

# Room Controller

## VT7606E Indoor Air Quality Controller

### Technical Cut Sheet

The VT7606E Indoor Air Quality (IAQ) room controller, 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 IAQ room controller replaces the need for custom programmed DDC controllers and sensors to achieve the same results as in the past. When connected to a building automation system, the IAQ room controller can monitor and verify the CO2 and fresh air levels, ensuring that air quality and energy efficiency is optimized.



# VT7606E IAQ Room Controller Features



Most people spend up to 90% of their time indoors. A large portion of that time is dedicated to a working environment in a commercial building. Studies conducted by the Environmental Protection Agency (EPA) show indoor air can contain levels of pollutants that are actually higher than levels found outdoors.

## Introduction

The VT7606E IAQ room controller, along with a CO2 sensor, is a cost-effective solution capable of controlling economiser-free cooling and IAQ demand-based ventilation strategy while providing a fresh air measurement input right out of the box. The room controller replaces the need for custom programmed DDC controllers and sensors to achieve the same results as in the past.

When connected to a building automation system, the IAQ room controller can monitor and verify CO2 and fresh air levels, ensuring air quality and energy efficiency is optimised.

## Indoor Air Quality Control

Indoor air quality has become a major concern to businesses, building managers, tenants, and employees because of its direct impact on the comfort, well-being, and productivity. Not all buildings have severe indoor air-quality issues, yet even well-run buildings can experience episodes of poor indoor air quality.

While primarily designed for use in small to mid-sized commercial building applications such as office buildings or schools, the IAQ room 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 room controller provides a simple, cost-effective solution and 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 is applied.

Further energy saving benefits can be achieved with the use of a local onboard Passive Infrared (PIR) motion sensor that can automatically detect local activity. This allows 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. This brings IAQ control and energy saving features in one simple yet powerful package that is network ready, BACnet®, or ZigBee® Pro wireless compatible.



## AT A GLANCE

### Custom design

- IAQ control with remote return duct or wall CO2 sensor
- Controls and measure fresh air with a fresh air measurement station
- Embedded free cooling economizer loop
- One small compact thermostat like controller
- Network ready functionality built in

### Options and accessories

- Available with or without scheduling
- PIR sensor cover available as an accessory

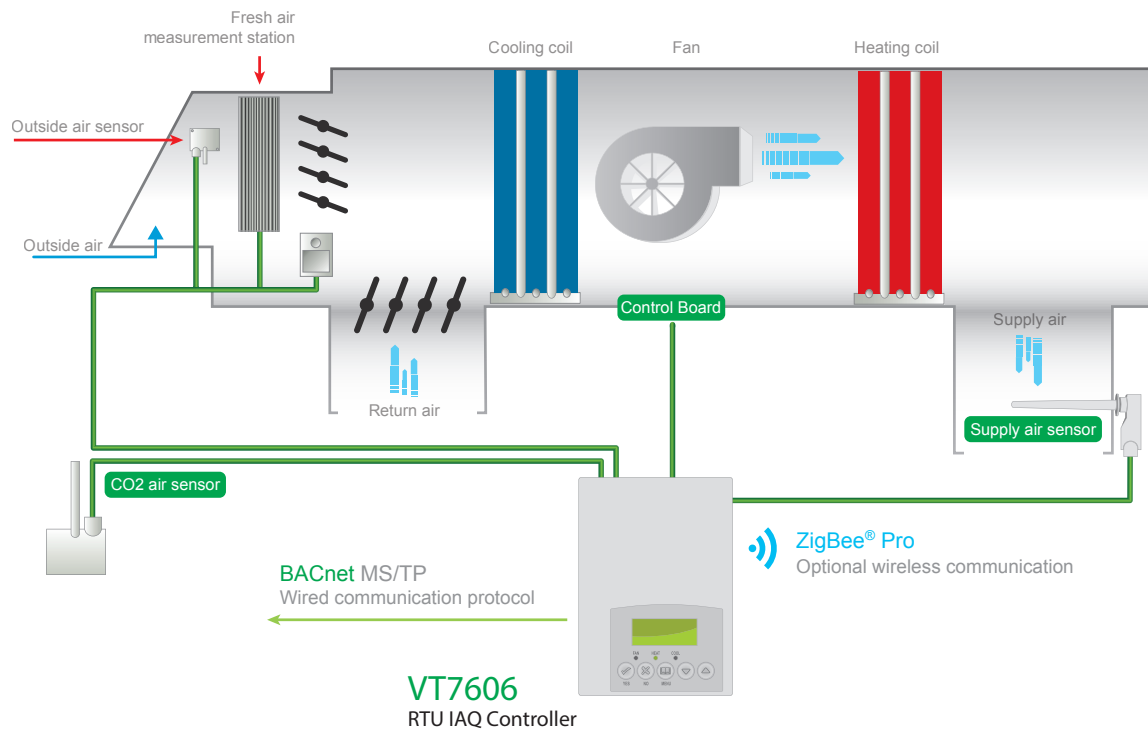
# VT7606E IAQ Room Controller Application

## Simplified HMI



Unique 5 button menu driven user interface simplifies programming and commissioning time during typical installation of unit.

## TYPICAL INDOOR AIR QUALITY APPLICATION



# VT7606E IAQ Room Controller Specifications

## Specifications

### Dimensions

12.5cm/4.9in (H) x 8.6cm/3.4in (W) x 2.9cm/1in (D)

### Power Requirements

19-30Vac, 50/60 Hz; 2 VA (RC & C) Class 2  
RC to RH jumper 2.0 Amps 48 VA maximum

### Operating Conditions

0 °C - 50 °C ( 32 °F - 122 °F )  
0% - 95% R.H. non-condensing

### Storage Conditions

-30 °C - 50 °C ( -22 °F - 122 °F )  
0% - 95% R.H. non-condensing

### Temperature Sensor

Local 10 K NTC thermistor

### Temperature Sensor Resolution

± 0.1 °C ( ± 0.2 °F )

### Temperature Control Accuracy

±0.5 °C ( ± 0.9 °F ) @ 21 °C ( 70 °F ) typical  
calibrated

### Occ and Unocc Cooling Setpoint Range

12.0 - 37.5 °C ( 54 - 100 °F )

### Occ and Unocc Heating Setpoint Range

4.5 °C - 32 °C ( 40 °F - 90 °F )

### Room and Outdoor Air Temperature

#### Display Range

-40 °C - 50 °C ( -40 °F - 122 °F )

### Proportional Band for Room Temperature control

Factory set, heating and cooling at: 1.1°C ( 2.0°F )

### Contact Output Rating

Each relay output: ( Y1, Y2, G, W1, W2 & AU )  
30 Vac, 1 Amp. maximum  
30 Vac, 3 Amp. in-rush

### Analog Output Rating

0 to 10 Vdc into 2KΩ resistance min.

### Wire Gauge

18 gauge maximum, 22 gauge recommended

### 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)

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

### 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 UNDESIRABLE OPERATION.



Check with your local government for instruction on disposal of these products.



## Ordering information

VT76  6 E   00

**Programmability:**  
-06= No local scheduling / Non programmable  
-56= Local scheduling / programmable

**PIR options:**  
-50 = PIR ready but PIR cover not included  
-55 = Factory assembled with PIR cover

**Communication options:**  
-B = BACnet® MS/TP  
-P = ZigBee Pro wireless  
-W = ZigBee® wireless  
- = Network ready

\* Some part number configurations may not be available.