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).

MTL4649 / MTL4649Y

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
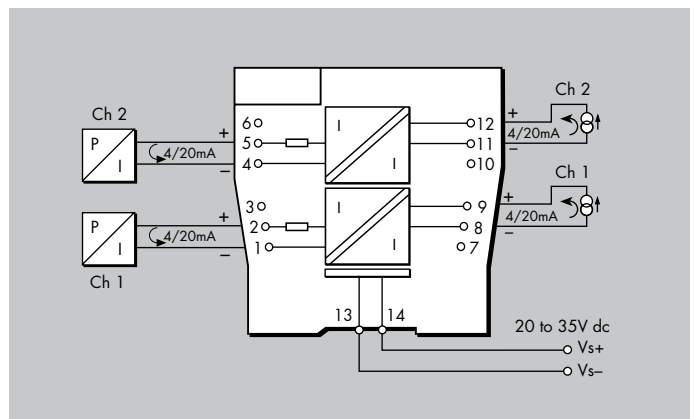Better than 20µA

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.

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