Carrier

ClimaVision Smart Node 2.0
Part #s 7C-SN-C3X-X & 7C-SN-C8X-X (with DPS)

Flexible controller for individual VVT or VAV zone damper control or by-pass damper control

Built-in Differential Pressure Sensor

THE INTERNET OF AIR

Carrier

CONFERENCE 1

84% **74**°F

Damper | Room Temp

Airflow1- 52° | Airflow2- 48°

Shown here: Smart Node 2.0 with DPS | 7C-SN-C8X-X

– (4) Universal inputs

– (4) Analog outputs

– (4) Relays

– (1) Sensor bus communications port

– (1) PoR – Power Over RS485 port

– (1) RS-485 3-pin serial communications port

– (1) LED display with user navigation buttons

ClimaVision Smart Node 2.0 (7C-SN-C3X-X & 7C-SN-C8X-X)

Put the power, flexibility, and speed of IoT in your building automation system with the ClimaVision Smart Node. Gone are the days of pulling thousands of feet of comm wire from field controllers to supervisory devices. Power up a Smart Node, pair with a CCU over Bluetooth, select a pre-written sequence of operation, configure a few parameters and move on to the next one. Enjoy the comfort and energy savings made possible by ClimaVision with less effort than ever.

OVERVIEW

The Smart Node is a revolutionary terminal box controller for individual zone control with flexible software-defined configurations that can control a range of equipment across multiple ClimaVision applications. These include VAV and VVT terminal box control, bypass damper, and economizer control.

KEY FEATURES

- The Smart Node was designed and built to control equipment with zero programming required.

- An onboard display with large user navigation buttons enables field verification and adjusting without external devices such as voltmeters and laptops.

- Updates can be pushed from the cloud to include firmware updates and profiles (i.e. pre-written sequences of operation).

- Secure wireless mesh network. The Smart Node takes advantage of ClimaVision's secure and encrypted 900 MHz mesh network to communicate data to the Central Control Unit.

COMPATIBLE APPLICATIONS

Multi-Zone Air Distribution Systems
- VVT Zone Control
- VAV Zone Control
- Bypass Damper Control
- Economizer Damper Control

Single-Stage Equipment
- Exhaust Fans
- Pumps
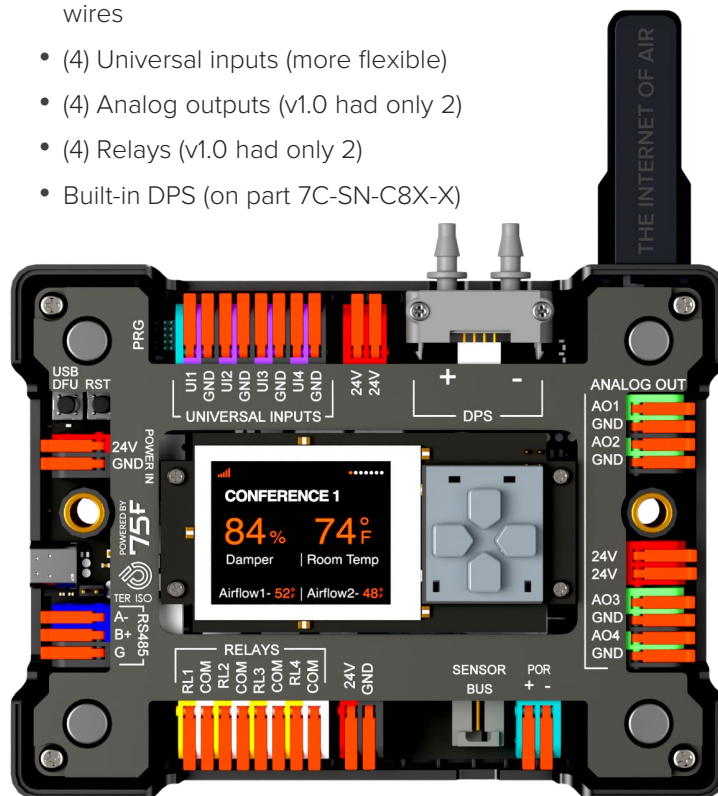- Unit Heaters
- Single-stage Cooling

NEW IN SMART NODE 2.0

Made to simplify installation:

- A magnetic cover makes access easy to wiring I/O

- Level-style terminals make wiring easy and accommodates solid or stranded wire

- Terminals and Communication ports clearly labeled

And increase flexibility:

- PoR (Power over RS485) port for connection to sensors offering communication and power over 2 wires

- (4) Universal inputs (more flexible)

- (4) Analog outputs (v1.0 had only 2)

- (4) Relays (v1.0 had only 2)

- Built-in DPS (on part 7C-SN-C8X-X)

ClimaVision Smart Node 2.0

MECHANICAL

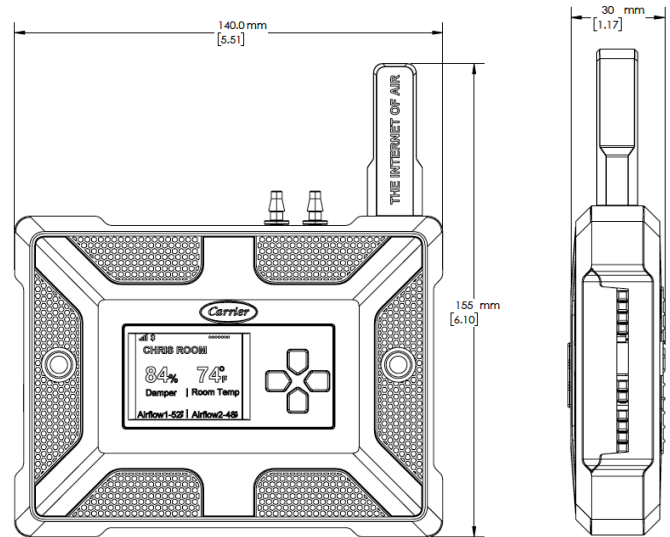|	
Dimensions	5.51" x 6.1" x 1.18" (140mm x 155mm x 30mm)
Operating Range	Humidity 20-85% non-condensing Temperature 0°F to 122°F (-17°C to 50°C) Plenum-rated
Screen	TFT
Termination	Lever, no tool connectors. 3-wire Molex connectors

I/O

Inputs	(4-UIs) Each input configurable for 10k Thermistor OR 0-10V DC
Outputs	(4 AOs) 0-10V DC analog outputs (4 DOs) Dry contact relays rated at 24VDC
Sensors	Differential Pressure Sensor (on part number 7C-SN-C8X-X) 0 – 500Pa

ELECTRICAL

Supply	24V AC/DC input (+/- 15%)
Peak Consumption	3VA (when no two-wire sensors are connected). Typical <9VA when the PoR is on full load
Protection	IP 20, NEMA Type 1
Rated Impulsive Voltage	330V AC RMS

COMMUNICATIONS

Bluetooth	BLE 4.1 for commissioning
Mesh	900 Mhz Mesh IEEE 802.15.4-compliant, for communications to CCU
Wired	PoR (Power over RS485) for v2 sensor bus 3-wire Molex connector for legacy sensor bus RS-485 port for wired connection to CCU 4-wire Molex connector sensor bus no longer supported (i.e. HyperSense)

COMPLIANCE

Pollution Grade	2
Certification	ROHS, UL 60730-1- Automatic Electrical Controls – in progress

MADE TO BE FLEXIBLE

Each Smart Node operates off 24V AC or DC and is designed to accept daisy-chain power, making power bus installation simple and fast. This device marries multiple digital and analog inputs and outputs with mesh network communication and Bluetooth commissioning, virtually eliminating the need to install network cabling in your building. The Smart Node also supports wired connection should that be required in outlier cases.