



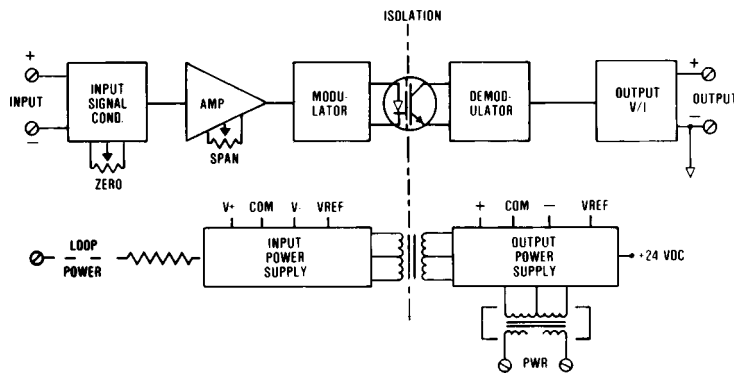
ADTECH
Analog-Digital Technology, Inc.

The Adtech Model SCT 02 Isolated Signal Converter provides accurate and economical signal or impedance conversion from a current or voltage source to any standard process signals such as 4-20 mA DC, 1-5 VDC, or zero-based output.

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.

The SCT 02 offers 600 VAC/1,000 VDC isolation with a common mode rejection of 140 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

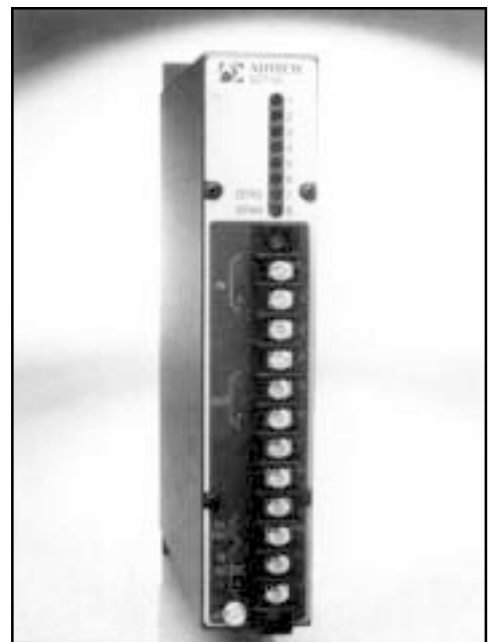
- **DC Current Inputs:** 4-20 mA, etc.
- **DC Voltage Inputs:** 1-5 VDC, etc.
- **High Input Impedance:** 10 megohms minimum
- **Zero-Based Current & Voltage Inputs:** Current & voltage
- **Low Impedance Current Inputs:** 1/10 standard—optional
- **DC Process Signal Outputs:** Current and voltage
- **Repeatability:** $\pm 0.02\%$ of span typical
- **High Accuracy:** $\pm 0.1\%$ of span

Isolated Signal Converter

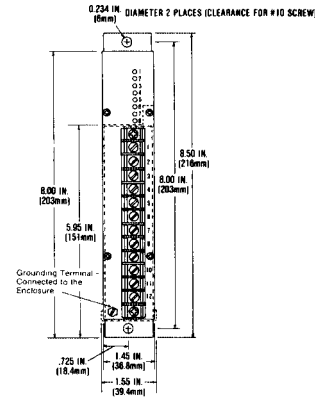
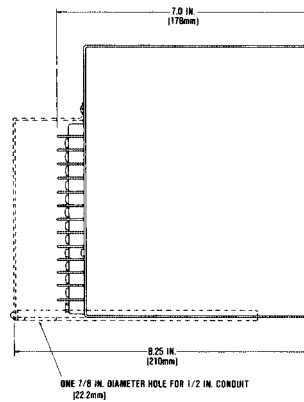
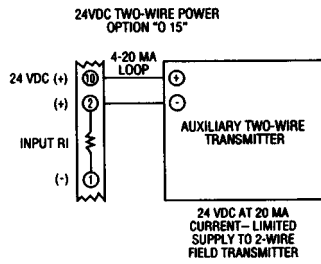
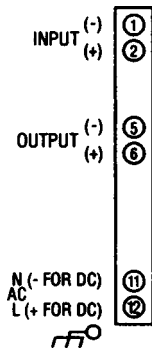
Model No. SCT 02

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

4-20 mA DC (Z in 250 ohms)
 10-50 mA DC (Z in 100 ohms)
 0-1 mA DC (Z in 5K ohms)
 0-10 mA DC (Z in 500 ohms)
 1-5 VDC (Z in 10 megohms)
 0-5 VDC (Z in 10 megohms)
 0-10 VDC (Z in 1 megohm)
 Other zero-based currents and voltages available.

Output Signals/Output Drive (RL)

	AC Power (RL)	DC Power (RL)
4-20 mA DC	0-1,000 ohms max.	0-900 ohms max.
10-50 mA DC	0-400 ohms max.	0-350 ohms max.
0-1 mA DC	0-20,000 ohms max.	0-18,000 ohms max.
1-5 VDC	100k ohms min.	100k ohms min.
0-10 VDC	200k ohms min.	200k ohms 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: 140 db @ 60Hz
Isolation: Input/output/power 600 VAC, 50/60 Hz, 1,000 VDC for AC, isolated DC powered units

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

Power

115 VAC: 50/60 Hz, 0.7PF (Standard)	48 VDC: Isolated (Option P3)
12 VDC: Isolated (Option P8)	125 VDC: Isolated (105-140 VDC) (Option P4)
24 VDC: Non-isolated (Option P1)	230 VAC: 50/60 Hz, 0.7 PF (Option P5)
24 VDC: Isolated (Option P2)	

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

Mechanical

Electrical Classification: General purpose
Connection: Barrier terminal strip (3/8 spacing, No. 6 screws)
Controls: Multiturn zero and span controls

Mounting: Surface mounting standard. See Housings section for options.
Weight: Net unit: 2.6 pounds (1.18 kilograms)
 Shipping: 3.0 pounds (1.36 kilograms)

Options

Option Number	Description
I 14	Voltage inputs to 200 VDC, 1 megohm min. impedance; current inputs of 100 mA max.
I 18	Low impedance DC current inputs [1/10 of standard (Z)]
O 10	Bipolar current output (larger than ± 1 mA)
O 11	Bipolar voltage output to ± 10 VDC: at 1 mA, bipolar current ± 1 mA
O 12	Reverse calibration
O 15	Two-wire transmitter excitation
H 10	Thin-line conduit mounting plate and terminal cover
H 13B, H 14B, H 15B	NEMA 4, 7, & 12 enclosures
H 16	PFA 12 high-density, plug-in enclosures

Ordering Information

- Model number
- Input signals
- Number of inputs
- Equation and scaling factors
- 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:



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