

D5034

I.S. SIL3 Line-Fault Transp. Switch/Prox. Repeater

The Switch/Proximity Detector Repeater D5034 is a module suitable for applications requiring SIL 3 level in safety related systems for high risk industries. The unit can be connected to switches or proximity detectors, located in Hazardous Area, and repeats the input current to the output in Safe Area. DCS/PLC Digital Input cards compatible with NAMUR devices can detect the status/fault of proximity sensors or switches equipped with end of line resistors, in transparent mode, through the module.

FEATURES

- SIL 3 / SC 3
- Input from Zone 0/Div. 1
- Installation in Zone 2/Div. 2
- 2 fully independent channels
- Field fault mirroring to PLC NAMUR DI
- High Accuracy
- Three port isolation, Input/Output/Supply
- High Density, two channels per unit

TECHNICAL DATA

Supply

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

Current consumption: 30 mA (D5034D), 15 mA (D5034S), @ 24 Vdc with short circuit input, typical.

Power dissipation: 0.72 W (D5034D), 0.36 W (D5034S), @ 24 Vdc with short circuit input, typical.

Input

Current range: ≥ 0.1 mA to ≤ 8.0 mA.

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

Output

0.1 to 8.0 mA in sink mode, V max. 30 V, current limited ≈ 8 mA, repeats input current level.

Response time: 1 ms (0 to 100 % step change).

Power dissipation: 0.4 W (D5034D), 0.2 W (D5034S), @ 24 Vdc with short circuit input, typical.

Performance

Ref. Conditions: 24 V supply, 23 \pm 1 $^{\circ}$ C ambient temperature.

Calibration accuracy: $\leq \pm 0.25$ % FSR.

Linearity accuracy: $\leq \pm 0.25$ % FSR.

Temp. influence: $\leq \pm 0.03$ % FSR on zero/span for a 1 $^{\circ}$ C change.

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 $^{\circ}$ C.

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

Safety description

Associated apparatus and non-sparking electrical equipment.

$U_o = 10.5$ V, $I_o = 15$ mA, $P_o = 39$ mW at terminals 7-8, 9-10.

$U_m = 250$ Vrms or Vdc, -40 $^{\circ}$ C $\leq T_a \leq 70$ $^{\circ}$ C.

Mounting

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

Weight: about 140 g (D5034D), 115 g (D5034S).

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

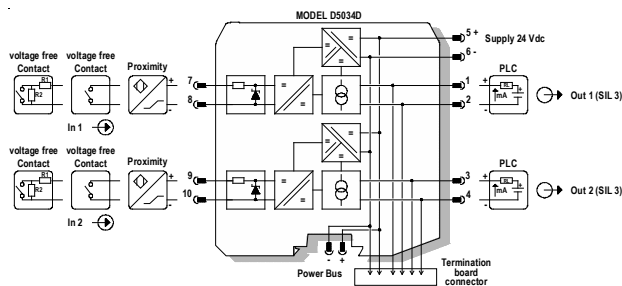
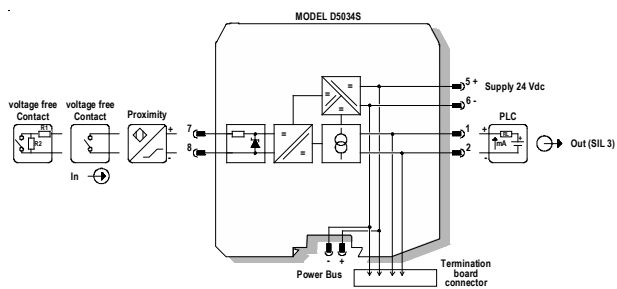
Dimensions: Width 12.5 mm, Depth 123 mm, Height 120 mm.

FUNCTION DIAGRAM

Additional installation diagrams may be found in Instruction Manual.

Hazardous Area

Safe Area/Zone 2/Div. 2



ORDERING INFORMATION

D5034S: 1 channel

D5034D: 2 channels

Accessories

Bus Connector JDFT049, Bus Mounting Kit OPT5096.