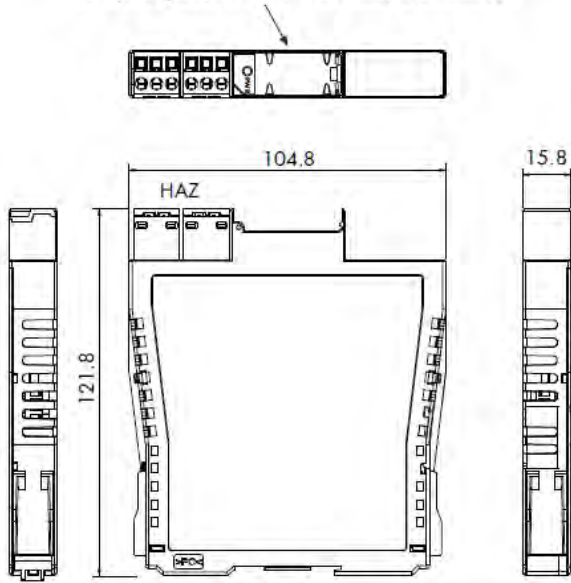


MTL4541 REPEATER POWER SUPPLY

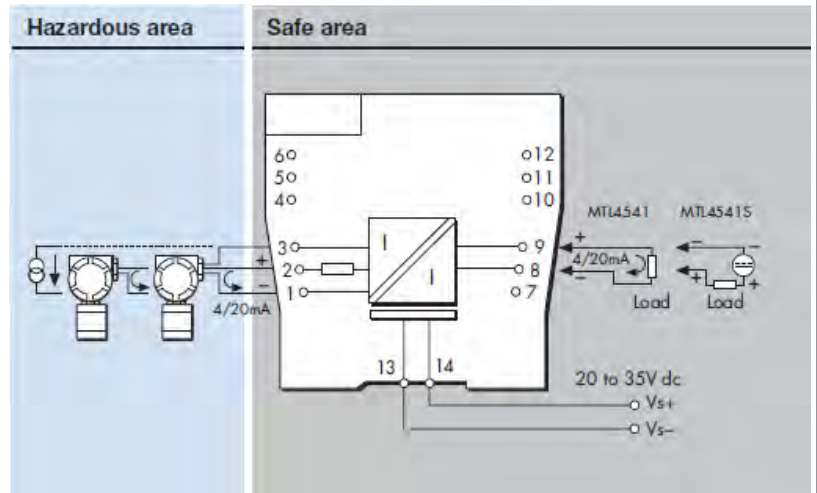
4-20mA, HART®, 2- or 3-wire transmitters

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 MTL4541 provides a fully-floating dc supply for energising a conventional 2- or 3-wire 4/20mA transmitter, which is located in a hazardous area, and repeats the current in another floating circuit to drive a safe-area load. For HART 2-wire transmitters, the unit allows bi-directional communications signals superimposed on the 4/20mA loop current.

Number of channels

One

Location of transmitter

Zone 0, IIC, T4-T6 hazardous area if suitably certified
Div. 1, Group A hazardous location

Safe-area output

Signal range: 4 to 20mA
Under/over-range: 0 to 24mA
Safe-area load resistance: 0 to 360 Ω @24mA
0 to 450 Ω @20mA

Safe-area circuit output resistance: > 1MΩ

Safe-area circuit ripple

< 50 μA peak-to-peak

Hazardous-area input

Signal range: 0 to 24mA (including over-range)
Transmitter voltage: 16.5V at 20mA

Transfer accuracy at 20°C

Better than 15 μA

Temperature draft

< 0.8 μA/°C

Response time

Settles within 10% of final value within 50 μs

Communications supported

HART (terminals 1 & 2 only)

LED indicator

Green: power indication

Maximum current consumption (with 20mA signal)

51mA at 24V dc

Power dissipation within unit (with 20mA signal)

0.7W at 24V

Safety description

Terminals 2 to 1 and 3:

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

Terminals 1 and 3:

Simple apparatus <1.5V, <0.1A and <25mW; can be connected without further certification into any IS loop with an open-circuit voltage <28V

SIL capable

These models have been assessed for use in IEC 61508 functional safety applications.

REV.

PROJECT NAME:	Cooper Industries Japan K.K.			Title			
	Tokyo, Japan			MTL4541 Specification			
USER NAME :	TEL: +81-(0)3-6434-7890			SIZE	FSCM NO	Drawing No.	rev
	FAX: +81-(0)3-6434-7871					SS-MTL4541(E)	
JOB NAME :	DATE:	2010/11/29					
Ref no.:	CHKD	K.T	DRAWN	I.S	SCALE	N/A	SHEET 1 / 1