

## SPEC SHEET

# 75F<sup>®</sup> HyperSense

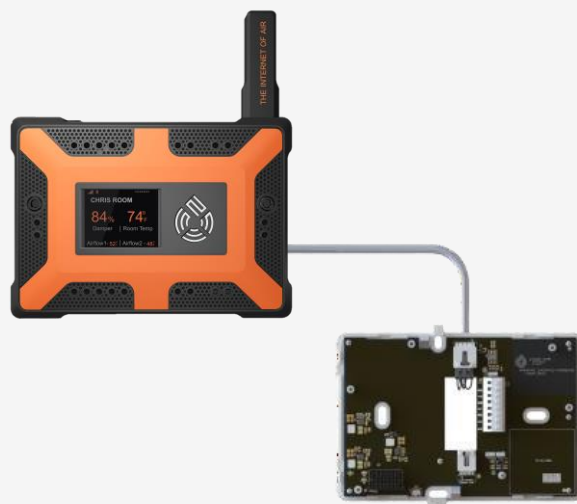
Sophisticated Indoor Air Quality Sensing Station & Occupant Interface



- Occupancy, temperature, light, humidity, sound, CO<sub>2</sub> & optional VOC and particulate matter
- TFT LCD display with touch slider and user buttons
- (2) Thermistor inputs
- (2) Analog inputs

# 75F® HyperSense

The HyperSense caters to use cases where a highly capable remote interface is desired for a 75F® Smart Node™ operating in a terminal unit. HyperSense is part of 75F's vertically- integrated suite of intelligent building solutions delivering multi- mode sensing, remote monitoring, and individual zone control for the comfort and productivity of building occupants. The HyperSense works out of the box with the Smart Node.



## OVERVIEW

The HyperSense brings building owners eight onboard sensors for indoor air quality management (IAQM) bundled into one device. Paired with the 75F® Smart Node™, the HyperSense's industry-leading sensing turns into granular and sophisticated zone control. The HyperSense delivers various parameter values in a room or zone to the Smart Node, which then carries out advanced control algorithms based on real-time data from the space.

## KEY FEATURES

- Provides a large screen with a touch slider and mechanical keys to change values on the Smart Node
- Measures indoor air quality and conveys the information to a Smart Node
- 4 wire interface for RS 485 communication from the Smart Node to the HyperSense

## ADDITIONAL FEATURES

- Sensor bus for power and communication with the Smart Node
- Option to connect a PM2.5 sensor

## COMPATIBLE APPLICATIONS

- 75F® Dynamic Airflow Balancing™
- 75F® Outside Air Optimization™
- 75F® Smart VAV with Reheat™
- Single-Stage Equipment Controls

## INCLUDED

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- (1) HyperSense
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- (1) Mounting Adapter plate
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- (2) Mounting Screws
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# 75F® HyperSense

## MECHANICAL

**Dimensions** 6.5" x 4.5" x 1.15" (165mm x 115mm x 29 mm)

**Mounting** (2) screws in drywall

**Screen** 2.8" 240x320 pixel TFT LCD

**Operating Range** 32°F to 122°F (0°C to 50°C)

## SENSORS

**Temperature** Operating range between 32°F to 122°F (0°C to 50°C); typical accuracy of +/- 1°F or 0.2°C

**Humidity** Operating range between 20 to 85% noncondensing; Typical accuracy of +/- 2% RH

**Dedicated CO<sub>2</sub> Sensor** Range 0-40'000 ppm; Accuracy +/-30ppm over range of 400-10,000ppm and lifetime of 15 years

**Light** Ambient light sensor; high-accuracy UV index sensor; matches erythema curve; < 100 mix resolution

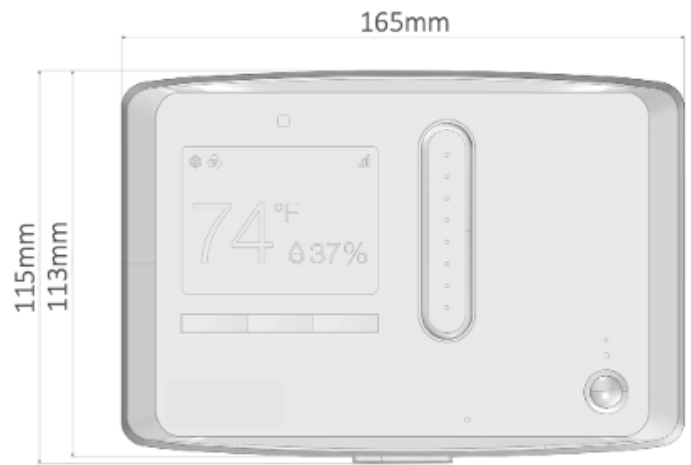
**Sound** 40-120dB response for 100 Hz to 10Khz

**Occupancy** Passive Infra Red (PIR) with detection range of 4m with 30-degree angle

## OPTIONAL SENSORS

**PM2.5, PM10** Detection range of 0-1000ug/m3 and accuracy of +/- 10ug/m3 (PM2.5, 0-100 ug/m3) or +/- 25ug/m3 (PM10, 0-100ug/m3)

**VOC** TVOC: 0-60'000 ppb. Typical Accuracy - 15% of measured value



## ELECTRICAL

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

## COMMUNICATIONS

**Bluetooth** BLE4.1; used during commissioning

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

**Wired** 4 wire RS-485 interface  
3 wire connector for low-power sensor bus

## I/O

**Inputs** (2) 10k type-2 thermistor inputs with 2% accuracy  
(2) 0-10V analog voltage inputs with 2% detection accuracy

**Outputs** (6) 24V dc/1A relays  
(3) 0-10V/4 -20ma (max load of 20mA per channel) analog outputs

