

VisionPRO® 8000 with RedLINK™

PRODUCT DATA



APPLICATION

The VisionPRO® 8000 with RedLINK™ features an effortless, 7-Day programmable touchscreen thermostat that provides control of temperature, humidification, dehumidification, and ventilation for up to 4 Heat/2 Cool heat pump systems or up to 3 Heat/2 Cool conventional systems for residential and commercial applications.

FEATURES

- **RedLINK™ Compatible**

Increase your content and profit per job by including RedLINK™ accessories that meet your customers comfort and convenience needs. RedLINK accessories include the Wireless Outdoor Sensor, Portable Comfort Control (PCC), Equipment Interface Module (EIM), RedLINK Internet Gateway, Wireless Indoor Sensor, TrueSTEAM™ humidifier with Wireless Adapter, TrueZONE™ zoning panel with Wireless Adapter, Vent Boost Remote and Entry/Exit Remote.

- **Customizable Service Reminders**

Set up to 10 service reminders. Choose from the pre-set options or customize your own. Reminders can be based on date or the outdoor temperature.

- **Universal Inputs**

- **Thermostat - S1**

- **EIM - S1, S2, S3, S4**

Assignable inputs allow you to setup Indoor and Outdoor Temperature Sensors, Discharge and Return Air Sensors or Dry Contact Devices. Dry Contact Devices can be used to trip pre-set or customized alerts on the thermostat home screen. Note: Dry Contact Alerts require an Equipment Interface Module (EIM).

- **User Interaction Log**

The interaction log stores history of thermostat setting changes including temperature, system and installer setup. You can use the interaction log to save time by determining if the issue is a system error or an accidental user error. The Interaction Log is only viewable on a computer after you download it from the thermostat to a microSD card.

- **Selectable for Residential and Light Commercial Applications**

One thermostat does it all to meet the needs of Residential and Light Commercial applications. Simply select Residential or Commercial during the installer setup. If Commercial is selected, the thermostat will use commercial language, meet building codes and offer 365 day holiday scheduling.

- **MicroSD Card Port for Quick Installer Setup**

Save time by using a microSD card to upload installer settings and service reminders in one simple step.

- **Selectable Sensors**

When paired with a Wireless Indoor Sensor(s) you have the ability to choose which sensor(s) to use for temperature, humidification and dehumidification. They can be used in combination for temperature averaging—or individually—to condition humidity levels in separate spaces.



SPECIFICATIONS

Thermostat Description:

Feature	Description
Powering method	• Common wire or battery
System types (up to 4 heat/2 cool heat pump and up to 3 heat/2 cool conventional)	• Gas, oil or electric heat with air conditioning • Warm air, hot water, high-efficiency furnaces, heat pumps, steam and gravity • Cool only
Changeover	Manual or Auto changeover selectable
System setting	Em Heat-Heat-Off-Cool-Auto
Fan setting	Auto-On-Circ-Follow Schedule

Electrical Ratings for: the Equipment Interface Module and VisionPRO Thermostats

NOTE: To find what terminals are available on the Equipment Interface Module and the VisionPRO Thermostats, see "Terminal Designations" below the table.

Terminal	Voltage (50/60 Hz)	Max. Current Rating
W - O/B	18 to 30 VAC and 750 mVDC	1.00A
Y (cooling)	18 to 30 VAC	1.00A
G (fan)	18 to 30 VAC	0.50A
W2 - Aux 1 (heating)	18 to 30 VAC	0.60A
W3 - Aux 2 (heating)	18 to 30 VAC	0.60A
Y2 (cooling)	18 to 30 VAC	0.60A
A-L/A (Output)	18 to 30 VAC	1.00A
U1, U1 U2, U2 U3, U3	30 VAC max.	0.50A

Terminal Designations:

- Equipment Interface Module: R, RC, RH, C, W-O/B, W2-AUX 1, W3-AUX 2, Y, Y2, G, A-L/A, U1 U1, U2 U2, U3 U3, S1 S1, S2 S2, S3 S3, S4 S4, A, B, C, D
- TH8321 Thermostat: R, RC, C, W-O/B, W2-AUX/E, Y, Y2, G, A-L/A, K, U1 U1, S1 S1
- TH8320 Thermostat: R, RC, C, W-O/B, W2-AUX/E, Y, Y2, G, A-L/A, K, S1 S1
- TH8110 Thermostat: R, RC, C, W-O/B, Y, G, K, S1 S1

Power Consumption of TH8321/TH8320/TH8110:

Backlight on: 1.44 VA

Backlight off: 1.32 VA

RedLINK Communication:

Frequency: 900 Mhz frequency range

Re-Sync Time: RedLINK devices re-establish communication within 6 minutes after AC power resumes.

Temperature Setting Range:

Heating: 40 to 90 °F (4.5 to 32 °C).

Cooling: 50 to 99 °F (10 to 37 °C).

Temperature Sensor Accuracy:

± 1.5 F at 70 F (0.75 C at 21.0 C)

Humidification Setting Range:

10% to 60% RH.

Dehumidification Setting Range:

40% to 80% RH.

Humidity Display Range:

0% to 99%.

Humidity Sensor Accuracy:

± 5% RH from 30% to 50% RH at 75 F.

Cool Indication:

VisionPRO® 8000 with RedLINK™ displays "Cool On" when the thermostat turns the cooling on.

Heat Indication:

VisionPRO® 8000 with RedLINK™ displays "Heat On" when the thermostat turns the heating on.

Auxiliary Heat Indication:

VisionPRO® 8000 with RedLINK™ displays "Aux Heat On" when the thermostat turns the auxiliary heat on.

Interstage Differential:

Comfort: The thermostat keeps the indoor temperature within 1 degree of the setpoint (droop less control). The thermostat turns on stage 2 when the capacity on stage 1 reaches 90%. When the interstage differential is set to 1.0 or higher, the thermostat stages the equipment based on how far the indoor temperature is from the setpoint (ISU 303 to 309). See page 27 for more information.

Clock Accuracy: 1 minute per month at 77 °F (25 °C). ± 2 minutes per month over the operating ambient temperature range.

Mounting Means:

Thermostat mounts directly on the wall in the living space using mounting screws and anchors provided. Fits a horizontal 2 x 4 in. junction box.

Equipment Interface Module (EIM) mounts on HVAC equipment or on a wall in the equipment room.

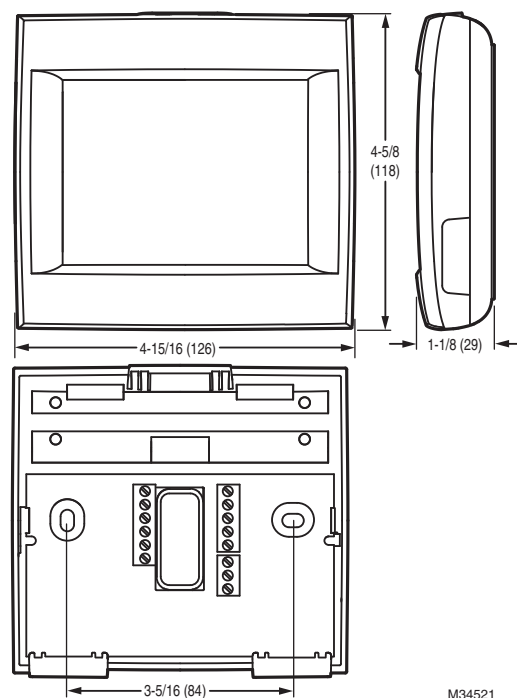


Fig. 1. Dimensions of thermostat in in. (mm).

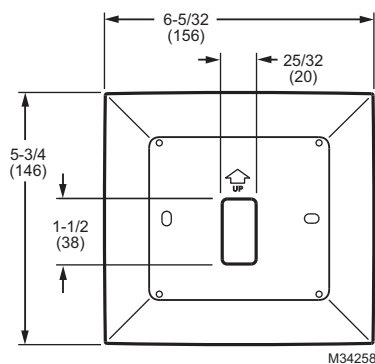


Fig. 2. Dimensions of VisionPRO cover plate in in. (mm).

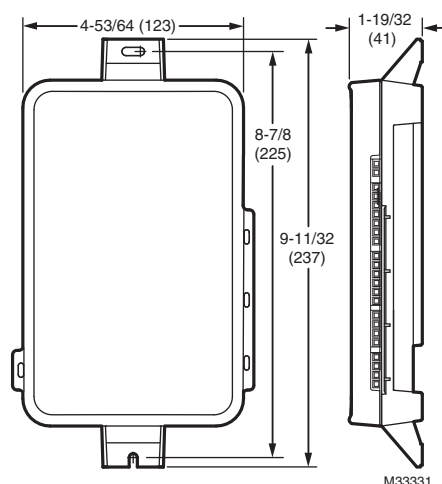


Fig. 3. Dimensions of Equipment Interface Module in in. (mm).

Product	Part Number	Operating Ambient Temperature	Operating Relative Humidity	Shipping Temperature	Physical Dimensions in in. (mm)	Color(s)
Thermostat	TH8321R1001 TH8320R1003 TH8110R1008	32 to 120 °F (0 to 48.9 °C)	5% to 90% Non-Condensing	-20 to 120 °F (-28.9 to 48.9 °C)	4-15/16 x 4-5/8 x 1-1/8 (126 x 118 x 29)	Arctic White
Equipment Interface Module	YTHM5421R1010* THM5421R1021	-40 to 165 °F (-40 to 73.9 °C)	5% to 95% Non-Condensing	-20 to 165 °F (-28.9 to 73.9 °C)	9-11/32 x 4-53/64 x 1-19/32 (237 x 123 x 41)	Gray
Wireless Adapter (For TrueZONE, TrueSTEAM or extend wireless range of EIM)	THM4000R1000	-40 to 165 °F (-40 to 73.9 °C)	5% to 95% Non-Condensing	-20 to 165 °F (-28.9 to 73.9 °C)	5-9/16 x 4-3/8 x 1-1/4 (141 x 112 x 32)	Gray
RedLINK Internet Gateway	THM6000R1002	32 to 120 °F (0 to 48.9 °C)	5% to 95% Non-Condensing	-20 to 120 °F (-28.9 to 48.9 °C)	6 x 4-7/8 x 2-1/2 (152 x 124 x 64)	Black
Portable Comfort Control	REM5000R1001	32 to 120 °F (0 to 48.9 °C)	5% to 90% Non-Condensing	-20 to 120 °F (-28.9 to 48.9 °C)	6-1/4 x 3-1/8 x 1-5/8 (158 x 80 x 38)	Arctic White, Gray
Wireless Entry/Exit Remote	REM1000R1003	32 to 120 °F (0 to 48.9 °C)	5% to 90% Non-Condensing	-20 to 120 °F (-28.9 to 48.9 °C)	3-15/16 x 1-15/16 x 5/8 (101 x 50 x 16)	Arctic White
Wireless Vent and Filter Boost Remote	HVC20A1000	32 to 120 °F (0 to 48.9 °C)	5% to 90% Non-Condensing	-20 to 120 °F (-28.9 to 48.9 °C)	3-15/16 x 1-15/16 x 5/8 (101 x 50 x 16)	Arctic White
Wireless Outdoor Sensor	C7089R1013	-40 to 140 °F (-40 to 60 °C)	0% to 100% Condensing	-40 to 120 °F (-40 to 48.9 °C)	5 x 3-1/2 x 1-11/16 (127 x 89 x 43)	Gray
Wireless Indoor Sensor	C7189R1004	0 to 120 °F (-17.8 to 48.9 °C) For optimal Battery Life: 35 to 114 °F (1.7 to 45.6 °C)	5% to 90% Non-Condensing	-20 to 120 °F (-28.9 to 48.9 °C)	2-7/8 x 1-7/8 x 15/16 (74 x 48 x 24)	Arctic White
Wired Outdoor Sensor (10K ohm Negative Temperature Coefficient)	C7089U1006	-40 to 120 °F (-40 to 48.9 °C)	5% to 95% Non-Condensing	-40 to 130 °F (-40 to 54.4 °C)	1-1/2 (38)	- -
Wired Wall Mount Indoor Sensor (10K ohm Negative Temperature Coefficient)	C7189U1005	45 to 88 °F (7 to 32 °C)	5% to 95% Non-Condensing	-20 to 120 °F (-28.9 to 48.9 °C)	2-9/32 x 1-1/2 x 11/16 (58 x 38 x 18)	Premier White