

# MTL4646/Y ISOLATING DRIVER

for 4–20mA HART® valve positioners  
with line fault detection

The MTL4646 accepts a 4/20mA floating signal from a safe-area controller to drive a current/pressure converter (or any other load up to 800Ω). 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 MTL4646Y is very similar except that it provides open circuit detection only (i.e. no short-circuit detection).

## SPECIFICATION

See also common specification

### Number of channels

One

### 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

Field wiring state	MTL4646	MTL4646Y
Normal	< 6.0V	< 6.0V
Open-circuit	< 0.9mA	< 0.5mA
Short-circuit	< 0.9mA	N.A.

### Response time

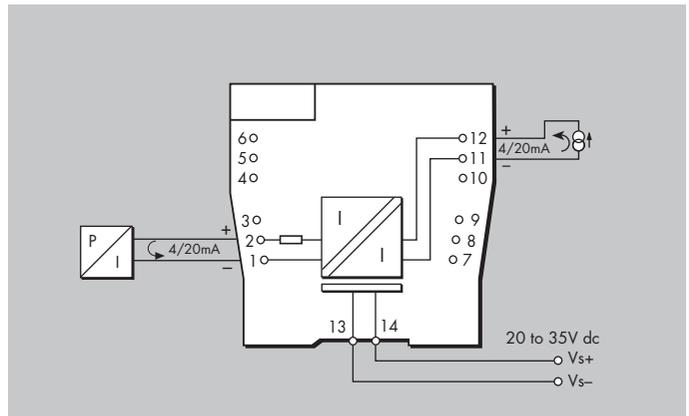
Settles within 200μA of final value within 100ms

### Communications supported

HART

### LED indicator

## MTL4646 / MTL4646Y



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

### 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.



EUROPE (EMEA): +44 (0)1582 723633  
enquiry@mtl-inst.com

THE AMERICAS: +1 800 835 7075  
csinfo@mtl-inst.com

ASIA-PACIFIC: +65 6 487 7887  
sales@mtlsing.com.sg

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