# ADTECH
Analog-Digital Technology, Inc.

The Adtech Model ECT 302-1 DC powered 3 Way Isolated Bipolar Signal Converter provides a user configurable solution for ground loops and problems encountered in connecting together recorders, process control systems, motor control systems, computers, DCS and PLC systems.

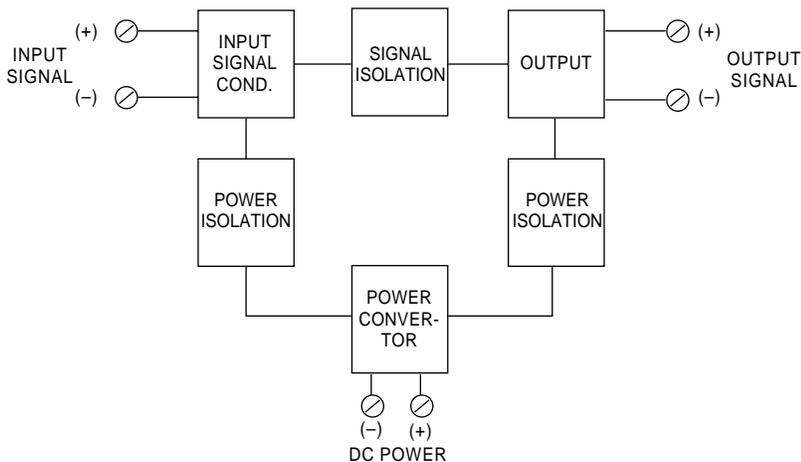The standard response time is 150 milliseconds. Higher speed of response is available, consult factory.

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.

The input, output and power supply are mutually isolated to 600 VAC or 1,000 VDC peak minimum.

It delivers standard process 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

- **Fast response isolation**
- **Interface unequal or non-compatible plant ground systems**
- **Interface non-compatible instruments**
- **DCS-PLC-PC-MC Interface**
- **Isolate common mode interference on signal lines**



## Features
- **DC Current Input:** 4-20 mA DC
- **DC Voltage Inputs:** 0-10 VDC, 0-±10 VDC
- **Bipolar Input:** Voltage
- **DC Voltage Outputs:** 0-10 VDC, 0-±10 VDC
- **Bipolar Output:** Voltage
- **Repeatability:** ±0.02% of span typical
- **High Accuracy:** ±0.1% of span
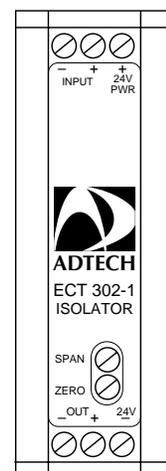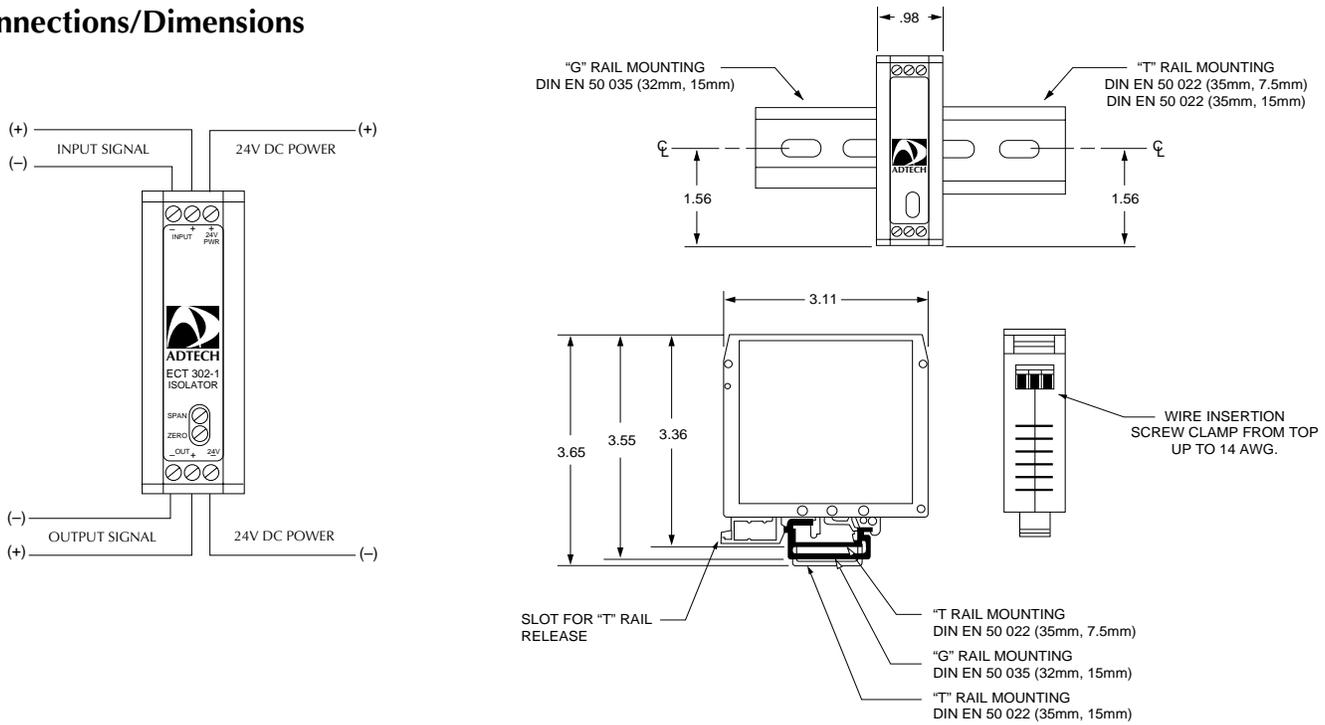- **Power:** 24 VDC

## Connections/Dimensions



### Input/Output

**Input Signals:**
- 4-20 mA DC (Z in 50 ohms)
- 0-10 VDC (Z in 1 megohm)
- 0-±10 VDC (Z in 1 megohm)

**Output Signals:**
- 0-10 VDC into 5k ohms min.
- 0-±10 VDC into 5k ohms min.

### Performance

**Calibrated Accuracy:** ±0.1%
**Linearity:** ±0.1% max., ±0.04% typical
**Repeatability:** ±0.05% maximum
**Temperature Stability:** ±0.01%/°F max., ±0.004%/°F typical
**Load Effect:** ±0.01% zero to full load
**Output Ripple:** 10 mV P/P maximum
**\*Response Time:** 150 milliseconds
**Bandwidth:** (-3db) 2.3 Hz

*\*Up to 10kHz bandwidth: Specify Consult factory for higher bandwidth*

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

**Temperature Range:**
-25° to 185°F (-31°C to 85°C) operating;
-40° to -200°F (-40°C to 93°C) storage
**Power Supply Effect:** ±0.05% for ±10% power variation
**Common Mode Rejection:** 100 db @ 60 Hz
**Isolation:** Input/output/power 600 VAC, 50/60 Hz, 1,000 VDC

### Power

24 VDC, ±10%, 1 watt maximum.

*Note: For AC power use the SCT 502-1.*

### 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 |
|---|---|
| I 14 | Voltage inputs to 200 VDC, 1 megohm min. impedence; current inputs of 100 mA max. |
| H 15D | Explosion Proof: Class 1, Group B,C & D |
| H 23 | Two (2) inch pipe mounting plate & clamps |
| 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.*

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