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: $\pm 15 \mu V$ or $\pm 0.05\%$ of input value

(whichever is greater)

Output: $\pm 16\mu A$

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

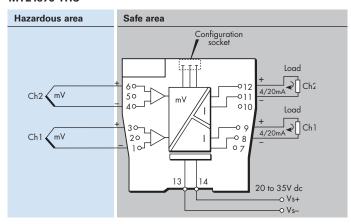
 300Ω with safety drive on sensor failure enabled >10k Ω with safety drive on sensor failure disabled

Response time

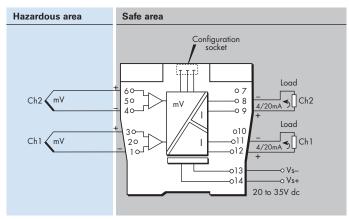
Configurable - 500 ms default

(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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