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	24Vac	0
	EFCB10TU2-OE1		2
	EFCB10TU4-OE1		4
	EFCB12T-OE1	240Vac	0
	EFCB12TU2-OE1		2
	EFCB12TU4-OE1		4

neptronic

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 (10KΩ)
- 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 10KΩ)
- 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)

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

TFL - Digital Room Sensor

FEATURES

- Built-in temperature sensor and optional humidity and CO_2 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

TFL54 TFL24

Model	Temp	Humidity	CO_2	Type
TFL54	•			3*3
TFL24	•			2*4
TFLH24-INT	•	Internal		
TFLH24-EXT	•	External		
TFLG24	•		•	
TFLGH24	•	Internal	•	

TDF - Universal Digital Room Sensors

TDF10

TDF40

TDF70

TDF00

TDF30

TDF60

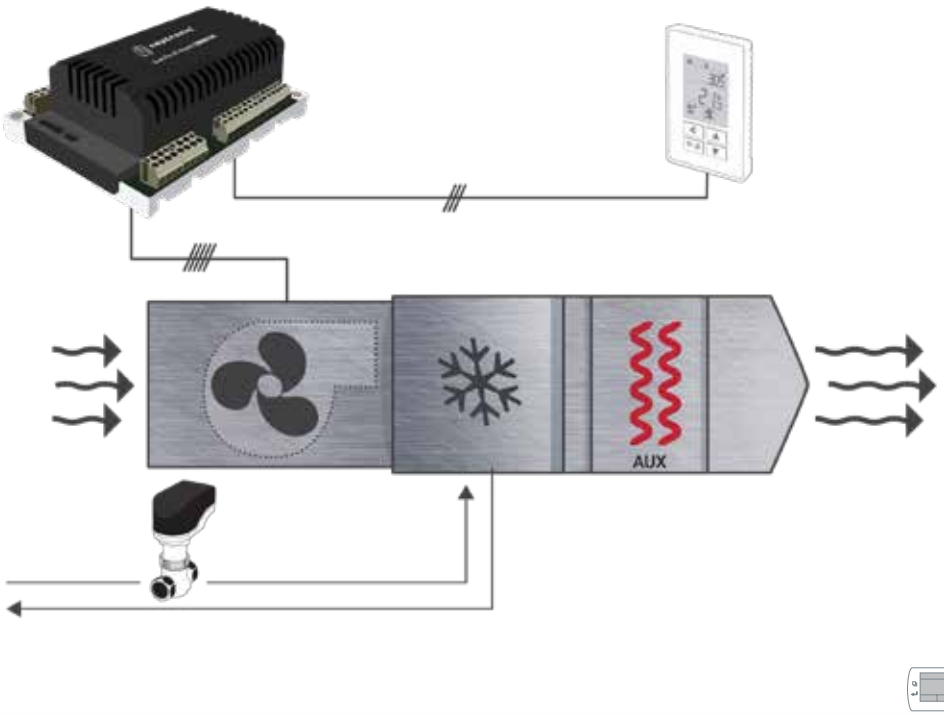
Horizontal Models	Temp.	RH	CO_2
TDF10-100 TDF40-100 TDF70-100	•		
TDF10-101 TDF40-101 TDF70-101	•	•	
TDF10-102 TDF40-102 TDF70-102	•	•	•
TDF10-103 TDF40-103 TDF70-103	•		•

Vertical Models	Temp.	RH	CO_2	PIR	VOC
TDF00-100 TDF30-100 TDF60-100	•				
TDF00-101 TDF30-101 TDF60-101	•	•			
TDF00-102 TDF30-102 TDF60-102	•	•	•		
TDF00-104 TDF30-104 TDF60-104	•			•	
TDF00-105 TDF30-105 TDF60-105	•	•		•	
TDF00-106 TDF30-106 TDF60-106	•	•	•		•
TDF00-107 TDF30-107 TDF60-107	•	•	•	•	•

TDF FEATURES

- Built-in temperature sensor and optional humidity, CO_2, 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



EFCB CONTROLLER	
TO1	TRIAC
TO2	TRIAC
TO3	TRIAC
TO4	TRIAC
AO1	Cooling / Heating
AO2	Cooling / Heating
AO3	Analog Output 3
AO4	Analog Output 4
DO1 - DO4	Optional digital outputs
Low	
Med	
Hi	
DI1 - DI4	Sensor inputs (on/off)
AI1 - AI6	Sensor inputs (analog)
A+	BACnet/Modbus
B-	
Digital Room Sensor	