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Find the *Eaton / MTL Instruments MTL4015* at our website: ***Click HERE***

MTL4015 SWITCH/ PROXIMITY DETECTOR INTERFACE UNIT

dual relay output

With the MTL4015, a switch or proximity detector located in a hazardous area can control two safe-area loads. The two safe-area outputs are made through relays. It is designed for applications where the status of a sensor needs to be fed to two separate systems (eg, control and shutdown). A phase-reversal switch, located on top of the module, allows an alarm signal to be signalled for either state of the sensors. Line fault detection (LFD) for broken or shorted lines is provided as also are facilities for earth fault detection. Power and switch status is indicated by LEDs located on top of the module.

SPECIFICATION

See also common specification, cable parameters and approvals

Number of channels
One

Location of switches
Zone 0, IIC, T6 hazardous area
Div.1, Group A, hazardous location

Location of proximity detector
Zone 0, IIC, T4–6 if suitably certified
Div.1, Group A, hazardous location

Voltage applied to sensor
7.0–9.0V dc from 1kΩ

Input/output characteristics
Outputs closed if >2.1mA* (<2kΩ) in sensor circuit
Outputs open if <1.2mA* (>10kΩ) in sensor circuit
Hysteresis: 200μA (650Ω) nominal
**NAMUR and DIN 19234 standards for proximity detectors*

Phase reversal
The operation of the output can be reversed by a switch on top of the unit

Line fault detection (LFD)
By built-in line-fault detection (LFD)
Output opens if input current <100μA (broken line) or >6.5mA (shorted lines)
Note: to prevent false triggering of LFD, switch-type sensors must be fitted with resistors as shown in the diagram or LFD disabled by the switch on top of the unit

'No-fail' earth fault protection
Enabled by connecting terminal 6 to an MTL4220 earth leakage detector
Fault on either line of each channel proclaimed: unit continues working

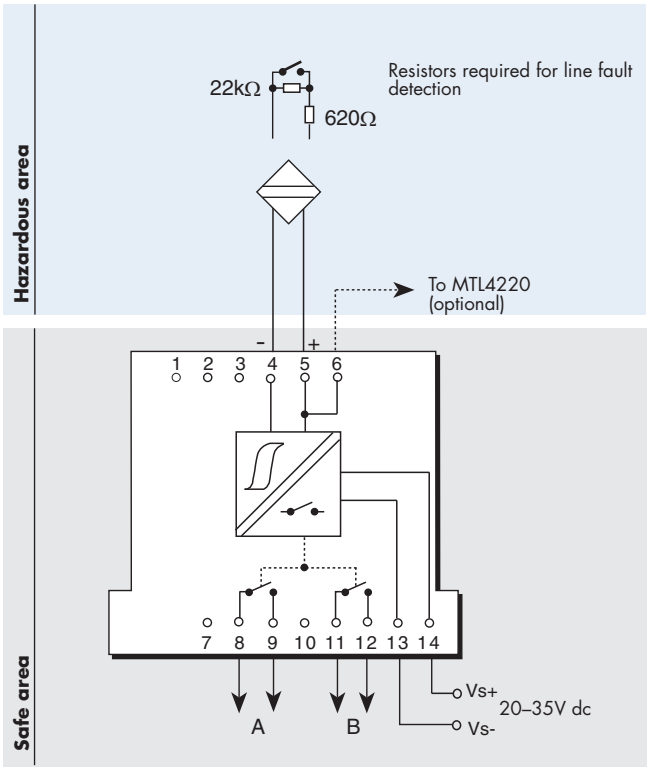
Relay output characteristics
Double-pole on/off, open when relay de-energised
Response time: 2ms maximum
Contact rating: 10W, 0.5A, 35V (dc)
Contact life expectancy: 10^6 operations at maximum load
Note: reactive loads must be adequately suppressed

LED indicators
Amber: one provided, ON when output circuit is closed
Green: one provided for power indication

Power requirement, Vs
50mA at 24V dc
60mA at 20V dc
45mA at 35V dc

Power dissipation within unit
1.2W at 24V
1.6W at 35V

Isolation
250V ac between safe and hazardous area circuits



Terminal	Function
4	Input –ve
5	Input +ve
6	Optional link from input to MTL4220
8, 9	Output A
11, 12	Output B
13	Supply –ve
14	Supply +ve

Safety description for each channel
10.5V, 800Ω, 14mA

FM entity parameters
V_{oc} = 10.5V dc, I_{sc} = 14mA, C_a = 2.4μF, L_a = 165mH

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