

# MTL4549/C/Y - MTL5549/Y

## ISOLATING DRIVER

two-channel, for 4–20mA, HART®  
valve positioners with line fault detection

The MTLx549 accepts 4/20mA floating signals from safe-area controllers to drive 2 current/pressure converters (or any other load up to 800Ω) in a hazardous area. For HART valve positioners, the module also permits bi-directional transmission of digital communication signals. Process controllers with a readback facility can detect open or short circuits in the field wiring: if these occur, the current taken into the terminals drops to a preset level. The MTL4549C and MTLx549Y are very similar to the MTLx549 except that they provide open circuit detection only (i.e. no short-circuit detection).

### SPECIFICATION

See also common specification

#### Number of channels

Two

#### Location of I/P converter

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

#### Working range

4 to 20mA

#### Digital signal bandwidth

500Hz to 10kHz

#### Maximum load resistance

800Ω (16V at 20mA)

#### Minimum load resistance

90Ω (short-circuit detection at < 50Ω)

#### Output resistance

> 1MΩ

#### Under/over range capability

Under range = 1mA  
Over range = 24mA (load ≤ 520Ω)

#### Input and output circuit ripple

<40μA peak-to-peak

#### Communications supported

HART

#### Transfer accuracy at 20°C

Better than 20μA

#### Temperature drift

< 1.0μA/°C

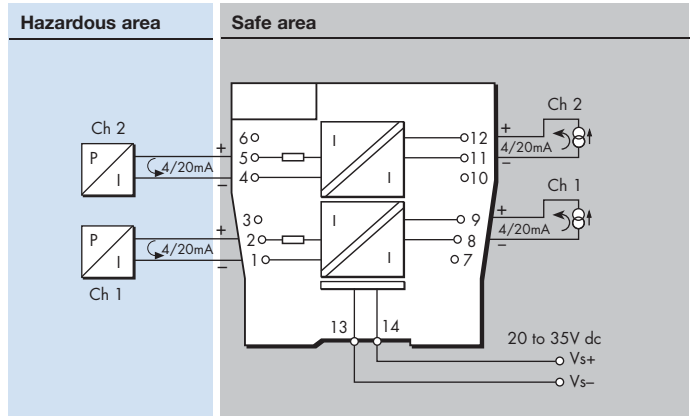
#### Input characteristics

Field wiring state	MTL4549	MTL4549C	MTL4549Y
Normal	< 6.0V	< 6.0V	< 6.0V
Open-circuit	< 0.9mA	< 0.9mA	< 0.5mA
Short-circuit	< 0.9mA	N.A.	N.A.

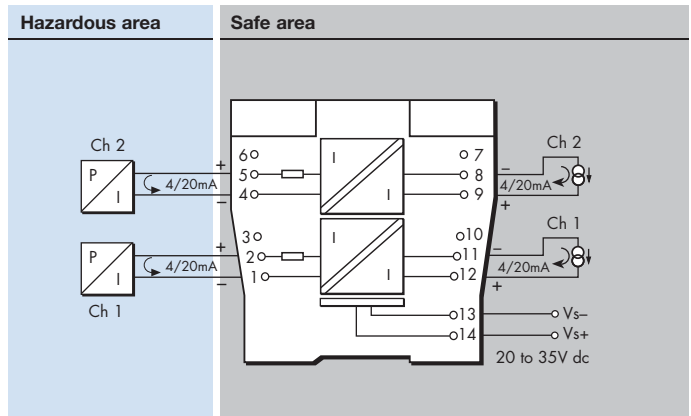
#### Response time

Settles within 200μA of final value within 100ms

### MTL4549 / MTL4549C / MTL4549Y



### MTL5549 / MTL5549Y



#### LED indicator

Green: power indication

#### Maximum current consumption (with 20mA signals into 250Ω load)

70mA at 24V dc

#### Power dissipation within unit (with 20mA signals into 250Ω load)

1.6W at 24V

#### Safety description (each channel)

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

#### SIL capable

These models have been assessed for use in IEC 61508 functional safety applications. See data on MTL web site.

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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