



Description

- ▶ The BACwall is a fully programmable digital wall controller
- ▶ It is factory delivered preprogrammed with a powerful low voltage RTU, HP & AHU application
- ▶ It supports BACnet MS/TP
- ▶ It has 4 AI/BI's, 3 AO's, 6 BO's plus 1 jumper selectable universal AO/BO
- ▶ Options includes: Humidity sensor, PIR & CO2 sensing
- ▶ It is certified as a B-ASC (BACnet Application Specific Controller)
- ▶ To order use part number as per table below

Model number	Built-in humidity sensor	Built-in PIR motion sensor	Built-in CO2 NDIR sensor
BW437-RTU			
BW437MH-RTU	√	√	
BW437HC-RTU	√		√
BW437MHC-RTU	√	√	√

Application

This controller is designed to facilitate control and management of equipment typically used in the HVAC industry. It allows powerful yet flexible solutions that can be tailored and sized according to any project needs. It features a very flexible I/O set capable of meeting all terminal equipment control needs in the market

Technical specifications

Power supply:

24 Vac/Vdc ± 15%

Current consumption:

1.5 VA controller only

Up to 96 VA total maximum on all 7 BO's @

0.5A maximum per output

Inputs:

4 x AI/BI's universal inputs

- 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 x BO's Solid State

- 10 to 30Vac/Vdc, 0.5A max.
- Up to 96 VA total maximum on all 7 BO's @ 0.5A maximum per output

- Sink or source main power feed
- Built-in overcurrent protection @ 4A max
- Solid State BO's can be used as pulse outputs

3 x AO's

- Voltage 0 - 10 Vdc linear

1 x universal AO/BO's

- Jumper selectable
- Same specification as above

Real-time clock (RTC):

Built in with one-week capacitor backup once charged

Trend logs:

Automatic for all declared BACnet objects
Limited only by the storage capacity of the server when connected to a Strato Edge Server

Microprocessor:

STM32 (ARM CortexTM M3)

32 bits, 72MHz

Memory:

Flash: 768 KB non-volatile for the application program

RAM: 96 KB

Number of BACnet objects:

Maximum 100 items

RS485 BACnet MS/TP communication speed:

9600, 19200, 38400, 76800 Bps

Controller addressing:

Via keypad configuration

External connections:

Mini USB connector allows local access to the MS/TP network

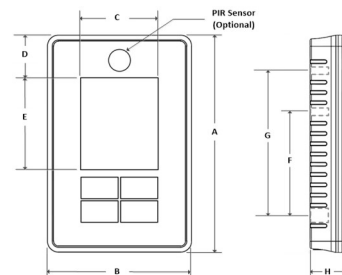
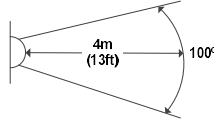
Requires a Strato Automation USB-MSTP cable

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

- Operating Principle: 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

Backlight display / LCD

Multi-HVAC system symbols, time display, 4 segment main numeric display with one decimal

Programming:

Fully programmable using the Strato Workstation software

Communication protocols:

BACnet MS/TP

Dimensions:

B 83 mm x A 124 mm x 20 mm

B 3,25" x A 4,88" x 0,8"

Max. wire size:

16 awg

Stocking temperature:

-30 °C to 50 °C / -22 °F to 122 °F

Operating conditions:

-25 °C to 45 °C / -13 °F to 113 °F

10% to 90% H.R. without condensation

Weight:

120 g / 0.25 lb

Mounting type:

Standard 2" x 4" electrical junction box

Warranty:

1 year

Enclosure:

White color, ABS material UL94VO

Certifications:

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