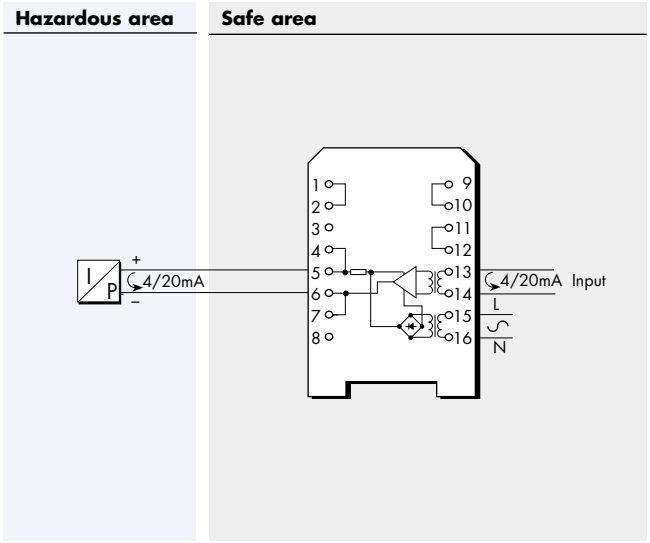
MTL2442B 4/20mA ISOLATING DRIVER

CE

The MTL2442B isolates and passes on a 4/20mA signal from a safe-area controller to drive a hazardous-area load such as a current-to-pressure (I/P) converter, a position actuator, or an electrically-driven valve, etc. Input and output circuits float independently to ensure compatibility with all types of drive instrumentation and permit the use of earthed or poorly insulated loads. In conjunction with an MTL2441B repeater power supply, the unit can be used to pass measurement or control signals through a hazardous area between two safe areas. The MTL2442B supersedes the MTL2442 but is designed for 240/120V ac supplies only. For a 24V dc powered model refer to the MTL5045.



Note: MTL5045 is recommended for applications using 24V dc supplies

SPECIFICATION

***See also* 'Common specification'**

Number of channels
One, fully floating
Location of load
Zone 0, IIC, T4–T6 hazardous area if suitably certified
Div 1, Group A hazardous location if suitably certified
Input and output signal range
4 to 20mA dc
Input resistance
≤200Ω (4V at 20mA)
Maximum load resistance
800Ω(16V at 20mA)
Output resistance
>1MΩ
Input and output circuit ripple
<100µA peak-to-peak
Transfer accuracy at 20°C
Better than 20µA
Temperature drift
<1µA/°C
Response time
Settles within 200µA of final value after 200ms
Power supply
240V ac nominal, 180–260V, 48–65Hz
120V ac nominal, 90–130V, 48–65Hz
Power consumption
5VA
Ambient temperature limits
–20 to +50°C close packed
–20 to +60°C at least 5mm apart
Safety description
28V, 300Ω, 93mA
FM maximum entity parameters
V_{oc} = 28Vdc, I_{sc} = 93mA, C_a = 0.13µF, L_a = 4.2mH

This unit may show degraded immunity performance under some EMC test conditions – refer to supplementary specification SUP2442B for further details.

See also MTL2000 approvals, maximum cable parameters, dimensions and ordering information

EUROPE (EMEA) Tel: +44 (0)1582 723633 Fax: +44 (0)1582 422283
AMERICAS Tel: +1 603 926 0090 Fax: +1 603 926 1899
ASIA PACIFIC Tel: +65 487 7887 Fax: +65 487 7997
E-mail: enquiry@mtl-inst.com **Web site: www.mtl-inst.com**

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