

MTL5546Y-T ISOLATING DRIVER

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

The MTL5546Y-T accepts a 4/20mA floating signal from a safe-area controller to drive a current/pressure converter (or any other load up to 800Ω) 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 circuit in the field wiring: if this occurs, the current taken into the terminals drops to a preset level.

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

800Ω (16V at 20mA)

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	MTL5546Y-T
Normal	< 6.0V
Open-circuit	< 0.5mA
Short-circuit	N.A.

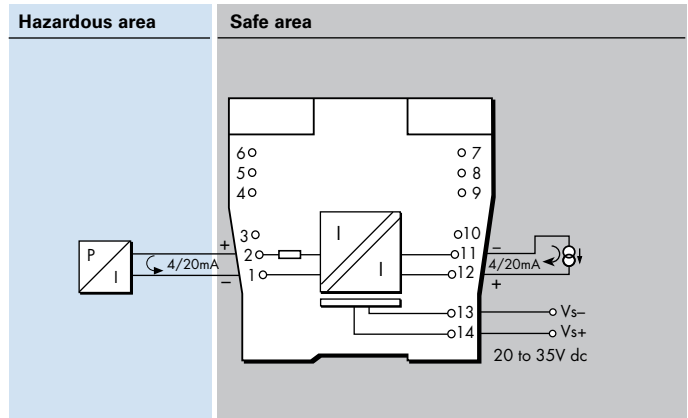
Response time

Settles within 200μA of final value within 100ms

Communications supported

HART

MTL5546Y-T



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

Operating temperature range

-20°C to + 65°C (-6 to + 149°F)

Safety description

$U_o=28V$ $I_o=93mA$ $P_o=651mW$ $U_m = 253V$ rms or dc



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