



ADTECH
Analog-Digital Technology, Inc.

The Adtech Model SCT 502 AC powered Isolated 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 SCT 502 breaks the galvanic path between the transmitted signal and the output receiving device insuring reliable and accurate signal transfer.

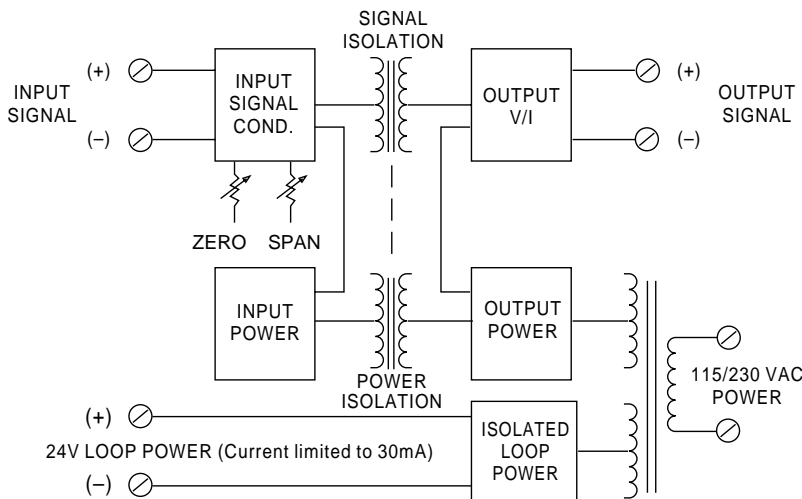
It is highly useful for applications that require signal isolation to eliminate ground loops, instrumentation level shifts, or the conditioning of a process signal riding over high common mode AC or DC voltages. Another common application is to provide additional amplification or drive to a process signal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

An important feature provides an isolated 24 VDC at 30 mA DC loop power output as standard.

The SCT 502 offers 600 VAC/1,000 VDC isolation with a common mode rejection of 100 db at 60 Hz.

It delivers standard process current or voltage signals 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.



Features

- **DC Current Inputs:** 1 mA to 20 mA DC (i.e. 4-20 mA DC)
- **DC Voltage Inputs:** 100 mV to 200 VDC: (i.e. 1-5 VDC)
- **Zero-Based Inputs:** Current & voltage
- **DC Process Signal Outputs:** Current and voltage
- **Repeatability:** $\pm 0.02\%$ of span typical
- **High Accuracy:** $\pm 0.1\%$ of span
- **Power:** 115 VAC or 230 VAC

Isolated Signal Converter AC Powered

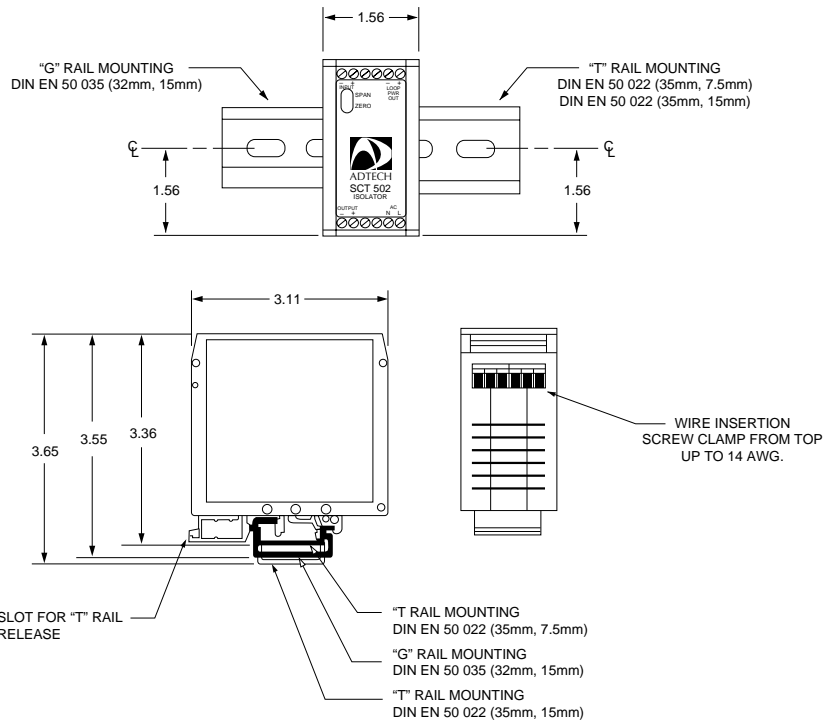
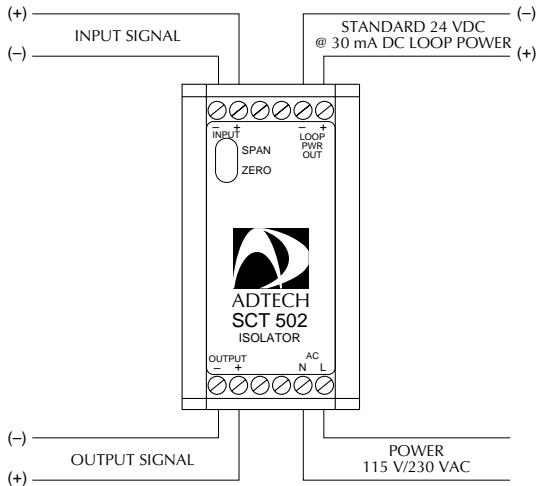
Model No. SCT 502

Typical Applications

- **Interface unequal or non-compatible plant ground systems**
- **Interface non-compatible instruments**
- **Computer/programmable controller interface**
- **Isolate interference on signal lines**
- **Impedance conversion**



Connections/Dimensions



Input/Output

Input Signals: Pin Jumper Configurable

4-20 mA DC (Z in 10 ohms)
 0-20 mA DC (Z in 10 ohms)
 1-5 VDC (Z in 1 megohm)
 0-5 VDC (Z in 1 megohm)

Input Signals: Alterable

0-1 mA DC (Z in 200 ohms)
 0-10 VDC (Z in 1 megohm)
 Any zero based voltage
 from 100 MV to 200 VDC.

Output Signals: Pin Jumper Configurable

4-20 mA DC 0-900 ohms max.
 0-20 mA DC 0-900 ohms max.
 1-5 VDC 1 megohm min.
 0-5 VDC 1 megohm min.

Output Signals: Alterable

0-1 mA DC 20k ohms max.
 0-10 VDC 1 megohm min.

Performance

Calibrated Accuracy: $\pm 0.1\%$

Linearity: $\pm 0.1\%$ max., $\pm 0.04\%$ typical

Repeatability: $\pm 0.05\%$ maximum

Temperature Stability: $\pm 0.01\%/^{\circ}\text{F}$ max.,
 $\pm 0.004\%/^{\circ}\text{F}$ typical

Load Effect: $\pm 0.01\%$ zero to full load

Output Ripple: 10 mV P/P maximum

Response Time: 150 milliseconds

Temperature Range:

0° to 140°F (-18°C to 60°C) operating;
 -40° to 185°F (-40°C to 85°C) storage

Power Supply Effect: $\pm 0.05\%$ for
 $\pm 10\%$ power variation

Common Mode Rejection: 100 db @ 60 Hz

Isolation: Input/output/power 600 VAC, 50/60 Hz,
 1,000 VDC for AC powered units

Note: All accuracies are given as a percentage of span.

Power

115 VAC: 50/60 Hz, 0.7 PF (Standard)

230 VAC: 50/60 Hz, 0.7 PF (Option P5)

Note: All units 3 watts maximum, and a $\pm 10\%$ power variation unless noted.
 For DC power, consult the factory.

Mechanical

Electrical Classification: General purpose

Connection: Screw compression type
 accepts up to 14 AWG

Controls: Multiturn zero and span controls

Mounting: DIN: Optional Nema 4

Weight: Net unit: 9.0 oz (257 grams)
 Shipping: 16.0 oz (455 grams)

Options

Option Number
 I 14

Description

Voltage inputs to 200 VDC, 1 megohm min. impedance; current
 inputs of 100 mA max.

Ordering Information

- Model number
- Input signal
- Output signal
- Prime power with option no.
- Input/output options
- Housing and miscellaneous options

Please refer to the Housing and/or Option Section for more specific and detailed information.

Represented by:



Analog-Digital Technology, Inc.
 830 Canning Parkway
 Victor, New York 14564-8940

Phone: (585) 869-6330
 Fax: (585) 869-1835

E Mail: adtech@adtech-inst.com
 Web site: http://www.adtech-inst.com

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