INSTALLATION GUIDE

Duct Sensor (7C-SE-C1X-DT)

INTRODUCTION

The Duct Sensor provides a high precision temperature and humidity sensor that is pre calibrated from the factory to a Node or Stat. The Duct Sensor is easily mounted on a duct with the help of self-tapping screws. The Duct Sensor uses a proprietary 1-wire protocol to communicate with a master device such as a SmartNode.

PACKAGE CONTENTS

- Duct sensor
- Mounting accessories
- One Sensor bus cable of 20ft length
- Modular pipes (100 and 150mm) to allow the air. in the duct to be pitot.

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SPECIFICATIONS

Power	3-wire interface powered at 3.3V with maximum current limit of 10mA
Accuracy	Temperature (typical +/- 1°F (0.5C), Humidity (typical +/- 2% RH),
Protection	Protection: IP 20, NEMA Type 1 Pollution grade: 2 Certification: ROHS
Communication	3 wire sensor bus for daisy chained sensor communication and low power 3V DC.
Operating temperature	Operating Environment: 0°F (-17°C) – 122°F (50°C)
Span shift due to temperature variation	< 0.5% of reading per 10°C
Mounting	Firmly on the Duct. Torque not exceeding 0.2Nm to be used to fix the device. Drill a 17dia hole for the pipe to pitot the air stream for measurement.
Storage temperature	15°F (-10°C) to 150°F (70 °C)

Carrier

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 Cat. No. 11-808-964-01

PRECAUTIONS

- Failure to wire devices with the correct polarity when using a shared transformer may result in damage to any device powered by the shared transformer.
- Mount the tubing so that the tube is in direct line of a breeze or draft.
- Turn off the power before wiring. Never connect or disconnect the wiring with the power turned on. Do NOT allow live wires to touch the circuit boards.
- Install in accordance with all state and local codes.

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1. Drill a hole of dia greater than 18mm for the pipe to enter the Duct. Mount the Duct Sensor using two #8-1.5” self-tapping screws as shown in Figure 1. The transmitter must be installed vertically with the air inlet pipe pointing perpendicular to the duct.

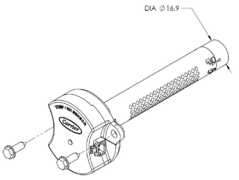
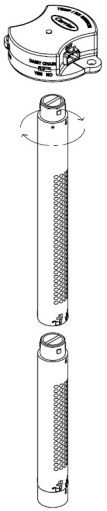
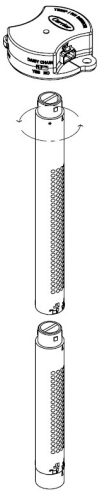


Figure 1

2. Choose the length of the pipe as per the duct dimension. The lengths of the pipes provided are 100 and 150mm long. There is an end cap provided to make the air pitot towards the sensor. Refer Figure 2. To lock and unlock the tubes.



Align the arrow on the pipe to the lock symbol and rotate clockwise to secure the position



Rotate the pipes anti-clockwise to separate them.

Figure 2

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1. Turn the power OFF. Connect one end of the Sensor Bus cable to one end of the RTS port on the Smart Node and the other end to the IN port of the Duct Sensor as shown in Figure 3. Set the Daisy chain switch to NO position if there is only one Duct Sensor connected.

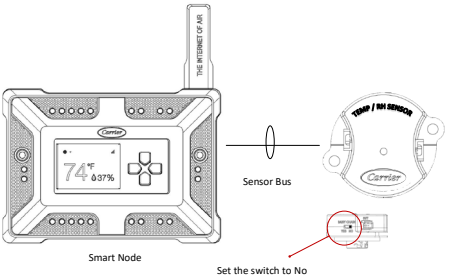
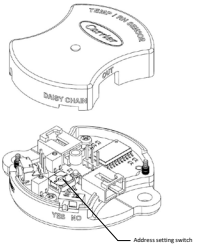


Figure 3

2. Power to the Duct Sensor is provided through this cable; no external power wiring is required. If an additional Duct sensor needs to be connected, connect the other Sensor Bus cable to one end of the OUT port of the Duct Sensor and the other end to the IN port on the Duct Sensor. See Figure 4 for connections.

3. To set addresses on the Duct Sensor, open the top cover and find the rotary address setting switch on the PCB. The position is marked from 0 to 3. Available addresses on the Duct Sensor are 0, 1 and 2. **Address 3 is not available for Daisy chain.**



4. To enable Multiple Duct Sensor communication, the *Daisy Chain* switch must be set to *Yes*. When there is no requirement for additional sensors to be connected to the OUT port of the DPS, the *Daisy Chain* switch must be set to *No*. See Figure 4.

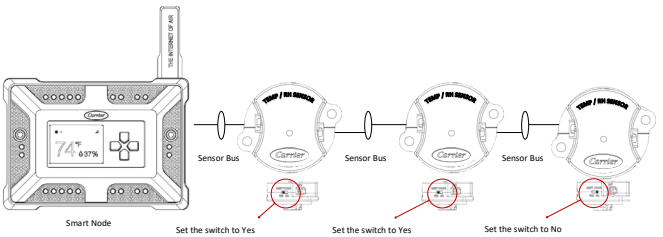


Figure 4

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Installation and servicing of Control Systems can be hazardous due to electrical components. Only trained and qualified service personnel should install, repair or service control system components.

For more information on wiring, commissioning, or usage of the ClimaVision product line, please refer to any documentation provided with the job. If no documentation was provided with the job, please use the ClimaVision Help Center (support.climavision.com) where you can find application specific wiring schematics and helpful user guides and videos or scan the QR code here:

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If you need help beyond that, please reach out to your local Carrier distributor for support.

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