



# ADTECH

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## ECONOMY ISOLATED SIGNAL CONVERTER DC POWERED MODEL NO. ECT 302

THE ADTECH MODEL ECT 302 DC 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 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 ECT 302 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. OUTPUT SIGNAL NEGATIVE AND POWER NEGATIVE ARE COMMON.

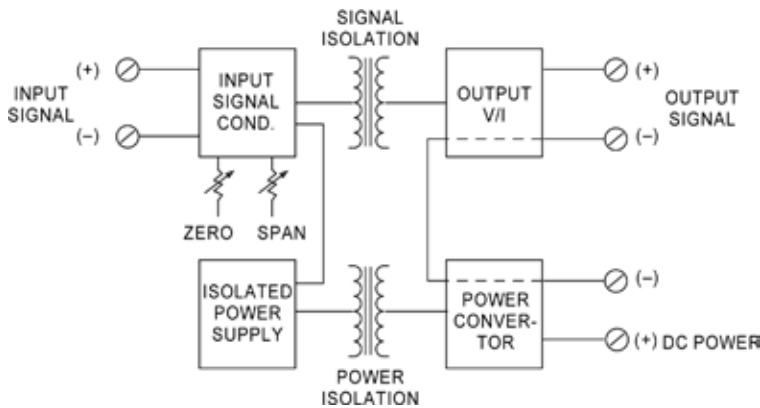
IT DELIVERS STANDARD PROCESS CURRENT OR VOLTAGE SIGNALS ON THE OUTPUT WITH A MAXIMUM OF 10 mV P/P OUTPUT RIPPLE. THIS PROVIDES CONVENIENT INTERFACING OF PROCESS SIGNALS TO A COMPUTER SYSTEM OR OTHER PROCESS INSTRUMENTATION FOR IMPROVED RESOLUTION.

ZERO AND SPAN CONTROLS ARE PROVIDED BY TWO SEPARATE INFINITE RESOLUTION POTENTIOMETERS. RECALIBRATION TO OTHER RANGES IN THE FIELD IS EASY AND CONVENIENT.

DIN MOUNTING IS SUPPLIED AS STANDARD. SURFACE MOUNT (OPTION H 26) AND SNAP TRACK (OPTION H 25) ARE AVAILABLE AT NO EXTRA COST, SPECIFY.

### TYPICAL APPLICATIONS

- INTERFACE UNEQUAL OR NON-COMPATIBLE PLANT GROUND SYSTEMS
- INTERFACE NON-COMPATIBLE INSTRUMENTS
- DCS-PLC-PC-MC INTERFACE
- ISOLATE INTERFERENCE ON SIGNAL LINES
- IMPEDANCE CONVERSION

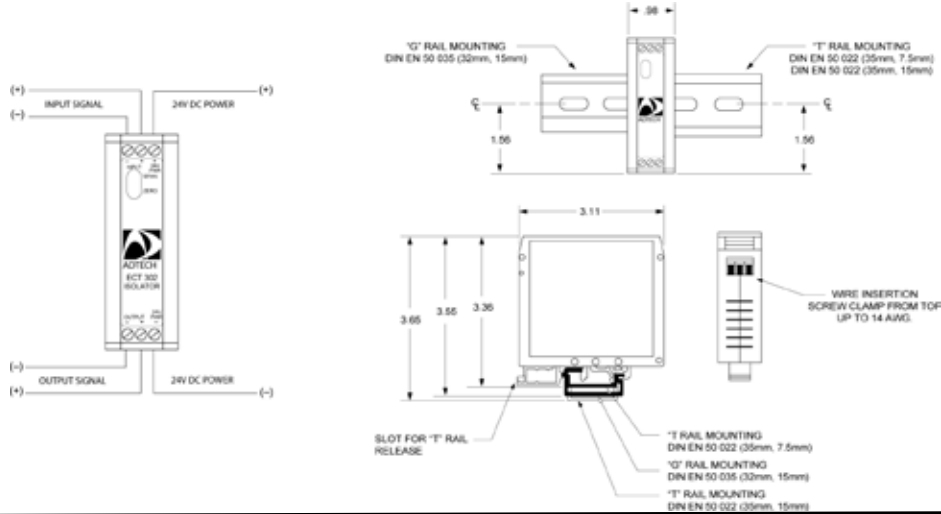


### FEATURES

- DC Current Inputs: 1 mA to 20 mA DC: (e.g. 4-20 mA DC)
- DC Voltage Inputs: 100 mV to 10 VDC: (e.g. 1-5 VDC)
- Unipolar Inputs: Current or voltage
- Unipolar DC Process Signal Outputs: Current or voltage
- Repeatability: +0.02% of span typical
- High Accuracy: +0.1% of span
- Power: 24 VDC



# CONNECTIONS / DIMENSIONS



## INPUT/OUTPUT

<p>INPUT SIGNALS: JUMPER CONFIGURABLE</p> <ul style="list-style-type: none"> <li>4-20 mA DC (Z IN 10 OHMS)</li> <li>0-20 mA DC (Z IN 10 OHMS)</li> <li>1-5 VDC (Z IN 1 MEGOHM)</li> <li>1-5 VDC (Z IN 1 MEGOHM)</li> </ul> <p>INPUT SIGNALS: ALTERABLE</p> <ul style="list-style-type: none"> <li>0-1 mA DC (Z IN 200 OHMS)</li> <li>0-10 mA DC (Z IN 20 OHMS)</li> <li>0-10 VDC (Z IN 1 MEGOHM)</li> </ul>	<p>OUTPUT SIGNALS: JUMPER CONFIGURABLE</p> <ul style="list-style-type: none"> <li>4-20 mA DC 0-900 OHMS MAX.</li> <li>0-20 mA DC 0-900 OHMS MAX.</li> <li>1-5 VDC 250K OHMS MIN.</li> <li>0-5 VDC 250K OHMS MIN.</li> </ul> <p>OUTPUT SIGNALS: ALTERABLE</p> <ul style="list-style-type: none"> <li>0-1 mA DC 20K OHMS MAX.</li> <li>0-10 mA 1800 OHMS MAX.</li> <li>0-10 VDC 500K OHMS MIN.</li> </ul>
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## PERFORMANCE

<p>CALIBRATED ACCURACY: <math>\pm 0.1\%</math></p> <p>LINEARITY: <math>\pm 0.1\%</math> MAX., <math>\pm 0.04\%</math> TYPICAL</p> <p>REPEATABILITY: <math>\pm 0.05\%</math> MAXIMUM</p> <p>TEMPERATURE STABILITY: <math>\pm 0.01\%</math> / <math>^{\circ}\text{F}</math>, <math>\pm 0.004\%</math> / <math>^{\circ}\text{C}</math></p> <p>LOAD EFFECT: <math>\pm 0.01\%</math> ZERO TO FULL LOAD</p> <p>OUTPUT RIPPLE: 10 mV P/P MAXIMUM</p> <p>RESPONSE TIME: 150 MILLISECONDS</p> <p>BANDWIDTH: (-3DB) 2.3 HZ</p> <p>NOTE: ALL ACCURACIES ARE GIVEN AS A PERCENTAGE OF SPAN.</p>	<p>TEMPERATURE RANGE:</p> <p>0<math>^{\circ}</math> TO 140 <math>^{\circ}\text{F}</math> (-18 <math>^{\circ}\text{C}</math> TO 60 <math>^{\circ}\text{C}</math>) OPERATING;</p> <p>-40 <math>^{\circ}</math> TO 185 <math>^{\circ}\text{F}</math> (-40 <math>^{\circ}\text{C}</math> TO 85 <math>^{\circ}\text{C}</math>) STORAGE</p> <p>POWER SUPPLY EFFECT: <math>\pm 0.05\%</math> FOR <math>\pm 10\%</math> POWER VARIATION</p> <p>COMMON MODE REJECTION: 100 DB @ 60 HZ</p> <p>ISOLATION: INPUT/OUTPUT/POWER 600 VAC, 50/60 HZ, 1,000 VDC</p>
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## POWER

24 VDC  $\pm 10\%$ , 1 WATT MAXIMUM , 3 WIRE OUTPUT LOOP POWERED

## MECHANICAL

ELECTRICAL CLASSIFICATION: GENERAL PURPOSE

CONNECTION: SCREW COMPRESSION TYPE ACCEPTS UP TO 14 AWG

CONTROLS: MULTITURN ZERO AND SPAN CONTROLS AND JUMPERS FOR RANGES

MOUNTING: DIN; OPTIONAL SURFACE, SNAP TRACK OR NEMA 4 & 7

WEIGHT: NET UNIT: 4.0 OZ. (115 GRAMS)

SHIPPING: 7.0 OZ. (200 GRAMS)

## OPTIONS

OPTION NUMBER	DESCRIPTION
H 15D	EXPLOSION PROOF: CLASS 1, GROUP B,C AND D
H 25	SNAP-TRACK MOUNT (SPECIFY)
H 26	SURFACE MOUNTING (SPECIFY)
H 27	NEMA 4 ENCLOSURE
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
- Output signal
- Housing and miscellaneous options

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