

# SC-II Series

## Current to Current Loop Powered Isolator

### Features

- 4-20 mA Input (10-50 mA optional)
- 2-Wire, 4-20 mA Output (10-50 mA optional)
- Two Year Warranty
- Loop Powered
- Input & Output LED Indicators
- Various Mounting Styles

### Description:

The SC-II loop powered isolator is a signal conditioner whose function is to provide a retransmitted, galvanically isolated 4-20 mA output signal in response to isolated 4-20 analog input.

The loop powered isolator may be applied in a similar manner as a conventional two wire transmitter.

The SC-II appears to the input loop as a series shunt resistor. A small sense resistor is used to measure the input current. The input loop derives its power from the input current loop.

This input current signal is then scaled and converted to a 0 to 10,000 Hz frequency signal by a Current to Frequency Converter. This frequency signal is then transmitted across an opto-isolator to the output stage.

The output stage derives its power from the output current loop. The output stage converts the 0-10000 Hz frequency signal into a current flowing in the output loop equal to that flowing in the input current loop.

The 10-50 mA range options are provided to enable the unit to perform range conversions as well as signal isolation.

### Specifications:

#### Analog Input

- Available Ranges: 4-20 mA (10-50 mA optional)
- Input Type: Two Wire, Loop Powered
- Equivalent Input Impedance: 525  $\Omega$  on 4-20 mA range  
 210  $\Omega$  on 10-50 mA range
- Operational Range: 3.5-33 mA
- Over Current Protection: 2.5 times rated span
- Reverse Polarity Protection
- Isolation Voltage: 500 V
- Input Loop Indicator: LED illuminates when loop is powered by proper polarity



### Analog Output

- Accuracy:  $\pm 0.10\%$  Span
- Output Type: Two Wire, Loop Powered
- Range: 4-20 mA (10 - 50 mA optional)
- Compliance Voltage: 10 to 40 VDC
- Loop Burden: < 10 VDC
- Trim Controls: Zero & Span
- Linearity: <  $\pm 0.10\%$  Span
- Output Voltage Effect: <  $\pm 0.002\%$  Span/Volt
- Temperature Effect: < 200 PPM/C $^{\circ}$
- Reverse Polarity Protected
- Noise Content: < 0.2% Span
- Overcurrent Limiting: 35 mA
- Output Loop Indicator: LED illuminates when output loop is powered by proper polarity

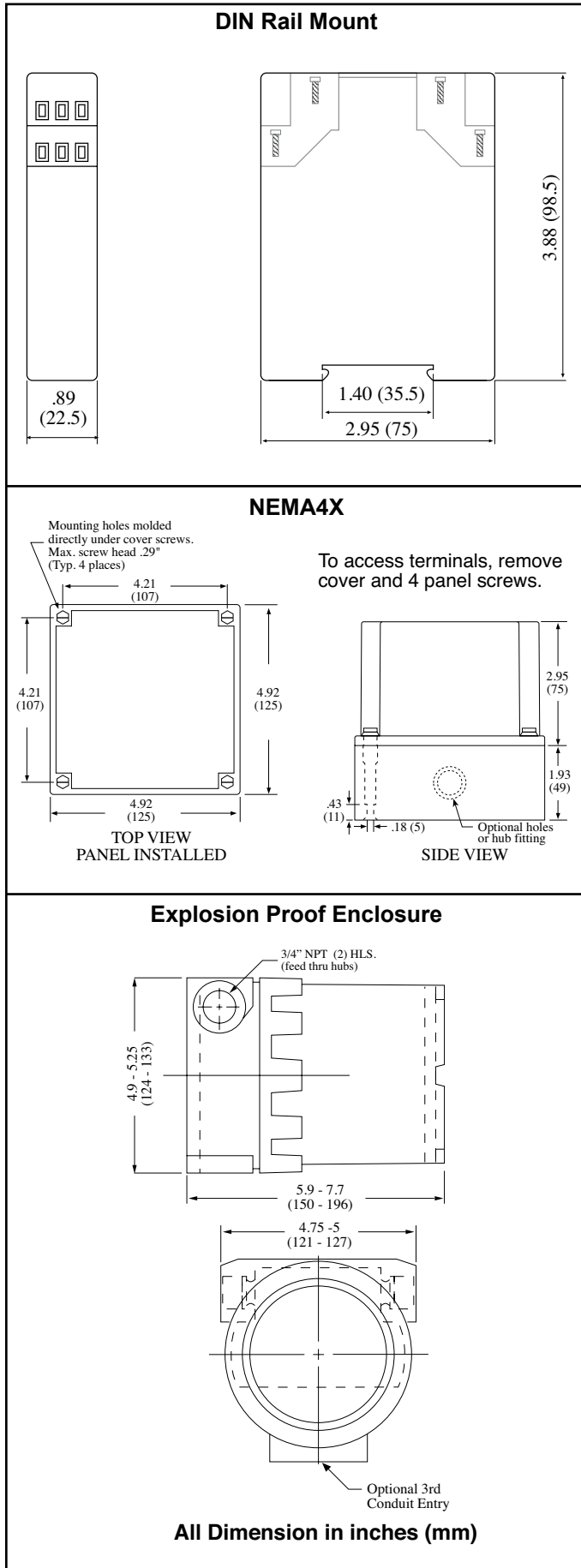
### Mounting Styles

- DIN Rail Mount: Plastic enclosure with a snap fastener for fitting to DIN 46 277 and DIN EN 50 022 assembly rails.
- NEMA 4: 4.92" x 4.92" NEMA 4 Enclosure for wall mounting.
- Explosion Proof: Aluminum enclosure for:  
 Class I, Division 1, Groups B, C & D  
 Class II, Division I, Groups E, F & G.

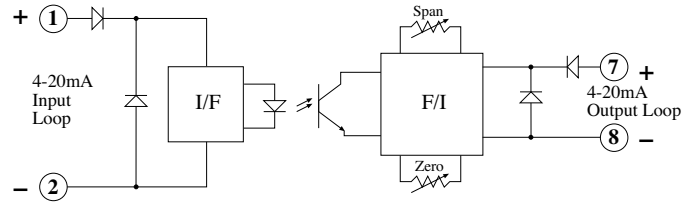
### Listing: CE Compliant

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## Dimensions

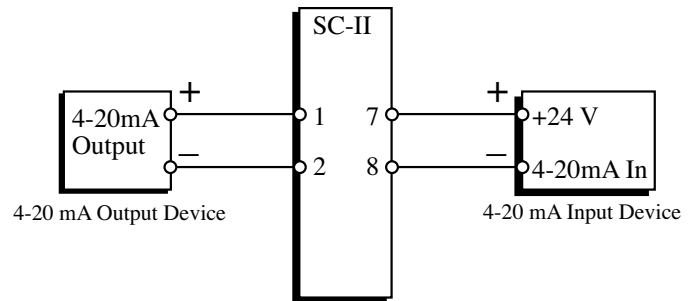


## Simplified Block Diagram

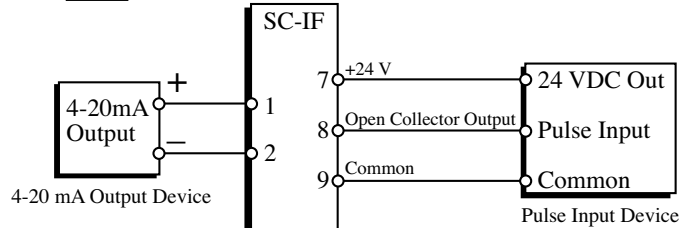


## Typical Wiring Hookup

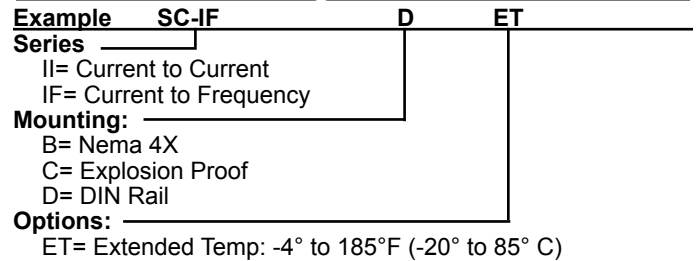
### SC-II



### SC-IF



## Ordering Information



**Accessories:** (add to end of part number)  
DR-4= 4" DIN Rail