



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

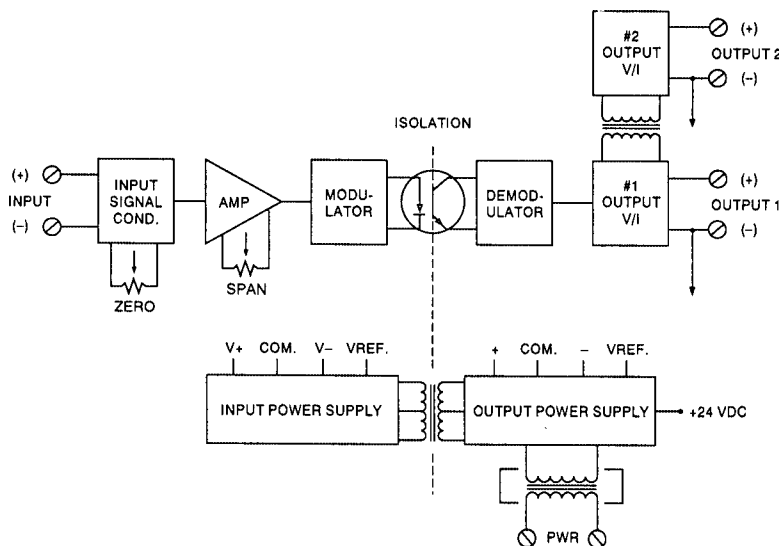
The Adtech Model SCT 02/0 66 AC powered Isolated Signal Converter provides a user configurable solution for ground loops and problems encountered in connecting together recorders, process control systems, computers, DCS and PLC systems.

It provides (2) two isolated 4-20 mA DC or 1-5 VDC outputs, or (1) one of each.

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 02/0 66 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 and/or other process instrumentation for improved resolution.

Zero and span controls are provided by two separate infinite resolution potentiometers.



## Features

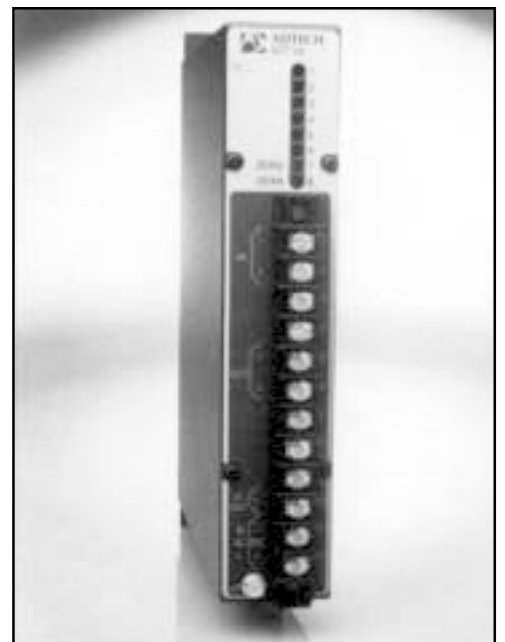
- **DC Current Inputs:** 4-20 mA, etc.
- **DC Voltage Inputs:** 1-5 VDC, etc.
- **High Input Impedance:** 10 megohms minimum
- **Zero-Based Inputs:** Current & voltage
- **Low Impedance Current Inputs:** 1 /10 standard—optional
- **Dual DC Process Signal Outputs:** Current or voltage
- **Repeatability:**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

# Dual Output Isolated Signal Converter

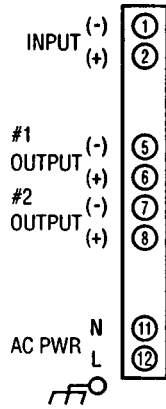
**Model No. SCT 02/0 66**

## Typical Applications

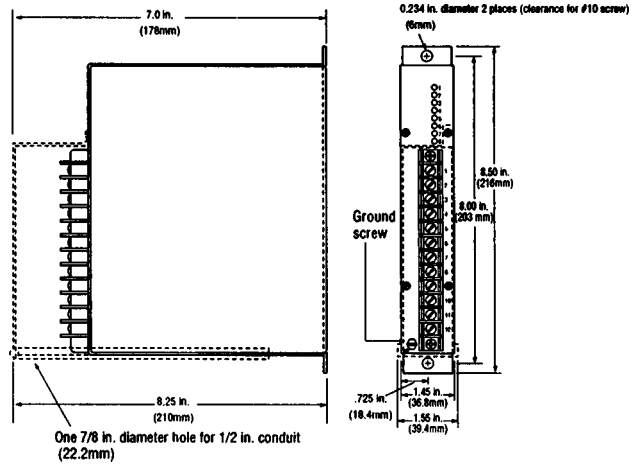
- **Interface unequal or non-compatible plant ground systems**
- **Interface non-compatible instruments**
- **DCS -PLC-PC Interface**
- **Isolate interference on signal lines**
- **Impedance conversion**



## Connections/Dimensions



Note: With 4-20 mA DC outputs, both loads (RL) must be connected or the unused output must be shorted.



### 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 V in 1 megohm)  
 Other zero-based currents and voltages available.

#### Output Signals/Output Drive (RL)

	Output 1	Output 2
4-20 mA DC:	0-700 ohms max.	0-700 ohms max.
1-5 VDC:	500k ohms min.	500k ohms min.

Note: The output(s) can be current, voltage or one of each.

### 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:**  $0^{\circ}$  to  $140^{\circ}\text{F}$  ( $-18^{\circ}\text{C}$  to  $60^{\circ}\text{C}$ )  
 operating;  $-40^{\circ}$  to  $185^{\circ}\text{F}$  ( $-40^{\circ}\text{C}$  to  $85^{\circ}\text{C}$ ) 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)

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

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**  
**I 14**

#### Description

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 12**

Reverse calibration [both channels]

**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 signal
- Output signal(s)
- 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.

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