MTL4646/Y ISOLATING DRIVER for 4–20mA HART[®] valve positioners with line fault detection

The MTL4646 accepts a 4/20mA floating signal from a safearea 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 $\leq 520\Omega$) Input and output circuit ripple

< 40µA peak-to-peak

Transfer accuracy at 20°C

Better than 20µA

Temperature drift

< 1.0µA/°C

Input characteristics

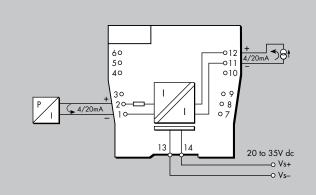
Field wiring state	MTL4646	MTL4646Y
Normal	< 6.0V	< 6.0V
Open-circuit	< 0.9mA	< 0.5mA
Short-circuit	< 0.9mA	N.A.

Response time

Settles within 200µA of final value within 100ms Communications supported

HART

MTL4646 / MTL4646Y



LED indicator

Green: power indication

Maximum current consumption (with 20mA signals into 250 Ω load) 35mA at 24V dc

Power dissipation within unit (with 20mA signals into 250 Ω load) 0.8W at 24V

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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