

# MTL4546S ISOLATING DRIVER

for 4–20mA HART® valve positioners with line fault detection and long field lines

The MTL4546S accepts a 4/20mA floating signal from a safe-area controller to drive a current/pressure converter (or any other load up to 710Ω) 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 circuits in the field wiring: if these occur, the current taken into the terminals drops to a preset level. The reduced maximum open-circuit voltage permits the use of longer field lines compared to MTL4546

## 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

710Ω (14.2V at 20mA)

### Minimum load resistance

90Ω

### 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

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

### Response time

Settles within 200μA of final value within 100ms

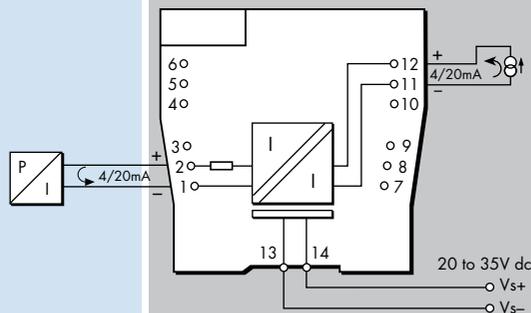
### Communications supported

HART

## MTL4546S

Hazardous area

Safe area



### LED indicator

Green: power indication

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

35mA at 24V dc

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

0.8W at 24V

### Safety description

$V_o=22V$   $I_o=100mA$   $P_o=550mW$   $U_m=253V$  rms or dc

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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