
ADVANCED PROGRAMMING & USER INTERFACE SETUP GUIDE

BrightStat

Air Conditioner/Heat Pump Room Controller



Bard Manufacturing Company, Inc.
Bryan, Ohio 43506
www.bardhvac.com

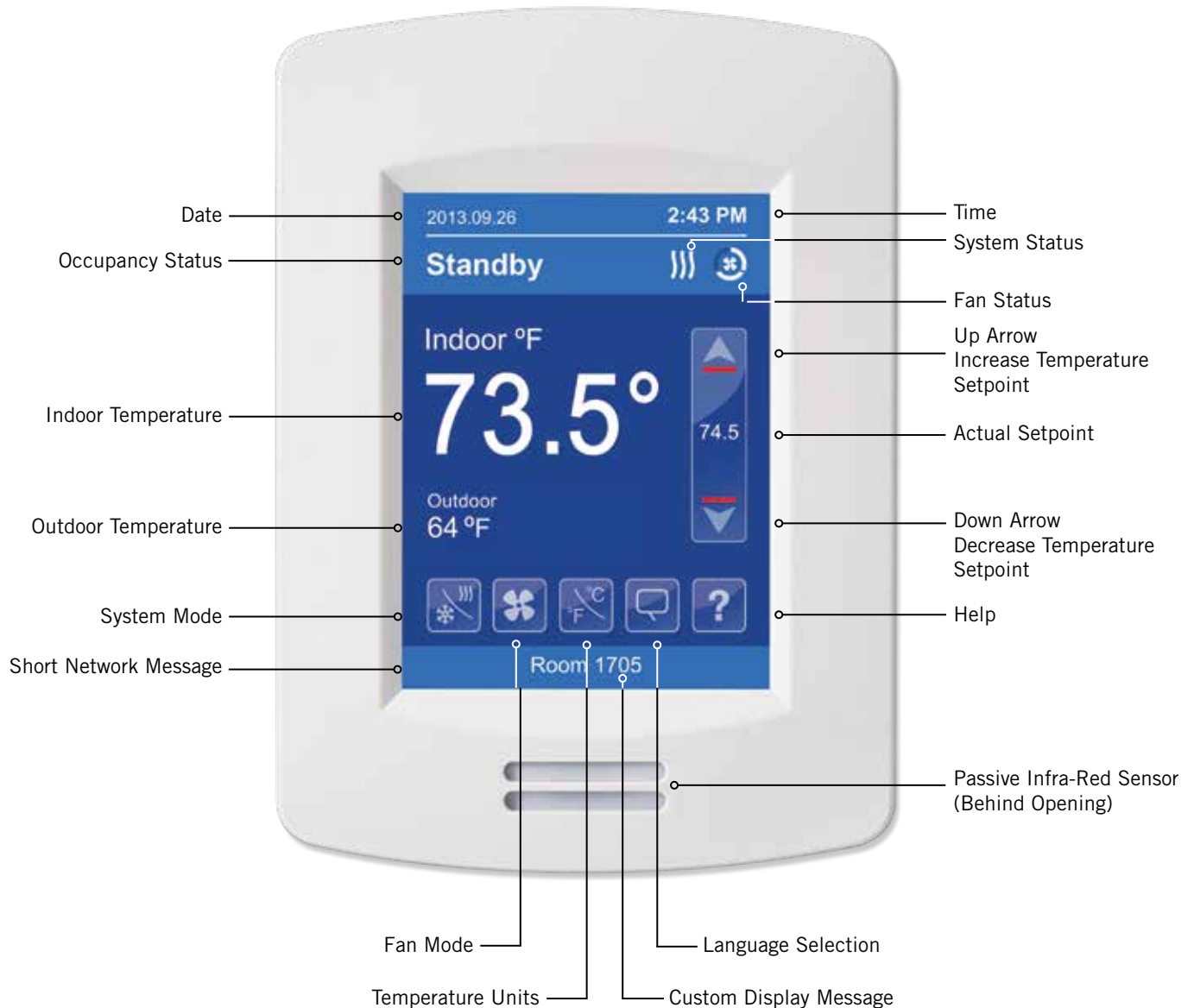
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HMI DISPLAY

The image below shows a typical user interface for the HVAC industry. The User HMI is configurable and allows display functions such as Date, Time, Outdoor Temperature and Setpoint to be enabled or disabled by setting various parameters.



General Notes

1. When any change is made to a parameter, the value is automatically saved in memory when the next parameter is selected or another page is opened.
2. Arrows auto-increment/decrement at higher speed when holding button for more than 2.5 seconds.

System Mode

The following apply in System Mode.

- **Off:** Heating, cooling and dehumidification demands are ignored.
- **Auto:** Room controller automatically toggles between heating and cooling modes to satisfy both heating and cooling demands. Dehumidification is allowed.
- **Cool:** Room controller only satisfies cooling demands; heating demands are ignored. Dehumidification is allowed.
- **Heat:** Room controller only satisfies heating demands; cooling demands are ignored. Dehumidification is allowed.
- **Emergency:** Only available if “Application” parameter is set to Heatpump. Room controller satisfies heating demands using exclusively the Auxiliary Heating output (W1); cooling demands are ignored. Dehumidification is allowed.

Fan Mode

The following apply in Fan Mode.

- **Auto:** In any occupancy mode, the fan turns Off if there is no demand (heat, cool, dehum.).
- **On:** In any occupancy mode, the fan stays On continuously even if there is no demand (heat, cool, dehum.).
- **Smart:** In Occupied, Standby and Override mode, the fan is continuously On, even if there is no demand (heat, cool, dehum.). In Unoccupied mode, the fan turns Off if there is no demand (heat, cool, dehum.).

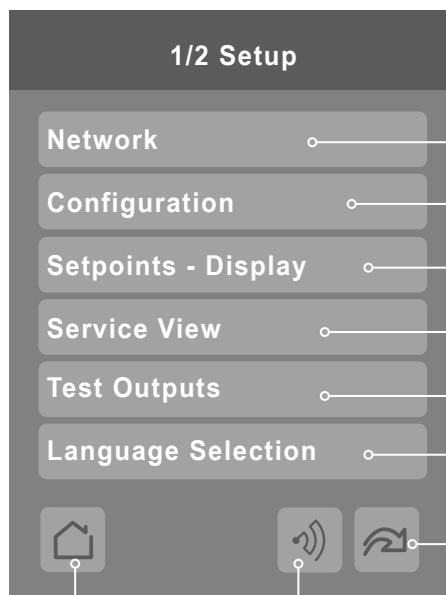
SETUP SCREEN



Touch and hold this point for 3 seconds to enter setup mode

NOTE: If a configuration/installer password is activated to prevent unauthorised access to the configuration menu parameters, a password entry prompt shows to prevent access to device configuration components.

SETUP SCREEN DISPLAY 1/2



Return to home screen

Discover Mode The controller becomes discoverable on the wireless ZigBee® network for 1 minute (this button is hidden if ZigBee® settings are not configured)

Enter BACnet® & ZigBee® network settings (only if ZigBee is detected)

Enter parameter configuration menu

Enter setpoint and display settings

Enter status and service view

Enter output testing mode

Enter language selection

Advance to next menu

General Note:



Adjustable parameter

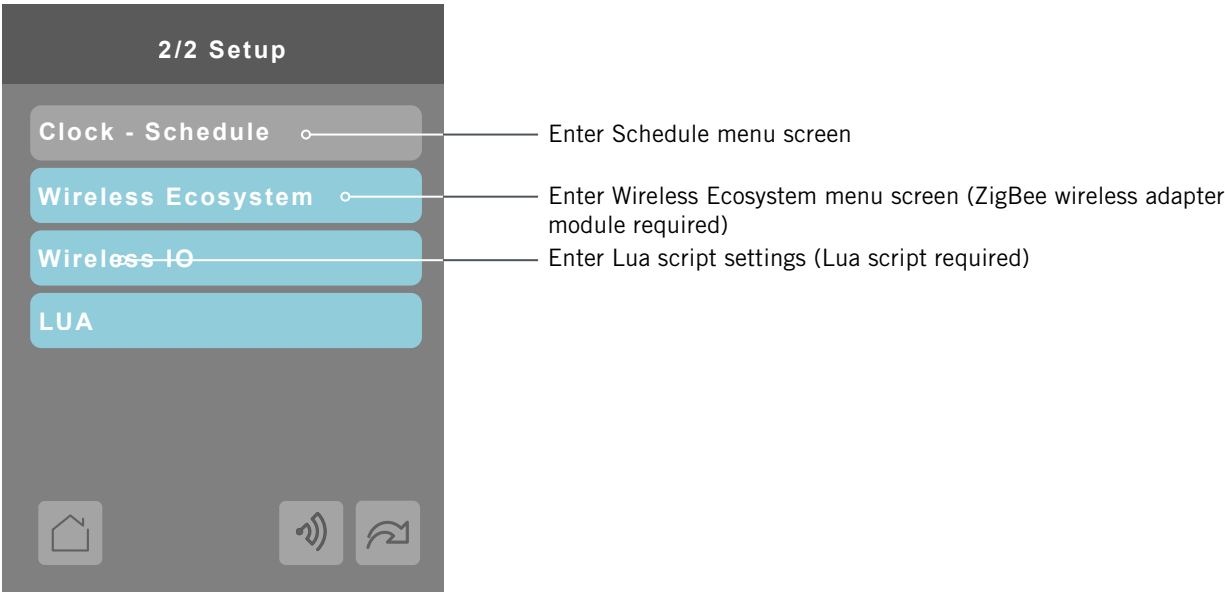
Nonadjustable parameter

Indicates invisible conditional field. Appears based only on model, presence of a ZigBee wireless adapter module or presence of a Lua script, depending on the field.

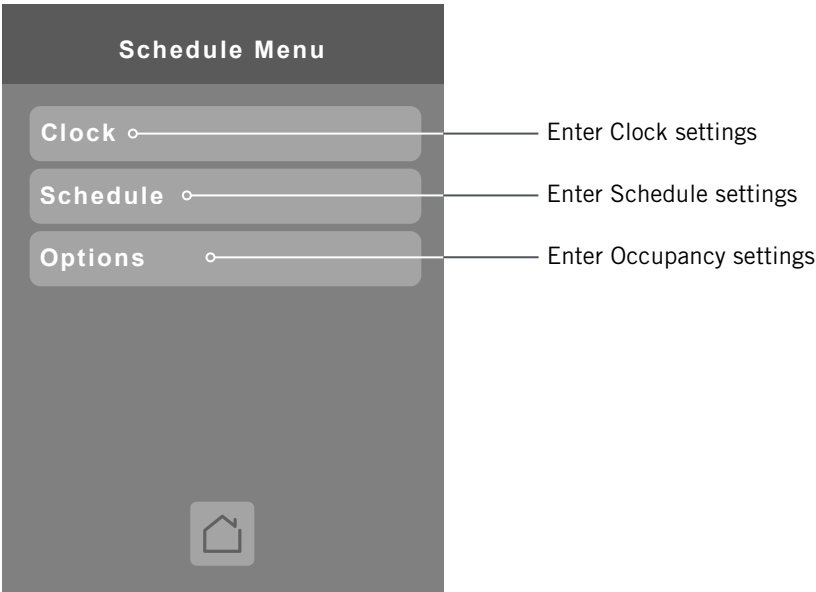
NOTE: The following menus show according to context:

- ZigBee menu shows if ZigBee card is detected
- Network choice inside does not show if no network is available

SETUP SCREEN DISPLAY 2/2



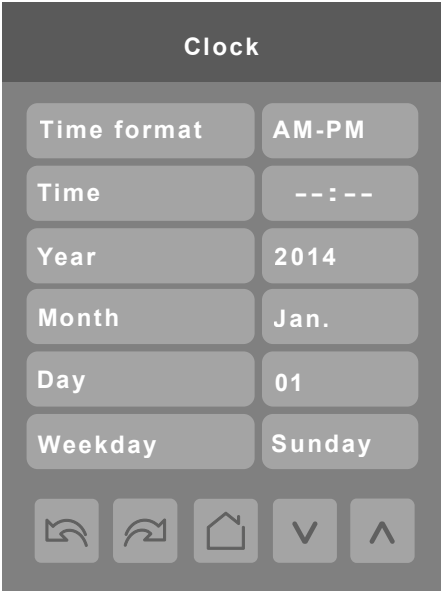
SCHEDULE MENU SCREEN



NOTE: The Schedule menu screen is directly accessible from the main display if the Schedule Menu configuration parameter is enabled. See Configuration Parameters Screen 9/11 on page 36 for more information.

CLOCK SETTINGS

The Clock settings screen allows the device's internal time settings to be changed, including current time, standard day, month, year and weekday options, as well as choice between a 12 hour AM/PM display or a 24 hour display.



PARAMETER DETAILS

Configuration Parameters Default Value	Significance and Adjustments
Time Format Default value: AM-PM	Time Format: Current time display format. Choice between 12 hour (AM - PM) time format or 24 hour time format. Note: Changing the value of this parameter automatically changes the format of the displayed value of the time parameter. Choices: AM-PM or 24 Hours
Time Default value: Current time at power up	Time: Standard time display, 12 hour AM-PM or 24 hour format determined by the Time Format parameter value.
Year Default value: 2014	Year: Current year Range: 2000 - 2100
Month Default value: Jan.	Month: Current month Range: Jan. - Dec.
Day Default value: 1	Date: Current date Range: 1 - 31
Weekday Default value: Monday	Day: Current day Range: Monday - Sunday

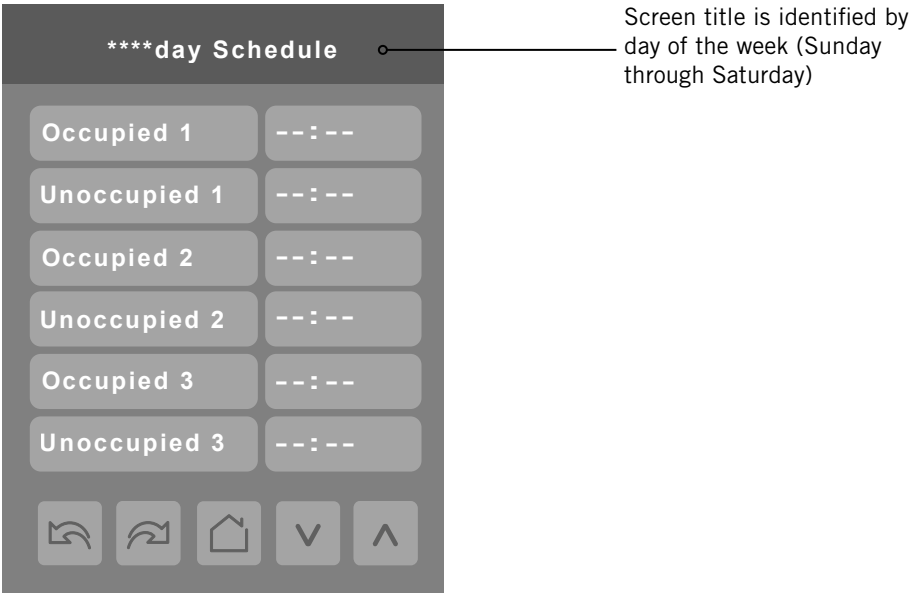
POWER OUTAGE CLOCK RESET

In the event of a power outage, controller will retain the correct time as long as the duration of the power outage is not prolonged. Depending on the duration of the power outage, the controller's internal clock may need to be updated or reset completely. The following table gives an indication of the expected clock performance after a power outage.

Outage Duration	Controller Behavior
0 - 24 hours	Clock functions are normal.
24 - 36 hours	Clock accuracy not guaranteed; time may need to be adjusted.
36 - 72 hours	Clock no longer increments and must be adjusted when power is restored.
72+ hours	Clock functions are fully reset and must be re-initialized as per new installation.

SCHEDULE SETTINGS

There are seven different schedule setting screens, one for each day of the week, titled accordingly. Each day can have different scheduled events where the room controller is set to Occupied status or back to Unoccupied status and use the appropriate setpoints, back and forth up to three times per day.

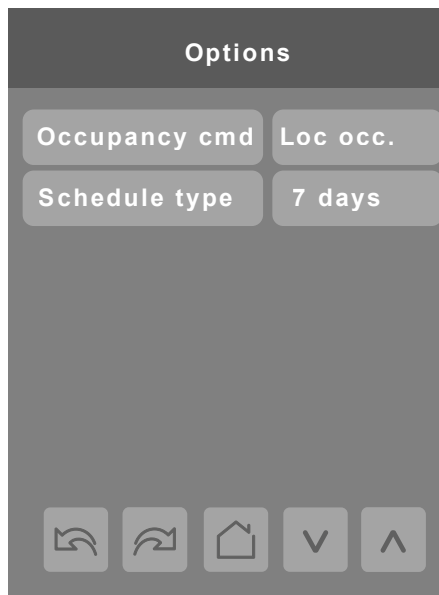


PARAMETER DETAILS

Configuration Parameters Default Value	Significance and Adjustments
Occupied 1 - 3 Default value: None	Occupied 1 - 3 Defines a time when the room controller is automatically set to use the Occupied setpoint. Note: There are three separate Occupied parameter entries Range: 00:00 - 24:00
Unoccupied 1 - 3 Default value: None	Unoccupied 1 - 3 Defines a time when the room controller is automatically set to use the Unoccupied setpoint. Note: There are three separate Unoccupied parameter entries Range: 00:00 - 24:00

OCCUPANCY SETTINGS

The occupancy settings screen allows the control of how the room controller will determine whether it is functioning in Occupied or Unoccupied mode.

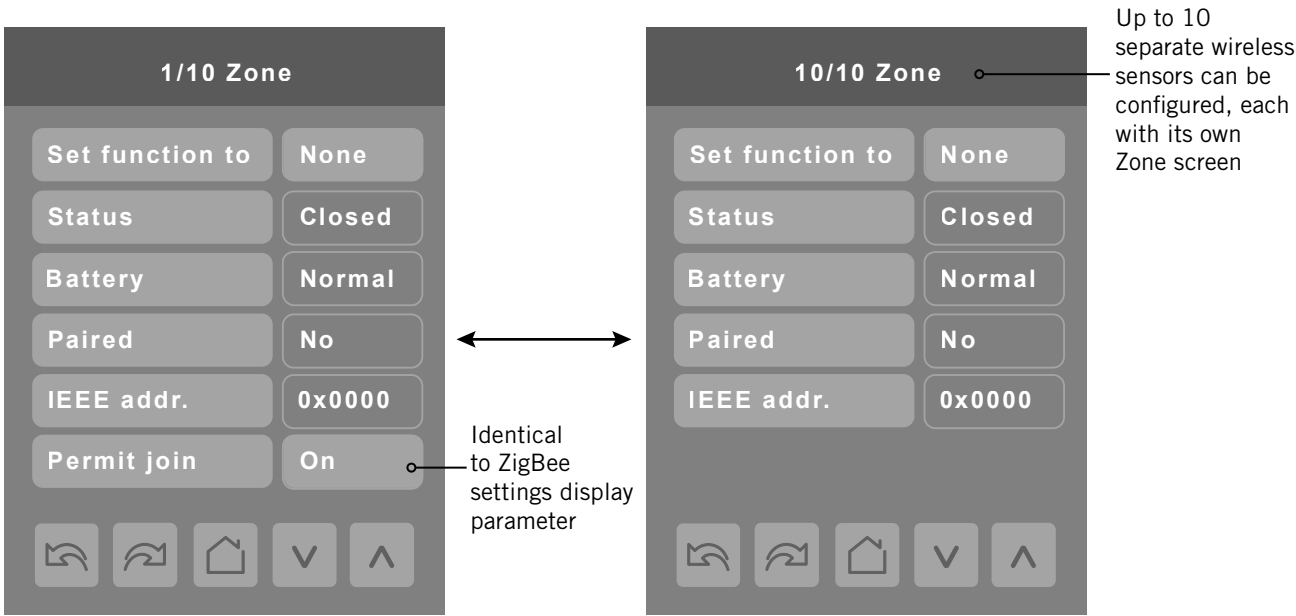


PARAMETER DETAILS

Configuration Parameters Default Value	Significance and Adjustments
Occupancy cmd Default value: Local occ. Loc occ. is normally selected for units with ventilation option in school applications.	Occupancy Command Loc occ.: Occupancy is determined by local sequences (either PIR or schedule, as configured under Occ. source). Occupied: Force occupied mode. Unoccup: Force unoccupied mode. Choices: Loc occ, Occupied, Unocc.
Schedule type Default value: 7 days 5+2 days is normally used in school applications.	Schedule Type 7 days: Independent scheduling identified by day of the week (Sunday - Saturday) 5+1+1 days: Weekdays scheduling and Independent Weekend scheduling identified as Weekdays, Saturday and Sunday 5+2 days: Weekdays scheduling and Weekend scheduling identified as Weekdays and Weekend Choices: 7 days, 5+2 days, 5+1+1

WIRELESS ECOSYSTEM

When wireless sensors are set up to communicate with a room controller, the functioning of each such sensor is described in a separate Zone screen, up to a maximum of 10 Zones. Select the appropriate type of sensor based on the required functioning using the up and down arrow keys.



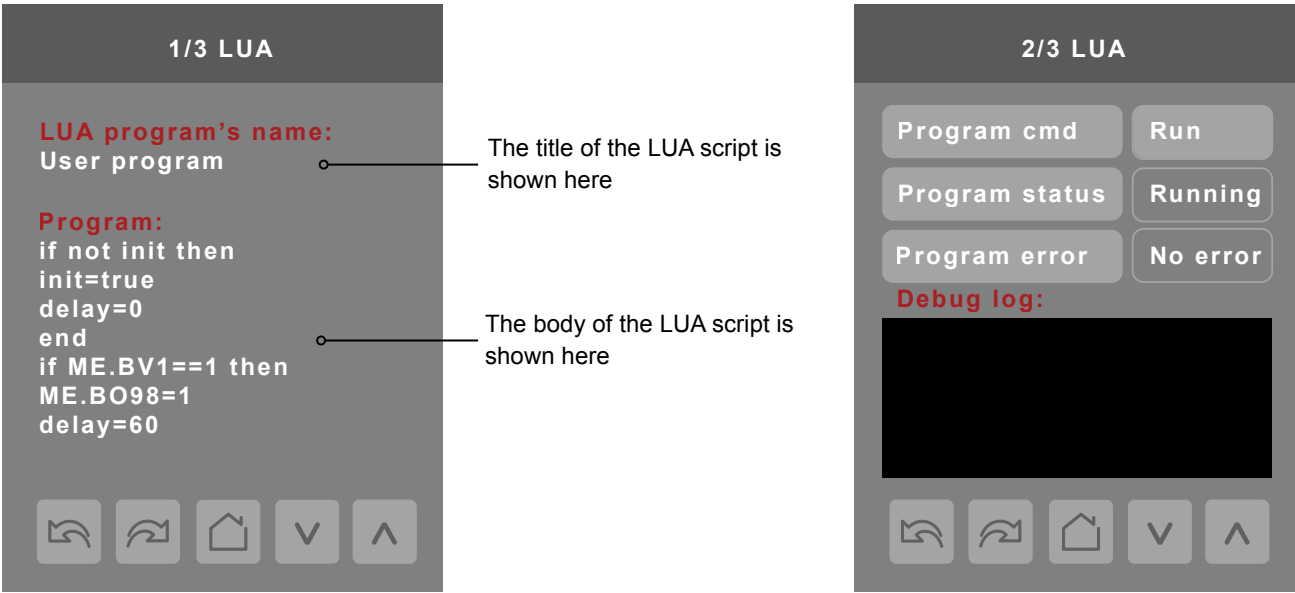
PARAMETER DETAILS

Configuration Parameters Default Value	Significance and Adjustments
Set function to Default value: Status Displays current value; see Choices.	Wireless Zone Set Function Describe function of specified wireless sensor. None: No sensor function for this zone Door: Sensor is a door contact switch Window: Sensor is a window contact switch Motion: Sensor is a motion sensor Status: Updates the BACnet status of the sensor. No action is taken by room controller. Remove: Clears zone of all settings for the attached sensor. However, the sensor will automatically try to reconnect with the room controller unless it is manually reset as well. Choices: None, Window, Door, Motion, Status, Remove
Status Read only Displays current value; see Choices.	Wireless Zone Status Current status of information received from the sensor Close: Sensor in closed state (door/window only) Open: Sensor in opened state (door/window only) No motion: Sensor detects no motion (motion sensor only) Motion: Sensor detects motion (motion sensor only) None: No status information received from sensor. Choices: None, Open, Close, No motion, Motion

Battery Default value: None Read only	Wireless Zone Battery Current status of sensor battery Low: Replacement or recharge required soon Normal: Normal range. Replacement or recharge not currently needed. None: Sensor does not use a battery Choices: None, Low, Normal
Comm. Status Default: Not paired Read only	Comm. Status Sensor pairing state. Choices: Not paired, Online, Invalid, Offline
IEEE addr. Default: 0x0000 Read only	IEEE Address Shows network address of sensor.
Permit join Default: Off	Permit Join Allows room controller to bind with sensor Choices: On/Off

LUA SETTINGS

The LUA settings screens show information about any custom LUA script uploaded to the controller. LUA scripts are not programmable on the controllers, and so must be uploaded to the controllers.

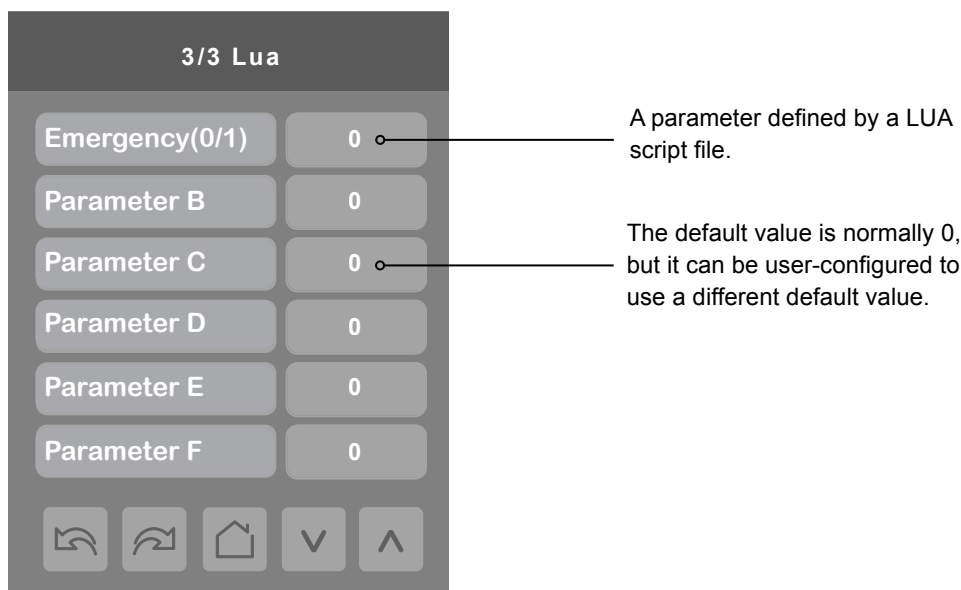


PARAMETER DETAILS

Configuration Parameters Default Value	Significance and Adjustments
Program cmd Default value: Run	Program Command Run: LUA script activated and runs continuously until deactivated Stop: LUA script deactivated Choices: Stop or Run
Program status Default value: Idle Read only	Program Status Running: LUA script active Halted: LUA script stopped and not active Idle: LUA script is running but not currently performing any actions Waiting: LUA script running and waiting for a response Uploading: LUA script currently unloading from Room Controller Loading: LUA script currently loading to Room Controller Choices: Idle, Loading, Running, Waiting, Halted, Unloading
Program error Default value: No error Read only	Program Error No error: No errors in LUA script Syntax: Syntax error in LUA script detected Runtime: Runtime error occurred while running LUA script Memory: Device has run out of memory for the script Yield: Double err: Choices: No error, Syntax, Runtime, Memory, Yield, Double err.

LUA GENERIC PARAMETERS

The LUA settings include six generic parameters that do not have predefined values. These can be used to represent LUA script variables. They are user configurable in their default state, but when they are assigned a value by a LUA script they become read only, and the display colour of the parameter changes to red. These parameters are also modifiable through BACnet as Analog Values (AVs). These parameters can be configured to receive information from ZigBee sensors.

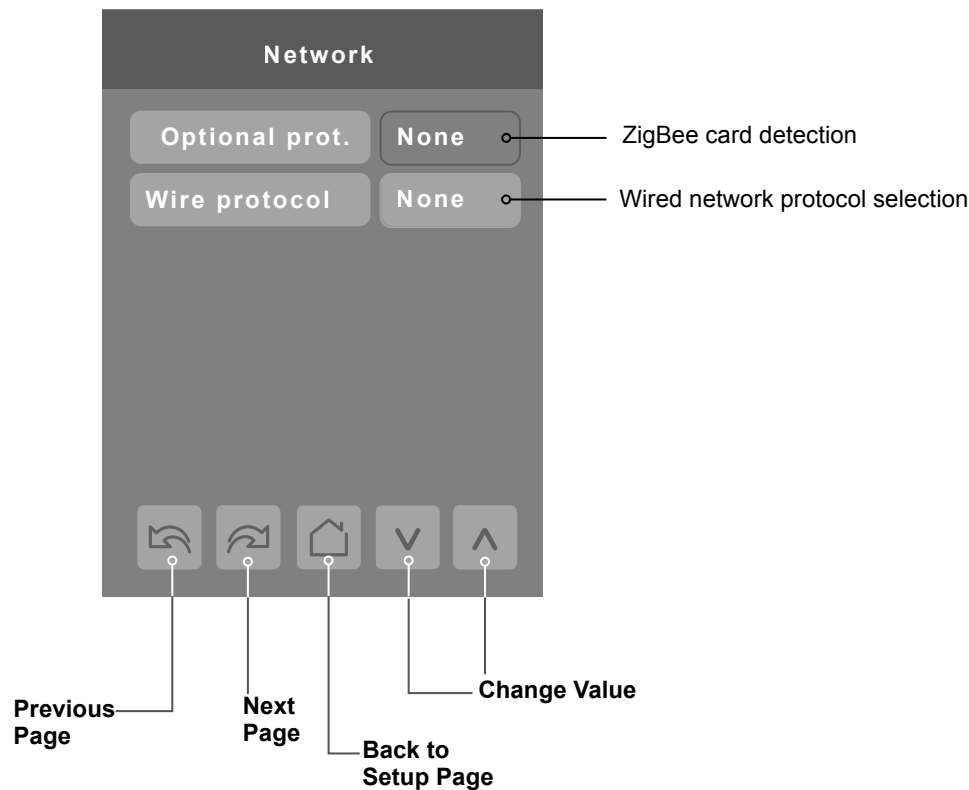


PARAMETER DETAILS

Configuration Parameters Default Value	Significance and Adjustments
Emergency (0/1) Default value: 0	Emergency Heat Emergency heat disables compressor (HP) operation and enables 1st and 2nd stage electric heat based on heating setpoint. Default value is 0 (emergency heat disabled) 0 is disabled/1 is enabled
Parameter B Default value: 0	AV26 Default value can be changed by user The value(s) of this parameter depends on what is assigned to it using the LUA script function
Parameter C Default value: 0	AV27 Default value can be changed by user The value(s) of this parameter depends on what is assigned to it using the LUA script function
Parameter D Default value: 0	AV28 Default value can be changed by user The value(s) of this parameter depends on what is assigned to it using the LUA script function
Parameter E Default value: 0	AV29 Default value can be changed by user The value(s) of this parameter depends on what is assigned to it using the LUA script function
Parameter F Default value: 0	AV30 The value(s) of this parameter depends on what is assigned to it using the LUA script function

NETWORK SETTINGS

Network screen shows if a ZigBee card is detected and selection between BACnet or Modbus network protocols.



PARAMETER DETAILS

Configuration Parameters Default Value	Significance and Adjustments
Optional prot. Default value: None	Optional Protocol Default value can be changed by user None: No ZigBee card detected ZigBee: ZigBee card detected Choices: None or ZigBee
Wire protocol Default value: None	Wire Protocol None: No wired protocol configured BACnet: Enable BACnet network protocol Modbus: Enable Modbus network protocol Choices: None, BACnet or Modbus

ZIGBEE PRO NETWORK SETTINGS

The ZigBee Pro set-up screen shows when a ZigBee card is detected in the model. Select the desired parameter and use up or down arrows to set the parameter to the desired value.

1/3 Zigbee network

COM address	254
Node type	Router
ZigBee PAN ID	25
ZigBee channel	15
ZigBee short	0x0000
ZigBee status	No NWK

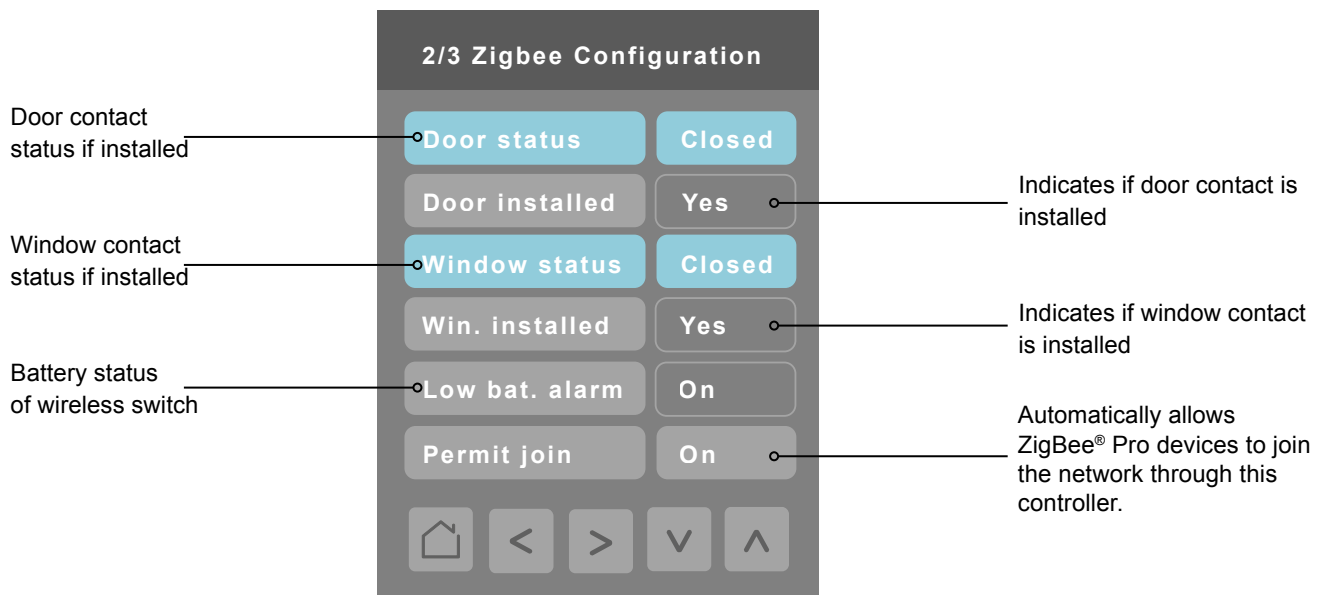
ZigBee® Pro short address. The address is generated once the device joins a ZigBee® network.

Status of controller detecting a ZigBee® network. Will display Online when connected successfully to network.

PARAMETER DETAILS

Configuration Parameters Default Value	Significance and Adjustments
COM address Default value: 254	COM Address Room Controller networking address. For wireless models, the use of the COM address is not mandatory. The COM address is an optional way to identify a device on the network and is recommended if used with an MPM. It is Mandatory for BACnet Range: 0 to 254
Node type Default: Coordinator	Node type Choices: Coordinator, Router
ZigBee® Pan ID Default value: 0	ZigBee® Pan ID Personal Area Network Identification that links specific Room Controllers to specific ZigBee® coordinators. For every Room Controller reporting to a coordinator, set the SAME channel value both on the coordinator and the Room Controller(s). The default value of 0 is NOT a valid PAN ID. Range 1 to 500: for centralized networked applications using a ZigBee® Coordinator. Range 501 to 1000: for stand-alone applications where each Room Controller is its own coordinator for stand-alone installation of wireless door and window switches. Range: 1 to 1000

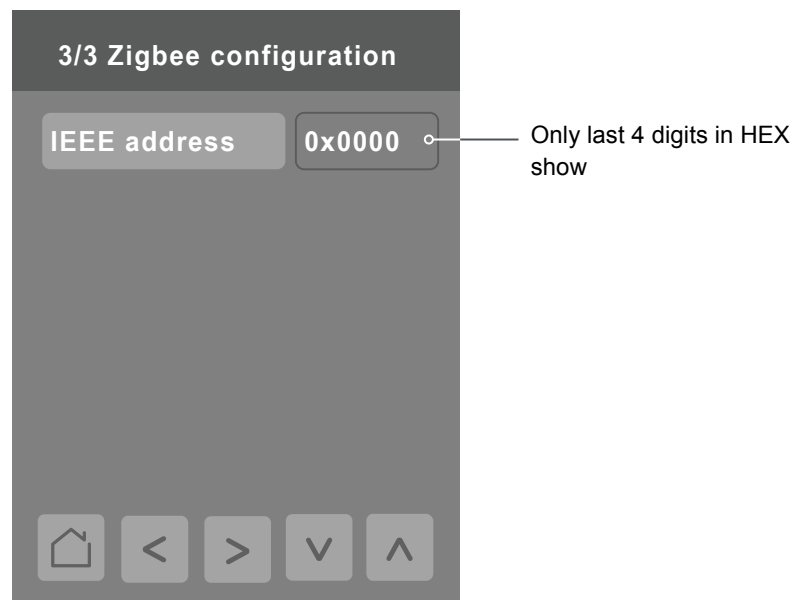
ZigBee® channel Default value: 10	ZigBee® Channel This parameter links specific Room Controllers to specific ZigBee® coordinators. For every Room Controller reporting to a coordinator, set the SAME channel value both on the coordinator and the Room Controller(s). The default value of 10 is NOT a valid channel. The valid range of available channel is from 11 to 25. Using channels 15 and 25 is recommended. Range: 10 to 25
ZigBee® short Default value: 0	ZigBee® Short Address ZigBee® Pro short address. The address is generated once device joins a ZigBee® network
ZigBee® status Default value: Not det.	ZigBee® Status Not det: ZigBee® module not detected Pwr on: ZigBee® module detected but not configured No NWK: ZigBee® configured but no network joined Joined: ZigBee® network joined Online: Communicating Choices: Not det., Pwr on, no NWK, Joined, Online



Note: Display returns to home screen when no activity is detected for 1 minute.

PARAMETER DETAILS

Configuration Parameters Default Value	Significance and Adjustments
Permit join Default value: On	Permit Join Changing this value to "Off" locks out any new ZigBee® devices from joining the network through this Room Controller. Choices: On or Off



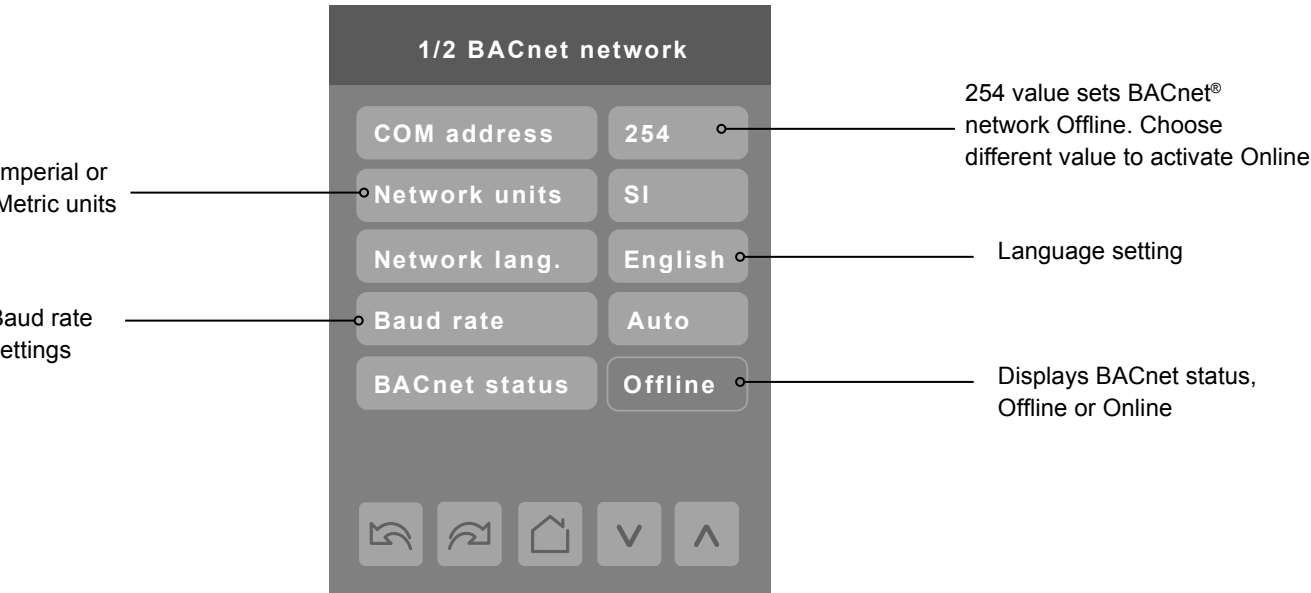
Note: The display will return to the home screen when no activity is detected for 1 minute.

PARAMETER DETAILS

Configuration Parameters Default Value	Significance and Adjustments
IEEE address Default value: 0x0000	IEEE Address The extended IEEE ZigBee® node address identifies the device on the network.

BACNET NETWORK SETTINGS

BACnet network set-up screen shows when BACnet is detected in model. Select desired parameter and use up or down arrow to set parameter to desired value.



PARAMETER DETAILS

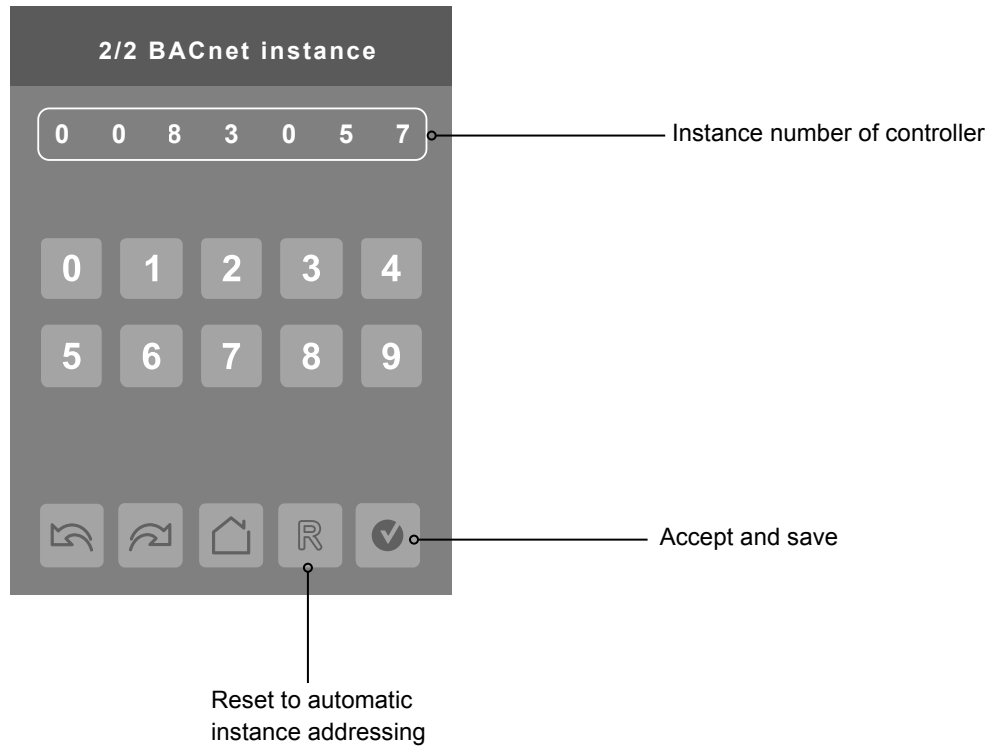
Configuration Parameters Default Value	Significance and Adjustments
Comm address Default value: 254	Communication Address Room Controller networking address. For BACnet® MS-TP models, the valid range is from 1 to 127. Default value of 254 disables BACnet® communication for the Room Controller. Range: 0 to 254
Network units Default value: SI	Measurement Units Imperial: network units shown as Imperial units. SI: network units shown as International Metric units. Choices: Imperial or SI
Network lang Default value: English	Network Language Network language/object names transmitted over network. Choices: English, French, and Spanish
Baud rate Default value: 115200	BACnet Baud Rate Leave the value at Auto unless instructed otherwise as this automatically detects BACnet® MS/TP baud rate. Choices: 115200, 76800, 57600, 38400, 19200, and 9600
BACnet status Default value: Offline	BACnet Status Shows if BACnet is detected or not. Choices: Online or Offline

BACNET INSTANCE NUMBER

The default BACnet® instance number is generated by the model number and COM address of the controller. For example, the instance number of a VT8600A5500B with a COM address of 57 is generated as “86057”.

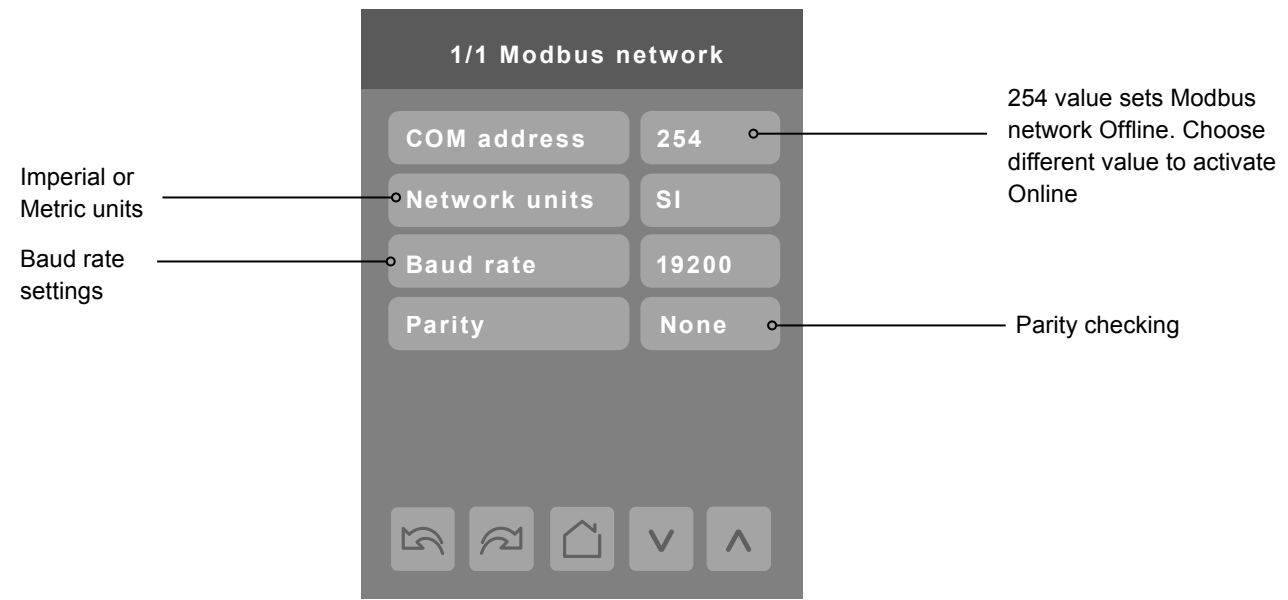
The default instance number appears first. To change the instance number, use number pad and press **Accept and save**.

Press Reset to automatic instance addressing to reset to automatic instance addressing.



MODBUS NETWORK SETTINGS

Modbus network set-up screen shows when Modbus is detected in model. Select desired parameter and use up or down arrow to set parameter to desired value.



PARAMETER DETAILS

Configuration Parameters Default Value	Significance and Adjustments
Comm address Default value: 254	Communication Address Room Controller networking address Default value of 254 disables Modbus communication for the Room Controller. Range: 0 to 254
Network units Default value: SI	Measurement Units Imperial: network units shown as Imperial units. SI: network units shown as International Metric units. Choices: Imperial or SI
Baud rate Default value: 9600	Modbus Baud Rate Leave the value at Auto unless instructed otherwise as this automatically detects Modbus baud rate. Choices: 57600, 38400, 19200, 9600, 4800
Parity Default value: Odd	Parity Parity checking of the data character frame. Choices: None, Odd and Even

CONFIGURATION PARAMETERS SCREEN 1/11

1/11 Configuration

UI16 config	None
UI17 config	None
UI19 config	None
Smart recovery	Off
Setpoint func.	Attach Stp
Mode button	Normal

PARAMETER DETAILS

Configuration Parameters Default Value	Significance and Adjustments
UI16 config Default value: None	Universal Input Configuration No. 1 None: no function associated with input Rem NSB: remote NSB timer clock input. The scheduling gets set as per the binary input and provides low cost setback operation via a dry contact Motion NO and Motion NC: advanced PIR occupancy functions using a Normally Open (NO) or Normally Closed (NC) remote PIR motion sensor. Window: forces system to disable any current heating or cooling action by Room Controller. Fan lock: When (G) Fan output is activated, if this input is not activated after 10 seconds, the Room Controller disables Heat and Cool outputs and display “Fan Lock” alarm. - Open contact = No airflow alarm - Closed contact = Airflow present, normal operation Choices: None, Rem NSB, Motion NO, Motion NC, Window, Fan lock
UI17 config Default value: None	Universal Input Configuration No. 2 None: no function associated with input Door Dry: door contact and motion detector Override: temporary occupancy remote override contact Filter: backlit flashing filter alarm shows on the Room Controller screen when input is energized Service: backlit flashing Service alarm shows on Room Controller screen when input is energized Choices: None, Door Dry, Override, Filter, Service

UI19 config Default value: None	Universal Input Configuration No. 3 None: no function associated with input though input can be used for remote network monitoring COC/NH: change over dry contact normally heat. Used for hot/cold water or air change over switching in 2-pipe systems COC/NC: change over dry contact normally cool. Used for hot/cold water or air change over switching in 2-pipe systems COS: change over sensor. Used for hot/cold water or air changeover switching in 2 pipe systems Choices: None, COC/NH, COC/NC, COS
Occupancy src Default value: Motion	Occupancy Source Motion: occupancy status received from motion sensor. Schedule: occupancy status determined by the schedule. Choices: Motion and Schedule
Smart recovery Default value: Off	Enable Smart Recovery Off = no smart recovery. The occupied schedule time is the time at which the system will restart. On = smart recovery active. The occupied schedule time is the time at which the desired occupied temperature will be attained. The Room Controller automatically optimizes the equipment start time. In any case, the latest a system will restart is 10 minutes prior to the occupied period time. Smart recovery is automatically disabled if UI16 and / or UI17 are configured remote NSB. Choices: Off or On
Setpoint func. Default value: Dual SP	Setpoint Function Sets the local setpoint interface for the User Dual SP: Dual Occupied Setpoints Adjustment Attach SP: Single Occupied Setpoint Adjustment Choices: Dual SP and Attach SP

CONFIGURATION PARAMETERS SCREEN 2/11

2/11 Configuration

Fan cont. heat	Off
Fan delay	On
Standby mode	Absolute
Standby diff.	2.0 °C
Power-up delay	10 Sec.
Occupancy src	Motion

PARAMETER DETAILS

Configuration Parameters Default Value	Significance and Adjustments
Fan cont. heat Default value: Off	Fan Control in Heating Mode On: Room Controller always controls the fan (terminal G). Valid for On or Auto fan mode. Off: Fan (terminal G), when heating stages (terminals W1 & W2) are solicited, will not be energized. The fan is controlled by the equipment fan limit control. Valid only for Auto fan mode. On fan mode leaves the fan always on. For multi stage models, fan control applies to W1 & W2 Choices: On or Off
Fan delay Default value: Off	Fan Delay On: fan mode will leave the fan always on and extends fan operation by 60 seconds after the call for heating or cooling ends. Valid only for Auto fan mode. Off: fan delay not operational Choices: On or Off
Standby mode Default value: Absolute	Standby Mode Configuration Standby setpoints used for control. Absolute: Standby entered values are used for standby mode. Offset: Occupied setpoints +/- Standby diff. used for standby mode. Choices: Absolute or Offset

Standby diff. Default value: 4°F Not used on Bard Units	Standby Temperature Differential When Standby mode is Relative, standby setpoints are calculated as follows: Standby cool: Cool setpoint + Standby diff. Standby heat: Heat setpoint - Standby diff. Range: 1 to 5 °F (0.5 to 2.5 °C)
Power-up delay Default value: 10 seconds	Power up Delay On initial power up of the Room Controller there is a delay before any operation is authorized (fan, cooling or heating). This can be used to sequence start up multiple Room Controllers in one location. Range: 10 to 120 seconds
Occupancy src Default value: Motion	Occupancy Source Motion: occupancy status is received from a motion sensor Schedule: occupancy status is determined by the schedule Choices: Motion or Schedule

CONFIGURATION PARAMETERS SCREEN 3/11

3/11 Configuration

Standby time	0.5 hrs
Unocc. time	0.0 hrs
Temp. occ. time	2.0 hrs
Temp. sensor	Remote
Deh. hysteresis	5%RH
Deh. lockout	Enabled

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These parameters are only displayed on models with built in humidity sensor

PARAMETER DETAILS

Configuration Parameters Default Value	Significance and Adjustments
Standby time Default: 0.5 hours	Standby Time Time delay between the moment where the PIR cover detects last movement in the area, and the time which the Room Controller stand-by setpoints become active. Range: 0.5 to 24.0 hours (0.5 hour increments)
Unocc. time Default: 0.0 hours	Unoccupied Time Time delay between the moment where the Room Controller toggles to stand-by mode, and the time which the Room Controller unoccupied mode and setpoints become active. Factory value 0.0 hours: Setting this parameter to its default value of 0.0 hours disables the unoccupied timer. This prevents the Room Controller to switch from stand-by mode to unoccupied mode when PIR functions are used. Range: 0.0 to 24.0 hours (0.5 hour increments)
Temp. occ. time Default value: 2 hours	Temporary Occupancy Time Temporary occupancy time with occupied mode setpoints when override function is enabled. When Room Controller is in unoccupied mode, function is enabled with either the menu or BI2 configured as remote override input. Range: 0.0 to 24.0 hours

PARAMETER DETAILS SCREEN 3/11

Configuration parameters default value	Significance and adjustments
Temp. sensor Default Value: Remote	Selection of room temperature sensor - Remote: Room Controller uses internal temperature sensor only if UI20 terminal is empty. If a valid temperature sensor is connected on UI20 terminal, Room Controller will automatically disable its internal sensor and use the remote sensor as control point. Disconnecting the sensor, or, if the sensor value is out-of-range, the room controller will automatically re-enable its internal temperature sensor. - Local: Room Controller uses internal temperature sensor even if UI20 terminal is used. Typical use for return air temperature or other temperature monitoring via BACnet point UI20. It can also be used for average internal sensor with remote sensor using a simple Lua script.
Deh. hysteresis Default value: 5% RH	Humidity Control Hysteresis Used only if dehumidification sequence is enabled: Range: 2 to 20% RH Models with humidity sensor only.
Deh. lockout Default value: Enabled	Dehumidification Lockout Typically toggled through the network. This variable enables or disables dehumidification based on central network requirements from the BAS front end. Enabled: Dehumidification Authorized Disabled: Dehumidification Not Authorized Models with humidity sensor only.

CONFIGURATION PARAMETERS SCREEN 4/11

4/11 Configuration

Cooling CPH	4
Heating CPH	4
Frost protec.	Off
BO1 aux. config	NO
Anti short cycle	2 min
Min sup. heat	18.0 °C

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PARAMETER DETAILS

Configuration Parameters Default Value	Significance and Adjustments
Cooling CPH Default value: 4 CPH	Cooling Output Cycles per Hour Sets maximum number cycles per hour under normal control operation and also represents the maximum number of cycles the equipment turns ON/OFF in one hour. A higher CPH represents a higher accuracy of control at the expense of wearing mechanical components faster. Range: 3 to 8 CPH
Heating CPH Default value: 4 CPH	Electric Heating Stages Cycles per Hour Sets maximum number cycles per hour under normal control operation and also represents the maximum number of cycles the equipment turns ON/OFF in one hour. A higher CPH represents a higher accuracy of control at the expense of wearing mechanical components faster. For multi stage models, heat cph applies to W1 & W2 Range: 3 to 8 CPH
Frost protec Default value: Off	Frost Protection Off: no room frost protection On: room frost protection enabled in all system mode at 42 °F (5.6 °C) Frost protection is enabled even in system Off mode Choices: Off or On
BO1 aux config Default value: NO	Binary Auxiliary Output Configuration Output directly follows occupancy of the Room Controller. Output to follow directly main occupancy and Fan on command. 1) NO: Occ or St-By, Contact Closed / Unoccupied = Contact Opened 2) NC: Occ or St-By, Contact Opened / Unoccupied = Contact Closed. Choices: Off or On

Anti short cycle Default value: 2 minutes	Anti Short Cycle Time Minimum On-Off operation time for stages IMPORTANT: anti-short cycling can be set to 0 minutes for equipment that posses their own anti cycling timer. Do not use this value unless the equipment is equipped with an internal timer. Failure to do so can damage the equipment. Range: 0 to 5 minutes
Min. sup. heat Default value: 64°F Not used on Bard Units	Minimum Supply Heat Sets the minimum supply heat to be maintained by the Room Controller during occupied periods (Occupied or Temporary Override). Only valid if HT Type is set to Analog Minimum supply heat temperature setpoint. Range: 50°F to 72°F (10°C to 22°C)

CONFIGURATION PARAMETERS SCREEN 5/11

5/11 Configuration

Prop. band	3.0
Heat stages	2
Cool stages	2
Econo. config	Off
Changeover SP	13.0 °C
Mech. cooling	Off

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PARAMETER DETAILS

Configuration Parameters Default Value	Significance and Adjustments																															
Prop. band Default value: 3	Proportional Band Setting Adjusts proportional band used by Room Controller PI control loop. Note: default value of 3 gives satisfactory operation in most normal installation cases. The use of a superior proportional band different than the factory value is normally warranted in applications where Room Controller location is problematic and leads to unwanted cycling of the unit. A typical example is a wall mounted Room Controller installed between return and supply air feeds and is directly influenced by the supply air stream of unit. Range: 3 to 10																															
	<table><tr><th>Value</th><th colspan="2">Effective Proportional Band</th></tr><tr><td></td><th>Fahrenheit</th><th>Celsius</th></tr><tr><td>3</td><td>3</td><td>1.2</td></tr><tr><td>4</td><td>4</td><td>1.7</td></tr><tr><td>5</td><td>5</td><td>2.2</td></tr><tr><td>6</td><td>6</td><td>2.8</td></tr><tr><td>7</td><td>7</td><td>3.3</td></tr><tr><td>8</td><td>8</td><td>3.9</td></tr><tr><td>9</td><td>9</td><td>5.0</td></tr><tr><td>10</td><td>10</td><td>5.6</td></tr></table>		Value	Effective Proportional Band			Fahrenheit	Celsius	3	3	1.2	4	4	1.7	5	5	2.2	6	6	2.8	7	7	3.3	8	8	3.9	9	9	5.0	10	10	5.6
Value	Effective Proportional Band																															
	Fahrenheit	Celsius																														
3	3	1.2																														
4	4	1.7																														
5	5	2.2																														
6	6	2.8																														
7	7	3.3																														
8	8	3.9																														
9	9	5.0																														
10	10	5.6																														

Heat stages Default value: 2 stages Set to 2	Number of Heating Stages Sets number of Heating Stages applicable to 2 stage models only 0 Stages: Only (UO11) modulating 0-10 Vdc output is used for Heating. W1 & W2 are disabled. 1 Stage: Only W1 (BO8) terminal is used. W2 is disabled. 2 Stages: Both W1 (BO8) and W2 (UO9) terminals are used in sequence. Choices 0, 1 or 2 stages
Cool stages Default value: 2 stages	Number of Cooling Stages Sets number of Cooling Stages. 1 Stage: Only Y1 (BO3) terminal is used. Y2 is disabled. 2 Stages: Both Y1 (BO3) and Y2 (BO2) terminals are used in sequence. Choices: 1 or 2 stages
Econo. config Default value: Off Not used on Bard units; leave in Off position.	Economizer Configuration Controls the activity of the economizer functionality On: Economizer activated Off: Economizer deactivated Choices: On or Off
Changeover SP Default value: 55°F	Changeover Setpoint In Cooling mode, the outside air temperature value at which the cooling gets switched over from mechanical (compressor) to free cooling (economizer) Range: 14°F to 70°F (-10°C to 21°C)
Mech. cooling Default value: Off	Mechanical Cooling Allowed Allows operation of mechanical cooling if free cooling (economizer) cannot maintain the cooling setpoint. Off: Applies when the mixed air temperature sensor is installed after the mechanical cooling refrigeration coils. In this case, mechanical cooling never operates at the same time as free cooling. On: Applies when the mixed air temperature sensor is installed before the mechanical cooling refrigeration coils in the mixing plenum. In this case, mechanical cooling is allowed when the free cooling (economizer operation) cannot maintain the cooling setpoint. Range: Off or On

CONFIGURATION PARAMETERS SCREEN 6/11

6/11 Configuration

Heat lockout	49.0 °C
Cool lockout	-40.0 °C
Discharge HL	49 °C
Discharge LL	7 °C
SH lockout	0 °C
FA range	0 l/s

PARAMETER DETAILS

Configuration Parameters Default Value	Significance and Adjustments
Heat lockout Default value: 120°F	Heating Lockout from Outside Air Temperature Disables heating stage operation based on outdoor air temperature. Function is only enabled if outside air temperature sensor is connected. Range: -15°F to 120°F (-26°C to 49°C)
Cool lockout Default value: -40°F	Cooling Lockout Disables cooling stage operation based on outdoor air temperature. On economizer model, free cooling is disabled by this function. Function is only enabled if outside air temperature sensor is connected. Range: -40°F to 95°F (-40°C to 35°C)
Discharge HL Default value: 120°F	Discharge High Limit Discharge air high temperature value at which the heating stages get locked out. Range: 70°F to 150°F (21°C to 65°C)
Discharge LL Default value: 45°F	Discharge Low Limit Discharge air low temperature value at which the cooling stages get locked out. Range: 35°F to 65°F (2.0°C to 19.0°C)
SH lockout Default value = 32°F	Supply Heat Lockout Disables heating operation based on outdoor air temperature. Only valid if HT Type is set to Analog Range: -15°F to 120°F (-26°C to 49°C)
FA Range Default value: 0 CFM Not used on Bard units	Fresh Air Range Sets the upper limit of the CFM range. This parameter should be set based on the unit size. If set to 0 CFM, the fresh air damper control will be based on the Min/Max CO2 and Min/Max Pos values. See Damper Position section for more details. Range: 0 to 20, 000 CFM (10 increments). The value set cannot exceed the value of FA Range parameter.

CONFIGURATION PARAMETERS SCREEN 7/11

7/11 Configuration

Econo min pos	0 %
Econo max pos	100 %
Min fresh air	0 l/s
Max fresh air	0 l/s
Min CO2	800 ppm
Max CO2	1200 ppm

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PARAMETER DETAILS

Configuration Parameters Default Value				Significance and Adjustments							
Econo min pos Default value: 0% Not used on Bard units				Economizer Minimum Position Minimum fresh air damper position. Effective only in Occupied mode (Fan ON). This value is also used to determine the fresh air damper position based on the Min/Max CO2 and Min/Max Pos values set. Range: 0% to 100%							
Econo max pos Default value: 100% Not used on Bard units				Economizer Maximum Position Maximum fresh air damper position. Effective only in Occupied mode (Fan ON). This value is used to determine the fresh air damper position based on the Min/Max CO2 and Min/Max Pos values set. Range: 0% to 100%							
Note: Room Controllers for air damper position and output is based on 0-10 Vdc analog actuators. Many installations utilize 2-10 VDC actuators, which cannot be switched to 0-10 Vdc control logic. The following chart indicates the appropriate equivalent damper positions for use with 2-10 Vdc actuators.											
Outside air percentage	0%	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%
Setting for 0-10 Vdc Actuator	0%	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%
Setting for 2-10 Vdc Actuator	20%	24%	28%	32%	36%	40%	44%	48%	52%	56%	60%
Outside air percentage	55%	60%	65%	70%	75%	80%	85%	90%	95%	100%	
Setting for 0-10 Vdc Actuator	55%	60%	65%	70%	75%	80%	85%	90%	95%	100%	
Setting for 2-10 Vdc Actuator	64%	68%	72%	76%	80%	84%	88%	92%	96%	100%	

Min fresh air Default value: 0 CFM Not used on Bard units	Minimum Fresh Air Minimum fresh air required. Effective only in Occupied mode (Fan ON). This value is used to determine the fresh air damper position based on the Min/Max CO2 and Min/Max FA values (if FA Range is set to other than 0 CFM). Range: 0 to 20, 000 CFM (10 increments). The value set cannot exceed the value of FA Range parameter.
Max fresh air Default value: 0 CFM Not used on Bard units	Maximum Fresh Air Maximum fresh air allowed. Effective only in Occupied mode (Fan ON). This value is used to determine the fresh air damper position based on the Min/Max CO2 and Min/Max FA values set (if FA Range is set to other than 0 CFM). Range: 0 to 20, 000 CFM (10 increments). The value set cannot exceed the value of FA Range parameter.
Min CO2 Default value: 800 ppm	Minimum CO2 Minimum CO2 Level required. Effective only in Occupied mode (Fan ON). This value is used to determine the fresh air damper position based on the Min/Max CO2 and Min/Max Pos values set. This setting is only used for a controller with a CO2 card installed. Range: 0 to 2000 ppm
Max CO2 Default value: 1200 ppm	Maximum CO2 Maximum CO2 Level allowed. Effective only in Occupied mode (Fan ON). This value is used to determine the fresh air damper position based on the Min/Max CO2 and Min/Max Pos values set. Range: 0 to 2000 ppm

CONFIGURATION PARAMETERS SCREEN 8/11

8/11 Configuration

Application	Rooftop
High BP	32.0 °C
Low BP	-24.5 °C
Comf. or econ.	Comfort
Rev. valve	O
Comp. interlock	Off

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PARAMETER DETAILS

Configuration Parameters Default Value	Significance and Adjustments
Application Default value: Rooftop Use Rooftop setting for AC only applications and Heatpump setting for heatpump applications.	Application Sets Room Controller operating logic for either a Rooftop or a Heat Pump application Choices: Rooftop or Heatpump
High BP Default value: 90°F	High Balance Point In Heating or Auto mode, it is the outside air temperature value at which the auxiliary heat is cut off. If the temperature exceeds this value, only the heat pump is used to maintain the heating setpoint NOTE: Function only enabled if outside air temperature sensor is connected. Range: 34°F to 90°F (1.0°C to 32.0°C)
Low BP Default value: -12 °F	Low Balance Point In Heating, Cooling or Auto mode, it represents the outside air temperature value at which the heat pump operation will be cut off. If the temperature falls below this value, only the auxiliary heat is used to maintain the heating setpoint Range: -40°F to 30°F (-40°C to -1.0°C)

Comfort/eco Default value: Comfort	Comfort or Economy Mode Sets the operation and interaction mode of the heat pump with the auxiliary heat. Comfort mode: In Heating mode, if the heat pump is not able to satisfy the heating setpoint, the auxiliary heat gets energized to satisfy the same heating setpoint. Economy mode: In Heating mode, if the heat pump is not able to satisfy the heating setpoint, the auxiliary heat gets energized to satisfy only when the temperature drops 2.0°F (1.1°C) below the heating setpoint. Selecting economy mode adds a deadband between the heat pump & auxiliary heat in heating mode. The actual temperature maintained will be lower than the true heating setpoint to maximize the heat pump operation. When the outdoor air temperature drops below the low balance point, the deadband gets eliminated and the auxiliary heat maintains the true heating setpoint alone. Choices: Comfort or Economy
Rev. valve Default value: O For Bard air-to-air heat pump, use B terminal. Bard water-to-air heat pump, use O terminal.	Reversing Valve Operation Heat pump reversing valve operation O: energize valve in cooling operation B: energize valve in heating operation Choices: O or B
Comp. interlock Default value: Off	Compressor Auxiliary Interlock Sets the operation and interaction mode of the heat pump with the auxiliary heat. Off: In Heating mode, if the heat pump is not able to satisfy the heating setpoint, the auxiliary heat gets energized at the same time as the heat pump stage. Typically applies when the air handler heat pump coil is installed before the auxiliary heat (all electric systems). On: In Heating mode, if the heat pump is not able to satisfy the heating setpoint, the auxiliary heat gets energized and the heat pump is cut off. Typically applies when the air handler heat pump coil is installed after the auxiliary heat (add on systems) There is a 2 minute delay to restart the heat pump when the auxiliary heat is shut down. Choices: Off or On

CONFIGURATION PARAMETERS SCREEN 9/11

9/11 Configuration

Main password 0

User password 0

Schedule menu Enabled



These parameters are only displayed on models with built in humidity sensor

PARAMETER DETAILS

Configuration Parameters Default Value	Significance and Adjustments
Main password Default value: 0	Main Password Sets a protective access password to prevent unauthorized access to configuration menu parameters. A default value of “0” will not prompt a password or lock access to the configuration menu. Range: 0 to 9999.
User password Default value: 0	User Password Sets a protective access password to prevent User unauthorized access to main screen adjustments. A default value of “0” will not prompt for a password. Range: 0 to 9999.
Schedule menu Default value: Enabled	Schedule Menu Toggles activation of schedule menu direct access Enabled: Schedule Menu is directly accessible from the main screen via a touch in the upper corner. Disabled: Schedule Menu can only be accessed through the Setup Menu screens. En. no. clk: Schedule Menu is directly accessible from the main screen via a touch in the upper corner. Clock does not show. Dis. no. clk: Schedule Menu can only be accessed through the Setup Menu screens. Clock does not show. Choices: Disabled, Enabled, Disabled no Clock, Enabled no Clock

CONFIGURATION PARAMETERS SCREEN 10/11

10/11 Configuration

Calib. temp.	0.0 °C
Calib. OS temp.	0.0 °C
Calib. humid.	0.0 %RH
CO2 autocal	Enabled

PARAMETER DETAILS

Configuration Parameters Default Value	Significance and Adjustments
Calib. temp. Default value: 0°F	Calibration Room Temperature Sensor Room temperature sensor calibration. Offset can be added or subtracted to actual displayed room temperature. Range: ± 5.0°F
Calib. OS temp. Default value: 0°F	Calibration Outside Temperature Sensor Outside air temperature sensor calibration. Offset that can be added/ subtracted to the actual displayed outdoor temperature. Range: ± 5.0 °F
Calib. humid. Default value: 0.0 %RH	Calibrate Humidity Sensor Offset that can be added/subtracted to actual displayed humidity. Range: ± 15.0 %RH Models with humidity sensor only.
CO2 autocal Default value: Enabled	Auto Calibrate CO2 Sensor Enable or Disable CO2 sensor auto calibration. Choices: Enabled or Disabled

CONFIGURATION PARAMETERS SCREEN 11/11



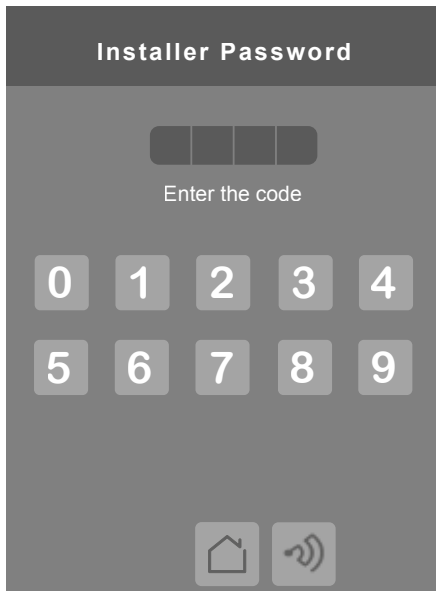
PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
Erase all? Default value: No	Erase All Answering Yes on both and pressing the Accept button erases all values and changes to factory default values everything except the following: • COM address • ZigBee® Pro Pan ID • ZigBee® Pro channel • Network units • Network language • Baud rate • BACnet® instance • Device name • Screen Contrast
Are you sure? Default value: No	

PASSWORD SETTINGS

The following shows you how to set-up the password for the Installer and User

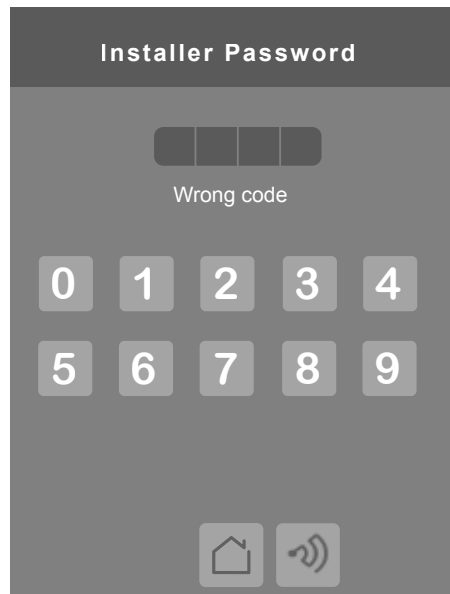
Installer Password



The Installer password prompt shows only if password value is greater than 0000. A password value of 0000 disables installer password but does not restrict access to configuration options. The Installer password prompt automatically disappears after 10 seconds if no value is entered. An error code is automatically generated if incorrect password is entered. Installer is permitted access to all Installer functions and menus when correct password is entered.

NOTE: when the schedule menu is enabled OR when the 5th button is set to schedule or custom, the clock, occupancy command, schedule or custom pages are NOT password-protected. Always use a system password when the Room Controller is in regular use to avoid inadvertent changes of the Room Controller logic.

User Password



The User password prompt shows only if password value is greater than 0000. A password value of 0000 disables User password but does not restrict access to local user functions. The User password prompt automatically disappears after 10 seconds if no value is entered.

The User is permitted access to controller interface to change any allowed settings when correct password is entered. Password lock resumes after 1 minute of non activity.

PARAMETER DETAILS

Configuration Parameters Default Value	Significance and Adjustments
Main password Default value: 0	Main Password Sets a protective access password to prevent unauthorized access to configuration menu parameters. A default value of “0” will not prompt a password or lock access to the configuration menu. Range: 0 to 9999.
User password Default value: 0	User Password Sets a protective access password to prevent User unauthorized access to main screen adjustments. A default value of “0” will not prompt for a password. Range: 0 to 9999.

SETPOINT SETTINGS 1/2

1/2 Setpoints

Unocc. cool	26.5 °C
Standby cool	25.5 °C
Occ. cool	24.0 °C
Occ. heat	22.0 °C
Standby heat	20.5 °C
Unocc. heat	16.5 °C

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PARAMETER DETAILS

Configuration Parameters Default Value	Significance and Adjustments
Unocc. cool Default value: 80°F	Unoccupied Cool Setpoint Set between occupied and unoccupied cooling setpoints. Ensure difference between standby and occupied value can be recovered when movement is detected in the zone. Range: 54 to 100°F (12.0 to 37.5°C)
Standby cool. Default value: 78 °F	Standby Cooling Setpoint Set between occupied and unoccupied cooling setpoints. Ensure difference between standby and occupied value can be recovered when movement is detected in the zone. Range: 54 to 100°F (2.0 to 37.5°C).
Occ. cool Default value: 75°F	Occupied Cool Setpoint Set between occupied and unoccupied cooling setpoints. Ensure difference between standby and occupied value can be recovered when movement is detected in the zone. Range: 54 to 100°F (12.0 to 37.5°C)
Occ. heat. Default value: 72°F	Occupied Heating Setpoint Set between occupied and unoccupied cooling setpoints. Ensure difference between standby and occupied value can be recovered when movement is detected in the zone. Range: 54 to 100°F (2.0 to 37.5°C).

Standby heat. Default value: 69°F	Standby Heating Setpoint Set between occupied and unoccupied heating setpoints. Ensure difference between standby and occupied value can be recovered in a timely fashion when movement is detected in the zone. Range: 40 to 90°F (4.5 to 32.0°C).
Unocc. heat. Default value: 62°F	Unoccupied Heating Set between occupied and unoccupied heating setpoints. Ensure difference between standby and occupied value can be recovered in a timely fashion when movement is detected in the zone. Range: 40 to 90°F (4.5 to 32.0°C).

SETPOINT SETTINGS 2/2

2/2 Setpoints

Default heat	22.0 °C
Min. deadband	1.5 °C
Max. heating	32.0 °C
Min. cooling	12.0 °C
Supply air SP	13.0 °C
Dehum. SP	50 %RH

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This parameter is only displayed on models with built in humidity sensor.

PARAMETER DETAILS

Configuration Parameters Default Value	Significance and Adjustments
Default heat Default value: 72°F	Default Heating Setpoint Used for hospitality applications in stand-alone mode only. When devices are in deep unoccupied mode, any movement detected by PIR resets actual occupied set points to fresh room default setting. Default setpoint is used to write to Heating setpoint when thermostat goes to Unoccupied mode. Cooling setpoint is set according to Min. deadband (65°F to 80°F). Parameter is only used when Stand-by mode = Offset. Range: 65 to 80 °F
Min. deadband Default value: 3°F	Minimum Deadband Minimum deadband value between heating and cooling setpoints applied only when any setpoints are modified. Range: 20°F to 50°F
Max heating Default value: 90°F	Heating Setpoint Limit Maximum occupied and unoccupied heating setpoint adjustment. Range: 40°F to 90°F
Min. cooling Default value: 54°F	Cooling Setpoint Limit Minimum occupied and unoccupied cooling setpoint adjustment. Range: 54°F to 100°F
Supply air SP Default value: 55°F	Supply Air Setpoint Free cooling supply air setpoint when economizer mode is enabled. Range: 54°F to 100°F
Dehum. SP Default value: 50%RH	Dehumidification Setpoint Used only if dehumidification sequence is enabled: Range: 30-95% RH Only for Models with Humidity Sensor.

DISPLAY SETTINGS 1/2

1/2 Display

User HMI	0
Colour	White
Main display	Temp.
Standby screen	No
Contrast	0

PARAMETER DETAILS

Configuration parameters Default Value	Significance and Adjustments
User HMI Default value: 0 Determines which parameters are adjustable	User HMI Select user HMI type. This function turns main screen icons On/Off. Range: 0 to 11
Color Default value: White	White Change text colors according to set font colors. Choices: White, Green, Blue, Grey, Dark Grey
Main display Default value: Temp.	Main Display Shows temperature or setpoint on main display Choices: Temperature or Setpoint
Standby screen Default value: No	Standby Screen When the device is left unattended for 2 minutes background backlight dims. Installers can load a custom image for brand identification. Choices: No, Yes, Occupied Only, Screen Saver
Lock screen Default value: No	Lock Screen Allow or disallow User to perform any activity on main screen. Choices: No, Yes
Contrast Default value: 0	Contrast Control screen contrast and brightness: 0 is least bright, most contrast; 5 is most bright, least contrast. Range: -5 to 5

User HMI

Hospitality 0



- Setpoint adjustment
- System mode setting
- Fan mode setting
- Local unit scale adjustment
- Local user language
- User help menu

Hospitality 1



- Setpoint adjustment
- System mode setting
- Fan mode setting
- User help menu

Hospitality 2



- Local unit scale adjustment
- Local user language
- User help menu

Hospitality 3



- Setpoint adjustment
- User help menu

Parameters are model dependent and may not appear on certain models.

Hospitality 4



- Fully locked interface with no user settings

Hospitality 5



- Setpoint adjustment
- System mode setting
- User help menu

Hospitality 6



- Setpoint adjustment
- System mode setting
- Fan mode setting
- Local unit scale adjustment
- User help menu

Commercial 7



- Setpoint adjustment
- System mode setting
- Fan mode setting
- Unoccupied mode overdrive
- User help menu

Commercial 8



- Setpoint adjustment
- Unoccupied mode override
- Local user language
- User help menu

Commercial 9



- Setpoint adjustment
- Unoccupied mode override
- User help menu

Commercial 10



- Unoccupied mode override

Commercial 11



- Setpoint adjustment
- System mode setting
- Unoccupied mode override
- User help menu

Note:

The day/night setback button appears only in unoccupied mode in the Commercial HMIs 7 to 11. If UI17 input is configured as “override”, the day/night setback button does not show.

Parameters are model dependent and may not appear on certain models.

Other Functions



Local humidity only shows on models with the humidity sensor present and when enabled by configuration property RH Display.

Outdoor temperature display is dependent on receiving a valid networked outdoor temperature value.

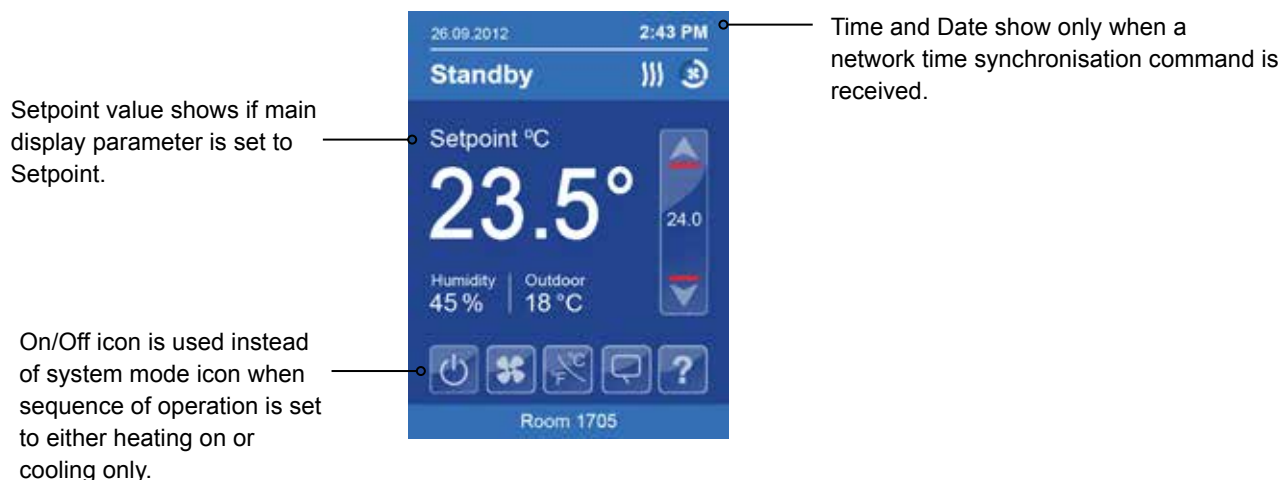
Fan Mode Settings



Fan Mode Setting

Mode	Significance and Adjustments
Fan mode ON	On Fan is on continuously, even when system mode is OFF.
Fan mode Automatic	Automatic Fan cycles on a call for heating or cooling for both occupied & unoccupied periods.
Fan mode Smart	Smart During occupied periods, fan is on continuously. In unoccupied mode, fan cycles on a call for heating or cooling. This selection is available on all models with a communication module, on all stand-alone (Network Ready) scheduling models or if UI16 or UI17 is set to RemNSB on stand-alone non-scheduling models.

Heating only Configuration

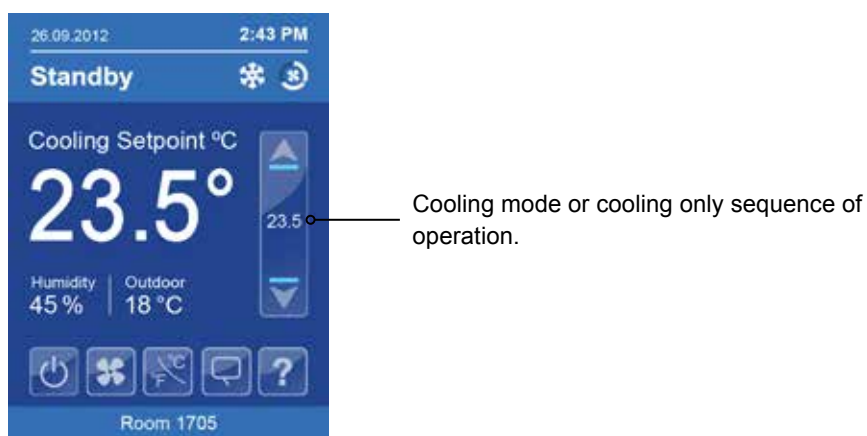


Setpoint Adjustment for Cooling Mode

In Cooling mode, the setpoint displayed in the bar is the current occupied cooling setpoint.

During occupied setpoint adjustment, the large digits are temporarily used to show occupied cooling setpoint while it is adjusted.

Normal temperature display resumes after setpoint is adjusted and actual occupied cooling setpoint shows in setpoint bar.

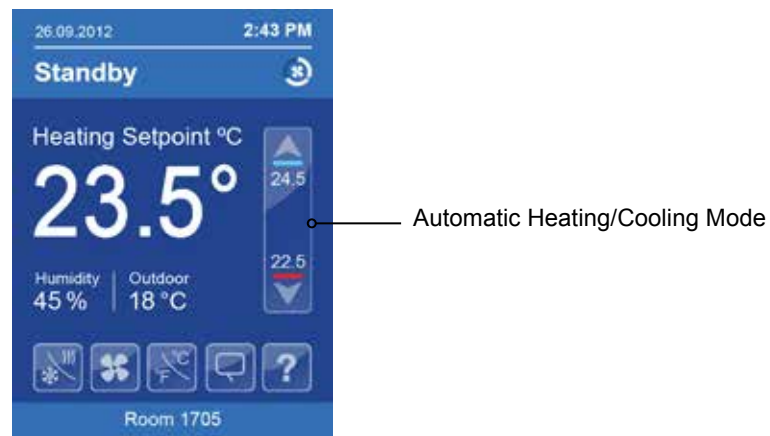


Setpoint Adjustment for Heating Mode

In automatic mode, setpoint showing at the top of the set point bar located directly under the blue line represents the actual occupied cooling setpoint.

During occupied setpoints adjustment, large digits are temporarily used to display the occupied Cooling Setpoint or occupied Heating Setpoint. The actual setpoint is dependent on the last effective demand (heating or cooling). The setpoint on top of the red line represents the actual occupied heating setpoint. The differential between the occupied heating and cooling setpoint is defined by the minimum deadband configuration parameter.

Normal temperature display resumes after setpoints are adjusted and the actual occupied heating and cooling setpoints show in the setpoint bar.



CUSTOMIZABLE COLOR OPTIONS



White



Green



Blue



Dark Grey



Grey

DISPLAY SETTINGS 2/2

2/2 Display

Language	English
Units	°C
Low backlight	60 %
Night backlight	5 %
RH display	Disable
CO2 display	Enabled

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These parameters are only displayed on models with built in humidity and CO2 sensor.

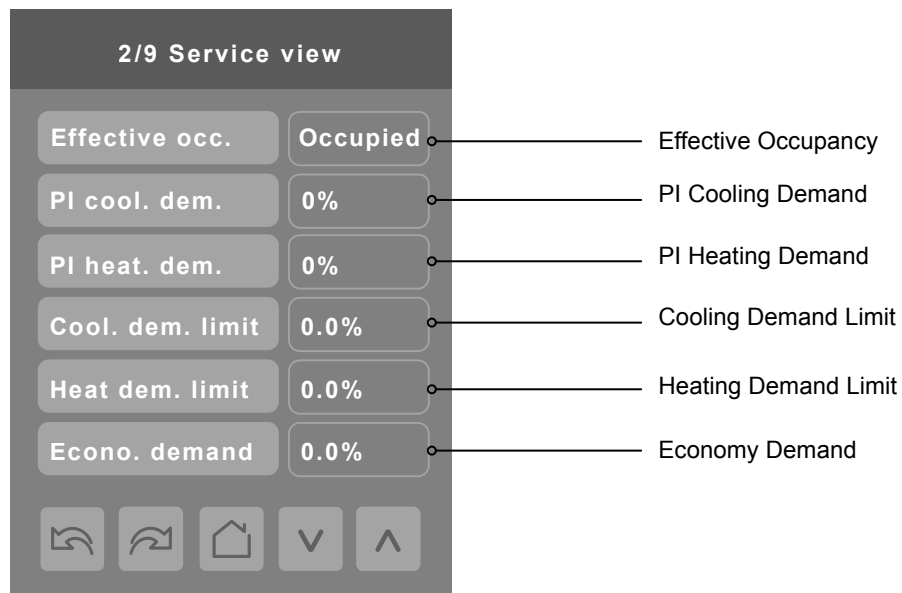
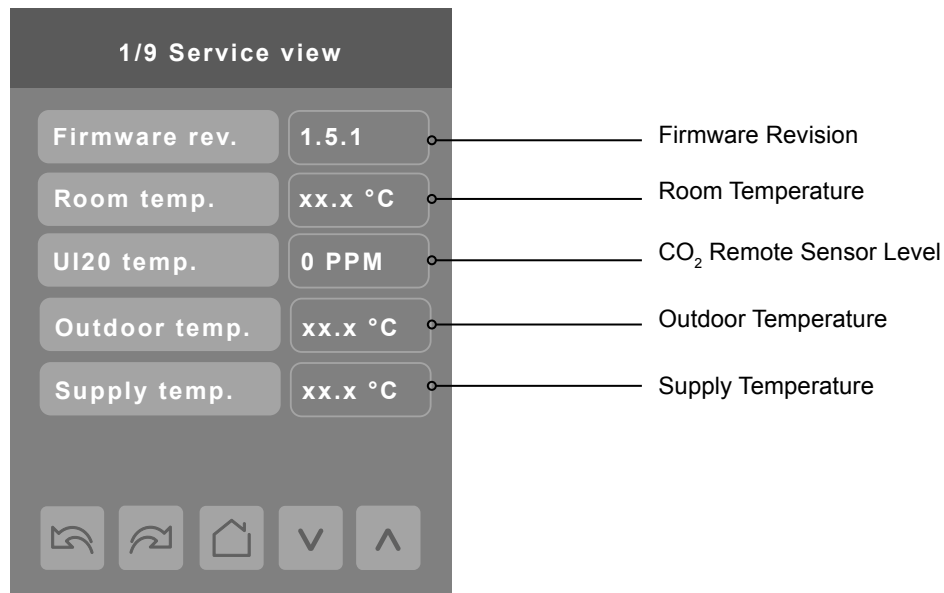
PARAMETER DETAILS

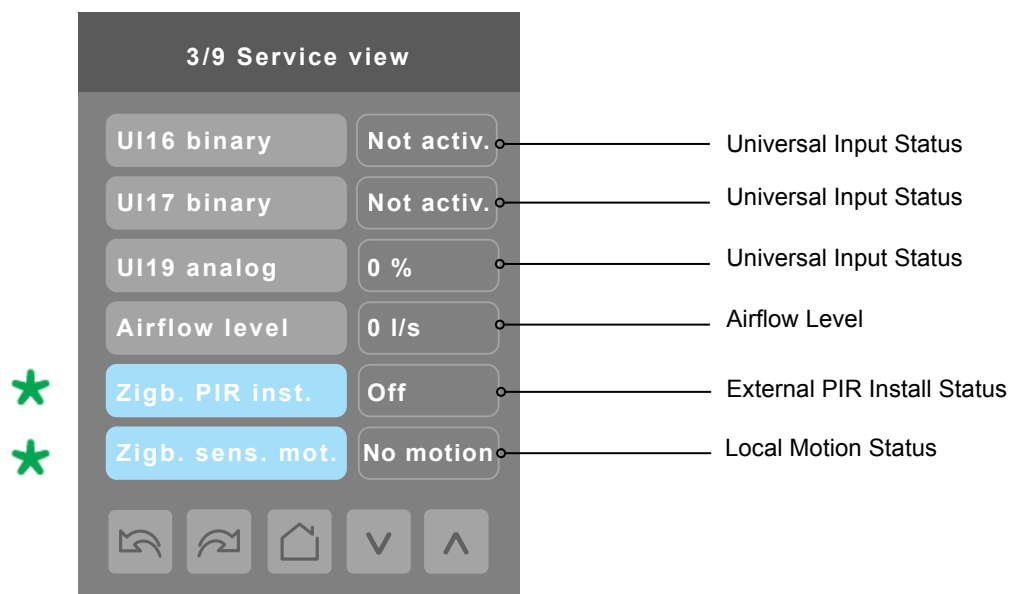
Configuration parameters Default Value	Significance and Adjustments
Language Default value: English	Display Language Select language for main display. Choices: English, French, Spanish, Chinese, Russian, Arabic, Bulgarian (disabled), Czech, Danish, Dutch, Finnish, German, Hungarian, Indonesian, Italian, Norwegian, Polish, Portuguese, Slovak, Swedish, Turkish
Units Default value: SI	Network Units Sets default local scale value when Room Controller powers up. Choices: SI for Celsius, °F for Fahrenheit.
Low backlight Default value: 60%	Low Backlight Set display backlight intensity after 2 minutes of keyboard inactivity. Adjustable: 0 to 100%.
Night backlight Default value: 5%	Night Backlight Set display backlight intensity after 2 minutes of keyboard inactivity. Parameter only available for models with motion/light detectors. The screen backlight progressively decreases down to this setting when room is dark. This feature is used mostly in hospitality applications when a darker non obtrusive lighting level is desired when room is dark. Adjustable: 0 to 100%.

RH display Default value: Disabled	Relative Humidity Shows humidity level in room in %RH On: Display %RH Off: Do not display %RH Choices: Enabled, Disabled Models with humidity sensor only
CO2 display Default value: Disabled	CO2 Levels Display Shows carbon dioxide level in room in ppm. On: Display %CO2. Off: Do not display %CO2. Choices: Enabled, Disabled Models with CO2 sensor only

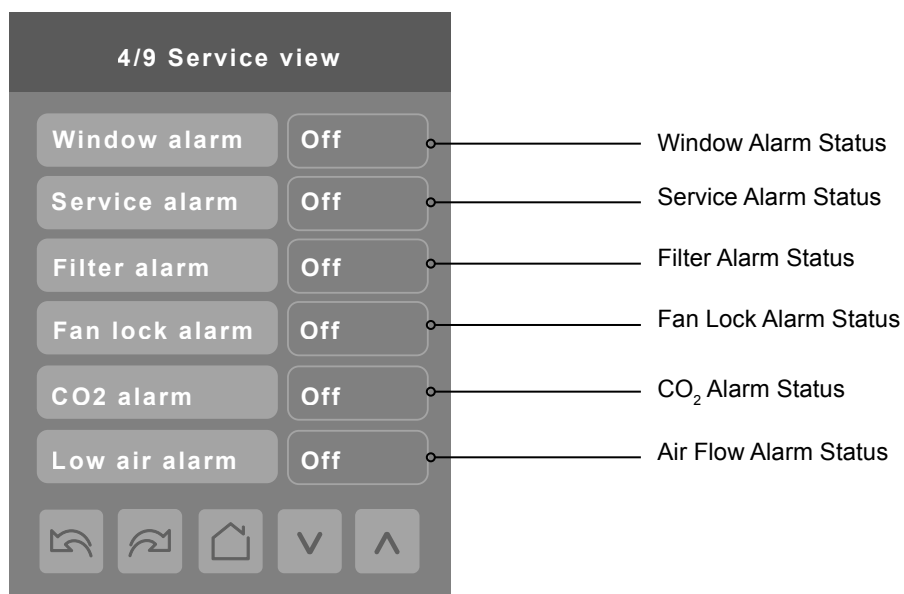
SERVICE SCREEN VIEWS

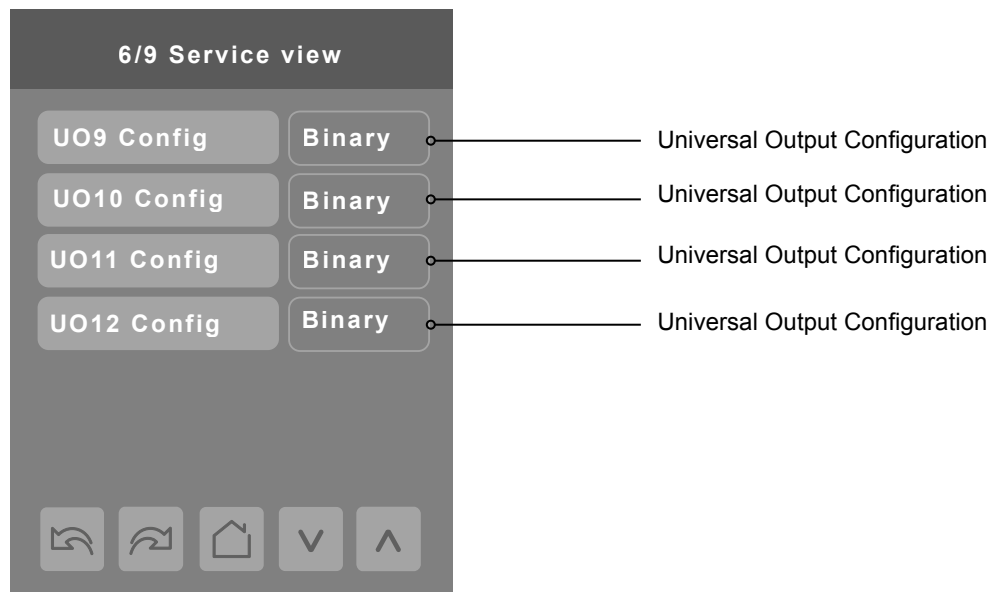
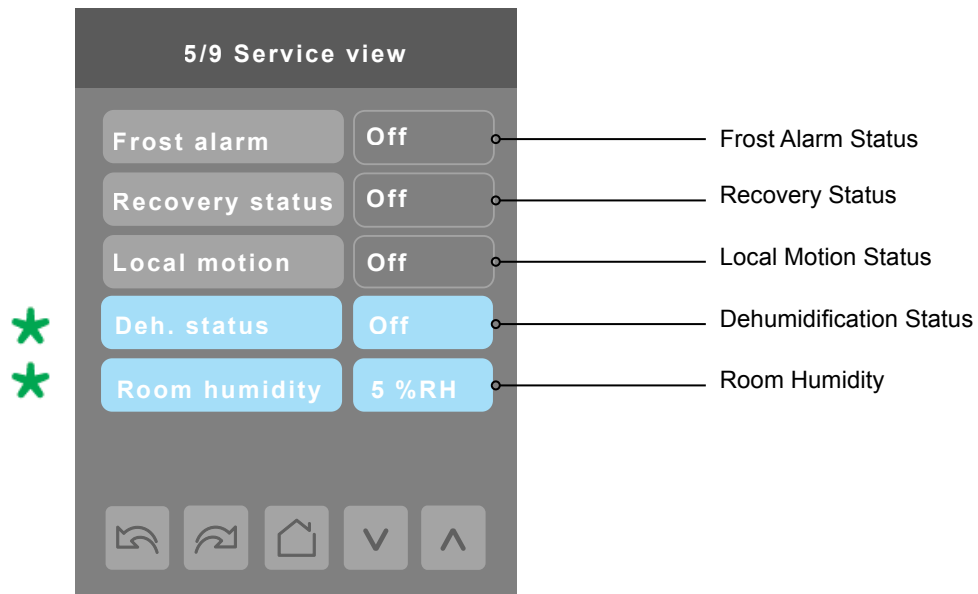
The service view screens show the current status of certain points locally at the controller. These points can also be viewed through the network. Service view allows service contractor to visualize the status of key functionality to correctly diagnose operational system issues.





* These parameters are only displayed on models with ZigBee modules.





* These parameters are only displayed on models with built in humidity sensor

7/9 Service view

UI19 type	Voltage
UI20 type	Thermistor
UI22 type	Thermistor
UI23 type	Thermistor
UI24 type	Reserved

Universal Input (Voltage)

Universal Input Configuration

Universal Input Configuration

Universal Input Configuration

Universal Input (Voltage)

8/9 Service view

CO2 module	None
CO2 err. code	0x0000
CO2 level	0 PPM
CO2 FW rev.	
CO2 S/N	

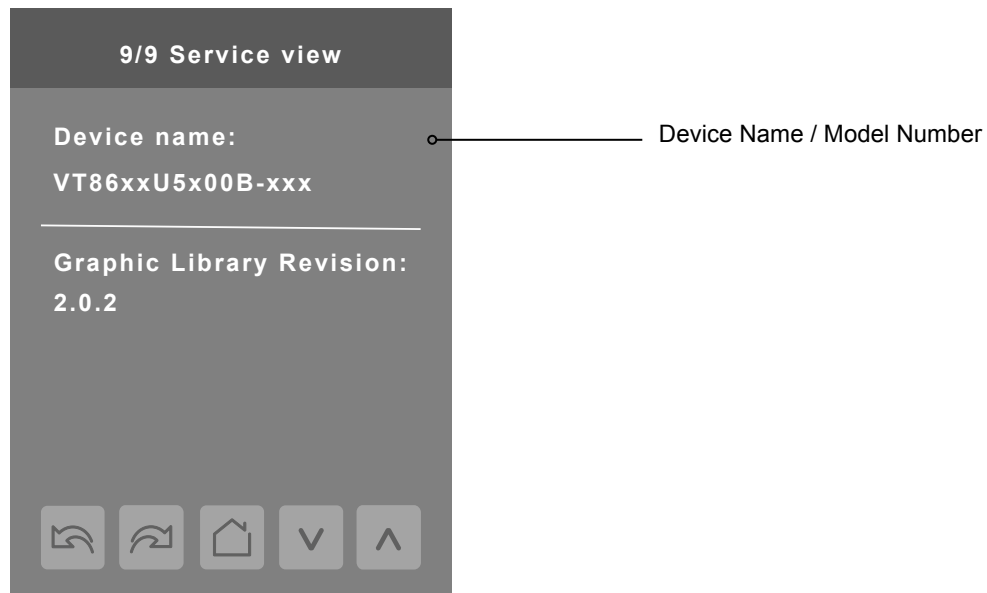
CO2 Sensor module

CO2 Sensor error code

CO2 Remote Sensor Level

CO2 Sensor firmware revision

CO2 Sensor serial number



The Model Number is the BACnet® device name automatically assigned when using the current BACnet® addressing scheme based on the MAC address. The network can update and change the device BACnet® name. If changed, the new updated BACnet® device name shows on the screen.

For example, when a VT8600U5500B thermostat with a MAC address of 41 is connected to a network, its default Device Name is VT8600U5x00B-41 and its default BACnet Device ID is 83041.

TEST OUTPUTS 1/2



Note 1: The test output screen allows manual override of specified outputs. When any BACnet® network priority array includes a value, the status background shows in red. After any output state is overridden, the command is cancelled after 1 minute of screen inactivity (auto exit to main screen) or when page is exited. Refer to the BACnet® integration guide for more details.

Note 2: Use high caution when manually enabling outputs so as to not cause damage to equipment. It is the responsibility of the Installer or Service Contractor to insure safe operation during usage.

TEST OUTPUTS 2/2



Note: screen Test outputs are LIVE. Any output gets displayed immediately for any value change according to the following:

1. If any BACnet priority array (1 - 16) includes a value, the displayed state background shows in red.
2. When toggling a value on the screen, the output directly energizes according to the selected value.
3. You can override any output if you bypass the Bacnet array (1 - 16).
4. It is not possible to modify the set Bacnet array values.
5. After any output state gets modified, all overrides get cancelled after 1 minute of button inactivity, or if you scroll from one screen to another screen.

CASE A: screen 2/2 display is dependent on Control type configuration. If mode is set to On/Off, binary options show.

CASE B: screen 2/2 display is dependent on Control type configuration. If mode is set to Analog, analog options show.

LANGUAGE SELECTION



Only English, French, Spanish, Chinese, and Russian are enabled by default and are accessible to users cycling through languages on the display settings menu screen. To change the language selection settings, touch a language on the screen and then use the arrow buttons to disable or enable it.

NOTE: English is always enabled.