

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

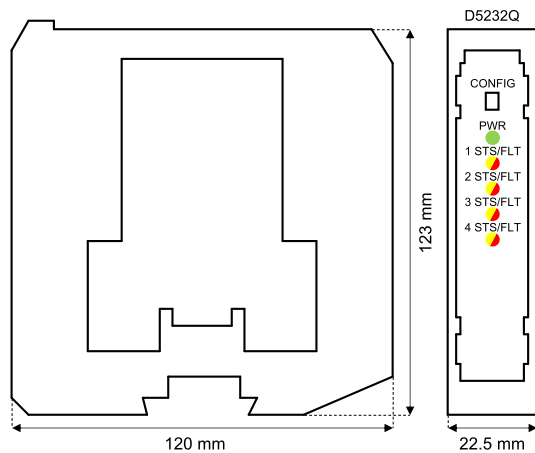
Ordering codes

D5232Q: 4 channels

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 kΩ typical (7.5 V no load, 7.5 mA short).

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

No fault: input current ≥ 0.35 mA and input resistance ≥ 360 Ω.

Open fault: input current ≤ 0.05 mA.

Short fault: input resistance ≤ 100 Ω.

Output

Voltage free SPST relay contact.

Contact material: AgNi90/10.

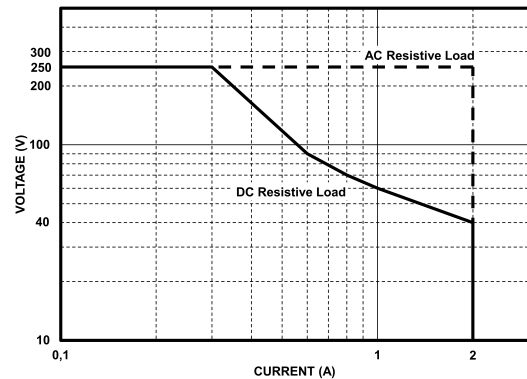
Contact rating: 2 A 250 Vac 500 VA, 2 A 250 Vdc 80 W (resistive load).

Mechanical / electrical life: 15 * 10⁶ / 10 * 10⁴ 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.

U_o = 11.2 V, I_o = 12 mA, P_o = 34 mW

at terminals 13-14, 15-16, 17-18, 19-20.

U_m = 250 Vrms or Vdc, -40 °C ≤ T_a ≤ 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 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.

Hazardous Area

Safe Area/Zone 2/Div. 2

