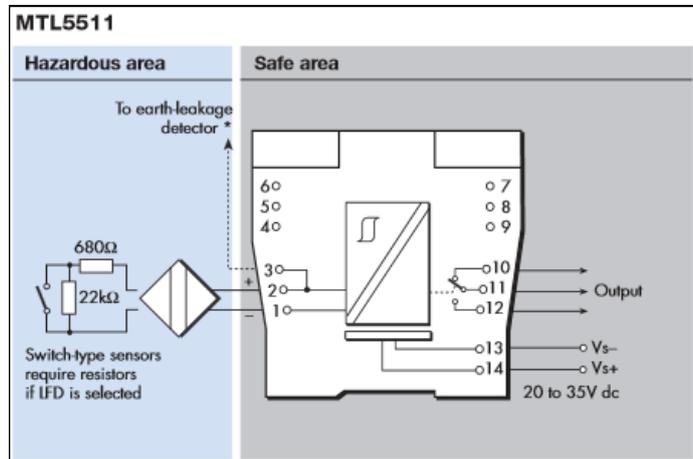


## MTL 5511 IS Barrier

The MTL5511 enables a safe-area load to be controlled by a switch or proximity detector located in a hazardous-area.

When selected, open or short circuit conditions in the field wiring are detected by the line-fault-detect (LFD) facility and also indicated on the top of the module.

Phase reversal for the channel is selected by a switch on the side of the module and output is provided by changeover relay contacts.



### SPECIFICATION

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 hazardous area if suitably certified Div. 1, Group A hazardous location
Hazardous-area inputs:	Inputs conforming to BS EN60947–5–6:2001 standards for proximity detectors (NAMUR)
Voltage applied to sensor:	7 to 9V dc from 1kΩ ±10%
Input/output characteristics:	Normal phase Outputs closed if input > 2.1mA (< 2kΩ in input circuit) Outputs open if input < 1.2mA (> 10kΩ in input circuit) Hysteresis: 200μA (650Ω) nominal
Line fault detection (LFD):	User-selectable via switches on the side of the unit. A line fault is indicated by an LED. The channel output relay is de-energised if an input line fault is detected. Open-circuit alarm on if $I_{in} < 50\mu A$ Open-circuit alarm off if $I_{in} > 250\mu A$ Short-circuit alarm on if $R_{in} < 100\Omega$ Short-circuit alarm off if $R_{in} > 360\Omega$ <i>Note: Resistors must be fitted when using the LFD facility with a contact input</i> 500Ω to 1kΩ in series with switch 20kΩ to 25kΩ in parallel with switch
Safe-area output:	Single pole relay with changeover contacts <i>Note: reactive loads must be adequately suppressed</i>
Relay characteristics:	Response: 10ms maximum Contact rating: 250V ac, 2A, $\cos\phi > 0.7$ 40V dc, 2A, resistive load
LED indicators	Green: power indication Yellow: channel status, on when output energised Red: LFD indication, on when line fault detected
Maximum current consumption:	25mA at 24V
Power dissipation within unit:	0.6W at 24V
Safety description (each channel):	$U_o=10.5V$ $I_o=14mA$ $P_o=37mW$ $U_m= 253V$ rms or dc
SIL capable:	These models have been assessed for use in IEC 61508 functional safety applications.

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