



## ■ EVCB VAV Unit Controller

The EVCB VAV Controller is designed for simple and accurate control of any variable air volume box in a number of zone control configurations. Its field configurable algorithms enable versatile implementation of required control sequences.

### APPLICATIONS

- Single duct, cooling only
- Single duct cooling and/or heating
- Up to 4 stage reheat and/or cool
- Up to 4 On/Off heat and/or cool
- Up to 4 time proportioned (TPM) heat or reheat
- Up to 2 analog (0-10Vdc) reheat and/or cool
- Up to 2 floating heat and/or cool
- Pressure dependent or pressure independent
- With or without auto changeover
- Supply/exhaust (requires an additional EVC)

### MODELS

Model	TRIACS	Pressure Type	Feedback	Fan Powered Box
EVCB14NIT0S	0	Indep.		
EVCB14NIT2S	2	Indep.		
EVCB14NIT4S	4	Indep.		•
EVCB14NDT4S	4	Dep.		•
EVCB14NIT0SF	0	Indep.	•	
EVCB14NIT4SF	4	Indep.	•	•

Model (External Motor)	TRIACS	Pressure Type	Motor
EVCB14NIT4X	4	Indep.	External
EVCB14NDT4X	4	Dep.	External

## **FEATURES**

- 24Vac operation
- Up to 4 inputs and 6 outputs
- Field configured VAV algorithm
- Built-in actuator 70in.lb [8Nm] (select models)
- On board differential pressure sensor (pressure independent models)
- Manual or automatic pressure mode selection (pressure independent models)
- Configurable PI (Proportional-Integral) function
- Simple air balancing and commissioning via digital room sensor
- Independent, configurable proportional control band and dead band per ramp
- Selectable internal or external temperature sensor (10K $\Omega$ )
- Activate output with CO<sub>2</sub> from digital room sensor or external CO<sub>2</sub> sensor
- Change over by contact or external temperature sensor
- Removable, raising clamp, non-strip terminals
- Potentiometer feedback for increased precision of actuator position (select models)

## **INPUTS/OUTPUTS**

### **Inputs:**

- 2 analog inputs
- 2 digital inputs

### **Outputs:**

- 2 analog outputs
- Up to 4 TRIAC outputs

## **NETWORK COMMUNICATION**

- BACnet MS/TP or Modbus RTU communication (selectable via menu)
- Select MAC address via DIP switch or via network
- Automatic baud rate detection

### **BACnet MS/TP**

- BACnet scheduler (up to 6 events)
- Firmware upgradeable via network
- COV (change of value)
- Copy and broadcast configuration to other EVCB modules via menu or network
- Automatic device instance configuration

### **Modbus RTU**

- Modbus RTU @ 9600, 19200, 38400 or 57600 bps
- RTU Slave, 8 bits (configurable parity and stop bits)
- Connects to any Modbus RTU master

# TDU - Universal Digital Room Sensors



Horizontal Models	Temp.	RH	CO <sub>2</sub>
<ul style="list-style-type: none"> <li>● TDU10-100</li> <li>● TDU40-100</li> <li>○ TDU70-100</li> </ul>	•		
<ul style="list-style-type: none"> <li>● TDU10-101</li> <li>● TDU40-101</li> <li>○ TDU70-101</li> </ul>	•	•	
<ul style="list-style-type: none"> <li>● TDU10-102</li> <li>● TDU40-102</li> <li>○ TDU70-102</li> </ul>	•	•	•
<ul style="list-style-type: none"> <li>● TDU10-103</li> <li>● TDU40-103</li> <li>○ TDU70-103</li> </ul>	•		•

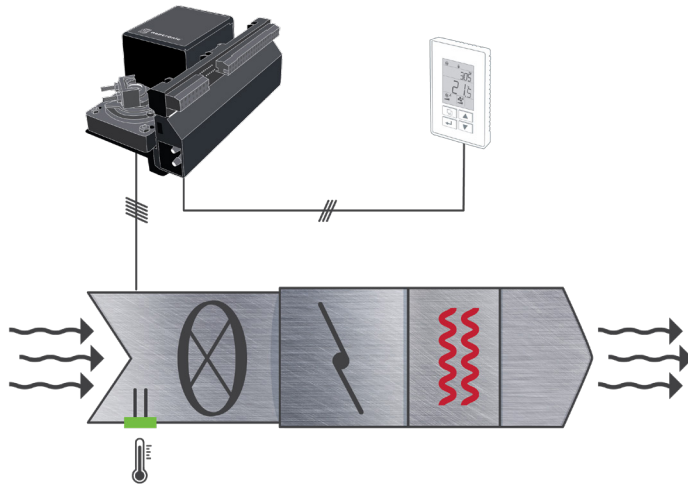
Vertical Models	Temp.	RH	CO <sub>2</sub>	PIR	VOC
<ul style="list-style-type: none"> <li>● TDU00-100</li> <li>● TDU30-100</li> <li>○ TDU60-100</li> </ul>	•				
<ul style="list-style-type: none"> <li>● TDU00-101</li> <li>● TDU30-101</li> <li>○ TDU60-101</li> </ul>	•	•			
<ul style="list-style-type: none"> <li>● TDU00-102</li> <li>● TDU30-102</li> <li>○ TDU60-102</li> </ul>	•	•	•		
<ul style="list-style-type: none"> <li>● TDU00-104</li> <li>● TDU30-104</li> <li>○ TDU60-104</li> </ul>	•			•	
<ul style="list-style-type: none"> <li>● TDU00-105</li> <li>● TDU30-105</li> <li>○ TDU60-105</li> </ul>	•	•		•	
<ul style="list-style-type: none"> <li>● TDU00-106</li> <li>● TDU30-106</li> <li>○ TDU60-106</li> </ul>	•	•	•		•
<ul style="list-style-type: none"> <li>● TDU00-107</li> <li>● TDU30-107</li> <li>○ TDU60-107</li> </ul>	•	•	•	•	•
<ul style="list-style-type: none"> <li>● TDU00-108</li> <li>● TDU30-108</li> <li>○ TDU60-108</li> </ul>	•	•	•	•	





## TDU FEATURES

- Built-in temperature sensor and optional humidity, CO<sub>2</sub>, VOC and occupancy sensors
- Elegant design
- Universal wall-mount design
- Used to configure and operate the EVCB VAV controllers
- Three wire connection between digital room sensor and controller
- Selectable Fahrenheit or Celsius scale
- BACnet service port via on-board mini USB connector
- Horizontal or vertical configuration

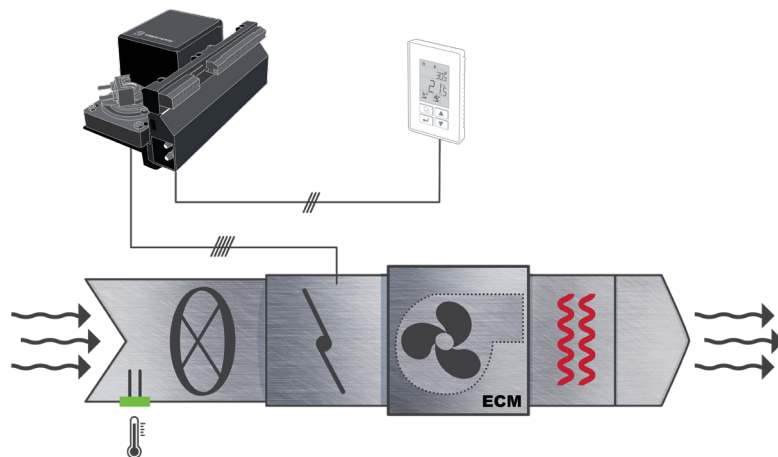
# TYPICAL APPLICATIONS





## Single duct



EVCB CONTROLLER	
T01	Optional TRIAC
T02	Optional TRIAC
T03	Optional TRIAC
T04	Optional TRIAC
	<b>A01</b> Cooling / Heating
	A02 Cooling / Heating
	DI1 Sensor input (on/off)
	DI2 Sensor input (on/off)
	<b>AI1</b> Sensor input (analog)
	AI2 Sensor input (analog)
	A+ BACnet
	B-
DIGITAL ROOM SENSOR	
	
	LO Optional differential pressure sensor
	HI

## Fan powered box



EVCB CONTROLLER	
T01	Optional TRIAC
T02	Optional TRIAC
T03	Optional TRIAC
T04	Optional TRIAC
	<b>A01</b> Cooling / Heating
	A02 Fan
	DI1 Sensor input (on/off)
	DI2 Sensor input (on/off)
	<b>AI1</b> Sensor input (analog)
	AI2 Sensor input (analog)
	A+ BACnet
	B-
DIGITAL ROOM SENSOR	
	
	LO Optional differential pressure sensor
	HI