# Installation Instructions





## SENDCOM Communicating Duct Temperature Sensor

#### **Description**

The SENDCOM is a microprocessor based, communicating air temperature sensor for stand alone HVAC systems. Each stand alone HVAC system requires a SENDCOM to display the Supply and Return temperature for that particular system. The SENDCOM is designed to be installed on the supply duct with the remote Return Air sensor installed on the return duct or plenum. The SENDCOM uses a unique address number corresponding to the thermostat controlling the HVAC system but does not take up an address point on the Command Center.

<u>Mounting Instructions</u> - Mount the SENDCOM device in an interior location with the provided sheet metal screws. Drill a ¼" hole in the <u>supply</u> trunk, before the bypass damper take-off. Insert the Supply Air temperature sensor (LAT) into the ¼" hole and secure the mounting base with the provided sheet metal screws.

Drill a ¼" hole in the Return duct <u>upstream</u> of the bypass takeoff, and mount the Return Air sensor (LAT) the same way the Supply sensor was installed. *See Fig 1* 

#### Wiring

Use standard 18 AWG thermostat wire for the 24vac connections. Thermostat wire may also be used to extend the 9' air sensor leads. The LAT sensors do not require a shield to be connected.

Use twisted pair or shielded twisted pair communication wire for the RX TX connections. **NOTE:** The RX TX communication wire is not to be run with <u>any</u> ac voltage wiring in conduit or strapped to the outside of conduit. If there is a potential for electrical interference, use shielded twisted pair communication wire (Belden 8450).

The RX and TX terminals can be tied into the communication buss at any location within the communication circuit.

Multiple SENDCOM installations can have their RX TX buss daisy chained together and terminated at any RX TX location within the link. This can be at any DIGICOM thermostat or at the Command Center.

The SENDCOM requires 24 - 28vac, which can be provided by a dedicated transformer or the HVAC system control transformer. See Fig 2

Connect the Return and Supply air sensors (LAT) to the SENDCOM RA and SA terminals. No shield is required. See Fig 2

#### Addressing

Each SENDCOM must be addressed to the corresponding stand alone thermostat. Determine the thermostat address to which the SENDCOM is applied and add 70 to that address. Press and hold the **ADR** button, and then press the **UP** or **DN** button to raise or lower the displayed address number. NOTE: SENDCOMS installed on ZonexCommander (Plus) systems cannot be assigned to thermostat addresses 1 through 4 (71–74). See Fig 3

#### **Temperature Display and Calibration**

When the SENDCOM is powered up, the Supply air temperature is displayed. To display the Return air temperature, press and hold the **UP** and **DN** buttons. For temperature display on the computer, see the ZCMAN Installation Manual.

The SENDCOM comes from the factory fully calibrated. Should field calibration be required, adjust the **R2** potentiometer for Supply air. For return air calibration, press and hold the **UP** and **DN** buttons and adjust the **R10** potentiometer until the correct Return air temperature is displayed. Release the **UP** and **DN** buttons. Calibration is complete.

Fig. 1



### **TERMINAL FUNCTIONS**

- TX- Data transmit
- RX- Data receive
- C 24vac power common
- R 24vac power input
- RA Return Sensor input
- RA Return Sensor common
- SA Supply Sensor input SA Supply Sensor common

Fig. 3