



## ■ EFCB Fan Coil Controller

The EFCB Fan Coil Controller is designed for simple and accurate control of any fan coil application. The controller incorporates a configurable fan coil algorithm, variable three speed fan control and either modulating or digital heating and cooling outputs.

### APPLICATIONS

- 2 or 4 pipe systems
- Fan coil unit (up to 3 speeds and/or analog 0-10Vdc)
- Cooling signal (on/off, floating or modulating 0-10Vdc)
- Heating signal (on/off, floating, pulse or modulating 0-10Vdc)
- Reheat signal (on/off, floating, pulse or modulating 0-10Vdc)

### MODELS

Product	Model	Type	Extra 3A Relay	
Fan Coil Controllers	EFCB10TU2	24Vac	2	
	EFCB10TU4		4	
	EFCB11TU2	120Vac	2	
	EFCB11TU4		4	
	EFCB12TU2	240Vac	2	
	EFCB12TU4		4	
	Middle East and Asian Markets			
		EFCB10T-OE1		0
		EFCB10TU2-OE1	24Vac	2
		EFCB10TU4-OE1		4
		EFCB12T-OE1		0
		EFCB12TU2-OE1	240Vac	2
	EFCB12TU4-OE1		4	

## FEATURES

- Available in 24, 120 or 240 Vac
- Up to 10 inputs and 15 outputs
- Real Time Clock (RTC) with 24 hour backup
- Configurable PI (Proportional-Integral) function
- Selectable proportional control band and dead band
- Independent cool/heat setpoint for NSB/OCC mode
- 3-speed or ECM (analog) fan control
- Selectable internal or external temperature sensor (10K $\Omega$ )
- Changeover by contact or external temperature sensor
- Freeze protection
- Removable, raising clamp, non-strip terminals

## INPUTS/OUTPUTS

### Inputs:

- 4 configurable analog inputs (0-10Vdc or 10K $\Omega$ )
- 3 dedicated sensor inputs
- 3 configurable digital inputs

### Outputs:

- 4 analog outputs (configurable)
- 4 TRIAC outputs (configurable)
- 3 fan outputs (configurable)
- Up to 4 digital outputs (configurable)

## **TFL - Digital Room Sensor**

## FEATURES

- Built-in temperature sensor and optional humidity and CO<sub>2</sub> sensors
- Backlit LCD with simple icon and text driven menus
- BACnet service port via on-board mini USB connector
- Selectable Fahrenheit or Celsius scale
- Three wire connection between digital room sensor and controller
- Used to configure and operate the EFCB Fan Coil Controllers

## 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 BACnet
- COV (change of value)
- Copy and broadcast configuration to other EFCB 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



Model	Temp	Humidity	CO <sub>2</sub>	Type
TFL54	•			3*3
TFL24	•			2*4
TFLH24-INT	•	Internal		
TFLH24-EXT	•	External		
TFLG24	•		•	
TFLGH24	•	Internal	•	

# TDF - Universal Digital Room Sensors



Horizontal Models	Temp.	RH	CO <sub>2</sub>
<ul style="list-style-type: none"> <li>● TDF10-100</li> <li>● TDF40-100</li> <li>○ TDF70-100</li> </ul>	•		
<ul style="list-style-type: none"> <li>● TDF10-101</li> <li>● TDF40-101</li> <li>○ TDF70-101</li> </ul>	•	•	
<ul style="list-style-type: none"> <li>● TDF10-102</li> <li>● TDF40-102</li> <li>○ TDF70-102</li> </ul>	•	•	•
<ul style="list-style-type: none"> <li>● TDF10-103</li> <li>● TDF40-103</li> <li>○ TDF70-103</li> </ul>	•		•

Vertical Models	Temp.	RH	CO <sub>2</sub>	PIR	VOC
<ul style="list-style-type: none"> <li>● TDF00-100</li> <li>● TDF30-100</li> <li>○ TDF60-100</li> </ul>	•				
<ul style="list-style-type: none"> <li>● TDF00-101</li> <li>● TDF30-101</li> <li>○ TDF60-101</li> </ul>	•	•			
<ul style="list-style-type: none"> <li>● TDF00-102</li> <li>● TDF30-102</li> <li>○ TDF60-102</li> </ul>	•	•	•		
<ul style="list-style-type: none"> <li>● TDF00-104</li> <li>● TDF30-104</li> <li>○ TDF60-104</li> </ul>	•			•	
<ul style="list-style-type: none"> <li>● TDF00-105</li> <li>● TDF30-105</li> <li>○ TDF60-105</li> </ul>	•	•		•	
<ul style="list-style-type: none"> <li>● TDF00-106</li> <li>● TDF30-106</li> <li>○ TDF60-106</li> </ul>	•	•	•		•
<ul style="list-style-type: none"> <li>● TDF00-107</li> <li>● TDF30-107</li> <li>○ TDF60-107</li> </ul>	•	•	•	•	•
<ul style="list-style-type: none"> <li>● TDF00-108</li> <li>● TDF30-108</li> <li>○ TDF60-108</li> </ul>	•	•	•	•	

## TDF 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 EFCB Fan Coil 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 APPLICATION

