

MTL4676-RTD TEMPERATURE CONVERTER

RTD/potentiometer input, 2-channel

The MTL4676-RTD converts signals from resistance temperature detectors (RTDs) into 4/20mA currents. Software selectable features include input type and characterisation, ranging, monitoring, testing and tagging. Configuration is carried out using a personal computer. The MTL4676-RTD is compatible with 2- and 3-wire RTD inputs.

SPECIFICATION

See also common specification

Number of channels

Two

Signal source

2-/3-wire RTDs to BS 60751
Pt 100, Pt 500, Pt 1000
Cu-50 & Cu-53
Ni 100/500/1000 DIN 43760

Input signal range

0 to 400Ω (0 to 4000Ω Pt & Ni sensors)

Input signal span

10 to 400Ω (10 to 1000Ω Pt & Ni sensors)

RTD excitation current

200μA nominal

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: ± 80mΩ

Output: ± 16μA

Temperature drift (typical)

Input: ± 7mΩ/°C

Output: ± 0.6μA/°C

Example of calibration accuracy and temperature drift (RTD input)

Span: 250Ω

Accuracy: ± (0.08/250 + 16/16000) x 100%
= 0.13% of span

Temperature drift: ± (0.007/250 x 16000 + 0.6) μA/°C
= ±1.0μA/°C

Safety drive on sensor failure

Upscale, downscale, or off

Output range

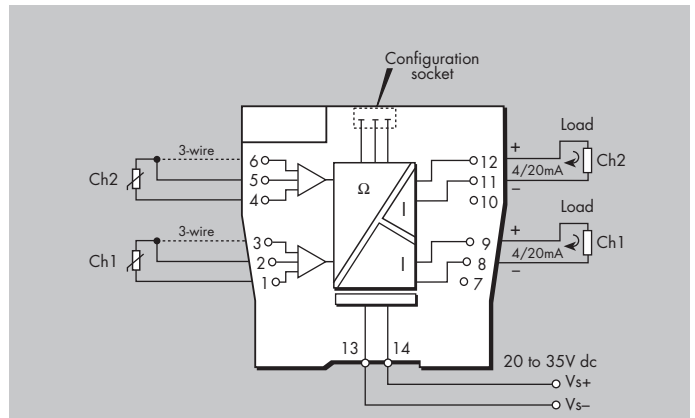
4 to 20mA nominal into 300Ω max. (direct or reverse)

Response time

Configurable - 500 ms default

(Accuracy at 100/200ms - contact MTL)

MTL4676-RTD



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 channel-channel isolation for safe and hazardous-area circuits

Configurator

A personal computer running MTL PCS45 software with a PCL45USB serial interface.

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.



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