

## Product overview

The VT7600 PI thermostat family is specifically designed for single stage and multi-stage control of heating/cooling equipment such as rooftop and self-contained units. The product features an intuitive, menu-driven, back-lit LCD display, which walks users through the programming steps, making the process extremely simple. Accurate temperature control is achieved due to the product's PI time proportional control algorithm, which virtually eliminates temperature offset associated with traditional, differential-based thermostats.

All models contain two digital inputs, which can be set by the user to monitor filter status, activate a remote temporary occupancy switch, and/or used as a general purpose service indicator. In addition, depending on the model, up to three remote sensor inputs are available. All models contain a SPST auxiliary switch, which can be used to control lighting or disable the economizer function and a discharge air sensor input. For more advanced applications, an economizer control logic has been integrated onto the thermostat for use with proportional damper economizer actuators.



Fig.1 - VT7600 Series

The thermostats are also compatible with the new Viconics PIR cover accessories. Thermostats equipped with a PIR cover provide advanced active occupancy logic, which will automatically switch occupancy levels from Occupied to Unoccupied as required by local activity being present or not. This advanced occupancy functionality provides advantageous energy savings during occupied hours without sacrificing occupant comfort. All thermostats can be ordered with or without a factory installed PIR cover ( see ordering notes below ).

The additional following documentation is available on [www.viconics.com](http://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-40-BAC-Exx* and *LIT-VWG-40-SETUP-Exx*

## Models available

Application	1 Heat / 1 Cool	2 Heat / 2 Cool	2 Heat / 2 Cool with economizer	3 Heat / 2 Cool heat pump
Model (programmable)	VT7652A5x00(X)	VT7652B5x00(X)	VT7656B5x00(X)	VT7652H5x00(X)
Model (non-programmable)	VT7600A5x00(X)	VT7600B5x00(X)	VT7605B5x00(X)	VT7600H5x00(X)

### Ordering Information Notes:

- (X) model number represents available communication options: **X=none** for Stand-alone, **X=B** for BACnet MS-TP, **X=E** for Echelon and **X=W** for Wireless
- Thermostats can be ordered with a factory installed PIR cover. Please use (5500) extension instead of the (5000) only extension.: Ex. VT7600B5500E.
- Thermostats ordered without a PIR cover can be retrofitted with a separate PIR accessory cover afterwards when required

## Features and benefits

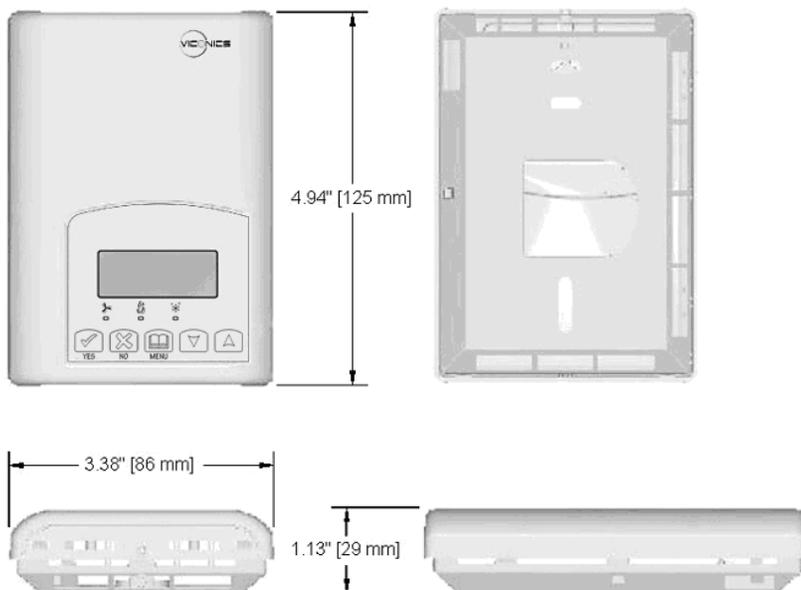
Features	Benefits
• Advanced occupancy functions	⇒ Through the network or smart local occupancy sensing
• Ready for PIR accessory cover	⇒ Fully integrated advanced occupancy functionality with a PIR accessory cover
• Ready for PIR accessory cover	⇒ Fully integrated advanced occupancy functionality with a PIR accessory cover
• 2 digital inputs	⇒ Adds functionality
• Smart fan operation	⇒ Saves energy during night mode
• Unique configuration key with password protection	⇒ Minimizes parameter tampering
• Lockable keypad	⇒ Tamper proof, no need for thermostat guards
• 6 hour reserve time for clock	⇒ No need to reprogram day/time after power shortage
• Remote room and outdoor temperature sensor	⇒ Increase flexibility and functionality
• Auxiliary output	⇒ Can be used for lighting and/or economizer override
• Discharge air sensor	⇒ Can be used to monitor unit efficiency
• Intuitive, menu-driven programming (7 day, 2/4 events - on programmable models only)	⇒ Can be used for all types of establishments
• Economizer output 0-10 Vdc economizer models only	⇒ Excellent retrofit opportunities
• 3 Heat/2 Cool (on heat pump models only)	⇒ Support single and two stages heat pump with one auxiliary heat stage

## Specifications

Thermostat 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:	<b>UL:</b> UL 873 (US) and CSA C22.2 No. 24 (Canada), File E27734 with CCN XAPX (US) and XAPX7 (Canada) <b>Industry Canada:</b> ICES-003 (Canada)
Agency Approvals all models	<b>FCC:</b> Compliant to CFR 47, Part 15, Subpart B, Class A (US) <b>CE:</b> EMC Directive 89/336/EEC (Europe Union) <b>C-Tick:</b> AS/NZS CISPR 22 Compliant (Australia / New Zealand) Supplier Code Number N10696
Agency Approvals Wireless models	<b>FCC:</b> 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 UNDESIRE OPERATION.

## Drawing & dimensions



## Important notice



All VT7600 series controls are for use as operating controls only and are not safety devices. These instruments have undergone rigorous tests and verifications prior to shipment 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 / installer / electrical system designer to incorporate safety devices ( such as relays, flow switch, thermal protections, etc...) and/or alarm system to protect the entire system against such catastrophic failures. Tampering of the devices or miss application of the device will void warranty.

Fig.1 – Thermostat dimensions