

# BW437-FCU

## BACwall FCU

Configurable Wall  
BACnet MS/TP Controller



### Description

- Configurable Wall Controller with factory-loaded 2 & 4 Pipe FCU applications
- 14 I/O - 4 UI, 3 AO, 6 BO, & 1 Universal AO/BO (*Jumper Selectable*)
- Options: RH%, PIR (Motion) & CO2
- BACnet MS/TP **BTL** certified as a B-ASC

| Model number        | Built-in humidity sensor | Built-in PIR motion sensor | Built-in CO2 NDIR sensor |
|---------------------|--------------------------|----------------------------|--------------------------|
| <b>BW437-FCU</b>    |                          |                            |                          |
| <b>BW437MH-FCU</b>  | √                        | √                          |                          |
| <b>BW437HC-FCU</b>  | √                        |                            | √                        |
| <b>BW437MHC-FCU</b> | √                        | √                          | √                        |



### Application

The BW437 controller is designed to facilitate the control of standard 2 and 4 Pipe FCU HVAC equipment. The BW437 offers multiple configuration profiles which can be used to meet project requirements. Features a very flexible (Not Fixed) I/O set.

### Technical specifications

#### Power supply:

- 24 VAC/VDC ± 15%; Class 2

#### Current Consumption:

- 1.5 VA controller only
- 96 VA Max (including outputs 0.5A each)

#### Communication Protocols:

- BACnet MS/TP half-wave device
- BTL listed: B-ASC, BACnet Application Specific Controller
- Baud 9600, 19200, 38400, 76800 Bps (76800 default)
- Addressing: Keypad configuration
- Mini USB2 MS/TP network access (Strato Automation USB-485 cable adapter)
- All Strato Controllers are ¼ unit load devices.**

#### Hardware

- Microprocessor: STM32 (ARM Cortex™ M3) 32 bits
- CPU Speed: 72MHz
- Memory: 768 KB non-volatile Flash (Application Program)
- RAM: 96 KB RAM
- Real-time clock (RTC): Built-in capacitor (one-week backup)

#### Programming

- Configurable using the local keypad, writing to the BACnet objects, or utilizing Strato Software tools.

#### Inputs:

- 4 Universal Inputs (AI/BI)**
  - Thermistor 10KΩ (type 2 or 3)
  - Dry contact, 500 ms minimum (On-Off)
  - Voltage 0 - 10 Vdc (Input impedance of 100 K Ω)
  - Resolution: 12 Bits (4096 segments)

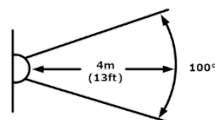
#### Outputs:

- 6 Binary Outputs**
  - MOSFET Solid State Relays, Isolated
  - 10 to 30VAC/VDC, 0.5A max
- 3 Analog Outputs**
  - Voltage 0 - 10 VDC linear
- 1 Universal AO/DO**
  - Jumper selectable
  - Same specification as above

**Humidity Sensor:** Sensirion™ SHT31 ±2 @ 0-100% RH

#### PIR Sensor:

- Operating Principle: Passive Infrared
- Detection Angle: 100 degrees
- Detection Distance: 4M (13ft) maximum
- Detection Area



#### CO2 Sensor: Sensirion™ SCD30

- Self-calibrating, non-dispersive infrared (NDIR)
- Sensor Range: 0-5000 PPM
- Accuracy: ± 30 PPM @ 3% of reading
- Accuracy is valid after a minimum of 3 weeks of continuous operation.
- Response Time T63: 2 minutes

#### Mechanical:

- Dimensions: B 3.25" (82.5 mm) x A 4.88" (123.9mm) x H 0.93" (23.62mm)
- Stocking temperature: -30 °C to 50 °C / -22 °F to 122 °F
- Operating conditions: -25 °C to 50 °C / -13 °F to 113 °F 10% to 90% H.R. without condensation
- Mounting type: Standard 2" x 4" electrical junction box
- Enclosure: White color, ABS material UL94VO

#### Warranty: 1 Year

#### Certifications:

- UL 916 Energy Management Equipment
- BTL listed: B-ASC, BACnet Application Specific Controller

