (D5032S), @ 24 Vdc with short circuit input and relay energized, typical.

Power dissipation: 0.85 W (D5032D), 0.45 W (D5032S), @ 24 Vdc with short circuit input and relay energized, typical.

Input

Input switching current levels: ON ≥ 2.1 mA, OFF ≤ 1.2 mA.

Fault current levels: open fault ≤ 0.2 mA, short fault ≥ 6.8 mA.

Input equivalent source: 8 V 1 k Ω typical (8 V no load, 8 mA short).

Output

Voltage free SPST relay contact.

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

Contact rating: 100 mA 50 Vac 5 VA, 100 mA 50 Vdc 5 W (resistive load).

Contact min. switching current: 1 mA.

Mechanical / electrical life: 5 * 10⁶ / 1 * 10⁶ operation, typical.

Operate / release time: 8 / 4 ms, typical.

Frequency response: 10 Hz maximum.

Isolation

I.S. In/Out 2.5 kV; I.S. In/Supply 2.5 kV; I.S. In/ I.S In 500 V; Out/Supply 500 V; Out/Out 500 V.

Environmental conditions

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

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

Safety description

Associated apparatus and non-sparking electrical equipment.

U_o = 10.5 V, I_o = 22 mA, P_o = 56 mW at terminals 7-8, 9-10.

U_m = 250 Vrms or Vdc, -40 °C \leq T_a \leq 70 °C.

Mounting

On custom Term. Board.

Weight: about 125 g (D5032D), 115 g (D5032S).

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

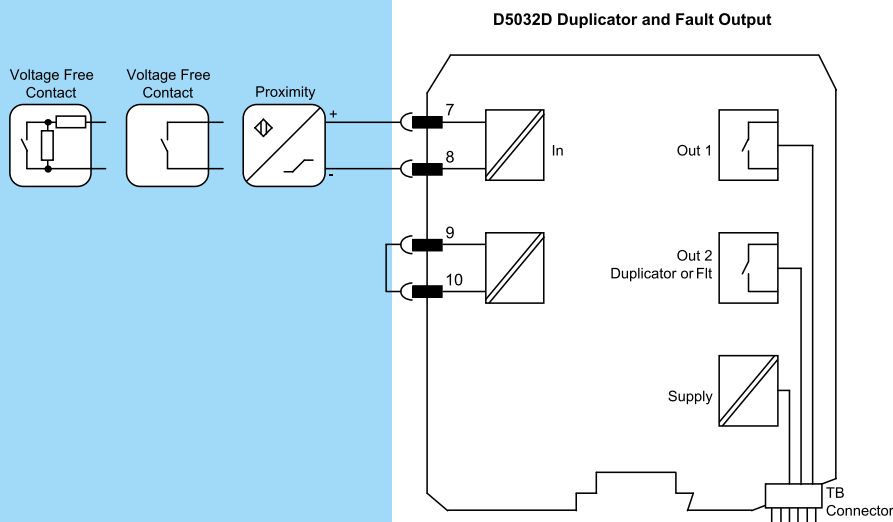
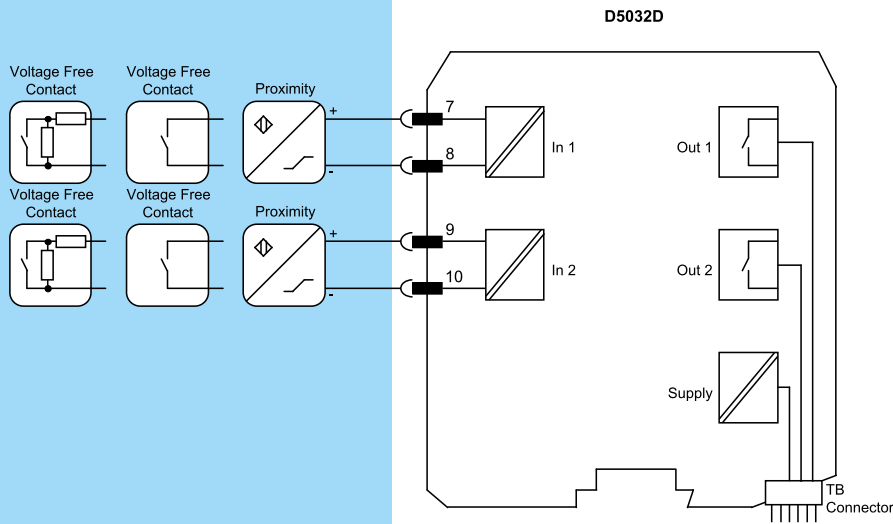
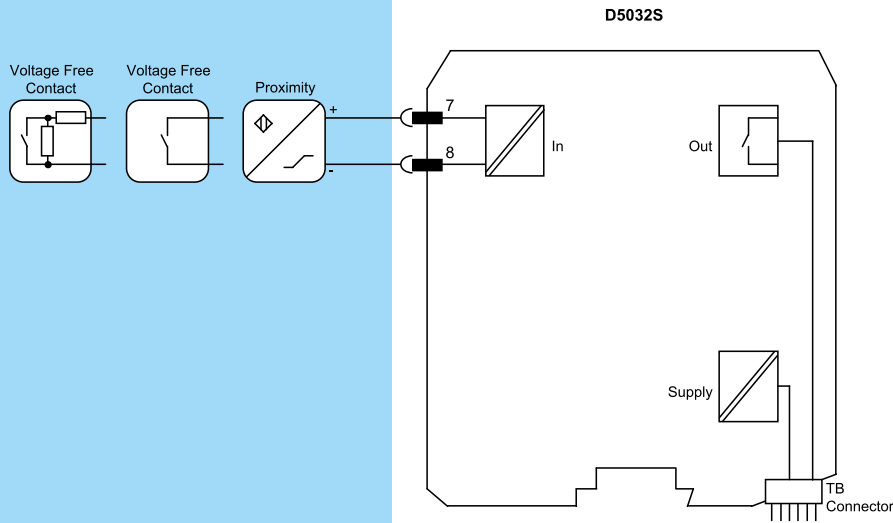
Dimensions: Width 12.5 mm, Depth 123 mm, Height 120 mm.

FUNCTION DIAGRAM

Additional installation diagrams may be found in Instruction Manual.

Hazardous Area

Safe Area/Zone 2/Div. 2



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.