Installer's Guide

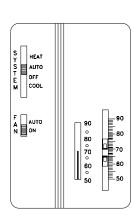**Customer Property: Contains wiring and service information. Please retain.**
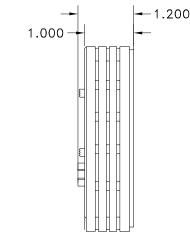
Models :
BAYSENS008B
ASYSTAT663B

Zone Sensor Module
for Heat/Cool Units
Dual Setpoint, Auto C/O

Description

This Zone Sensor Module provides the following features and system control functions:

- System control switch to select heating mode (HEAT), cooling mode (COOL) automatic selection of heating or cooling as required (AUTO), or to turn the system off (OFF).

- Dual Temperature setpoint levers for setting desired temperature. The blue lever controls cooling, and the red lever controls heating.

- Thermometer to indicate temperature in the zone. (This indicator has been factory calibrated.)

Application

- Cooling, Gas/Electric, packaged rooftop units, (2- 25ton).

-Large Commercial Rooftop UCM units, (20 - 130 tons), with Constant Volume controls (5U56).

-Commercial Self-Contained units with Constant Volume Intellipak controls (SU29).

Inspection

Check packaging and contents for damage. Check for concealed damage before storing. Report any damage immediately to the transportation company, and make any appropriate claims.
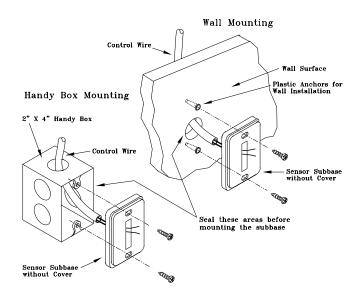
Installation Steps

1. **Mounting location.** Choose a spot on an interior wall near the return air grille, about five feet above floor level, where air circulates freely and is of average temperature for the zone.

   Avoid areas such as:
   - behind doors;
   - on outside walls, or any walls with unheated or uncooled areas behind the zone sensor;
   - in direct sunlight, or any source of radiant heat that could affect the temperature measurements; or
   - in line with the discharge air from the unit being controlled.

2. **Mount subbase.** Remove zone sensor cover from the subbase, and mount subbase on the wall or in a 2 x 4 handy box. Route the wires through the wire access hole in the subbase. (See Figure 1) Seal the hole in the wall behind the subbase.

Figure 1 - Zone Sensor Mounting (typical)

Wiring

Note: Guidelines for wire sizes and lengths are shown in Table 1. The total resistance of these low voltage wires must not exceed 2.5 ohms per conductor. Any resistance greater than 2.5 ohms may cause the control to malfunction due to excessive voltage drop.

Note: Do Not run low-voltage control wiring in same conduit with high-voltage power wiring.

1. **Run wires.** Run wires between the unit control panel and the zone sensor subbase. To determine the number of wires required, refer to Unit IOM for Wiring Connections.

2. **Connect wires.** Connect the wiring to the appropriate terminals at the unit control panel and at the Zone Sensor subbase. In general, zone sensor connections to the unit use the convention of connecting Zone Sensor terminals to like numbered Unit terminals (1 to 1, 2 to 2, etc.). The connection detail is shown on the unit wiring diagrams which can be found in the unit service literature and on the unit.

3. **Replace cover.** Place zone sensor cover back on the subbase, snap securely into place.

Table 1
Zone Sensor Maximum Lengths and Wire Size

Distance from Unit to Control	Recommended Wire Size
000 - 150 feet	22 gauge
151 - 240 feet	20 gauge
241 - 385 feet	18 gauge
386 - 610 feet	16 gauge
611 - 970 feet	14 gauge

Optional Remote Sensor (BAYSENS017)

When using the optional remote sensor (BAYSENS017), mount it in the space that is to be controlled. Clip the thermistor **(RT1)** on the zone sensor module. Wire remote sensor to the zone sensor module according to the interconnecting wiring diagrams in the unit's IOM.

Technical Literature Printed in USA