MTL4561 – MTL5561
FIRE AND SMOKE DETECTOR INTERFACE
2-channel

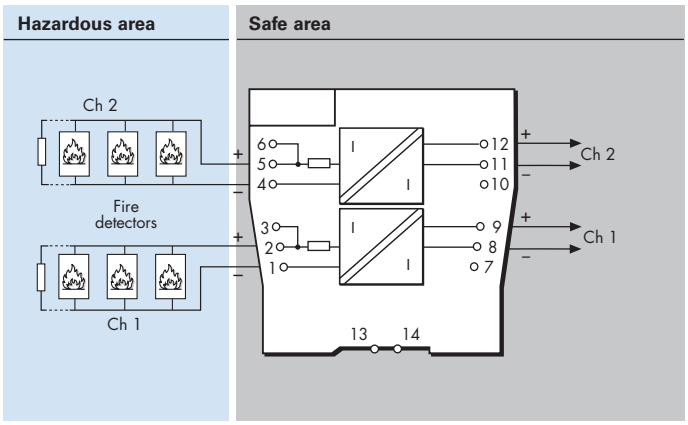
The MTLx561 is a loop-powered 2–channel interface for use with conventional fire and smoke detectors located in hazardous areas. In operation, the triggering of a detector causes a corresponding change in the safe–area current. The unit features reverse input polarity protection.

SPECIFICATION

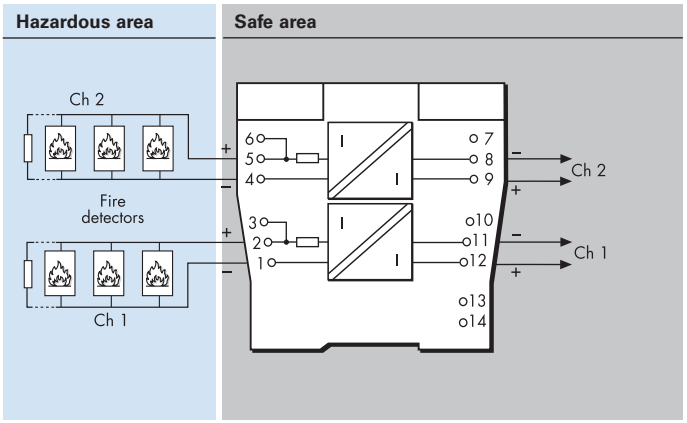
See also common specification

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
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
U_o=28V I_o=93mA P_o=0.65W U_m = 253V rms or dc

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SIL capable
These models have been assessed for use in IEC 61508 functional safety applications.
SIL2 capable for a single device (HFT=0)
SIL3 capable for multiple devices in safety redundant configurations (HFT=1)
See data on MTL web site and refer to the safety manual.

The given data is only intended as a product description and should not be regarded as a legal warranty of properties or guarantee.
In the interest of further technical developments, we reserve the right to make design changes.

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