



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 Ω)
- Activate output with CO₂ from digital room sensor or external CO₂ 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



● TDU10

● TDU40

○ TDU70



● TDU00

● TDU30

○ TDU60

Horizontal Models	Temp.	RH	CO ₂
● TDU10-100 ● TDU40-100 ○ TDU70-100	•		
● TDU10-101 ● TDU40-101 ○ TDU70-101	•	•	
● TDU10-102 ● TDU40-102 ○ TDU70-102	•	•	•
● TDU10-103 ● TDU40-103 ○ TDU70-103	•		•

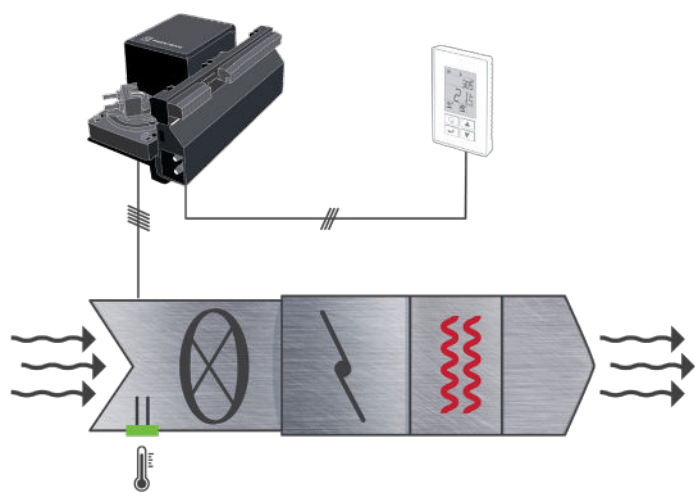
Vertical Models	Temp.	RH	CO ₂	PIR	VOC
● TDU00-100 ● TDU30-100 ○ TDU60-100	•				
● TDU00-101 ● TDU30-101 ○ TDU60-101	•	•			
● TDU00-102 ● TDU30-102 ○ TDU60-102	•	•	•		
● TDU00-104 ● TDU30-104 ○ TDU60-104	•			•	
● TDU00-105 ● TDU30-105 ○ TDU60-105	•	•		•	
● TDU00-106 ● TDU30-106 ○ TDU60-106	•	•	•		•
● TDU00-107 ● TDU30-107 ○ TDU60-107	•	•	•	•	•
● TDU00-108 ● TDU30-108 ○ TDU60-108	•	•	•	•	

TDU FEATURES

- Built-in temperature sensor and optional humidity, CO₂, 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

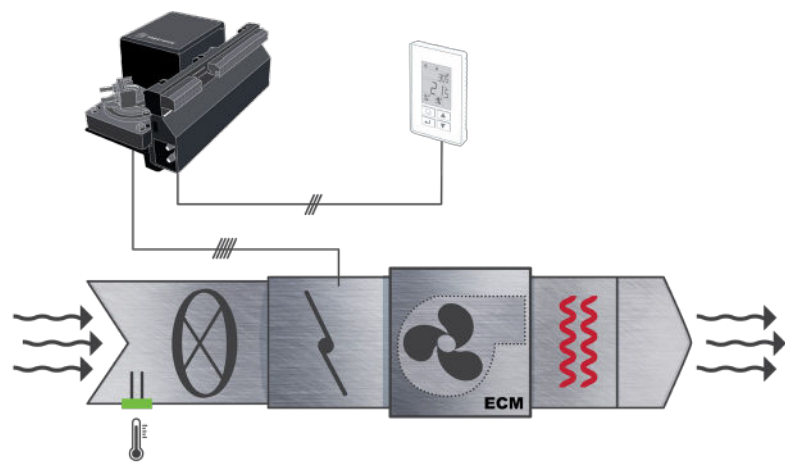
TYPICAL APPLICATIONS

Single duct



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

Fan powered box



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