

75F® Smart Node™

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



- (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
- (1) Differential Pressure Sensor (different part number)

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 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 75F 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 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 should that be required in outlier cases.

KEY FEATURES

- The Smart Node was designed and built from the studs out 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.
- Automatic updates pushed from the cloud. Pre-written sequences of operation always update for seamless performance benefits.
- Fast, easy installation. A magnetic cover makes access easy, and WAGO push-in connectors require no tools.
- Secure wireless mesh network. The Smart Node takes advantage of 75F's secure and encrypted 900 MHz mesh network to communicate data to the Central Control Unit.

ADDITIONAL FEATURES

- Optional differential pressure sensor built in for CFM VAV applications
- Robust construction with machined metal studs for mounting
- Commissions in just minutes with Bluetooth pairing

COMPATIBLE APPLICATIONS

- Multi Zone Air Distribution Systems
 - VVT
 - VAV
 - Bypass Dampers
 - Economizer
- Single-Stage Single-Zone Systems
 - Unit Heaters
 - Heat/Cool Equipment (Single-Stage)
 - Exhaust Fan



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°F-122°F (0°C 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

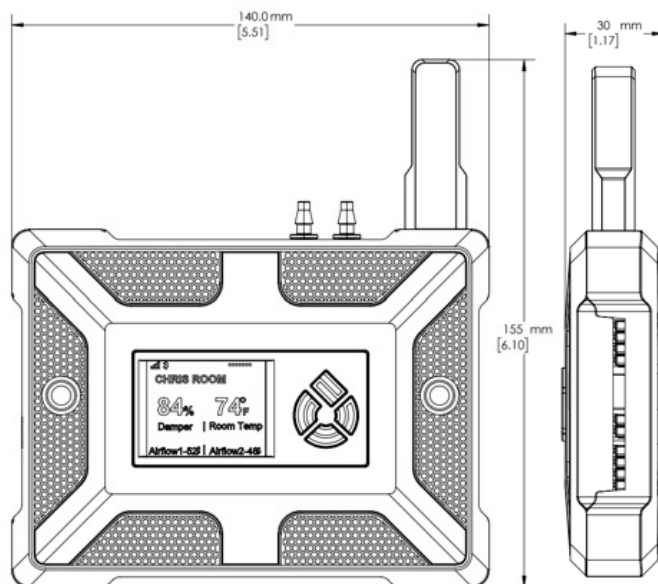
Sensors Differential pressure sensor (optional – different part number)
-500Pa to 500Pa

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