

# Signal Isolator

## SI99



- Intrinsically safe isolation without power supply
- Eliminating ground-loop
- 2 channels available
- High accuracy and stability

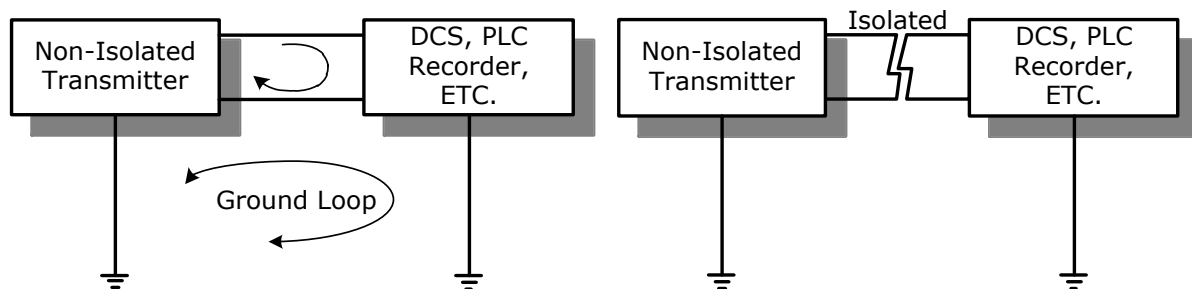
**The WISCO Signal Isolator** is a WISCO Industries product designed to break the galvanic path between a transmitted signal source and a receiving device, such as a controller or recorder. The Signal Isolator solves the problem of transferred signal distortion due to ground potential differences. The Signal Isolator is highly effective in eliminating unreliable or inaccurate signal transfer by providing total current-to-current signal isolation. The Signal Isolator derives its operating potential from the existing input loop current and, therefore, does not require a dedicated power supply. The Signal Isolator is placed in series with the drive signal and provides an output current that is proportional to the input signal current.

When a signal isolation device is installed it is important to consider the voltage drop or additional line resistance that will be placed in the system. Any additional load tends to reduce the line or drive potential and may exceed the source rating. The effect of voltage drop within the system must be calculated to ensure that drive capability is not exceeded. The Signal Isolator features a maximum fixed voltage drop of 2.5 VDC (4.2 V for 10 - 50 mA) which remains constant over the entire temperature range of 0 °C to 50 °C



### ลักษณะการใช้งานของ Signal Isolator

- 1) ป้องกันการเกิด Ground Loops ซึ่งเป็นสาเหตุ ทำให้ค่าวัดไม่คงที่ หรือผิดจากความเป็นจริง
- 2) ป้องกันความเสียหายที่จะเกิดขึ้นกับ PLC หรือ DCS เนื่องจากสัญญาณรบกวนที่เกิดขึ้นทางด้าน Transmitter เช่น ไฟฟ้า หรือจาก A.C. Line โดยตัว Signal Isolator ทำหน้าที่เหมือนกำแพง ที่ป้องกัน ไม่ให้สัญญาณเหล่านี้ ส่งเข้าไปทำความเสียหายให้ PLC หรือ DCS ได้



### Specifications

#### Analog Input

**Number of Channel:** 2 Channels

**Input Type:** Current

**Input Range:** 4 to 20 mA, 10 to 50 mA

**Input Impedance:**

130 + Load resistance (4 to 20 mA)

85 + Load resistance (10 to 50 mA)

#### Analog Output

**Number of Channel:** 2 Channels  
(Isolated)

**Output Type:** Current

**Output Range:** 4 to 20 mA, 10 to 50 mA

**Current Limitation:**

max 250 (2.5 VDC @ 20 mA)

**Isolation Voltage:** 500 VAC

**Linearity:** Better than + 0.2% of span

### Ordering Information:

Example SI99

### Package Checklist

1. SI99

### Environmental Limits

**Operating Temperature:** 0 to 55 °C

**Operating Humidity:** 5 to 95% RH

**Storage Temperature:** 0 to 70 °C

### Physical Characteristics

**Dimension:** W 50 x H 70 x D 130 mm.

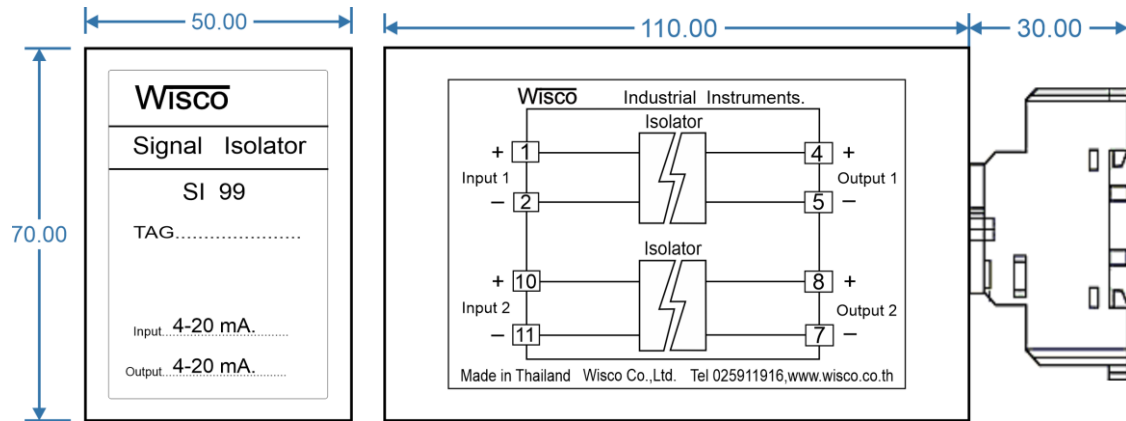
**Mounting:** Wall or DIN rail

**Construction:** Plug - in 11 pins socket

### Warranty

**Warranty Period:** 5 Year

**Dimension (Unit: mm.)**



**Wiring**

