

### INTRODUCTION

HTM SI420 signal isolator/converter is the low cost solution when isolation of input and output signal in an instrumentation system can not be avoided. The use of signal isolator in instrument loops can protect potential harmful effects of motor noise & ground loops etc on instruments connected in the loops. HTM SI420 is also a signal converter whereby input signals such as 1-5V(dc), 0-10V(dc), 0-100mV(dc) etc can be converted to 4-20mA without additional cost.



### PRINCIPLE OF OPERATION

HTM SI420 employs a linear optocoupler to isolate the input & 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 which occupy only a 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 & converter.

#### **Superior isolation**

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

#### **Low input impedance**

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

#### **Ease of calibration**

HTM SI420 can be calibrated easily by adjusting the Zero & Span potentiometer located in front of the casing. This eliminates unnecessary works to dismantle the instrument from site during routing calibration works

#### **Integral transmitter power supply**

HTM SI420 has a built-in 24Vdc transmitter power supply which can be enabled to power loop powered instrument connected to the input, thus eliminates the need of additional power pack for the input instrument. The transmitter power supply in SI420 can be enable or disable through a jumper inside the unit. No major modification is needed.

#### **Indication**

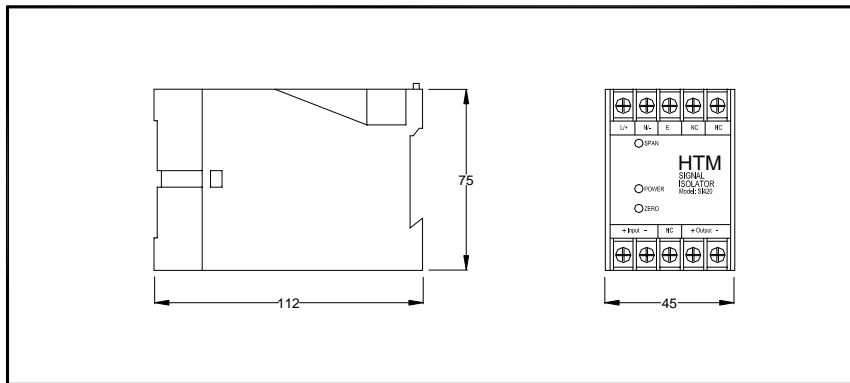
A red colour LED indicator is available on the front surface of the unit for the indication of power Supply and output status.

**SPECIFICATIONS**

Input : 4-20mA, 1-5Vdc, 0-10Vdc, 0-100mV.  
 (other inputs as options)  
 Output: 4-20mA  
 Input impedance : 10 Ohms  
 Accuracy : +/-0.1%FS  
 Power supply (+/-10%)  
     VDC: 12, 24, 48  
     VAC: 110, 115, 220, 240  
 Transmitter power supply : 24Vdc max 25mA

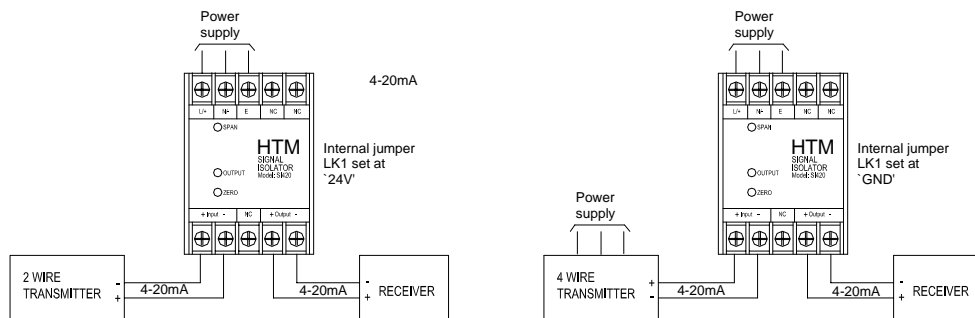
Power/signal isolation : 1000Vdc  
 Input/output isolation : 5000Vac  
 Casing: ABS shell  
     Polycarbonate Cover  
 Enclosure: IP10  
 Terminal size: 2.5mm<sup>2</sup> cable  
 Temperature: -10 to 60°C  
 Temperature effect : +/-0.3% max.  
 Mounting: DIN rail or panel mount

**DIMENSIONS**



**TYPICAL WIRING DIAGRAMS**

(4-20mA type shown)



NC = No Connection  
 All Dimensions in MM

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Manufactured by :

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