MTL4581 – MTL5581 MILLIVOLT/THERMOCOUPLE ISOLATOR

for low-level signals

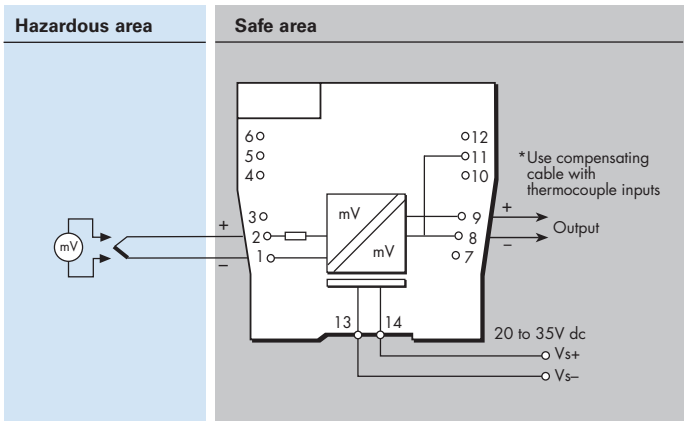
The MTLx581 takes a low-level dc signal from a voltage source in a hazardous area, isolates it, and passes it to a receiving instrument located in the safe area. The module is intended for use with thermocouples utilising external cold-junction compensation. A switch enables or disables the safety drive in the event of thermocouple burnout or cable breakage; a second switch permits the selection of upscale or downscale operation as appropriate.

SPECIFICATION

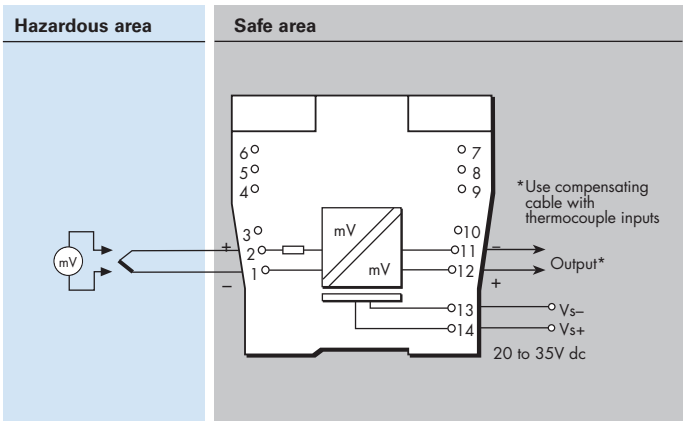
See also common specification

Number of channels
One
Signal source
Any dc millivolt source
Location of millivolt source
Zone 0, IIC, T4–T6 hazardous area if suitably certified
Div. 1, Group A, hazardous location
Input and output signal range
0 to ± 50mV, overrange to ± 55mV
Maximum lead resistance 600Ω
Output resistance
60Ω nominal
Transfer accuracy@20°C
Linearity and repeatability < 0.05% of reading or ± 5µV, whichever is the greater
Temperature drift
< 2µV/°C, maximum
Response time
Settles to within 10% of final value within 150µs
Frequency response
dc to 4kHz nominal
Safety drive on THC burnout
Two switches enable or disable the safety drive and select upscale or downscale operation

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LED indicator
Green: power indication
Power requirement, Vs
30mA max, 20V dc to 35V dc
Power dissipation within unit
0.7W typical at 24V
0.91W at 35V
Safety description
Terminals 1 to 2
Non-energy-storing apparatus ≤ 1.5V, ≤ 0.1A and ≤ 25mW; can be connected without further certification into any IS loop with an open-circuit voltage <28V

The given data is only intended as a product description and should not be regarded as a legal warranty of properties or guarantee.
In the interest of further technical developments, we reserve the right to make design changes.

Powering Business Worldwide

Eaton Electric Limited,
Great Marlings, Butterfield, Luton
Beds, LU2 8DL, UK.
Tel: + 44 (0)1582 723633 Fax: + 44 (0)1582 422283
E-mail: mtlenquiry@eaton.com
www.mtl-inst.com

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EUROPE (EMEA):
+44 (0)1582 723633 mtlenquiry@eaton.com
THE AMERICAS:
+1 800 835 7075 mtl-us-info@eaton.com
ASIA-PACIFIC:
+65 6 645 9888 sales.mtlsing@eaton.com