

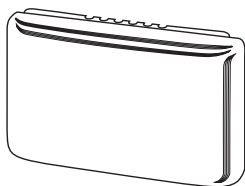
# ZZSENSAL0300AA/BAYSEN30ATEMPA

Indoor Remote Sensor/Outdoor Remote Sensor

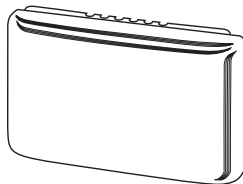
## INSTALLATION INSTRUCTIONS

**FAILURE TO READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY BEFORE INSTALLING OR OPERATING THIS CONTROL COULD CAUSE PERSONAL INJURY AND/OR PROPERTY DAMAGE.**

**ZZSENSAL0300AA  
INDOOR REMOTE SENSOR**



**BAYSEN30ATEMPA  
OUTDOOR REMOTE SENSOR**



**Outdoor Probe**

**Interior Mounting Base**

## SPECIFICATIONS

**Operating Range:** (based on thermostat range)

**ZZSENSAL0300AA Indoor Model:** 40 to 99°F

**BAYSEN30ATEMPA Outdoor Model:** -40 to 140°F

**Operating Humidity Range:** 0 to 90% RH  
(non-condensing)

**Maximum Distance from Thermostat:** 300 feet

**Recommended Wire:** 18 or 20 gauge,  
3-conductor shielded cable

**Color:** Classic White

**Dimension:** 2-1/8" x 3-1/2" x 3/4"

Outdoor Remote includes 12 ft. of outdoor  
probe lead

For applications where the wire run is short (100 ft. or less) shielded cable may not be required provided the wires are not routed parallel to or across other wires carrying electrical power. To reduce electrical interference or inductance from other electrical wiring or devices use shielded cable and keep Remote Sensor wire runs separate from thermostat wiring. Remote sensors cannot be used with systems where power interruptions are part of normal system operation.

### **⚠ CAUTION**

To prevent electrical shock and/or equipment damage, disconnect electric power to system at main fuse or circuit breaker box until installation is complete.

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### **⚠ WARNING**

Do not use on circuits exceeding specified voltage. Higher voltage will damage control and could cause shock or fire hazard.

Do not short out terminals on gas valve or primary control to test. Short or incorrect wiring will damage thermostat and could cause personal injury and/or property damage.

# INSTALLATION

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## INDOOR SENSOR SELECT SENSOR LOCATION

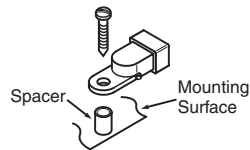
Proper location insures that the remote sensor will provide a comfortable home or building temperature. Observe the following general rules when selecting a location:

1. The remote sensor can be located a maximum of 300 feet from the thermostat.
2. Locate sensor about 5 ft. above the room floor level.
3. Install sensor on a partitioning wall, not on an outside wall.
4. Never expose sensor to direct light from lamps, sun, fireplaces or any temperature radiating equipment.
5. Avoid locations close to windows, adjoining outside walls, or doors that lead outside.
6. Avoid locations close to air registers or in the direct path of air from them.
7. Make sure there are no pipes or ductwork in that part of the wall chosen for the sensor location.
8. Never locate sensor in a room that is normally warmer or cooler than the rest of the home (such as the kitchen) or building.
9. Avoid locations with poor air circulation, such as behind doors or in alcoves.
10. In the home, the living or dining room is normally a good location, provided there is no cooking range or refrigerator on opposite side of wall.

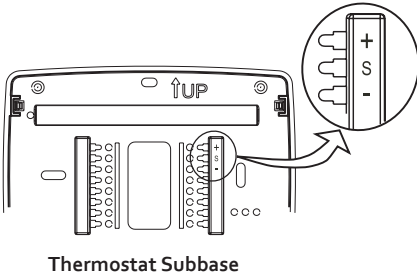
## OUTDOOR SENSOR SELECT SENSOR LOCATION

Proper location insures that the remote sensor will provide a correct outdoor temperature reading. Observe the following general rules when selecting a location:

1. The interior mounting base can be located a maximum of 300 feet from the thermostat.
2. Install the interior mounting base within 12 ft. of the intended outdoor probe location.
3. Never install the outdoor probe where it will be exposed to direct light from lamps, sun, fireplaces or any temperature radiating equipment.
4. Make sure there are no pipes or ductwork in the wall chosen for the base location.
5. Outdoor temperature measurement requires installing the probe outdoors. Good probe locations would be under a bay window or overhang, out of direct sunlight. Direct sun exposure will affect sensed temperature. Install probe with spacer to obtain a more accurate temperature.



6. Although connected to the probe wire for outdoor temperature sensing, the interior mounting base must be placed indoors. Therefore, the interior mounting base must be installed near the perimeter of the building, so that the probe wire can be run through to the outside of the structure and placed in the selected (shaded) location. The outdoor probe wire is 12 feet long (and should not be cut or spliced), so plan the placement of both the probe and interior mounting base accordingly. Any excess wire may be coiled or bundled. The probe should be connected to E2 as shown in figure 1.



**Note:** When using shielded cable, connect shield of 18 or 20 gauge 3 conductor cable to "-" on thermostat subbase.

## ⚠ CAUTION

Do not allow the 3-conductor wire to be pinched between the sensor and the wall.

Check wire connections before applying power. Improper connections will lead to permanent damage to the sensor.

When shielded cable is used, cable shield must be connected to "-" on the THERMOSTAT ONLY.

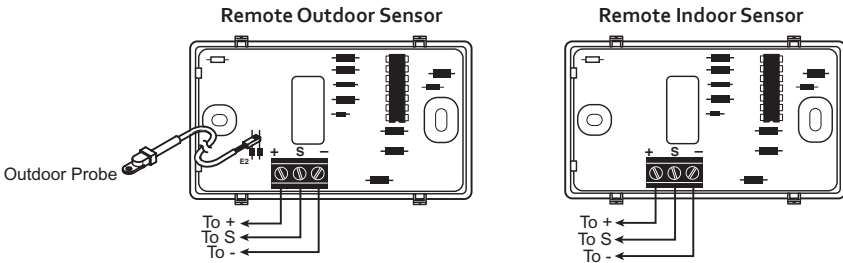


Figure 1 – Touchscreen Thermostat (ACONT302/303 & TCONT302/303)  
Indoor/Outdoor Remote Sensor Wiring (ZZSENSAL0300AA/BAYSEN30ATEMPA)

# CONFIGURATION

**Touchscreen Models:** When installing a remote sensor you must enable the remote sensor option in the Installation Menu. See Installation Instructions.

# TROUBLESHOOTING

To function correctly and read temperature accurately, the thermostat must have constant 24-volt power. If the thermostat temperature is steadily dropping, reading low, or reads 08° when a remote sensor is installed, it can be traced to one of the three following conditions.

Condition	Test	Comments
1. Loss of 24-volt power.	On models with batteries, remove the batteries and re-install thermostat. If the display is blank, check heating and cooling system to determine why 24-volt power is absent.	For the sensor to read correctly, the 24-volt system power must be present. Some systems may require an isolation relay to provide constant power to the thermostat. Limit or safety devices in the equipment can also cause a power interruption.
2. A broken wire on +, S or - from the thermostat to the remote.	Disconnect sensor wires at thermostat. Attach a short piece (2') of three-wire shielded cable to +, S, and - on the subbase. Bring the remote sensor to the thermostat location and attach +, S, and -, respectively. Reattach thermostat. If the temperature begins to climb (slowly), it is reading correctly. If it reads correctly with the 2' length but improperly when attached to the wire run, it indicates a fault in the wire run.	Repair or replace the 3 wire shielded cable. Be sure the remote wire run is not parallel to line voltage wires that carry heavy inductive loads, or across fluorescent light ballasts that may cause an inductance to be transmitted to the thermostat.
3. A shorted or damaged remote sensor.	Because it is an electronic sensor, there are no Ohm values to test. If correct conditions as listed in 1 & 2 above and the temperature stays at or near 08°, it indicates a shorted or damaged remote sensor.	Replace remote sensor.

**Note:** Digital thermostats and remote sensors acclimate very slowly to temperature change. It may take an hour or more for the temperature to acclimate to the room temperature from a low temperature reading as outlined above. To expedite the room temperature display use the reset instructions listed in the installation instructions for the thermostat model you are working with. When reset, the thermostat will default to a room temperature of 70° and begin sensing room temperature. Be sure to reconfigure the installer menu for a remote sensor because the reset function may cancel remote sensing.