PIR Ready VT7600E Series
RTU Controller with IAQ Control
For Commercial HVAC Applications

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PRODUCT OVERVIEW

The Viconics VT7600E Indoor Air Quality Controller (IAQ), along with your preferred CO2 sensor, is a cost-effective solution that is capable of controlling economizer-free cooling and IAQ demand-based ventilation strategy while providing a fresh air measurement input right out of the box. The Viconics IAQ Controller replaces the need for custom programmed DDC controllers and sensors in order to achieve the same results as in the past. When connected to a building automation system, the Viconics IAQ Controller can monitor and verify the CO2 and fresh air levels, ensuring that air quality and energy efficiency is optimized.

While primarily designed for use in small to midsized commercial building applications such as office buildings or schools, the Viconics IAQ Controller can be installed in any other building type currently using a standard packaged rooftop or heat pump unit with a requirement for fresh air control. The Viconics IAQ Controller provides a simple cost-effective solution. It offers advanced pre-programmed sequences of operations that can be installed without special software, tools or the presence of a network. This greatly reduces the installation cost and commissioning complexity while providing control functions immediately when powered on.

Further energy saving benefits can be achieved with the use of a local onboard passive infrared motion sensor (PIR) that can automatically detect local activity allowing the IAQ to be controlled only when occupants are present thus saving on unnecessary energy costs. This functionality along with configurable night setback features makes it an economical yet highly effective control solution, which brings IAQ control and energy savings features in one simple yet powerful package that is Network Ready, BACnet®, or ZigBee® Wireless compatible.

The additional following documentation is available on www.viconics.com

- PIR application information and examples are available on document: *APP-VT76-PIR-Guide-Exx*
- PIR cover installation information is available on document: *PIR Cover Installation-Exx*
- Information on the BACnet models (VT76xxX5x00B), is available on document *ITG-VT76xx-PIR-BAC-Exx*
- Information on the Wireless models (VT76xx0X5x00W), is available on documents: *ITG-VWG-50-BAC-Exx* and *LIT-VWG-50-SETUP-Exx*

MODELS AVAILABLE

APPLICATION	3 HEAT, 2 COOL
Model (with scheduling)	VT7656E5X00(X)
Model (without scheduling)	VT7606E5X00(X)

Ordering Information Notes:

- **(X)** model number represents available communication options: **X=none** for Network Ready, **X=B** for BACnet MS-TP, and **X=W** for Wireless.
- Controllers can be ordered with a factory installed PIR cover. Please use (5500) extension instead of the (5000) only extension. Ex. VT7606B5500B.
- Controllers ordered without a PIR cover can be retrofitted with a separate PIR accessory cover afterwards when required.

FEATURES & BENEFITS

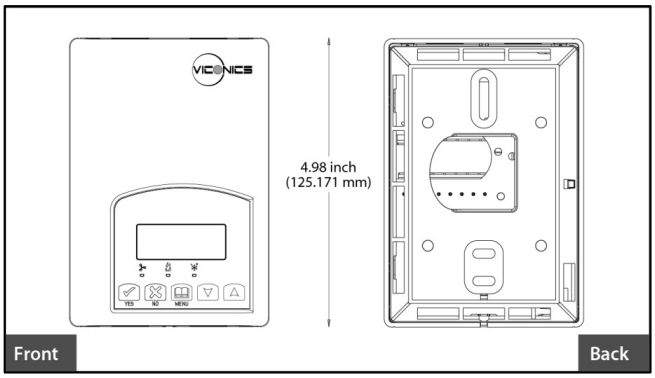
FEATURES	BENEFITS
Controls IAQ with a remote return duct or wall CO2 sensor.	Being able to control IAQ means healthier & more productive occupants.
Controls and measure fresh air with a fresh air measurement station.	Meets new IAQ requirements and regulations for LEED type buildings.
Embedded free cooling economizer loop.	True energy savings with adjustable economizer control loop. Minimum fresh air can be measured and controlled with the fresh air measurement station.
One small compact thermostat like controller.	Simple to install cost effective package. Easy thermostat like operation for the end user.
Network ready functionality built in.	Allows for future network functionality along with remote monitoring of all critical system data points for sustainability.
PIR sensor cover available as an accessory.	Further energy savings is possible with the use of local PIR cover to automatically detect local occupancy. IAQ is maintained and controlled only when occupants are present to save energy costs.

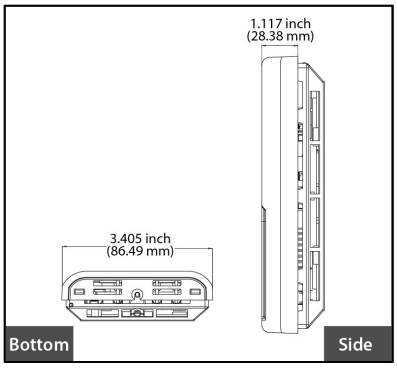
SPECIFICATIONS

Controller power requirements:	19-30 VAC 50 or 60 Hz; 2 VA (RC & C) Class 2 RC to RH jumper 2.0 Amps 48 VA maximum
Operating conditions:	0 °C to 50 °C (32 °F to 122 °F) 0% to 95% R.H. non-condensing
Storage conditions:	-30 °C to 50 °C (-22 °F to 122 °F) 0% to 95% R.H. non-condensing
Sensor:	Local 10 K NTC thermistor
Resolution:	± 0.1 °C (± 0.2 °F)
Control accuracy:	± 0.5 ° C (± 0.9 °F) @ 21 °C (70 °F) typical calibrated
Occupied and unoccupied setpoint range cooling:	12.0 to 37.5 °C (54 to 100 °F)
Occupied and unoccupied setpoint range heating:	4.5 °C to 32 °C (40 °F to 90 °F)
Room and outdoor air temperature range:	-40 °C to 50 °C (-40 °F to 122 °F)
Proportional band for room temperature control:	Factory set, heating and cooling at: 1.1°C (2.0°F)
Digital inputs:	Relay dry contact only across C terminal to DI1 or DI2
Contact output rating:	Each relay output: (Y1, Y2, G, W1, W2 & AU) 30 VAC, 1 Amp. maximum 30 VAC, 3 Amp. in-rush
Economizer analog output rating:	0 to 10 VDC into 2KΩ resistance min.
Economizer analog output accuracy:	± 3% typical
Wire gauge:	18 gauge maximum, 22 gauge recommended
Dimensions:	4.94" x 3.38" x 1.13"
Approximate shipping weight:	0.75 lb (0.34 kg)
Agency Approvals all models:	**UL:** UL 873 (US) and CSA C22.2 No. 24 (Canada), File E27734 with CCN XAPX (US) and XAPX7 (Canada) **Industry Canada:** ICES-003 (Canada)
Agency Approvals all models:	**FCC:** Compliant to CFR 47, Part 15, Subpart B, Class A (US) **CE:** EMC Directive 89/336/EEC (Europe Union) **C-Tick:** AS/NZS CISPR 22 Compliant (Australia / New Zealand) Supplier Code Number N10696
Agency Approvals Wireless models:	**FCC:** Compliant to: Part 15, Subpart C

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

DIMENSIONS





- When replacing an existing Terminal Equipment Controller, label the wires before removal of the Terminal Equipment Controller.
- Electronic controls are static sensitive devices. Discharge yourself properly before manipulating and installing the Terminal Equipment Controller.
- A short circuit or improper wiring may permanently damage the Terminal Equipment Controller or the equipment.
- All VT7000 series Terminal Equipment Controllers are designed for use as operating controls only and are not safety devices. These instruments have undergone rigorous tests and verification prior to shipping to ensure proper and reliable operation in the field. Whenever a control failure could lead to personal injury and or loss of property, it becomes the responsibility of the user or installer or electrical system designer to incorporate safety devices (such as relays, flow switch, thermal protections, etc…) and or an alarm system to protect the entire system against such catastrophic failures. Tampering with the devices or unintended application of the devices will result in a void of warranty.

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