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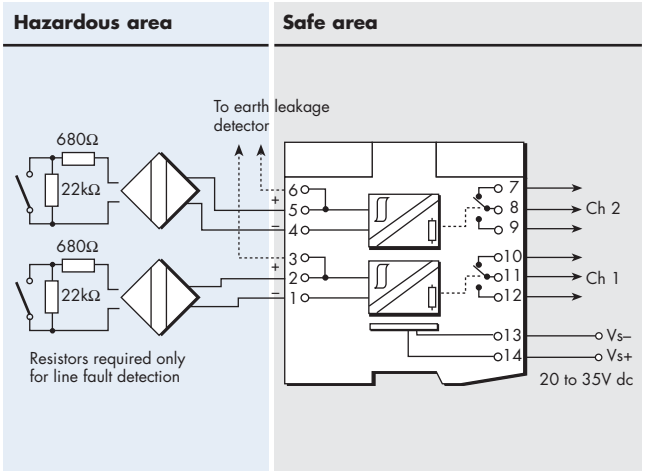
Find the *Eaton / MTL Instruments MTL5018* at our website: ***Click HERE***

MTL5018 SWITCH/ PROXIMITY DETECTOR INTERFACE

two-channel, with line fault detection and phase reversal

CE

The MTL5018 enables two safe-area loads to be controlled by two switches or proximity detectors located in a hazardous area. Two relay outputs are provided. Independent phase reversal control allows an alarm condition to be signalled for either state of the sensor. A selectable line fault detect (LFD) facility detects an open or short circuit in either field circuit.



SPECIFICATION

See also common specification

Number of channels
Two

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

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

Safe-area output
Two relays with changeover contacts

Hazardous-area inputs
Inputs conforming to NAMUR/DIN 19234 standards for proximity detectors

Voltage applied to sensor
7 to 9V from 1kΩ ±10%

Input/output characteristics
Normal (reverse) phase:
output energised (de-energised) if I_{in} >2.1mA or R_{in} <2kΩ
output de-energised (energised) if I_{in} <1.2mA or R_{in} >10kΩ
Hysteresis: 200µA, typical

Line fault detection (LFD)
User-selectable via switches on the top of the unit. Line faults are indicated by an LED for each channel. A detected line fault de-energises the relay.
Open-circuit alarm on if I_{in}<100µA
Open-circuit alarm off if I_{in}>250µA
Short-circuit alarm on if R_{in}<100Ω
Short-circuit alarm off if R_{in}>360Ω
Note: Resistors must be fitted when using the LFD facility with a contact input
500Ω to 1kΩ in series with switch
20kΩ to 25kΩ in parallel with switch

Phase reversal
Independent for each channel, user-selectable

Relay type
Single pole, changeover contacts
Note: reactive loads must be adequately suppressed

Relay characteristics
Response time: 10ms maximum
Contact rating: 250V ac, 2A, cosø >0.7
40V dc, 2A, resistive load

Terminal	Function
1	Input –ve (Ch 1)
2	Input +ve (Ch 1)
3	Earth leakage detection
4	Input –ve (Ch 2)
5	Input +ve (Ch 2)
6	Earth leakage detection
7	Normally-closed contact (Ch 2)
8	Common (Ch 2)
9	Normally-open contact (Ch 2)
10	Normally-closed contact (Ch 1)
11	Common (Ch 1)
12	Normally-open contact (Ch 1)
13	Supply –ve
14	Supply +ve

LED indicators
Green: power indication
Yellow: two: status of each channel (on when outputs are energised)
Red: two: LFD indication for each channel (on when line fault detected)

Maximum current consumption
60mA at 20V
60mA at 24V
40mA at 35V

Maximum power dissipation
1.4W at 24V
1.5W at 35V

Isolation
250V ac or dc between power supply, hazardous-area circuits and relay outputs

Safety description (each channel)
10.5V, 800Ω, 14mA, U_m= 250V rms or dc

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Aug 2008

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