

75F® Smart Node™

Flexible terminal box controller with multiple interface ports for individual zone control



- (4) Universal Inputs - 10K Type 2. Or 0-50K Ω resistance or 4 x 0-10V analog inputs
- (4) Analog Outputs - 0-10V
- (4) Relays. Rated for 24V AC/DC, 1A, Resistive load
- (1) Sensor Bus communications port
- (1) PoR - Power over RS485 port for power line communication
- (1) RS-485 3-pin serial communications port
- (1) LED display with user navigation buttons

75F® Smart Node

Put the power, flexibility, and speed of IoT in your building automation system with the 75F Smart Node. Gone are the days of laboriously running communication wire from field controllers to supervisory devices and PLCs. Instead, simply install a Smart Node, choose a pre-configured sequence of operations with automatic updates from the cloud, securely pair the Smart Node with its supervisor via a 900 MHz wireless mesh network, and you're ready to proceed. Each Smart Node comes equipped with multiple interface ports, accommodating a wide array of I/O applications. Experience the comfort and energy savings that only 75F can deliver, all with just a fraction of the effort it once required.



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 75F applications. These include VAV and VVT terminal box control, bypass damper, and economizer control.

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 making it a easy retro fit if wiring is available.

KEY FEATURES

- Accepts digital sensors for occupancy, light, temperature, and humidity that can be used to monitor multiple zones.
- PIR-enabled sensor enable Auto Away and Force Occupied, which save energy in unoccupied zones and maintain comfort in occupied zones that are scheduled to be unoccupied, both for temperature and ventilation.
- Comes equipped with pre-programmed sequences that follow ASHRAE guidelines, out of the box.
- Industry-leading connectivity allows interfacing with a variety of staged and modulating terminal equipment.
- Facility managers have real-time access to sensor data and remote control over building parameters through integration with Facilisight, 75F's building intelligence suite of web and mobile apps.

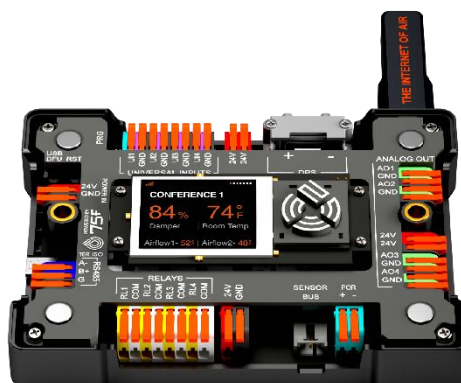
ADDITIONAL FEATURES

- Over-the-air firmware updates
- Easy-grip surfaces for installers wearing gloves
- Self-healing 900 MHz wireless mesh network for communication

COMPATIBLE APPLICATIONS

Software-defined hardware enables dynamic application assignment:

- 75F® Dynamic Airflow Balancing™
- 75F® Smart VAV with Reheat™
- Remote equipment & sensor monitoring
- Protocol Conversion



Smart Node

MECHANICAL

Dimensions 5.51" x 6.1" x 1.18" (140mm x 155mm x 30mm)

Mounting Wall and DIN mount

Operating Temp 32 – 122°F (0 to 50°C)

Screen TFT

Termination Lever, no tool connectors. 3-wire Molex connectors.

I/O

Inputs A. (4) 10k thermistor inputs
OR
B. (4) 0-10V DC analog inputs

Outputs C. (4) 0-10V DC analog outputs
D. (4) dry contact relays rated at 24V DC

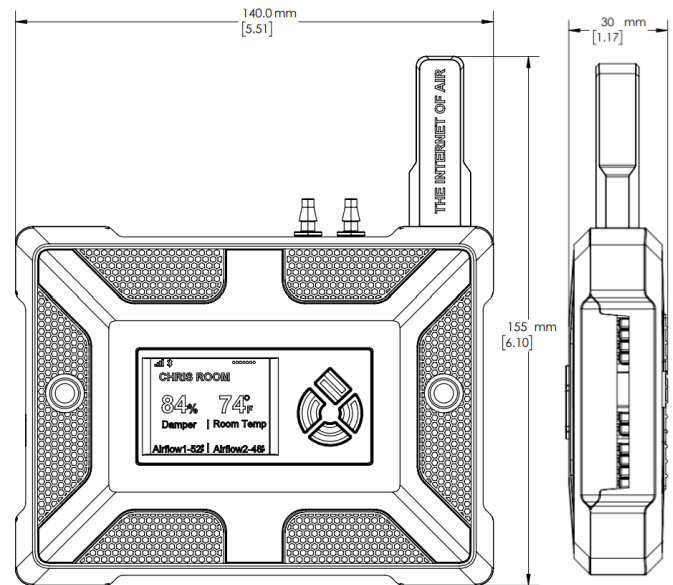
Sensors Differential pressure sensor (optional – different part number)
0 to 500Pa

ELECTRICAL

Supply 24V AC/DC input (+/- 15%)

Peak Consumption 3VA (When no 2 wire Sensors are connected).
Typical <9VA when the PoR is on full load

Protection IP 20, NEMA Type 1



COMMUNICATIONS

Bluetooth Used during commissioning and wireless sensor integration

Mesh IEEE 802.15.4-compliant; 900MHz used for device communication on mesh network

Wired

- RS-485 interface for Modbus or BACnet, 3 pin connector for Sensor Bus.
- PoR communication with other 75F two-wire Sensors and MySense

COMPLIANCE

Pollution Grade 2

Certification ROHS, UL 60730-1-Automatic Electrical Controls – In progress