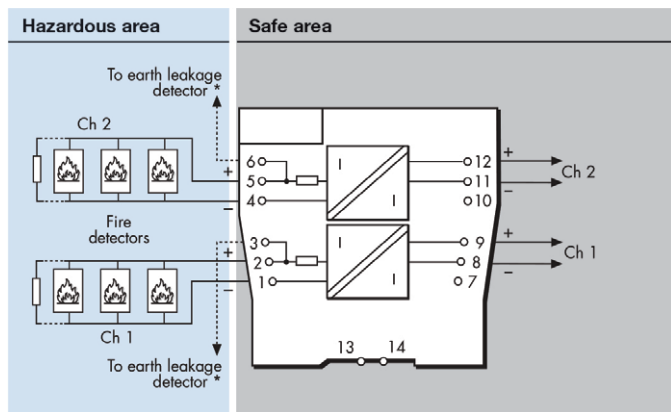


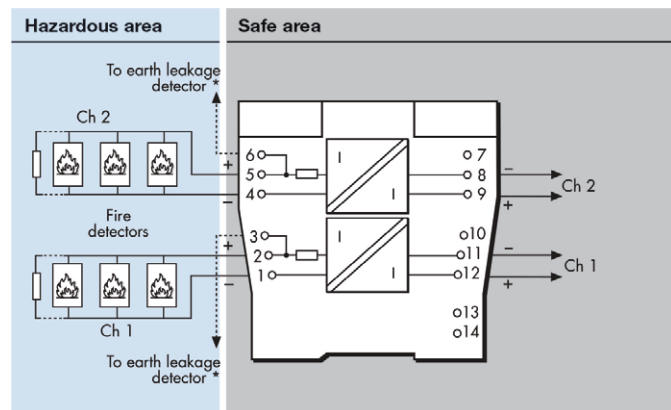
MTL4561 – MTL5561 FIRE AND SMOKE DETECTOR INTERFACE 2-channel

The MTLx561 is a loop-powered 2-channel interface for use with conventional fire and smoke detectors located in hazardous areas. In operation, the triggering of a detector causes a corresponding change in the safe-area current. The unit features reverse input polarity protection, while 'no-fail' earth fault detection on either line can be provided by connecting an earth leakage detector to terminal 3 and/or 6.

MTL4561



MTL5561



*Signal plug HAZ1-3 is required for access to this function

SPECIFICATION

See also common specification

Number of channels	Two, fully floating, loop powered
Location of fire and smoke detectors	Zone 0, IIC, T4–6 hazardous area if suitably certified Div. 1, Group A, hazardous area
Input voltage	6 to 30V dc
Current range	1 to 40mA, nominal
Quiescent safe-area current at 20°C	(hazardous-area terminals open circuit) < 400µA at Vin = 24V per channel
Integral input polarity protection	Input circuit protected against reverse polarity
'No-fail' earth fault protection	Enabled by connecting terminals 3 and/or 6 to an earth leakage detector (see notes) Fault on either line of each channel proclaimed: unit continues working <i>Notes:</i> 1. To maintain isolation between the two channels, separate earth leakage detectors are needed. 2. The earth leakage detectors introduce a 100µA, 1Hz ripple to the field circuit.
Minimum output voltage Vout at 20°C	For Vin ≤ 25V: Vout = Vin – (0.38 x current in mA) – 2V For Vin > 25V: Vout = 22.5V – (0.35 x current in mA)
Maximum output voltage	28V from 300Ω
Transfer accuracy at 20°C	Better than 400µA
Temperature drift	< 4µA/°C (0°C to 60°C) < 15µA/°C (–20°C to 0°C)
Response time to step input	Settles to within 5% of final value within 1.5ms
Power dissipation within unit	0.7W maximum at 24V with 40mA signal (each channel) 0.9W maximum at 30V with 40mA signal (each channel)
Safety description for each channel	Uo=28V Io=93mA Po=0.65W Um = 253V rms or dc