

# MTL5546 ISOLATING DRIVER

for 4–20mA smart valve positioners  
with line fault detection

The MTL5546 accepts a 4/20mA floating signal from a safe-area controller to drive a current/pressure converter (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

One

### 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 signal)

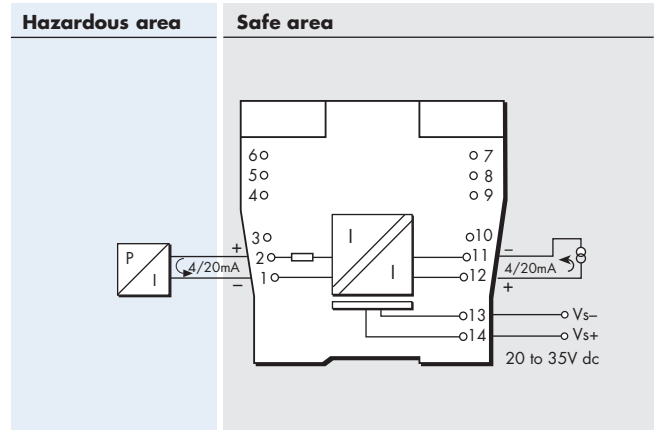
35mA at 24V dc

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

0.8W at 24V

### Safety description

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



Terminal	Function
1	Output -ve
2	Output +ve
11	Input -ve
12	Input +ve
13	Supply -ve
14	Supply +ve

