

# **D5232** I.S. SIL2 Switch/Proximity Relay-Out Repeater

The Switch/Proximity Detector Repeater D5232 is a module suitable for applications requiring SIL 2 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. Input-to-output function can be inverted, and signals can be duplicated.

## **FEATURES**

- SIL 2 / SC 3 (pending)
- Input from Zone 0/Div. 1
- Installation in Zone 2/Div. 2
- · High output current
- Field open and short circuit detection
- Input inversion available
- Duplication available
- Three port isolation, Input/Output/Supply
- · High Density, four channels per unit

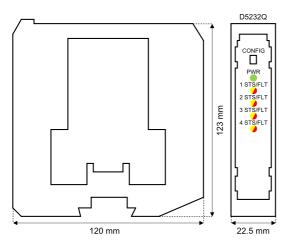
## **ORDERING INFORMATION**

#### Ordering codes D5232Q: 4 channels

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Accessories Bus Connector JDFT050, Bus Mounting Kit OPT5096. Programmable USB serial line Kit PPC5092 + SWC5090.

## **OVERALL DIMENSIONS**



## TECHNICAL DATA Supply

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

Current consumption: 75 mA @ 24 Vdc with short circuit input and output closed, typical.

**Power dissipation:** 1.8 W @ 24 Vdc with short circuit input and output closed, typical, excluding output contact dissipation.

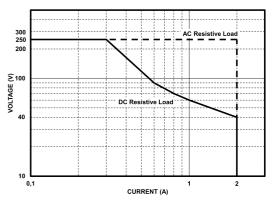
#### Input

Voltage source according to NAMUR standard. Input equivalent source: 7.5 V/1 k $\Omega$  typical (7.5 V no load, 7.5 mA short). Input switching current levels: ON  $\ge 2.1$  mA, OFF  $\le 1.2$  mA. No fault: input current  $\ge 0.35$  mA and input resistance  $\ge 360 \Omega$ . Open fault: input current  $\le 0.05$  mA. Short fault: input resistance  $\le 100 \Omega$ .

## Output

Voltage free SPST relay contact. Contact material: AgNi90/10. Contact rating: 2 A 250 Vac 500 VA, 2 A 250 Vdc 80 W (resistive load). Mechanical / electrical life: 15 \* 10<sup>6</sup> / 10 \* 10<sup>4</sup> operation, typical. Input-output delay: 20 ms, maximum. Frequency response: 10 Hz, maximum.

Output typical characteristics:



## Isolation

I.S. In/Out 2.5 kV; I.S. In/Supply 2.5 kV; 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. Uo = 11.2 V, Io = 12 mA, Po = 34 mW at terminals 13-14, 15-16, 17-18, 19-20. Um = 250 Vrms or Vdc, -40 °C  $\leq$  Ta  $\leq$  70 °C.

#### Mounting

DIN-Rail 35 mm, with or without Power Bus.

Weight: about 175 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.

emp. 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.

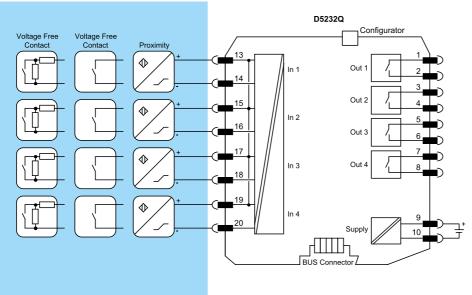
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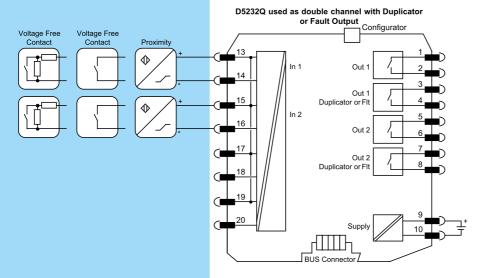
# **FUNCTION DIAGRAM**

Additional installation diagrams may be found in Instruction Manual.

Hazardous Area

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Safe Area/Zone 2/Div. 2
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#### Temp. TMP0008 Rev.1

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