MTL4576-THC – MTL5576-THC TEMPERATURE CONVERTER

mV/THC input, 2-channel

The MTLx576–THC converts low–level dc signals from temperature sensors mounted in a hazardous–area into 4/20mA currents for driving safe–-area loads. Software selectable features include linearisation for standard thermocouple types, ranging, monitoring, testing and tagging. Configuration is carried out using a personal computer. The hazardous–area connections include cold–junction compensation and do not need to be ordered separately.

SPECIFICATION

See also common specification

Number of channels
Two
Signal source
THC types J, K, T, E, R, S, B or N to BS 60584 and XK
mV input
Location of signal source
Zone 0, IIC, T4–6 hazardous area
Division 1, Group A, hazardous location
Input signal range
–75 to +75mV
Input signal span
3 to 150mV
Cold junction compensation
Automatic or selectable
Cold junction compensation error
≤ 1.0°C
Common mode rejection
120dB for 240V at 50Hz or 60Hz
Series mode rejection
40dB for 50Hz or 60Hz
Calibration accuracy (at 20°C)
(includes hysteresis, non-linearity and repeatability)
Input: ±15µV or ±0.05% of input value (whichever is greater)
Output: ±16µA
Temperature drift (typical)
Input: ±0.003% of input value/°C
Output: ±0.6µA/°C
Safety drive on sensor burnout
Upscale, downscale, or off
Output range
4 to 20mA nominal into 300Ω max.
Maximum lead resistance
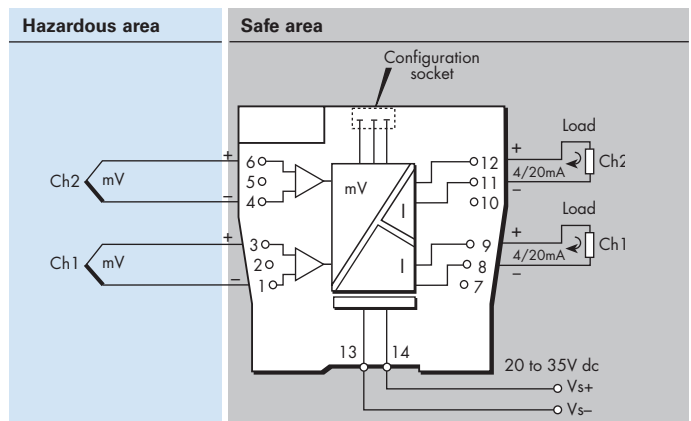300Ω with safety drive on sensor failure enabled
>10kΩ with safety drive on sensor failure disabled
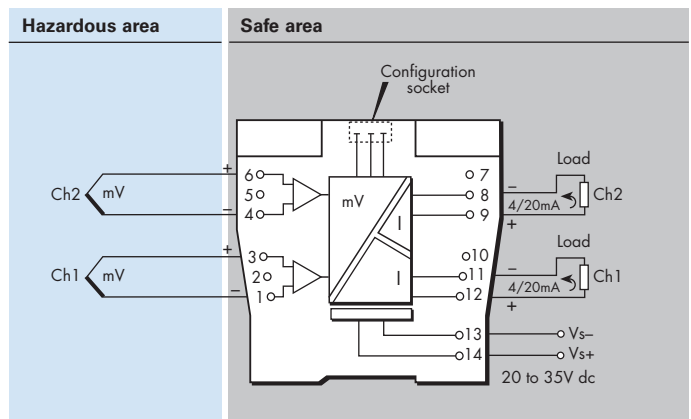**Response time**
Configurable - 500 ms default
(Accuracy at 100/200ms - contact Eaton's MTL product line)

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LED indicator
Green: power and status indication
Yellow: one provided for channel status
Red: alarm indication
Power requirement, Vs with 20mA signal
60mA at 24V
Power dissipation within unit with 20mA signal
1.4W at 24V
Isolation
Functional isolation channel–channel for safe and hazardous–area circuits.
Safety description
Refer to certificate for parameters. Um=253V rms or dc
Configurator
A personal computer running MTL PCS45 software with a PCL45USB serial interface.

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