**A**utomation

**C**omponents

**I**nc.

# Installation and Operation Instructions
## ACI/592, ACI/592-10K
## ACI/592-CS, ACI/592-10K-CS

### READ THESE INSTRUCTIONS BEFORE YOU BEGIN INSTALLATION

All ACI/592 and ACI/592-10K semiconductor sensors are both polarity and non-position sensitive. All semiconductor sensor type room units are supplied with a two or three pole terminal block depending on whether they have a current or voltage output.

The following units are available with corresponding terminal blocks for all connections: Room with Setpoint (RS), Room with Override (RO), Room with Setpoint and Override (RSO), and Room with Setpoint, Override, and RJ12 Communication Jack (RSO RJ12).
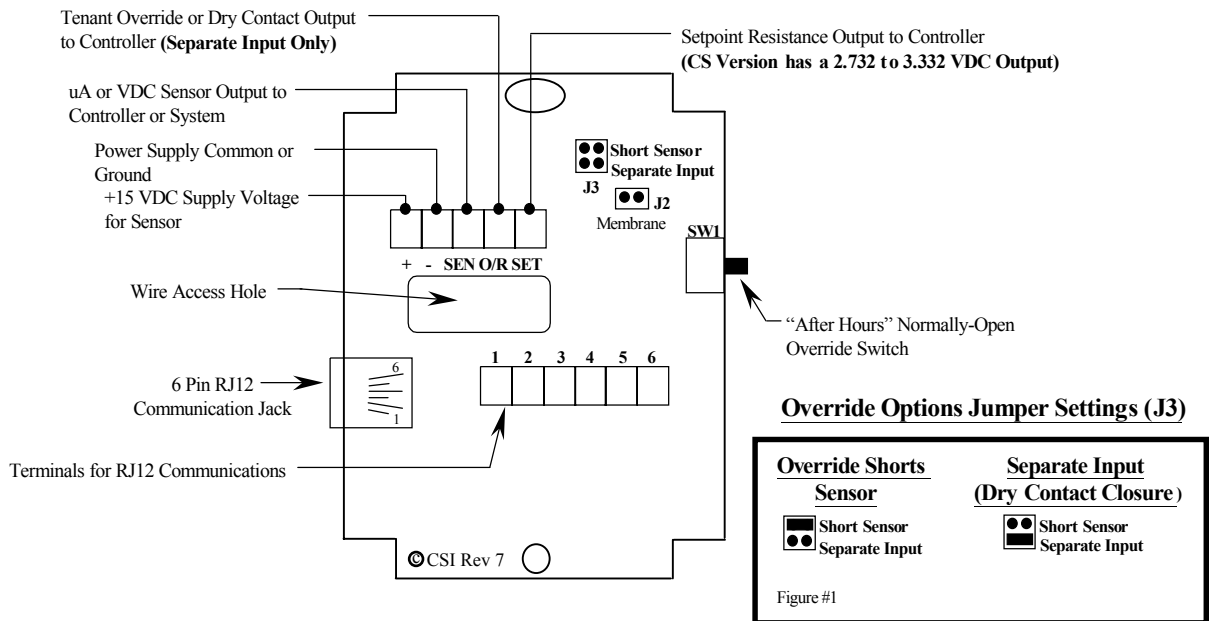
**\*\*Note:  All Room with Override (RO) and Room with Setpoint and Override (RSO) sensors are shipped with the Override in parallel with the sensor unless specified otherwise.  If a separate Input or Tenant Override is Needed, see Figure #1 for the Override Options jumper Settings.**

All other configurations are supplied with 22 gauge lead wires and can be hooked up with any crimp style or wire nut wire connectors.

### ■ TROUBLESHOOTING

| | |
|---|---|
| Sensor reads 0 uA or VDC | Check supply Voltage - Sensor or wires are shorted together open |
| Sensor reads supply voltage or high current | Sensor or wires are shorted together |
| Erratic readings | Bad wire connections - Condensation or Moisture problem – RF Noise |

### ■WIRING DIAGRAMS



**Override Options Jumper Settings (J3)**

| Override Shorts Sensor | Separate Input (Dry Contact Closure) |
|---|---|
| ■ Short Sensor / Separate Input | ●● Short Sensor / ■ Separate Input |

Figure #1

**\*\* NOTE:  (J2) is only used for Connection of the Membrane Switch.**

■**ROOM TEMPERATURE SENSORS**
This unit is suitable for either drywall or junction box mounting. The room sensor is provided with screw terminal blocks for all connections. Remove the cover from the unit and mount the housing base to the wall using the (2) 6/32" x 1" machine screws. Now replace the cover and tighten down using the (2) 1/16" Allen screws located on the bottom of the enclosure.

■**DUCT**
Duct temperature sensors - Drill a 3/8" hole in the duct and insert the probe through the hole until the foam pad is against the duct. Now insert the (2) mounting screws through the mounting holes in the flange and tighten them down until the unit is held firmly to the duct.

■**FLUID IMMERSION TEMPERATURE SENSORS**
The ACI Fluid Immersion-type sensors are provided with a 2 ½", 4", or 6 ¼" insertion length, 304 series stainless steel thermowell. The thermowell has a 1/2" NPT external or process thread and a 1/2" NPT internal or instrument threads. Heat transfer compound may be used but is not necessary. All of the ACI thermowells will accept a probe diameter of 0.250".

■**STRAP-ON TEMPERATURE SENSORS**
The ACI Strap-On sensors, are provided in a NEMA 1 rated junction box with an adjustable 2" to 5" pipe clamp. The unit should be mounted on the bottom side of the pipe to ensure proper heat transfer and a true temperature reading. Heat transfer compound and insulating the sensor will help the overall accuracy of the sensor. By ordering extra straps and fastening them together, it is possible to make them fit pipes larger than 5" in diameter.

■**OUTSIDE AIR TEMPERATURE SENSORS**
The ACI Outdoor Air temperature sensors are provided in a weatherproof enclosure. An optional waterproof Aluminum Bell Box or NEMA 4X Polycarbonate enclosure is also available upon request for an additional charge. All of the mounting hardware is provided with the sensor. Be sure to mount the sensor out of direct sunlight, with the sensor probe pointing downward.

■**STAINLESS PLATE TEMPERATURE SENSORS**
The ACI Stainless Plate temperature sensors are mounted on the back of a 1 Gang stainless steel plate. The foam pad will insulate the sensor from any drafts in the wall. (2) 6/32" x 1" machine screws are provided for junction box mounting. Be sure that the sensor is not mounted on an outside wall, due to the overall effect on the temperature readings from either drafts or heat transfer.