

# D6031

## SIL3 Switch/Proximity Transistor-Out Repeater

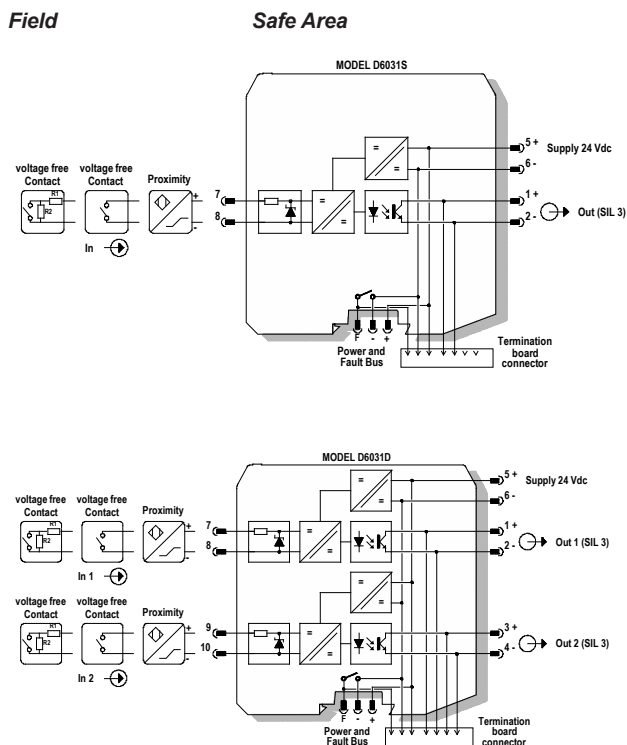
The Switch/Proximity Detector Repeater D6031 is a module suitable for applications requiring SIL 3 level in safety related systems for high risk industries. The unit can be configured for switches or proximity detectors and repeats the input state to an open-collector transistor. The selectable fault 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
- 2 fully independent channels
- High frequency transistor output
- Field open and short circuit detection
- In-field programmability by DIP Switch
- Three port isolation, Input/Output/Supply
- High Density, two channels per unit

### FUNCTION DIAGRAM

Additional installation diagrams may be found in Instruction Manual.



### TECHNICAL DATA

#### Supply

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

**Current consumption:** 22 mA (D6031D), 12 mA (D6031S), @ 24 Vdc with short circuit input and transistor closed, typical.

**Power dissipation:** 0.53 W (D6031D), 0.30 W (D6031S), @ 24 Vdc with short circuit input and transistor closed, typical.

#### Input

**Input switching current levels:** ON  $\geq 2.1$  mA, OFF  $\leq 1.2$  mA.

**Fault current levels:** open fault  $\leq 0.2$  mA, short fault  $\geq 6.8$  mA.

**Input equivalent source:** 8 V 1 k $\Omega$  typical (8 V no load, 8 mA short).

#### Output

Voltage free SPST optocoupled open-collector transistor.

**Open-collector/drain rating:** 100 mA @ 35 Vdc ( $\leq 1.5$  V voltage drop).

**Leakage current:**  $\leq 50$   $\mu$ A @ 35 Vdc.

**Response time:**  $\leq 100$   $\mu$ s.

**Frequency response:** 5 kHz maximum.

#### Isolation

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

#### Environmental conditions

**Operating temperature:** temperature limits  $-40$  to  $+70$   $^{\circ}$ C.

**Storage temperature:** temperature limits  $-45$  to  $+80$   $^{\circ}$ C.

#### Mounting

DIN-Rail 35 mm, with or without Power Bus or on custom Term. Board.

**Weight:** about 130 g (D6031D), 110 g (D6031S).

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

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

### ORDERING INFORMATION

D6031S: 1 channel

D6031D: 2 channels

#### Accessories

Bus Connector JDFT049, Bus Mounting Kit OPT5096.