VTR8300 Series Installation Guide

Room Controller with Optional PIR sensor

Commercial and Hotel/Lodging HVAC Fan Coil Applications

CONTENTS

VICONICS
Beyond Comfort

DISCLAIMERS

- The VTR8300 series Room Controller is only to be used in conjunction with the VC3000 line voltage switching relay pack. Together they are used as operating controls for high voltage fan coil units.
- If replacing an existing Line Voltage FCU Controller, label the wires before removal of the Room Controller.
- Electronic controls are static sensitive devices. Discharge yourself correctly before manipulating and installing the Room Controller. A short circuit or wrong wiring may permanently damage the Room Controller or equipment.
- All VTR8300 series Room 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/installer/electrical system designer to incorporate safety devices such as relays, flow switches, thermal protections, and/or an alarm system to protect the entire system against any catastrophic failures. Tampering with the devices or unintended application of the devices results in a void of warranty.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- These devices are not serviceable and must be returned to the supplier for any repair.
- A switch or circuit breaker must be installed. It must be suitably located, easily reached, and marked as the disconnecting device
- Never apply more than 9VDC to Room Controller.
- This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

IMPORTANT SYMBOLS

|	
⚠	Products marked with this symbol state that the manuals must be consulted in all cases to any hazards.
Ⓒ1	This product has been tested to the requirements of CAN/CAS-C22.2 No. 61010-1, second edition, including Amendment 1, or a later version of the same standard incorporating the same level of testing requirements.
∼	Alternating Current
⎓	Direct Current
▣	Equipment protected throughout by DOUBLE INSULATION or REINFORCED INSULATION

VTR8300 Room Controller
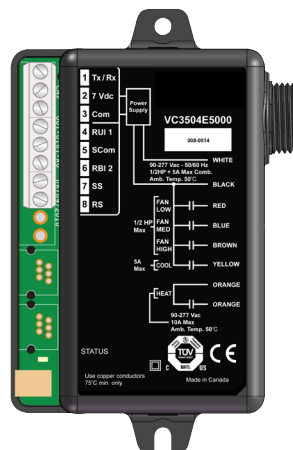
VC3000 Relay Pack

INSTALLATION

Location

- Do not install on outside wall.
- Do not install in areas with direct heat source.
- Do no install near any air discharge grill.
- Do not install in areas exposed to direct sunlight.
- Ensure Room Controller has sufficient air circulation.
- Ensure wall surface is flat and clean.

Installation

1. Open unit by pulling on bottom side of Room Controller (Figure 1).
2. Read FCC ID and IC label installed in cover before installing any wireless product.
3. Ensure correct side of base faces up.
4. Pull cables 6in (15cm) out from wall.
5. Align base and mark location of two mounting holes on wall (Figure 2).
6. Install anchors in wall.
7. Insert cable in central hole of base.
8. Insert screws in mounting holes on each side of base.
9. Strip each wire 1/4in (0.6cm) from end.
10. Insert each wire according to wiring chart (next page).
11. Gently push excess wiring back into hole.
12. Gently align cover to top of base and snap in place from bottom (Figure 3).
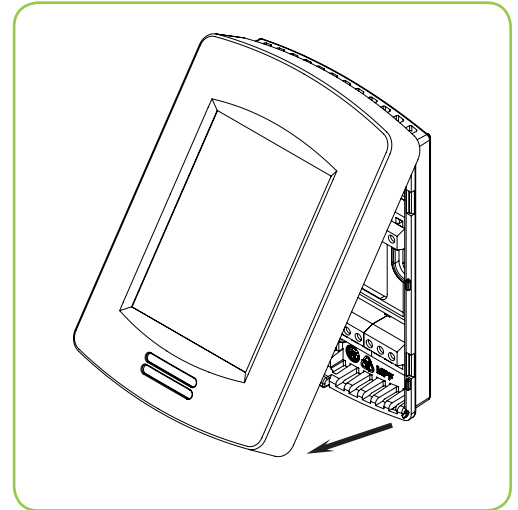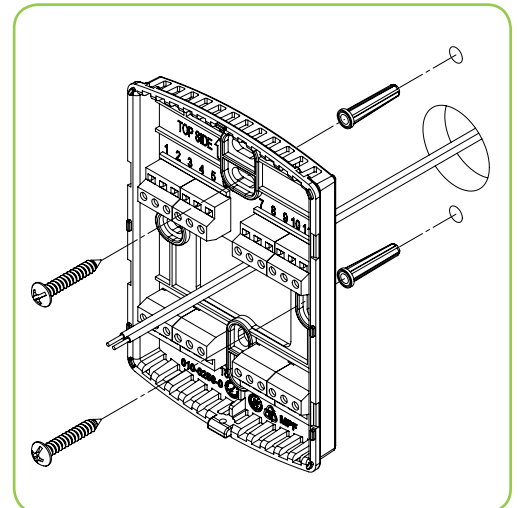13. Install security screw.

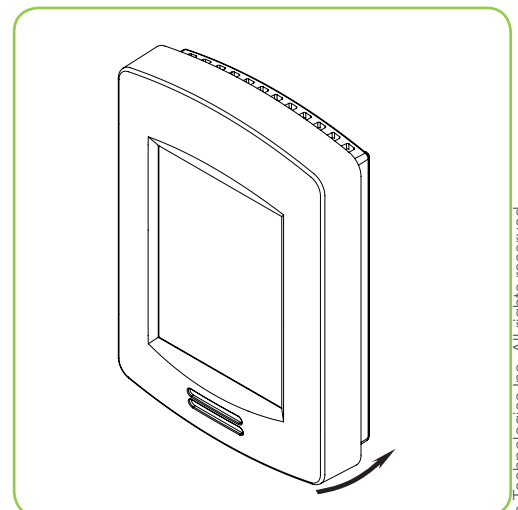Figure-1   Open the cover

Figure-2   Install the base

⚠

- If replacing an existing Line Voltage FCU Controller, label the wires before removal of the controller.
- Electronic controls are static sensitive devices. Discharge yourself properly before manipulating and installing the Room Controller.
- A short circuit or wrong wiring may permanently damage the Room Controller or the equipment.
- All VTR8300 series Room Controllers are designed for use as operating controls only and are not safety devices. Tampering with the devices or unintended application of the devices will result in a void of warranty. This transmitter must be installed to provide a separation distance of at least 4in (10cm) from all persons and must not be collocated or operating in conjunction with any other antenna or transmitter.

Figure-3   Reinstall cover

TERMINAL, IDENTIFICATION AND FUNCTION

Terminal Identification	All VTR83xxA Terminal Equipment Controller
Terminal 4	Tx – Rx Communication
Terminal 5	Power Hot 7.0 VDC
Terminal 6	Power Common
Terminal 13	BACnet +
Terminal 14	BACnet -
Terminal 15	BACnet REF
Terminal 16	BI 1 (Configurable)
Terminal 17	BI 2 (Configurable)
Terminal 18	Scom

NOTE: never use any terminal not mentioned in above table.

COMMUNICATION WIRING TO VC3XXXE RELAY PACK

VTR83xxA Terminal Controller	VC3504E Relay Pack	VC3300E Relay Pack	
4 - Tx / Rx	1 - Tx / Rx	1 - Tx / Rx	To other VC3xxxE
5 - 7 Vdc Power Hot	2 - 7 Vdc Power Hot	2 - 7 Vdc Power Hot	
6 - Power Common	3 - Power Common	3 - Power Common	Relay Pack

BACnet® Communication Shielded Wiring (if required)

VTR83xxA Terminal Controller	VTR83xxA Terminal Controller	
13 - COM +	13 - COM +	To others
14 - COM -	14 - COM -	To others

NOTE: See VTR8300 BACnet® integration manual for more details

Network Wiring Topology

Star Topology

Daisy Chained Topology

Mixed Daisy Chained & Star Topology

Only ONE VC3xxxE Relay Pack with remote monitoring inputs can be used under a single VTR83xxA Controller. All other slave units must be VC3xxxE Relay Pack(s) WITHOUT remote inputs. A maximum of 10 VC3xxxE Relay Packs can be used for a single VTR83xxA Room Controller.

From VTR83xxA to first VC3xxxE Relay Pack

- Uses existing or new field wires
- A minimum of 3 wires are required 14-22 Ga, Solid or Stranded, shield not necessary

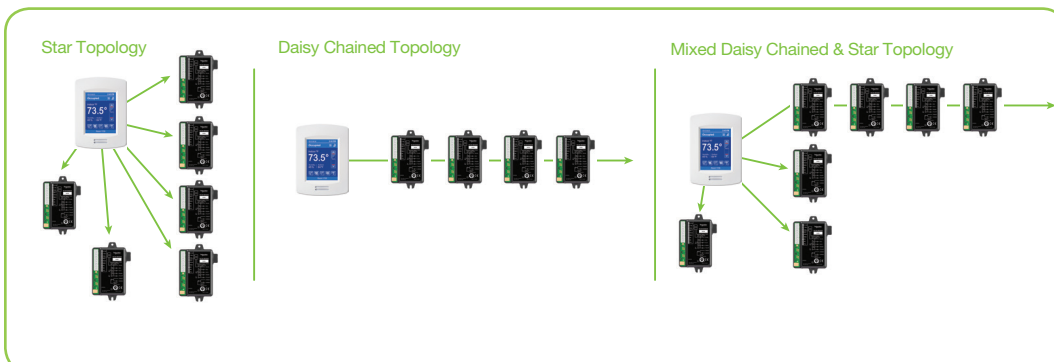### From first VC3xxxE to all other slave VC3xxxE Relay Pack(s)

- Uses existing or new field wires
- A minimum of 2 wires are required 14-22 Ga, Solid or Stranded
- Shield not necessary
- Connect only two wires: Tx/Rx (1) and Power Common (3).

HOME SCREEN DISPLAY

Hospitality User Interface Shown

Date — 2013.09.26

Time — 2:43 PM

System Status

Occupancy Status — **Standby**

Fan Status

Indoor °F

Up Arrow
Increase Temperature Setpoint

Indoor Temperature — **73.5°**

Actual Setpoint — 74.5

Humidity   Outdoor

Indoor Humidity — 45 %   64 °F

Down Arrow
Decrease Temperature
Setpoint

Outdoor Temperature

System Mode

Help

Short Network Message — Room 1705

Fan Mode

Language Selection

Temperature Units

Note: User HMI is configurable and allows display functions such as Date, Time, Humidity, Outdoor Temperature, Setpoint, and others to be enabled or disabled by setting various parameters.

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HOW TO ENTER SETUP SCREEN

2013.09.26   2:43 PM

Standby

Indoor °F

73.5°
74.5

Humidity | Outdoor
45 % | 64 °F

Room 1705
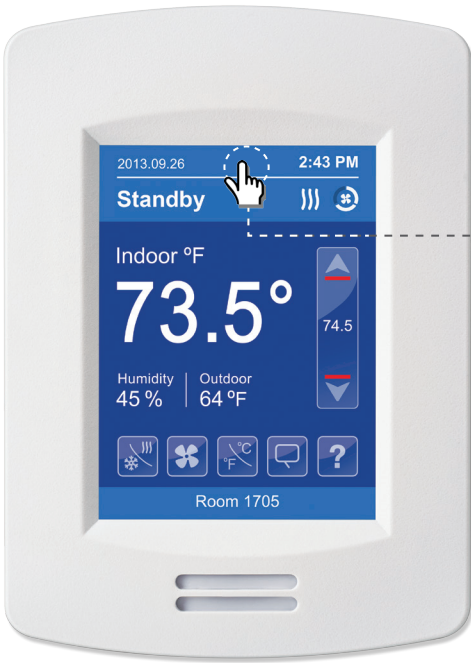
Touch and hold this point
for 3 seconds to enter setup mode

Note: If a configuration / installer
password is activated to prevent
unauthorised access to the
configuration menu parameters, a
password entry prompt will appear
to prevent access to the device
configuration components.

SETUP SCREEN DISPLAY

1/2 Setup
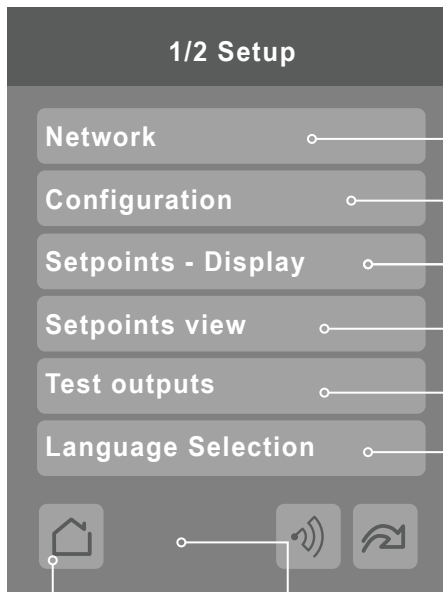
Network	Enter BACnet® & ZigBee® network settings
Configuration	Enter parameter configuration menu
Setpoints - Display	Enter setpoint & display settings
Setpoints view	Enter status and service view
Test outputs	Enter output testing mode
Language Selection	Enter language selection settings

**Return to
home screen**

Discover Mode The Controller will
become discoverable on the wireless
ZigBee® network for 1 minute (this
button is hidden if ZigBee® settings are
not configured)

General Note:

Adjustable parameter

Non-adjustable parameter