



# ADTECH

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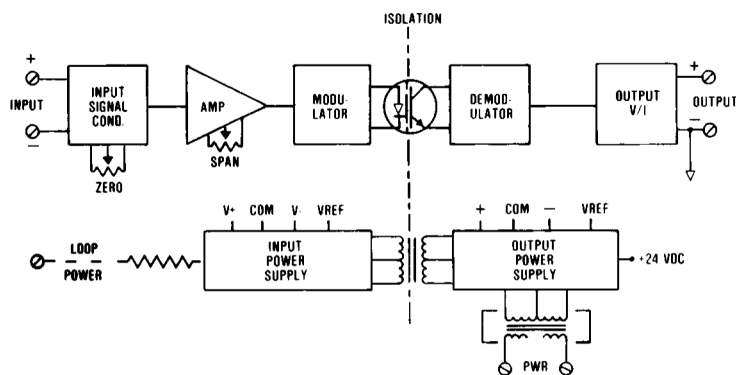
## ISOLATED SIGNAL CONVERTER MODEL NO. SCT 02

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.



### 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

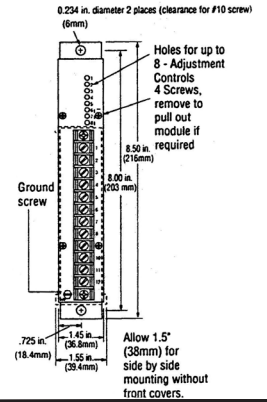
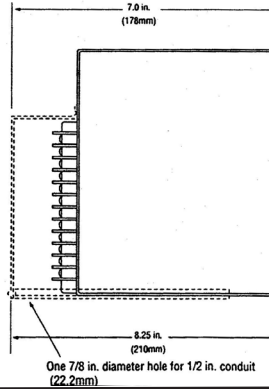
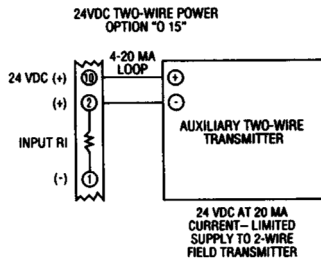
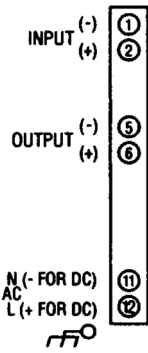
### FEATURES

- 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 AND 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



# CONNECTIONS / DIMENSIONS

## Connections/Dimensions



### INPUT/OUTPUT

INPUT SIGNALS	OUTPUT SIGNALS/ OUTPUT DRIVE (RL)		
	SIGNAL	AC POWER (RL)	DC POWER (RL)
4-20 MA DC (Z IN 250 OHMS)	4-20 MA DC	0-1,000 OHMS MAX.	0-900 OHMS MAX.
10-50 MA DC (Z IN 100 OHMS)	10-50 MA DC	0-400 OHMS MAX.	0-350 OHMS. MAX.
0-1 MA DC(Z IN 5K OHMS)	0-1 MA DC	0-20,000 OHMS MAX.	0-18,000 OHMS MAX.
0-10 MA DC (Z IN 500 OHMS)	1-5 VDC	100K OHMS MIN.	100K OHMS MIN.
1-5 VDC (Z IN 10 MEGOHMS)	0-10 VDC	200K OHMS MIN.	200K OHMS MIN.
0-5 VDC (Z IN 10 MEGOHMS)			
0-10 VDC (Z IN 1 MEGOHM)			

OTHER ZERO-BASED CURRENT AND VOLTAGES ARE AVAILABLE.

### PERFORMANCE

CALIBRATED ACCURACY:  $\pm 0.1\%$   
 LINEARITY:  $\pm 0.1\%$  MAXIMUM,  $\pm 0.04\%$  TYPICAL  
 REPEATABILITY:  $\pm 0.05\%$  MAXIMUM  
 TEMPERATURE STABILITY:  $\pm 0.01\%$  / °F MAXIMUM,  $\pm 0.004\%$  / °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° TO 60 °C) OPERATING; -40° TO 185 °F (-40° TO 85 °C) STORAGE  
 POWER SUPPLY EFFECT:  $\pm 0.05\%$  FOR A  $\pm 10\%$  POWER VARIATION  
 COMMON MODE REJECTION: 140 DB @ 60 HZ  
 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, 0.7 PF	(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  $\pm 10\%$  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 INPUT [1/10 OF STANDARD (Z)]
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, AND 12 ENCLOSURES
H 16	PFA 12 HIGH-DENSITY, PLUG-IN ENCLOSURES