



**ADTECH**  
Analog-Digital Technology, Inc.

The Adtech Model SCX 202 Isolated Two Wire Signal Converter provides a user configurable solution for ground loops and problems encountered in connecting together recorders, process control systems, computers, DCS and PLC systems.

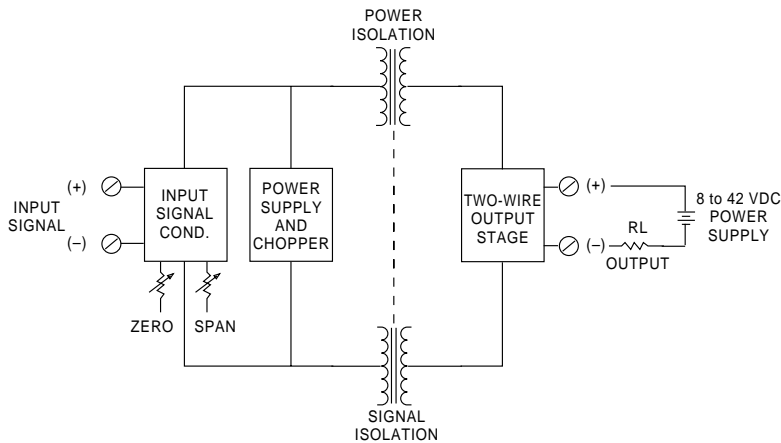
The SCX 202 breaks the galvanic path with 600 VAC/1,000 VDC input to output isolation between the transmitted signal and the output receiving device, insuring reliable and accurate signal transfer.

It is highly useful for applications that require signal isolation to eliminate ground loops, instrumentation level shifts, or the conditioning of a process signal riding over high common mode AC or DC voltages. Another common application is to provide additional amplification or drive to a process signal loop.

It delivers a standard process current 4-20 mA DC signal on the output with a maximum of 10 mV P/P output ripple. This provides convenient interfacing of process signals to a computer system or other process instrumentation for improved resolution.

Zero and span controls are provided by two separate infinite resolution potentiometers. Recalibration to other ranges in the field is easy and convenient.

Din mounting is supplied as standard. Surface mount (option H 26) and snap track (option H 25) are available at no extra cost, specify.



### Features

- **DC Current Inputs:** 1 mA to 20 mA DC: (e.g. 4-20 mA DC)
- **DC Voltage Inputs:** 100 mV to 200 VDC: (e.g. 1-5 VDC)
- **Unipolar or Bipolar Inputs:** Current or voltage
- **Temperature Coefficients:**  
Zero =  $\pm 0.007\%/^{\circ}\text{C}$  of span-max.  
Span =  $\pm 0.0080\%/^{\circ}\text{C}$  of span-max.
- **Repeatability:**  $\pm 0.002\%$  typical
- **Power:** 8 to 42 VDC

## Isolated Two Wire Signal Converter

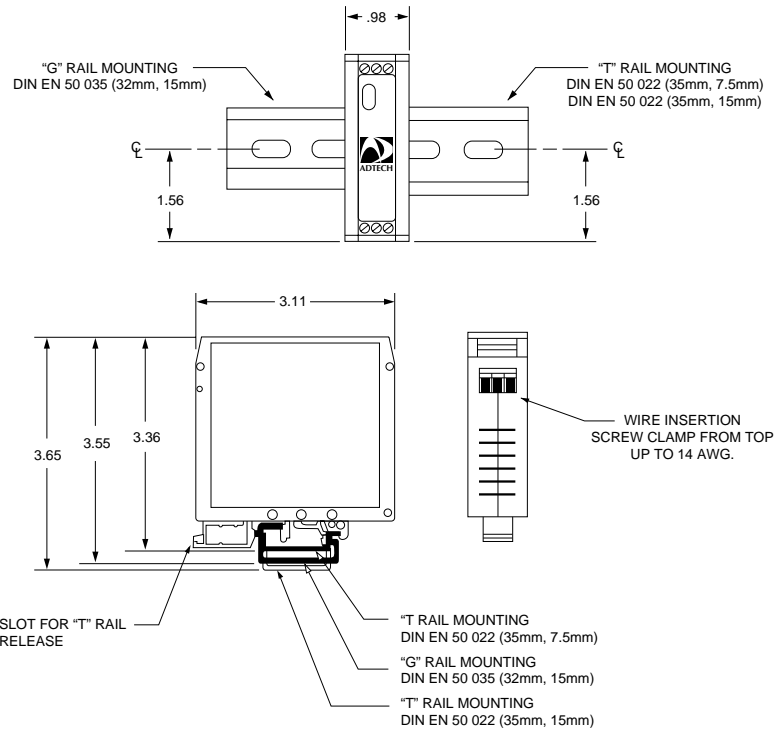
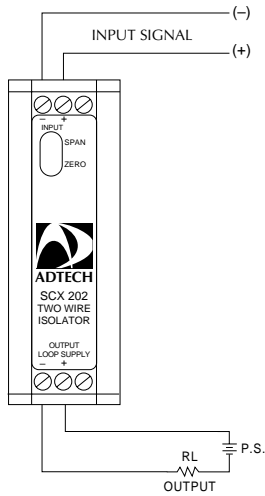
**Model No. SCX 202**

### Typical Applications

- **Interface unequal or non-compatible plant ground systems**
- **Interface non-compatible instruments**
- **DCS-PLC-PC Interface**
- **Isolate interference on signal lines**
- **Impedance conversion**



## Connections/Dimensions



## Input/Output

**Input Signals:**  
 4-20 mA DC (Z in 10 ohms)  
 0-20 or  $\pm 20$  mA DC (Z in 10 ohms)  
 0-10 or  $\pm 10$  mA DC (Z in 20 ohms)  
 0-1 or  $\pm 1$  mA DC (Z in 200 ohms)  
 1-5 VDC (Z in 1 megohm)  
 0-5 or  $\pm 5$  VDC (Z in 1 megohm)  
 0-10 or  $\pm 10$  VDC (Z in 1 megohm)  
 Any unipolar or bipolar voltage from  
 100 mV to 200 VDC (Option 1 14)

**Zero Suppression:** 10%  
**Span Adjustment:** 10%

**Output Signal:**  
 4-20 mA DC  
**Output Loop Drive Capability**  
 $R \text{ (ohm)} = \frac{(V \text{ supply} - V \text{ minimum})}{I \text{ out max. ma}}$   
 $V \text{ minimum} = 8.0 \text{ vdc}$

Iout	4-20 mA			
V supply	12	24	36	42
R(ohms)	200	800	1400	1700

## Performance

**Calibrated Accuracy:**  $\pm 0.1$  %  
**Independent Linearity:**  $\pm 0.025$  % max.,  
 $\pm 0.01$  % typ.  
**Repeatability:**  $\pm 0.005$  % max.,  $\pm 0.002$  % typ.  
**Zero TC:**  $\pm 0.007$  % of span max./ $^{\circ}$ C  
**Span TC:**  $\pm 0.008$  % of span max./ $^{\circ}$ C  
**Load Effect:**  $\pm 0.005$  % zero to full load  
**Output Ripple:** 10 mV P/P maximum

*Note: All accuracies are given as a % of span.*

**Temperature Range:**  
 -25 $^{\circ}$  to 1 85 $^{\circ}$ F (-31  $^{\circ}$ C to 85 $^{\circ}$ C) operating;  
 -40 $^{\circ}$  to 200 $^{\circ}$ F (-40 $^{\circ}$ C to 93 $^{\circ}$ C) storage  
**Power Supply Effect:**  $\pm 0.005$  % of span, max.  
**Isolation:** Input/output/case: 1000 VDC or 600  
 VAC  
**Response Time:** 110 milliseconds  
 (10 to 90% step response)  
**Bandwidth:** (-3db): 3.2 Hz

## Power Mechanical

8 to 42 VDC standard

**Electrical Classification:** General purpose  
**Connection:** Screw compression type  
 accepts up to 14 AWG

**Mounting:** DIN - standard (See other options below)  
**Controls:** Multiturn potentiometers for Zero and Span,  
 and jumpers for ranges  
**Weight:** Net unit: 4.0 oz. (115 grams)  
 Shipping: 7.0 oz. (200 grams)

## Options

Option Number	Description
I 14	Voltage Inputs to 200 VDC, 1 megohm min. Impedance; Current Inputs of 100 mA max.
H 15D	Explosion Proof: Class 1, Group B, C & D
H 23	Two (2) inch pipe mounting plate & clamps
H 25	Snap track mounting (specify)
H 26	Surface mounting (specify)
H 27	NEMA 4 enclosure (up to 3 units)
H 29	T 35 DIN "T" rail two feet long
H 30	T 32 DIN "G" rail two feet long

## Ordering Information

- Model number
- Input signal
- Prime power