

MTL4649/Y ISOLATING DRIVER

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

The MTL4649 accepts 4/20mA floating signals from a controller to drive 2 current/pressure converters (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 MTL4649Y 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

Two

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

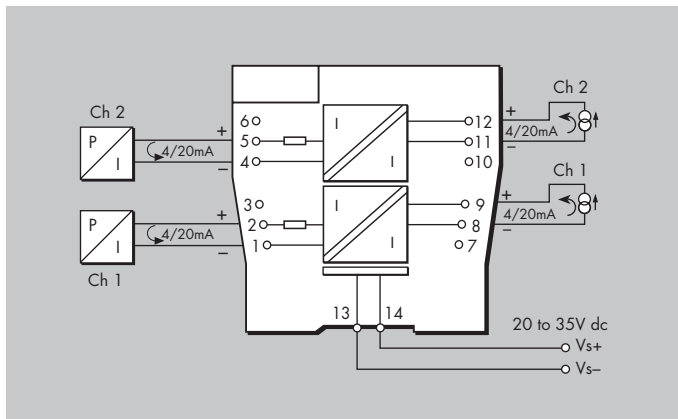
Temperature drift

< 1.0μA/°C

Input characteristics

| Field wiring state | MTL4649 | MTL4649Y |
|--------------------|---------|----------|
| Normal | < 6.0V | < 6.0V |
| Open-circuit | < 0.9mA | < 0.5mA |
| Short-circuit | < 0.9mA | N.A. |

MTL4649 / MTL4649Y



Response time

Settles within 200μA of final value within 100ms

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



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In the interest of further technical developments, we reserve the right to make design changes.