

75F[®] Helio Node[™]

Advanced terminal unit controller and IAQ sensing station



- Built-in sensors for occupancy, light, CO₂, temperature and humidity
- Controls damper actuators, VAV dampers and more
- TFT LCD display and integrated navigation buttons
- Compatible with ASHRAE ventilation standards

75F® Helio Node™

Put the power and speed of IoT in your building automation system with the 75F® Helio Node™, a flexible terminal unit controller and IAQ sensing station that prioritizes building health and efficiency without the communication wiring burden or expense.

The Helio Node packs real punch with integrated sensors for occupancy, light, CO₂, temperature and humidity, plus the ability to control a wide variety of staged and modulating terminal equipment. More sophistication, less stress.



OVERVIEW

The 75F Helio Node is an IoT-based controller and sensor specially created to simplify temperature and IAQ control in office buildings. Powered by commonly run 24V AC/DC, the Helio Node is designed for daisy chain power, making installation of your power bus simple and fast.

It comes with two relays, providing additional versatility for switching loads on and off. In addition, a full RS 485 port with power and a low-voltage sensor bus that allows for extendable applications.

KEY FEATURES

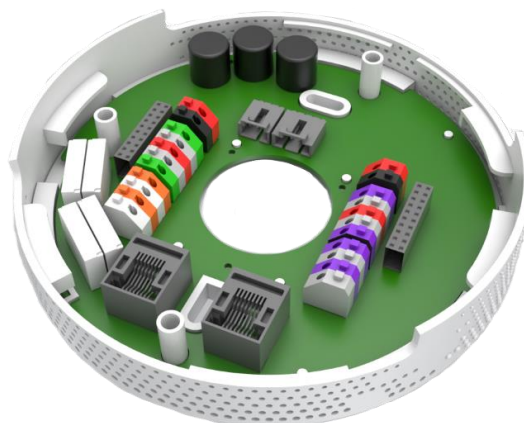
- Built-in sensors for occupancy, light, sound, temperature and humidity can be used to monitor multiple zones.
- PIR-enabled Auto Away Mode saves energy when a space is not occupied, both for temperature and ventilation requirements.
- Comes equipped with pre-programmed sequences that follow ASHRAE guidelines, out of the box.
- Industry-leading connectivity allows interfacing to a wide 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.
- Connects to a sensor that allows setpoint adjustments from within the room.

ADDITIONAL FEATURES

- Over-the-air firmware updates.
- Multiple mounting options as per site requirement
- Low power consumption of less than 1.0 watts
- Easy-grip surfaces for installers wearing gloves
- Self-healing 900 MHz wireless mesh network for communication

COMPATIBLE APPLICATIONS

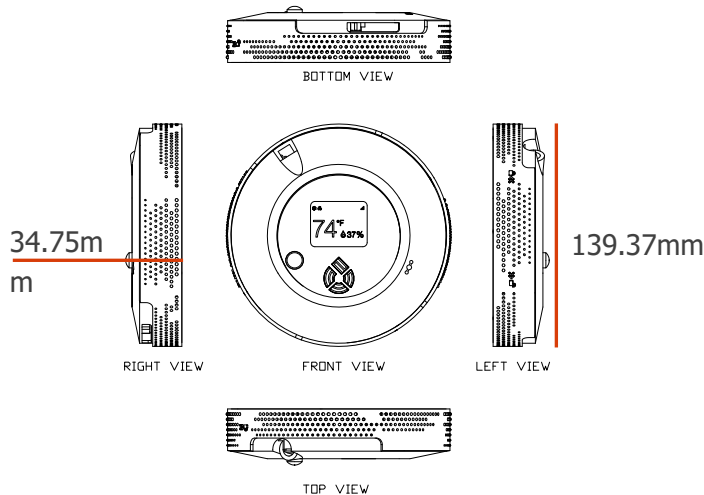
- 75F Dynamic Airflow Balancing
- 75F Smart VAV with Reheat, based on ASHRAE GPC-36
- 75F DCV, compatible with ASHRAE 90.1 and ASHRAE 62.1, 2018



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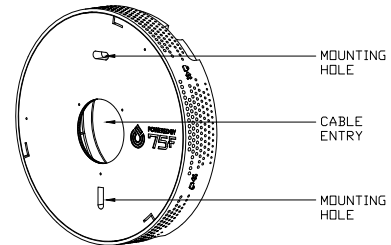
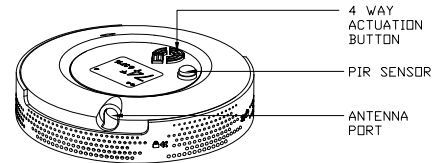
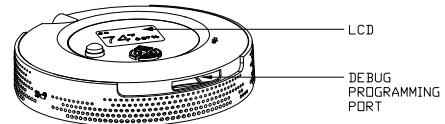
MECHANICAL

Dimensions	5.49" x 1.37" (139.37mm x 34.75mm)
Mounting	Spring or pipe
Screen	TFT LCD, 1.77", 128(RGB)* 160 Pixels



SENSORS

Temperature	14°F to 122°F (-10°C – 50°C); typical accuracy of +/- 1°F or 0.2°C
Humidity	Sensing range between 0 to 85%RH; Typical accuracy of +/- 2% RH
Dedicated CO₂ Sensor	Range 0-40'000 ppm; Accuracy +/-30ppm; drift +/- 50ppm over range of 400-5000ppm and lifetime of 15 years
Ambient Light	High-accuracy UV index sensor; matches erythral curve; < 100 mix resolution
Occupancy	Passive Infra Red (PIR) with detection range of 4m with 30-degree angle



I/O

Inputs

- A. (2) thermistor inputs. 10K.
- B. (2) 0-10v dc analog inputs.

Outputs

- C. (2) 0-10V dc or 4-20mA analog outputs
- D. (2) relays rated at 1A, 120V ac or 24 V ac/dc resistive load

ELECTRICAL

Power	24V AC/DC (+/-15%) with nominal power consumption 1.0W and maximum consumption of 2.5W
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COMMUNICATIONS

Bluetooth	Bluetooth (BLE4.2) for commissioning
Mesh	900 MHz IEEE 802.15.4-compliant for communication to CCU
Wired	4 wire port for power/ communication to Local Interface Sensor