



Functional Description:

This 4 channel intrinsically safe interface device is designed to accommodate four switches or NAMUR proximity sensor inputs or any combination of the two from a hazardous area and repeat the change of state of the field circuits to a control system located in a non-hazardous area.

The non-hazardous area outputs are four open collector transistors reflecting the corresponding change of state from each individual input of the field circuit, to its appropriate corresponding output when appropriately configured.

A common alarm transistor for all four channels is also incorporated.

Features:

- 4 channel input for NAMUR sensors or mechanical switches
- Monitoring of field wiring for open or short-circuit (if required)
- Configuration switches on top of unit for easy access
- 4 short-circuit protected open collector transistor non-hazardous area outputs; 1 for each channel and 1 alarm
- Selectable N.O./N.C. outputs

Electrical Parameters:

Inputs: Hazardous Area

Supply Voltage - (20-250 VAC or 20-125 VDC)
 Inputs (8.2 V, 8.2 mA)
 Switching Threshold 1.55 mA
 Hysteresis Typical 0.2 mA
 Open-circuit Threshold ≤0.1 mA
 Short-circuit Threshold ≥6.0 mA

Outputs: Non-Hazardous Area

5 Transistors, Potential Free Short-Circuit Protected
 Switching Voltage ≤30 VDC
 Switch Current ≤50 mA per channel
 Switch Frequency ≤3 kHz
 Voltage Drop. ≤2.5 V

For entity parameters see control drawings on pages B86 - B91.

Isolation Switch Relays IM1-451Ex-T

Pin #	Terminal Function
1	(+) to Field Device #1
2	(-) to Field Device #1
3	No Connection
4	(+) to Field Device #2
5	(-) to Field Device #2
6	(+) to Field Device #3
7	(-) to Field Device #3
8	No Connection
9	(+) to Field Device #4
10	(-) to Field Device #4

Pin #	Terminal Function
11	(+) Non-Hazardous Area Trans 3 & 4
12	Non-Hazardous Area Transistor #3 (-)
13	Non-Hazardous Area Transistor #4 (-)
14	Non-Hazardous Area Trans Alarm (+)
15	Non-Hazardous Area Trans Alarm (-)
16	(+) Non-Hazardous Area Trans 1 & 2
17	Non-Hazardous Area Transistor #1 (-)
18	Non-Hazardous Area Transistor #2 (-)
19	Module Power (+) or AC
20	Module Power (-) or AC

