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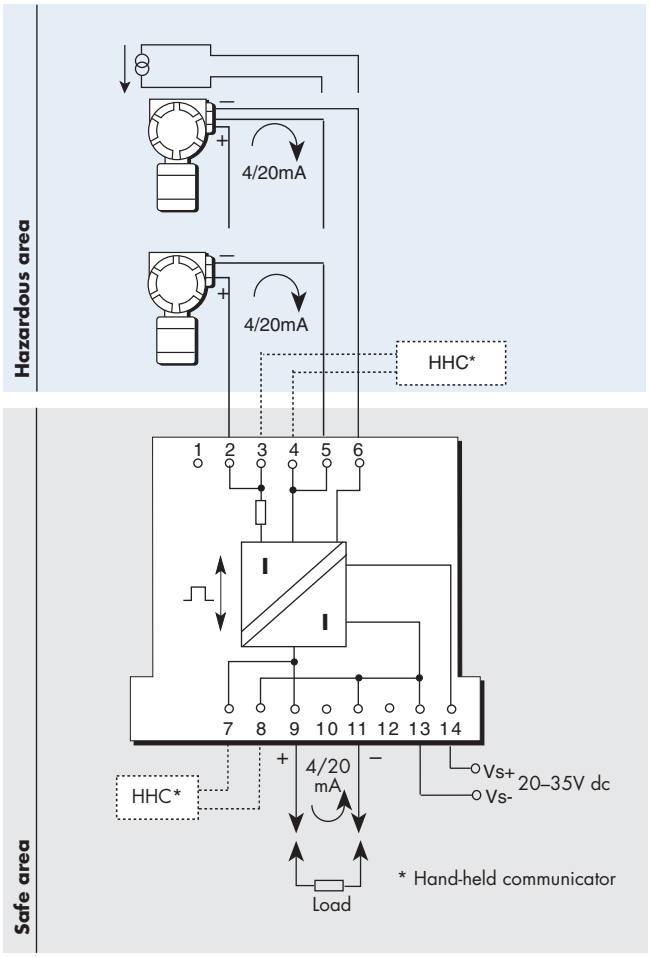
Find the *Eaton / MTL Instruments MTL4041B* at our website: *Click HERE*

MTL4041B REPEATER POWER SUPPLY

4/20mA, smart, for 2- or 3-wire transmitters

CE

The MTL4041B provides a fully floating dc supply for energising a conventional 2- or 3-wire 4/20mA transmitter or a 'smart' transmitter located in a hazardous area, and repeats the current in another circuit to drive a safe-area load. For smart transmitters, the unit allows bi-directional transmission of digital communication signals superimposed on the 4/20mA signal so that the transmitter can be interrogated either from the operator station or by a hand-held communicator (HHC). The module can also be used with hazardous-area current sources and some vortex and turbine meters.



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
15V 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

Digital signal bandwidth
10Hz to 8kHz

Safe-area circuit load resistance
Conventional transmitters: 0 to 650Ω
Smart transmitters: 250Ω ±10%

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, Vs
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 to 5 and 6
28V, 300Ω, 93mA

Terminals 5 to 6
Non-energy storing apparatus ≤1.2V, ≤0.1A, ≤20µJ and ≤25mW; can be connected without further certification into any IS loop with open-circuit voltage not more than 28V
Note: Terminals 5 and 6 do not support HART® communications.

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

FM entity parameters

Terminals 2, 5, 6
V_t = 28V, I_t = 141mA, C_a = 0.13µF, L_a = 1.94mH

Terminals 2, 4, 5
V_t = 28V, I_t = 93mA, C_a = 0.13µF, L_a = 4.2mH

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