

MTL4041T REPEATER POWER SUPPLY

4/20mA for 2- or 3-wire transmitters 
using long field lines

The MTL4041T provides a fully floating dc supply for energising a conventional 2- or 3-wire 4/20mA transmitter located in a hazardous area, and repeats the current in another circuit to drive a safe-area load. The reduced maximum open-circuit voltage permits the use of long field lines compared to MTL4041B.

SPECIFICATION

See also common specification, cable parameters and approvals

Number of channels

One

Location of transmitter

Zone 0, IIC, T4-6 hazardous area if suitably certified
Div.1, Group A, hazardous location

Voltage available for transmitter and lines

16V minimum at 20mA

Note: maximum open-circuit voltage is 22V

Input and output signal range

4 to 20mA

Over-/under-range

1.0mA to 21.5mA

Safe-area circuit load resistance

0 to 650Ω

Safe-area circuit output resistance

>1MΩ

Safe-area circuit ripple

<50μA peak-to-peak up to 80kHz

Transfer accuracy at 20°C

Better than 20μA

Temperature drift

<1μA/°C

Response time

Settles within 200μA of final value within 20ms

LED indicator

Green: one provided for power indication

Power requirement, V_s

65mA at 24V dc

75mA at 20V dc

50mA at 35V dc with 20mA signal

Power dissipation within unit

1.2W at 24V with 20mA signal

1.4W at 35V

Isolation

250V ac between safe- and hazardous-area circuits

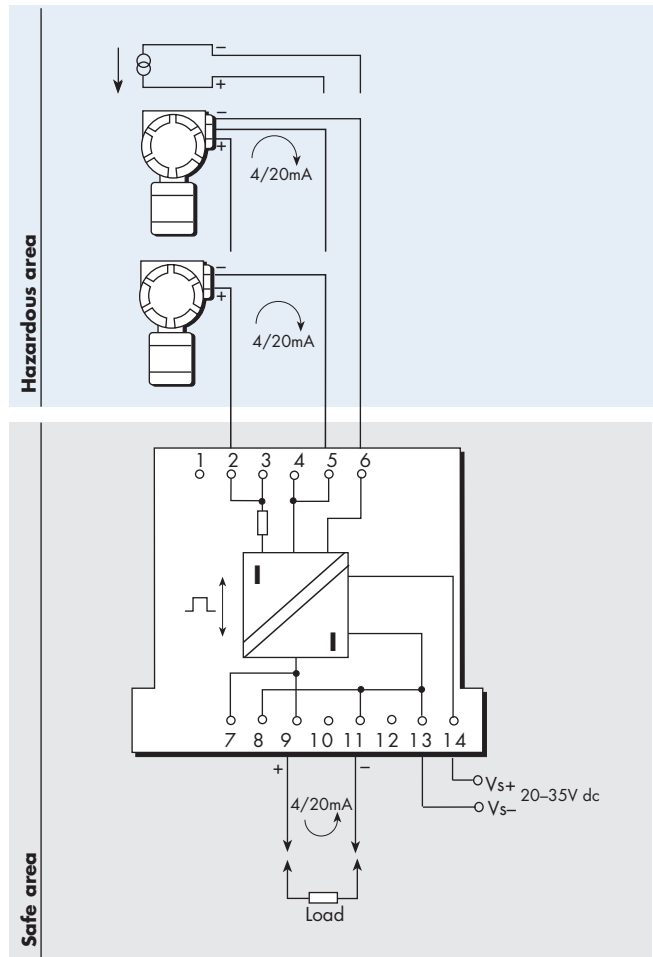
Safety description

Terminals 2 & 3 to 4 & 5

22V, 134Ω, 165mA

Terminals 4 & 5 to 6

Non-energy storing apparatus $\leq 1.2V$, $\leq 0.1A$, $\leq 20\mu J$ and $\leq 25mW$;
can be connected without further certification into any IS loop with
parameters $U_o = 30V$, $I_o = 121mA$,
source resistance U_o/I_o



Terminal	Function
2, 3	Tx supply +ve
4, 5	Current input
6	Common
7, 9	Output +ve
8, 11	Output -ve
13	Supply -ve
14	Supply +ve



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