

# MTL4042 REPEATER POWER SUPPLY IIB

4/20mA, for 2-wire transmitters



The MTL4042 provides a fully-floating dc supply for energising a conventional 2-wire 4/20mA transmitter located in a hazardous area, and repeats the current in another circuit to drive a safe-area load.

## SPECIFICATION

See also common specification, cable parameters and approvals

### Number of channels

One

### Location of transmitter

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

### Voltage available for transmitter and lines

18.0V minimum at 20mA

Note: maximum open-circuit voltage is 28V

### Input and output signal range

4 to 20mA

### Over-/under-range

1.0mA to 21.5mA

### Safe-area circuit load resistance

Conventional transmitters: 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<sub>s</sub>

65mA at 24V dc

75mA at 20V dc

50mA at 35V dc

### Power dissipation within unit

1.2W at 24V with 20mA signal

1.4W at 35V

### Isolation

250V ac between safe- and hazardous-area circuits

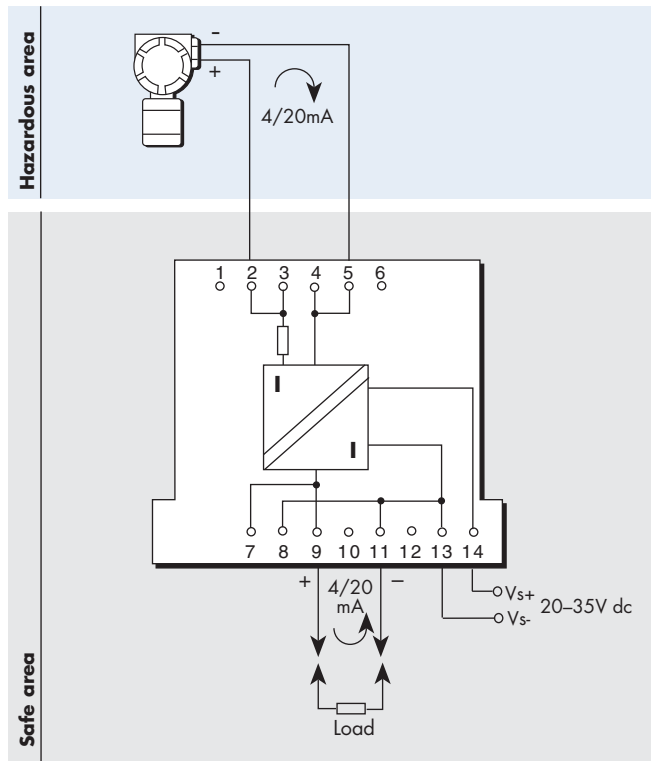
### Safety description

#### Terminals 2 to 5

28V, 150Ω, 187mA, U<sub>m</sub> = 250V rms or dc

### FM entity parameters

V<sub>OC</sub> = 28V dc, I<sub>SC</sub> = 185.5mA, C<sub>a</sub> = 0.39μF, L<sub>a</sub> = 4.5mH



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



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