

SPEC SHEET

75F[®] Smart Node[™]

Flexible terminal box controller for individual zone control



- (2) Relay outputs
- (2) Analog inputs
- (2) Thermistor (temperature) inputs
- (2) Analog outputs
- (1) 3-pin serial communications port
- (1) RS-485 4-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 pulling thousands of feet of com wire from field controllers to supervisory devices and PLCs. Power up a Smart Node close to your equipment, select a pre-written sequence of operation with auto updates from the cloud, pair the Smart Node with the system CCU over a secure and encrypted 900 MHz wireless mesh network, and move on. Enjoy the comfort and energy savings made possible only by 75F in one-tenth the effort it used to be.



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 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.
- OLED display that makes life easy. An onboard display with large user navigation buttons enables field testing and adjusting without external devices such as voltmeters and laptops.

- Automatic and wireless upgrades. Pre-written sequences of operation always update for seamless performance benefits.
- Fast, easy installation. Backlit text and light-pipe enabled ports indicate which inputs/outputs are enabled.
- Secure Wireless Mesh Network. The Smart Node takes advantage of 75F's secure and proprietary encrypted 900Mhz mesh-network to connect sensors and terminal equipment to the 75F Central Control Unit™.

ADDITIONAL FEATURES

- Robust construction with machined metal studs for mounting.
- Commissions in just minutes with Bluetooth pairing

APPLICATIONS

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

INCLUDED

-
- (1) Smart Node
-
- (1) Sensor
-
- (1) 20' cable
-

75F® Smart Node™

27.7mm

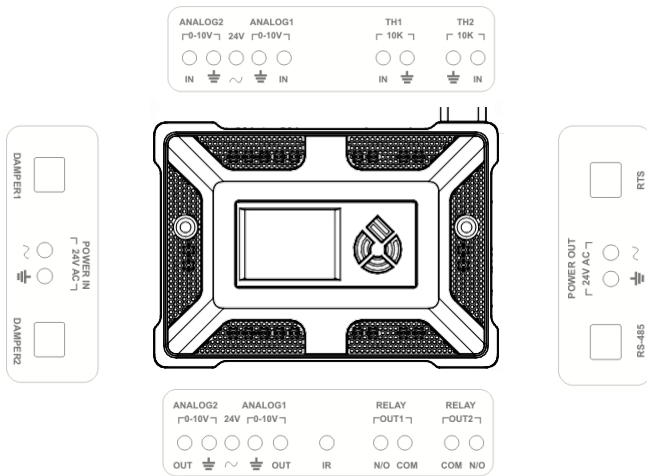
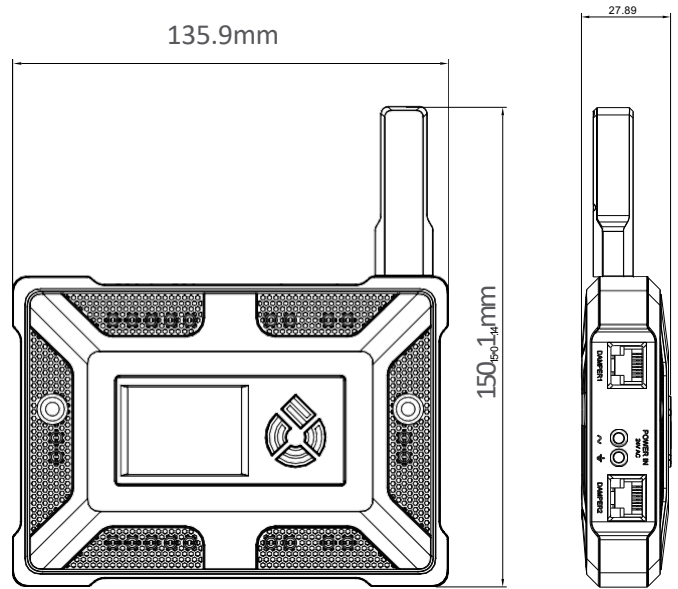
MECHANICAL

Dimensions 5.35" x 5.91" x 1.1" (135.9mm x 150.1mm x 27.7mm)

Operating Range Humidity 20-85% non-condensing. Temperature 0°F to 122°F (-17°C to 50°C)

Screen OLED

Termination WAGO2061 series poke-in connectors.



I/O

Inputs A. (2) thermistor inputs. 10K Type 2 or 0-50KΩ resistance
B. (2) 0-10v analog inputs. 10K impedance

Outputs C. (2) 0-10v or 4-20ma analog outputs
D. (2) relays rated for 24V AC/DC, 1A, Resistive load
E. (2) RJ-45 ports for 75F Smart Dampers. Motor output: 2W / 6.5V, 300mA

COMPLIANCE

Pollution Grade 2

Certification ROHS, UL 60730-1- Automatic Electrical Controls

COMMUNICATIONS

Bluetooth BLE 4.1 for commissioning

Mesh 900 Mhz Mesh IEEE 802.15.4-compliant, for communications to CCU

Wired 4 wire interface for RS 485 communication @ 115200 baud and 5V 100mA power source
3 wire sensor bus for daisy chained sensor communication and 3V power

ELECTRICAL

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

Peak Consumption 5VA (during Smart Damper calibration). Typical <1VA consumption

Protection IP 20, NEMA Type 1

Rated Impulsive Voltage 330V RMS

COMPONENTS

1	Front Cover Top Orange	9	OLED Display
2	Allen Screw to Mount SN to Damper	10	Daughter PCB
3	Front Cover Bottom	11	Mother PCB Screw
4	Middle Cover	12	Mother PCB
5	Antenna Back Cover	13	Bottom Cover
6	Antenna Back Cover Screw	14	Metal Plate
7	4 Way Actuation Button	15	Silicon Rubber at Back
8	Daughter PCB Screw	16	Allen Screw Back to Front Cover

