

# MTL5549

## ISOLATING DRIVER

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

The MTL5549 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 smart valve positioners, the module also permits bi-directional transmission of digital communication signals so that the device can be interrogated either from the operator station or by a hand-held communicator. 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.

### 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

#### Transfer accuracy at 20°C

Better than 20μA

#### Temperature drift

< 1.0μA/°C

#### Input characteristics

< 6.0V with the field wiring intact

< 0.9mA with the field wiring open or short-circuit

#### Response time

Settles within 200μA of final value within 100ms

#### Communications supported

HART®

#### LED indicator

Green: power indication

#### Maximum current consumption (with 20mA signals)

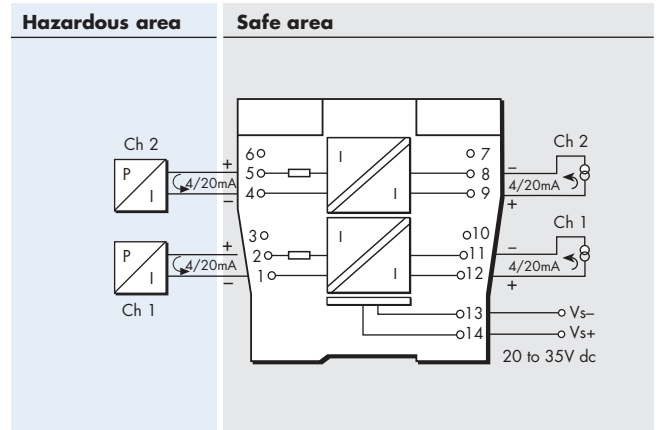
70mA at 24V dc

#### Power dissipation within unit (with 20mA signals)

1.6W at 24V

#### Safety description (each channel)

$V_o=28V$   $I_o=93mA$   $P_o=651mW$   $U_m = 253V$  rms or dc



Terminal	Function
1	Output -ve (Ch 1)
2	Output +ve (Ch 1)
4	Output -ve (Ch 2)
5	Output +ve (Ch 2)
8	Input -ve (Ch 2)
9	Input +ve (Ch 2)
11	Input -ve (Ch 1)
12	Input +ve (Ch 1)
13	Supply -ve
14	Supply +ve

