BW437-DB
Dump Box VAV

Configurable Wall
V A V BACnet MS/TP
Controller

Strato Automation

Description

- BW437DB with factory-loaded licensed firmware for Dump Box VAV 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
BW437-RTU			
BW437MH-RTU	√	√	
BW437HC-RTU	√		√
BW437MHC-RTU	√	√	√

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Application

The BW437 DB controller is designed to facilitate the control of VAV dump Box equipment. The BW437DB controls the damper for heat or cooling with a changeover sensor and includes DCV and reheat. Damper can be operated by Floating or Modulating control, direct or reverse acting.

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
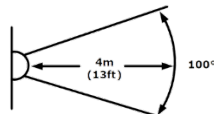*3 Analog Outputs*
- Voltage 0 - 10 VDC linear
1 Universal AO/DO
- Jumper selectable
- *Same specification as above*

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.
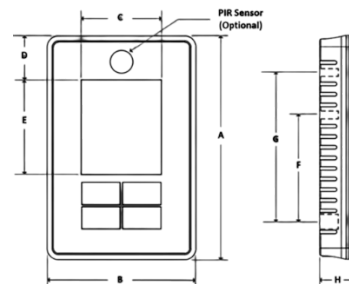- Response Time T63: 2 minutes

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

Designed and assembled in 🍁 **CANADA**

BW437-FCU-R
BACwall FCU

Configurable Wall
BACnet MS/TP Controller

Strato Automation

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
BW437-FCU-R			
BW437MH-FCU-R	√	√	
BW437HC-FCU-R	√		√
BW437MHC-FCU-R	√	√	√

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)
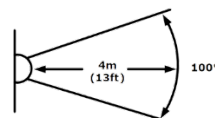- Resolution: 12 Bits (4096 segments)

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*

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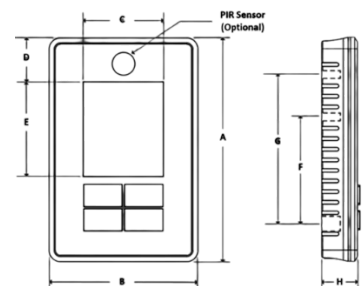- Response Time T63: 2 minutes

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- 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

Designed and assembled in 🍁 **CANADA**

BW437-FCU

BACwall FCU

Configurable Wall
BACnet MS/TP Controller

Strato Automation

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
BW437-FCU			
BW437MH-FCU	√	√	
BW437HC-FCU	√		√
BW437MHC-FCU	√	√	√

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.

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- Thermistor 10KΩ (type 2 or 3)
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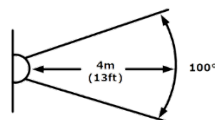- Resolution: 12 Bits (4096 segments)

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3 Analog Outputs
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1 Universal AO/DO
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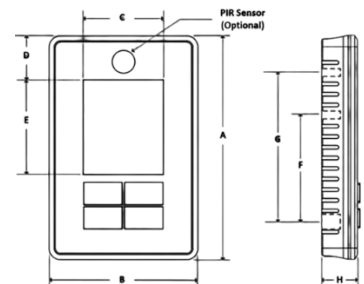- Response Time T63: 2 minutes

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Designed and assembled in 🍁 **CANADA**

BW437-RTU-R
BACwall RTU

Configurable Wall
BACnet MS/TP Controller

Strato Automation

Description

- Configurable Wall Controller with factory-loaded RTU, HP & AHU 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
BW437-RTU-R			
BW437MH-RTU-R	√	√	
BW437HC-RTU-R	√		√
BW437MHC-RTU-R	√	√	√

Application

The BW437 controller is designed to facilitate the control of standard RTU, HP, and AHU 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.

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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)

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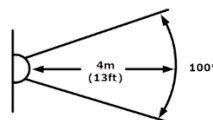- Resolution: 12 Bits (4096 segments)

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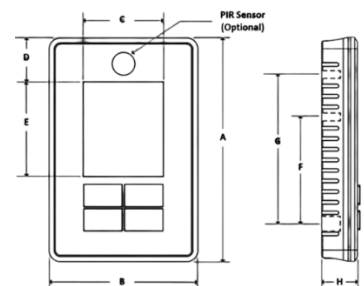- Response Time T63: 2 minutes

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BW437MH-RTU	√	√	
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BW437MHC-RTU	√	√	√

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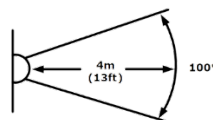*3 Analog Outputs*
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