

INTRODUCTION

HTM SI420 is the low cost solution when isolation of input and output signals in an instrumentation system is needed. The use of signal isolation in instrument loops can protect potentially harmful effects of motor noise and ground loops on instruments connected in the loops. HTM SI420 is also a signal converter whereby input signals such as 1-5VDC, 0-10VDC, 0-100mVDC and etc. can be converted to 4-20mA without additional cost.

PRINCIPLE OF OPERATION

HTM SI420 employs a linear optocoupler to isolate the input and output signals while maintaining the linearity of the signal. The circuit of HTM SI420 has been carefully designed to provide a highly accurate and stable output signal with a low input impedance.

FEATURES

Compact Enclosure

HTM SI420 is housed in a compact DIN rail enclosure that occupies small space. The wiring terminals are easily accessed via the front without opening any cover of the unit.

Low Cost

Due to its design simplicity, HTM SI420 is a low cost and yet reliable signal isolator and converter.

Superior Isolation

5000V isolation between input and output signals means process signal will not be affected by severe noise introduced at the input.



Low Input Impedance

The low input impedance of HTM SI420 at 10 Ω enables the unit to be used as a signal repeater without heavy loading on the input loop.

Ease of Calibration

HTM SI420 can be calibrated easily by adjusting the *Zero* and *Span* potentiometers located in front of the casing. This eliminates unnecessary work to dismantle the instrument from site during routine maintenance work.

Integral Transmitter Power Supply

HTM SI420 has a built-in 24VDC transmitter power supply that powers up loop-powered instruments connected to the input, thus eliminating the need of additional power supply for the input instrument. The transmitter power supply in SI420 can be enabled or disabled via a jumper inside the unit. No major modification is needed.

Indication

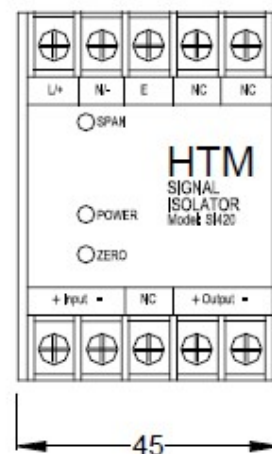
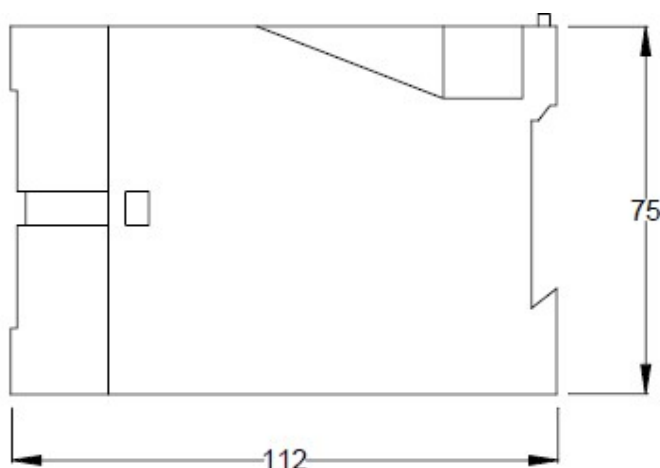
A red colour LED indicator is provided on the front of the unit to indicate power supply and output status.

SPECIFICATIONS

Input	4-20mA, 1-5VDC, 0-10VDC, 0-100mV (other inputs optional)
Output	4-20mA
No. of channels	1 (optional: 2 channels)
Input impedance	10 Ω
Accuracy	$\pm 0.1\%$ FS
Power supply	
VDC	12, 24, 48 ($\pm 10\%$)
VAC	110, 115, 220, 240 ($\pm 10\%$)

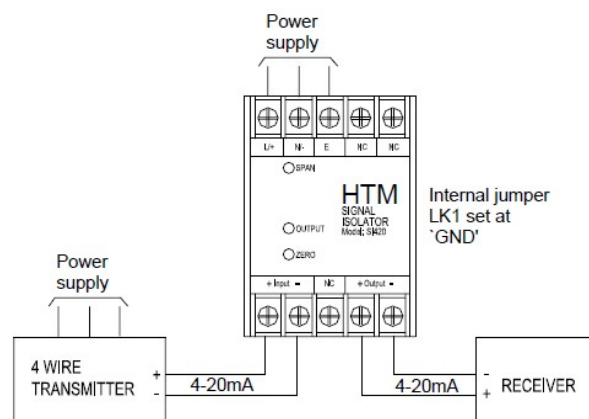
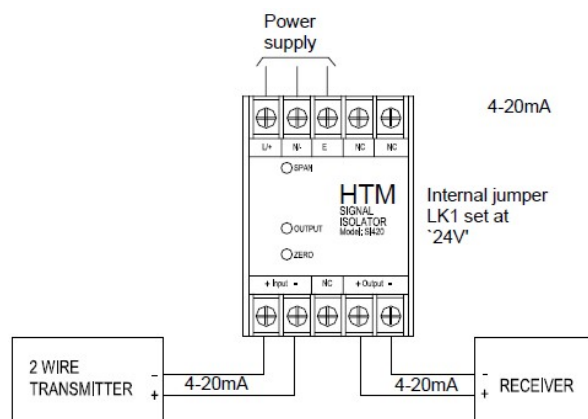
Transmitter power supply	24VDC max. 25mA
Power/signal isolation	1000VDC
Input/output isolation	5000VAC
Casing	ABS shell Polycarbonate cover
Enclosure	IP10
Terminal size	2.5mm ² cable
Temperature effect	$\pm 0.3\%$ max.
Mounting	DIN rail or panel mount

DIMENSIONS



TYPICAL WIRING DIAGRAMS

(4-20mA type shown)



NC = No Connection

All dimensions in mm

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