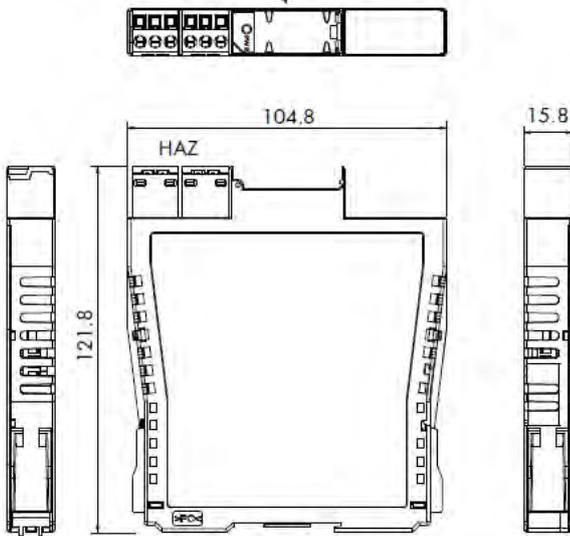


MTL4546 ISOLATING DRIVER

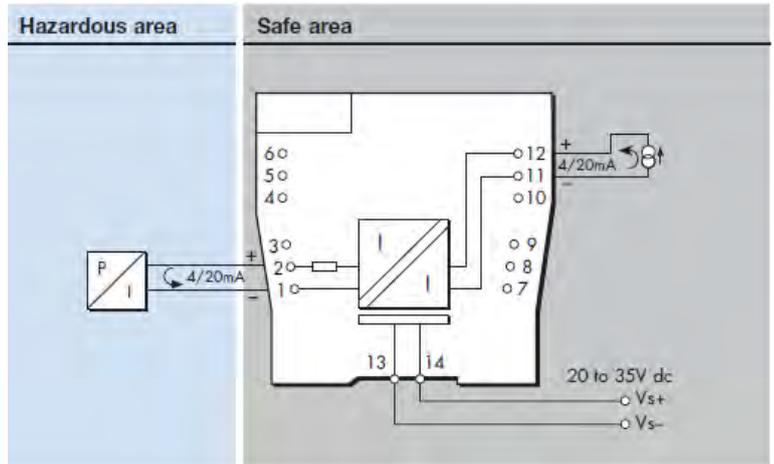
for 4-20mA smart valve positioners with line fault detection

I. Dimensions

Optional TH5000 tag holder for individual isolator identification.
Accepts tag label 25 x 12.5 ±0.5mm, 0.2mm thick.



II. Application example



III. Specification

The MTL4546 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 smart valve positioners, the module also permits bi-directional transmission of digital communication signals so that the device can be interrogated either from the operator station or by a hand-held communicator. 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.

Terminal	Function
1	Output -ve
2	Output +ve
11	Input -ve
12	Input +ve
13	Supply -ve
14	Supply +ve

Number of channels

One

Location of transmitter

Zone 0, IIC, T4-T6 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)

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

<1μA/°C

Input characteristics

< 6.0V with the field wiring intact

< 0.9mA with the field wiring open-circuit (and short-circuit on the MTL4546)

Response time

Settles within 200μA of final value within 100ms

Communications supported

HART

LED indicator

Green: power indication

Maximum current consumption (with 20mA signal)

35mA at 24V dc

Power dissipation within unit (with 20mA signal)

0.8W at 24V

Safety description

V_o=28V, I_o=93mA, P_o=651mW, U_m=253V rms or dc

REV.

PROJECT NAME:	Cooper Industries Japan K.K.			Title			
	Tokyo, Japan			MTL4546 Specification			
USER NAME:	TEL: +81-(0)3-6434-7890			SIZE	FSCM NO	Drawing No.	rev
	FAX: +81-(0)3-6434-7871					SS-MTL4546(E)	
JOB NAME:	DATE:	2010/11/25					
Ref no.:	CHKD	K.T	DRAWN	I.S	SCALE	N/A	SHEET 1 / 1