

# 75F<sup>®</sup> HyperStat Split

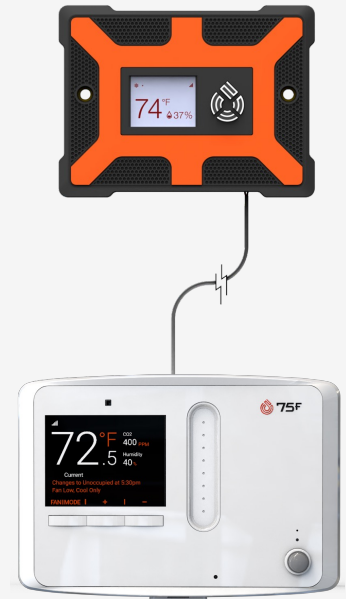
Advanced Rooftop Controls Over Two Wires



- Dual enthalpy economizer, demand-control ventilation (DCV), and variable frequency drive (VFD) control
- (8) Onboard sensors for occupancy, temperature, VOC, light, humidity, sound, CO2 & optional particulate matter
- (8) Relays
- (4) Analog outputs
- (8) Universal Inputs
- BACnet and Modbus control

# 75F® HyperStat Split

The HyperStat Split empowers contractors to upgrade rooftop units with Advanced Rooftop Control with unprecedented ease, bringing energy efficiency to more buildings than ever before. Using only two existing wires from the RTU to the thermostat, the HyperStat Split provides dual enthalpy economizer, demand-control ventilation, and VFD control. An onboard PIR occupancy sensor enhances energy savings with auto away, and its hefty I/O package enables alerts like condensate overflow and dirty filters.



## OVERVIEW

The HyperStat Split facilitates ARC over the existing two wires in retrofit applications using a HyperLite and a Connect Module. Both an occupant interface and a powerful indoor air quality sensing station, the HyperLite takes user input and collects data on temperature, humidity, light, sound, VOCs, CO2, occupancy, and particulate matter. The Connect Module communicates with the HyperLite over two wires from the RTU or FCU and performs stage or modular control. With the ability to accept eight universal analog inputs, the back half of the Connect Module moves load control away from the zone.

## KEY FEATURES

- Dual enthalpy economizer, demand-control ventilation, and VFD control for full Advanced Rooftop Controls over two wires
- Condensate overflow and dirty filter sensors with notifications for advanced alerts
- Real-time access to sensor data and remote control over building parameters through Facilisight, 75F's building intelligence suite of web and mobile apps
- Secure and proprietary encrypted 900 MHz wireless mesh network allows for lightweight, reliable communications between devices, eliminating the need to run wires throughout a space

## ADDITIONAL FEATURES

- Over-the-air firmware updates
- Works over the two wires provided for the thermistor to report temperature to the RTU
- Plug-and-Play solution for Advanced Rooftop Control

## EQUIPMENT CONTROL

Up to three stages of cooling/heating/fan or fully modulating:

- Rooftop Units
- Unit Heaters



## INCLUDED

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- (1) Each of HyperLite and Connect Module
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- (1) Mounting Adapter plate
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- (2) Mounting Screws
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# 75F<sup>®</sup> HyperLite

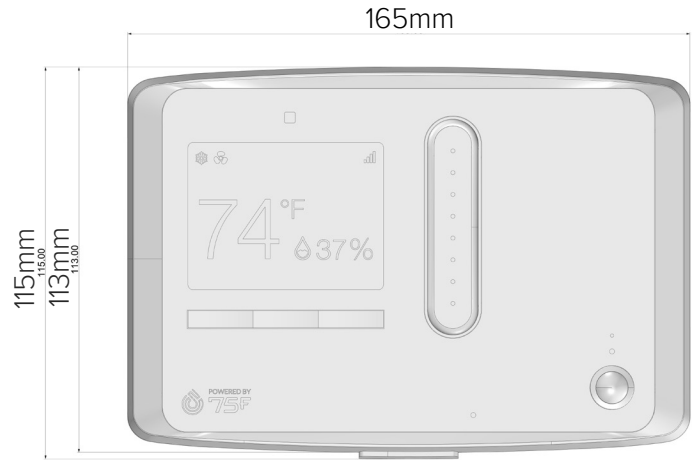
## MECHANICAL

Dimensions	165mm x 115mm x 29mm (6.5" x 4.5" x 1.15")
Operating Range	0 to 122°F (-17 to 50°C)
Screen	2.8" TFT
Mounting	(2) screws in drywall
I/O	
Inputs	None

Outputs	(1) POR RS485 Interface (1) TFT Screen
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## ACCURACY AND RANGE

Temperature	0 to 122°F (typical +/- 1 F)
Humidity	0 to 100% (typical +/- 2% RH)
VOC sensor	TVOC: 0 – 60'000 ppb. Typical Accuracy- 15% of the measured value
CO2	400 – 10,000 ppm, an accuracy of +/-30ppm for range between 0 - 4000 ppm
Light	High-accuracy UV index sensor; matches erythermal curve; ambient light sensor; <100 mlx resolution
Sound	40-120dB response for 100 Hz to 10Khz
Occupancy	Passive Infra Red (PIR) with detection range of 4m with 110 degree angle.
PM2.5, PM10	Optional. Detection range of 0-1000ug/m3 and accuracy of +/- 10ug/m3 (PM2.5, 0-100ug/m3) or +/-25ug/m3 (PM10, 0-100ug/m3)

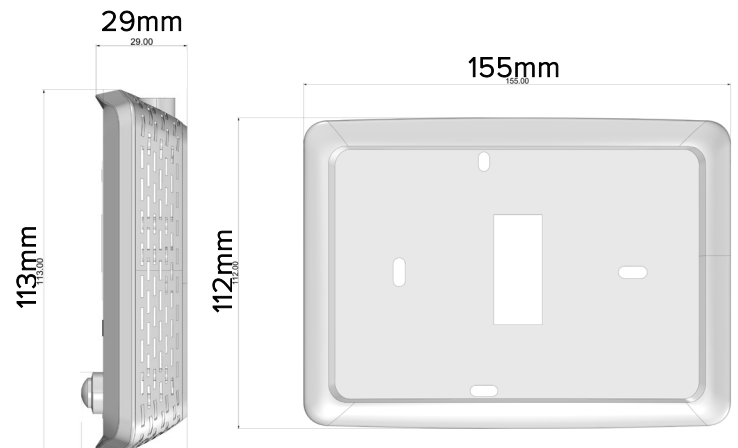


## ELECTRICAL

Power	Power over RS485 two-wire protocol.
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## COMMUNICATIONS

Bluetooth	Used during commissioning to pair with the CCU
Mesh	902-928 Mhz, IEEE 802.15.4 – compliant; used for device communication on a mesh network
Wired	(1) 2-wire Power RS485 used to communicate with Connect Module



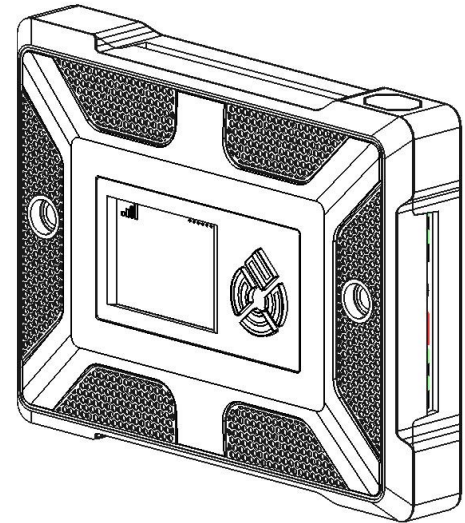
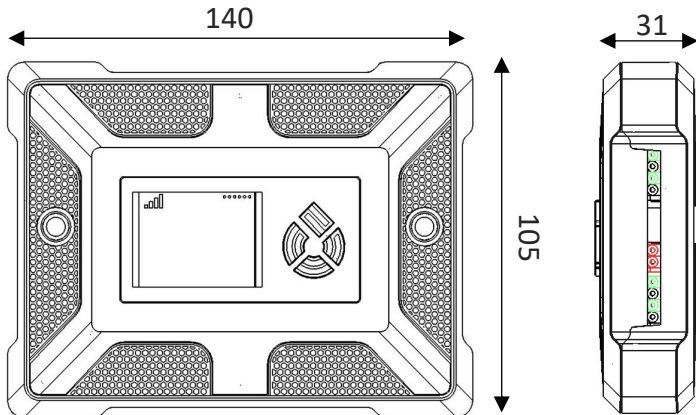
# 75F<sup>®</sup> Connect Module

## MECHANICAL

**Dimensions** 140 mm x 105 mm x 31mm (5.5" x 4.13" x 1.22" )

**Mounting** Wall

**Screen** TFT LCD, 1.77", 128(RGB)\* 160 Pixels



## COMMUNICATIONS

**Bluetooth** Bluetooth – Available for future use.

- Wired**
- Modbus RTU / BACnet over RS485 communication
  - Sensor bus
  - Power over RS485 to enable communication with the HyperLite and power the unit over standard thermostat wires.
  - Dedicated Modbus/BACnet MSTP ports to interface with 3<sup>rd</sup> party BMS devices.

## I/O

- Inputs**
- A. (8) Universal inputs.
  - B. (1) Sensor Bus

- Outputs**
- C. (4) 0-10V dc or 4-20mA analog outputs
  - D. (8) 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