

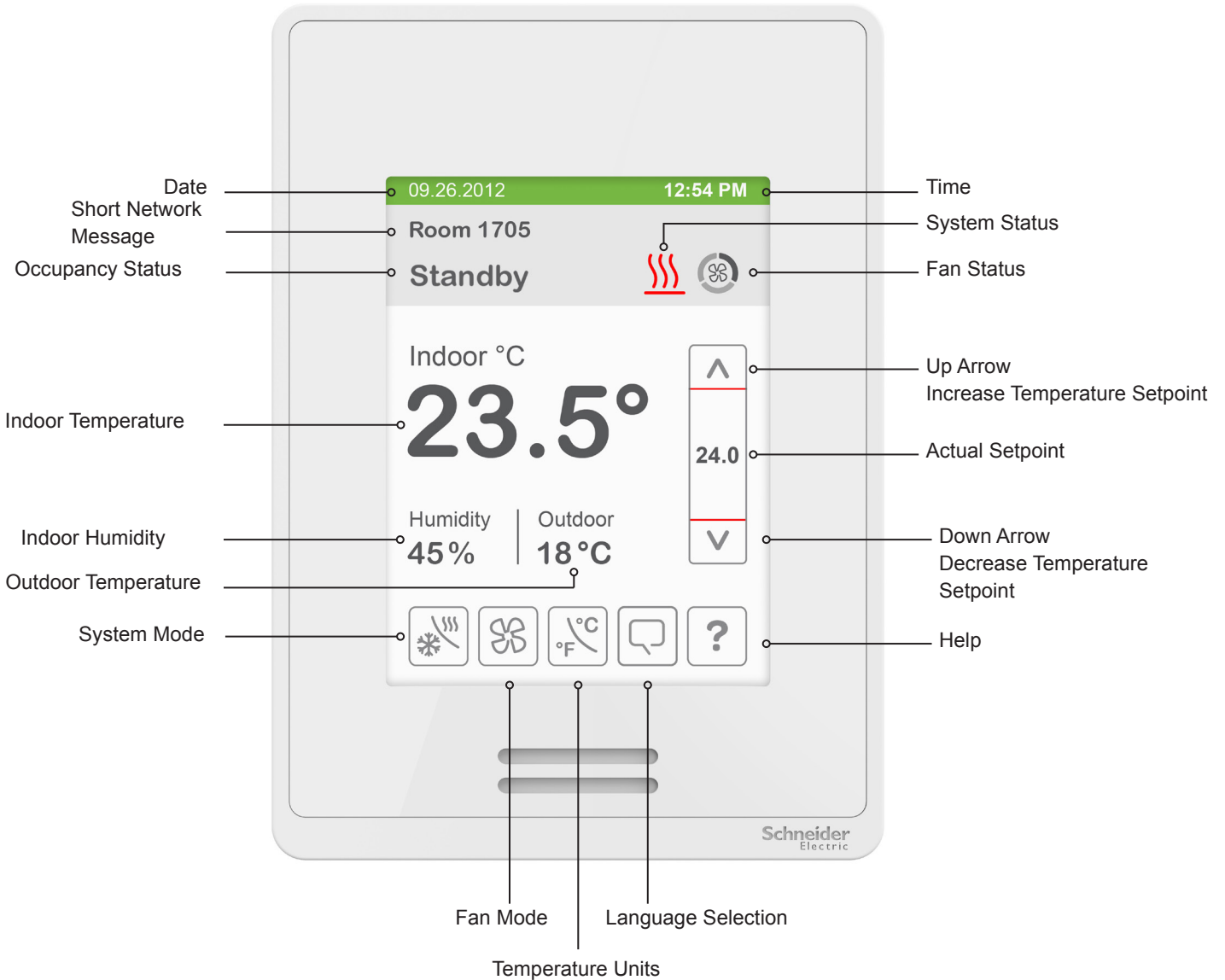
SE8300 User Interface Guide

Commercial and Hotel/Lodging HVAC Fan Coil Applications



HMI Display

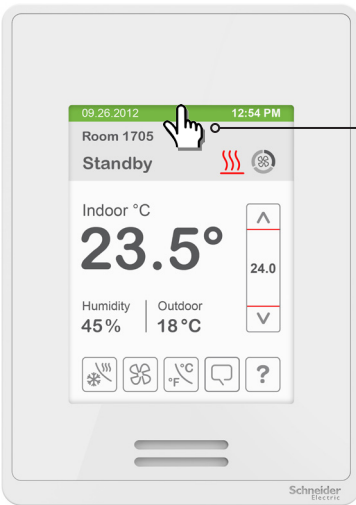
The below shows a typical user interface for the hospitality industry. The User HMI is configurable and allows display functions such as Date, Time, Humidity, Outdoor Temperature, and Setpoint to be enabled or disabled by setting various parameters.



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.
3. All objects related to humidity do not display on HMI when Controller is ordered without built-in humidity sensor.

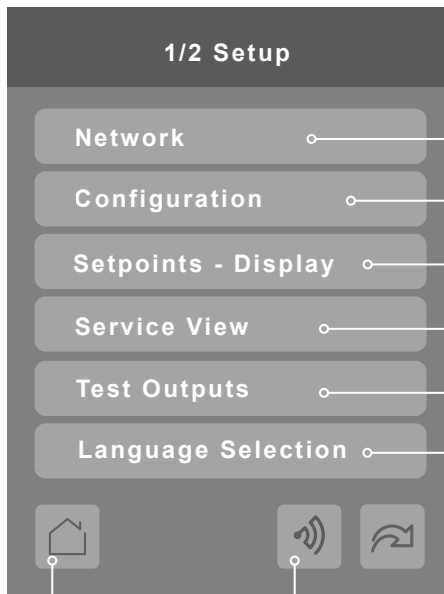
Enter Set-up Screen



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.

SET-UP SCREEN DISPLAY



- 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
- Enable selected language(s)*

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)

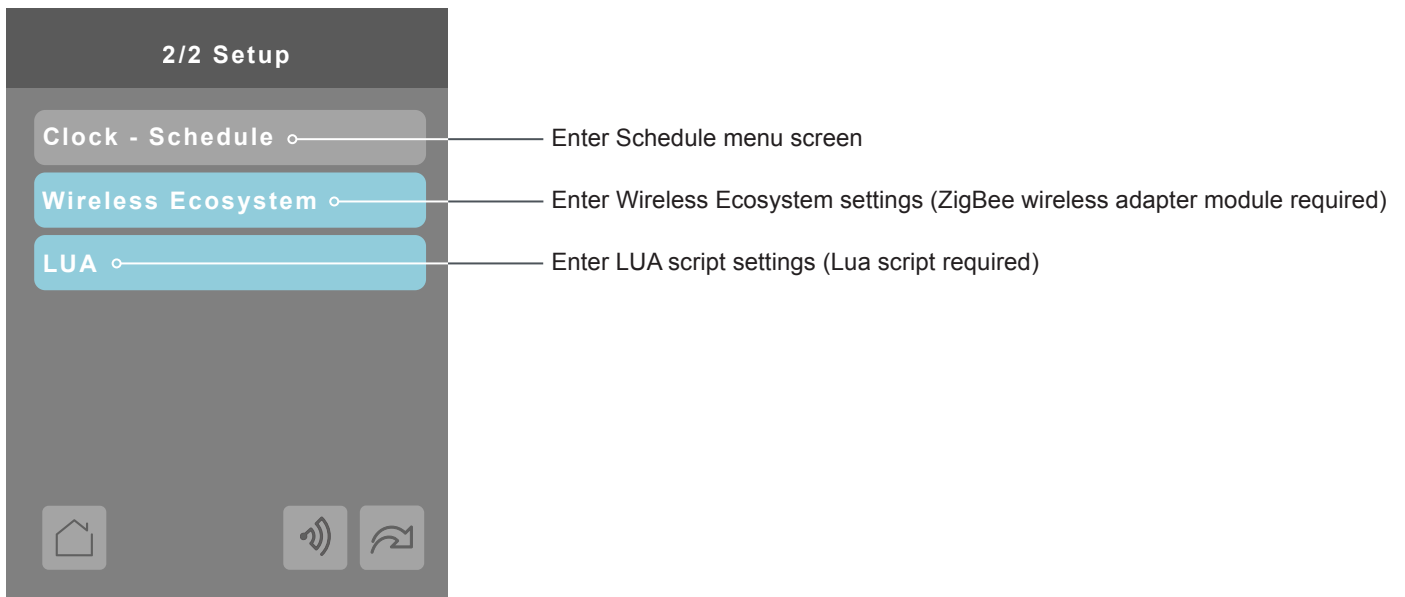
Note: The following menus show according to context:
 - ZigBee menu shows if ZigBee card detected.
 - Network choice inside does not show if no network is available

General Note:

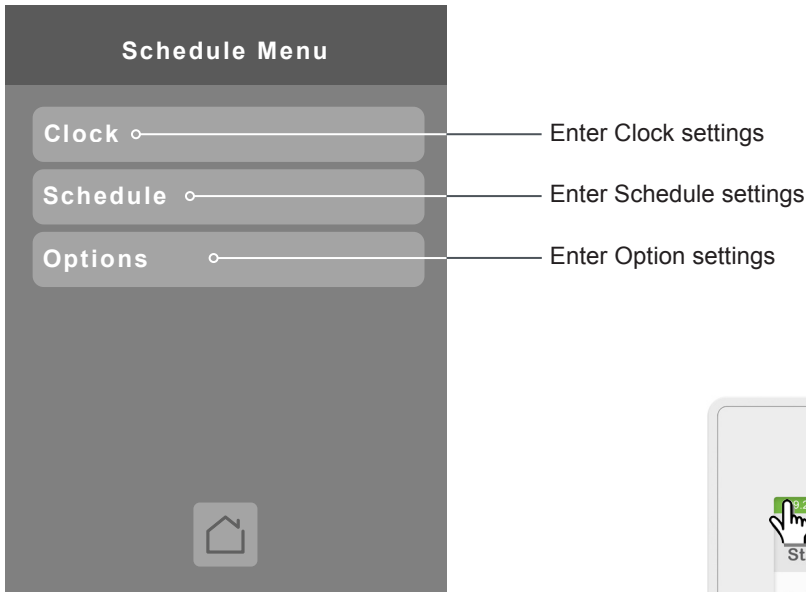
- Adjustable parameter
- Nonadjustable parameter
- Indicates invisible conditional field. Appears based only on model, presence of a ZigBee® wireless adapter module or presence of a Lua script, depending on the field.

*only available in recent versions of firmware

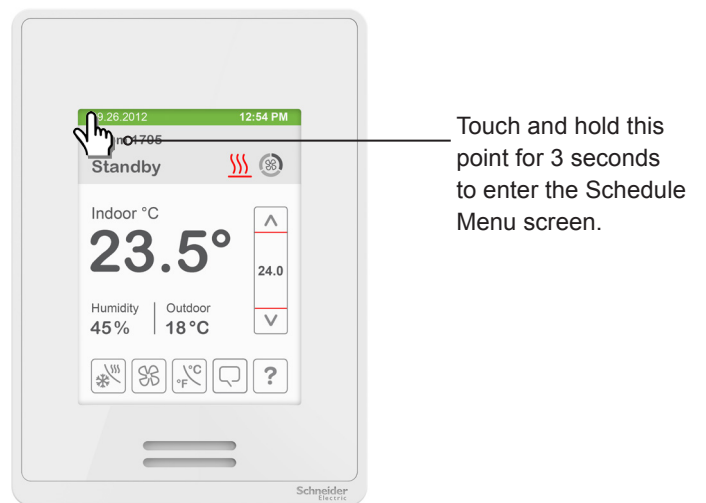
SET-UP SCREEN DISPLAY 2/2



SCHEDULE MENU SCREEN

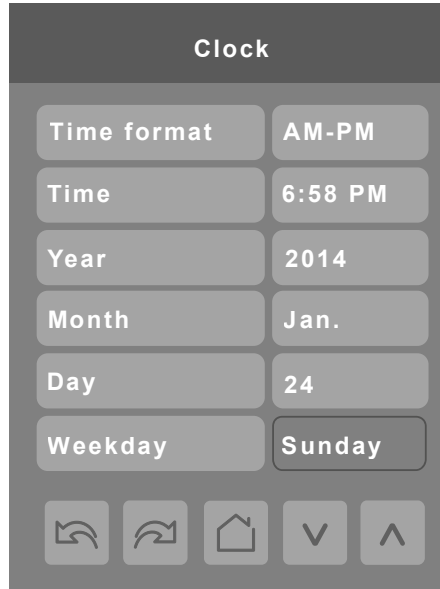


Note: The Schedule menu screen is directly accessible from the main display if the Schedule Menu configuration parameter is enabled. See Configuration Parameters Screen 6/7 on page 26 for more information.



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 Current time display format Default value: AM-PM	Choice between 12 hour AM - PM time format or 24 hour time format. AM-PM 24 Hours Note: Changing the value of this parameter automatically changes the format of the displayed value of the Time parameter directly below.
Time Current time display setting Default value: Begins at 12:00 AM at initial power up.	Standard time display, 12 hour AM-PM or 24 hour; format is determined by the Time Format parameter value.
Year Default value: 2000	Current year
Month Default value: Jan.	Current month
Day Default value: 01	Current day
Weekday Default value: Sunday	Current day of the week

SCHEDULE SETTINGS

There are 7 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 3 times per day.



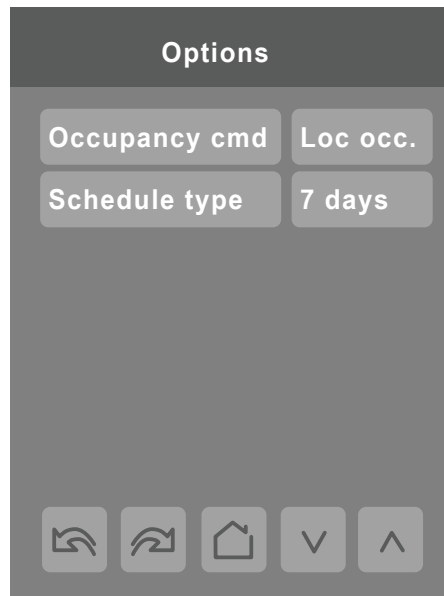
Screen title is identified by day of the week (Sunday through Saturday)

PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
Occupied Default value: None	Defines a time when the room controller is automatically set to use the Occupied setpoint. Note: There are 3 separate Occupied parameter entries.
Unoccupied Default value: None	Defines a time when the room controller is automatically set to use the Unoccupied setpoint. Note: There are 3 separate Unoccupied parameter entries.

OPTIONS SETTINGS

The options settings screen allows you to determine how the Room Controller will determine whether it is functioning in Occupied or Unoccupied mode and scheduling.

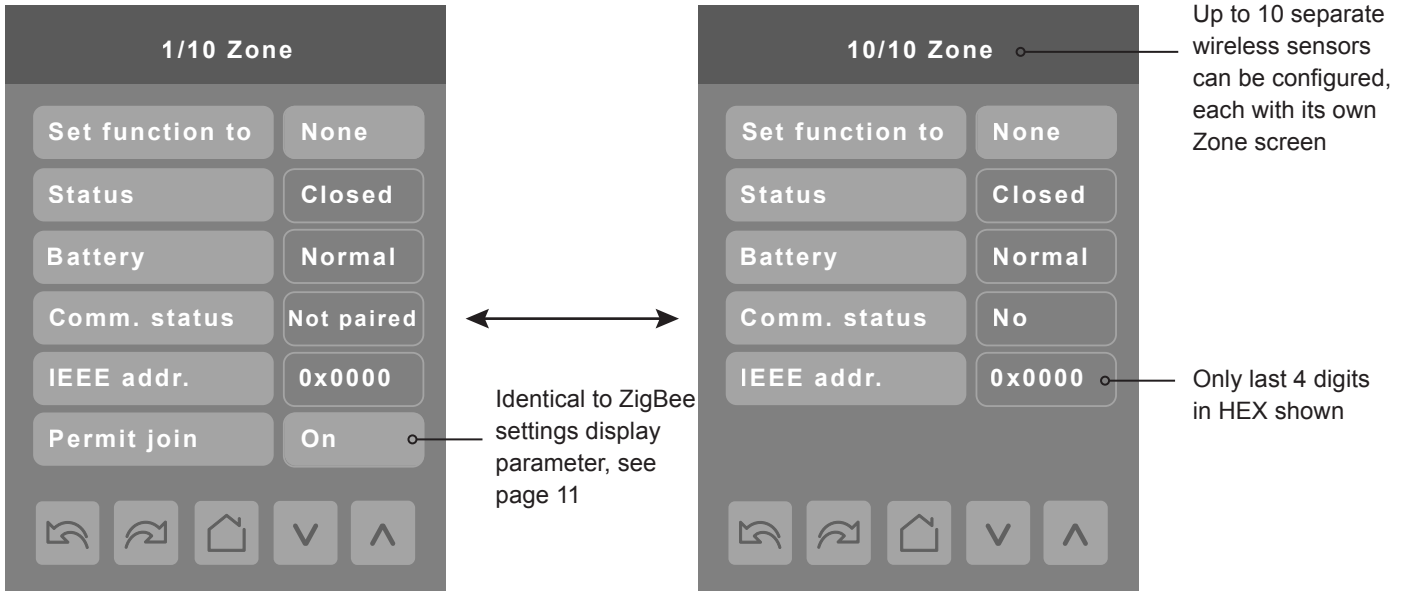


PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
Occupancy cmd Default value: Local occ	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.
Schedule type Default value: 7 days	Schedule type Command 7 days: Independent scheduling; title is identified by day of the week (Sunday through Saturday). 5+1+1 days: Weekdays scheduling and Independent Weekend scheduling; title is identified as Weekdays, Saturday and Sunday. 5+2 days: Weekdays scheduling and Weekend scheduling; title is identified as Weekdays and Weekend.

WIRELESS ECOSYSTEM

When ZigBee 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.

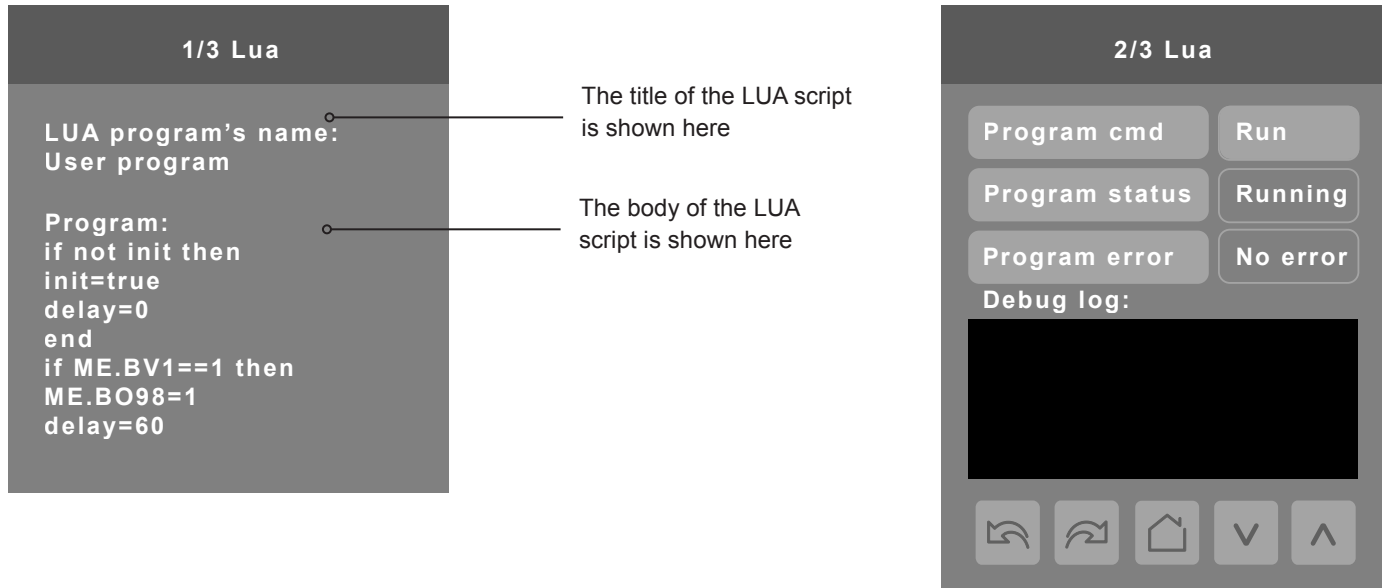


PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
Set function to Describe function of specified wireless sensor Default value: None	None: No sensor function configured 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, but no action is taken by the internal logic of the controller. Remove: Selecting this function clears the zone of the settings for the attached sensor. However, the sensor will automatically try to reconnect with the room controller unless it is manually reset as well.
Status Current status of information received from the sensor Read only	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.
Battery Current status of sensor battery, if any. Read only	Low: Battery power level is low, replacement or recharge will be needed soon Normal: Battery power level is in the normal range, replacement or recharge is not currently needed. None: Sensor does not use a battery
Comm. Status Sensor pairing state Read only	Default: Not paired Choices: Not paired, Online, Invalid, Offline

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.

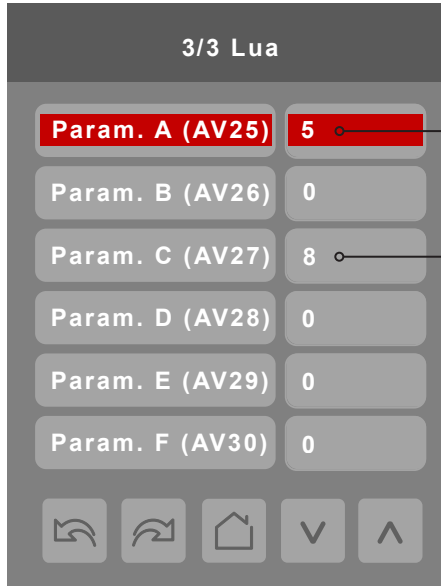


PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
Program cmd Default value: Run	Run: The LUA script is activated and will run continuously until deactivated. Stop: The LUA script is deactivated
Program status Read only	Running: The LUA script is current active Halted: The LUA script has been stopped and is not active. Idle: The LUA script is running but is not currently taking any actions Waiting: The LUA script is running and waiting for a response.
Program error Read only	No error: No errors in the LUA script are detected. Syntax: A syntax error in the LUA script is detected Runtime: A runtime error has occurred while running the LUA script. Memory: The device has run out of memory for the script

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.



A parameter defined by a LUA script displays in red text.

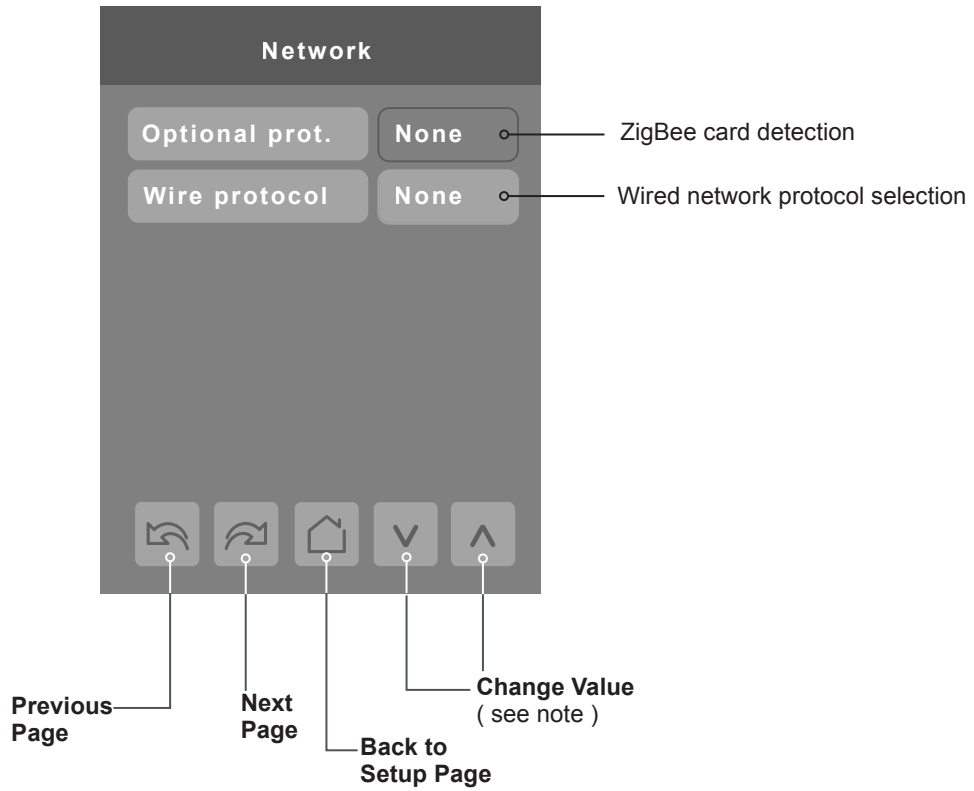
The default value is normally 0, but it can be user-configured to use a different default value.

PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
Parameter A Default value: 0 Default value can be changed by user	AV25 The value(s) of this parameter depends on what is assigned to it using the LUA script function
Parameter B Default value: 0 Default value can be changed by user	AV26 The value(s) of this parameter depends on what is assigned to it using the LUA script function
Parameter C Default value: 0 Default value can be changed by user	AV27 The value(s) of this parameter depends on what is assigned to it using the LUA script function
Parameter D Default value: 0 Default value can be changed by user	AV28 The value(s) of this parameter depends on what is assigned to it using the LUA script function
Parameter E Default value: 0 Default value can be changed by user	AV29 The value(s) of this parameter depends on what is assigned to it using the LUA script function
Parameter F Default value: 0 Default value can be changed by user	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.

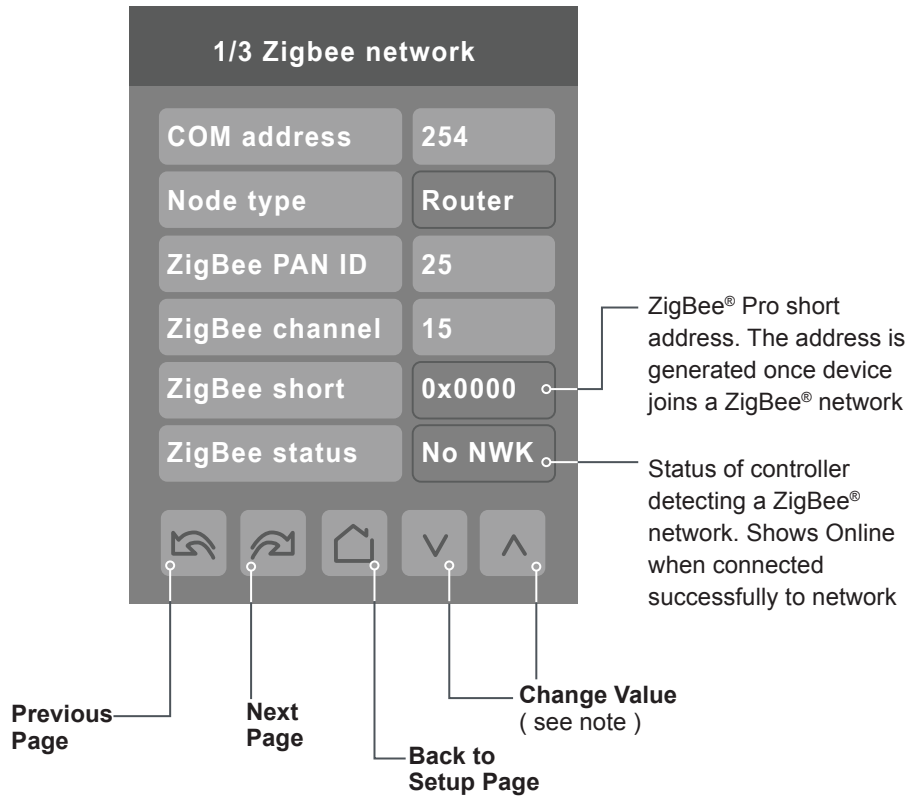


PARAMETER DETAILS

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

ZIGBEE PRO NETWORK SETTINGS

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

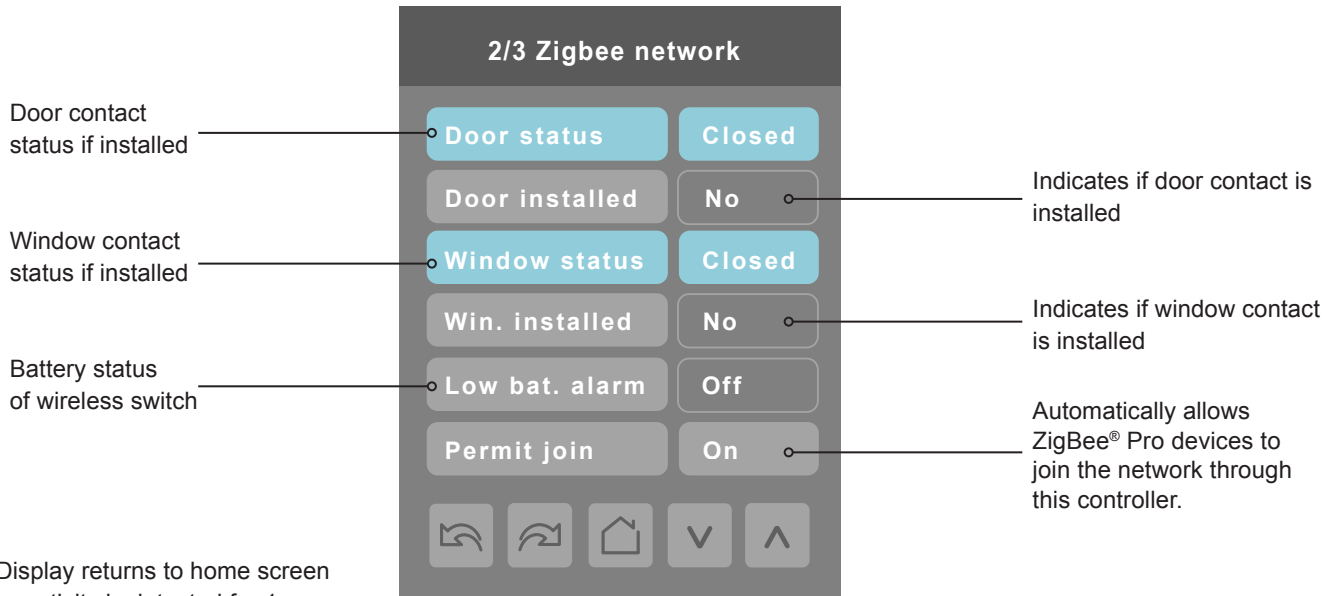


PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
<p>Com address Terminal Equipment Controller networking address Default value: 254 Range value: 0 - 254</p>	<p>Communication 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.</p>

PARAMETER DETAILS

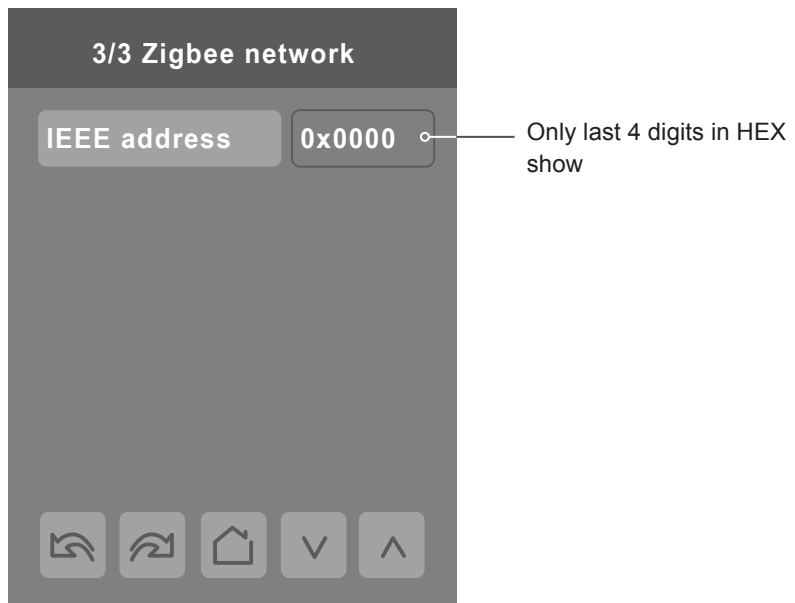
Configuration parameters default value	Significance and adjustments
<p>ZigBee Pan ID Personal Area Network Identification Default value: 0 Range value: 1 - 1000</p>	<p>ZigBee Pro PAN ID</p> <p>Links specific Terminal Equipment Controllers to specific ZigBee® Pro coordinators. For every Terminal Equipment Controller reporting to a coordinator. Ensure set the SAME channel value both on the coordinator and the Terminal Equipment Controller(s).</p> <p>Default value of 0 is NOT a valid PAN ID. The valid range of available PAN IDs is from 1 to 1000.</p> <p>Range 1 to 500 for centralized networked applications using a ZigBee® Pro Coordinator.</p> <p>Range 501 to 1000 is for stand-alone applications where each controller is its own coordinator for stand alone installation of wireless door and window switches.</p>
<p>ZigBee channel Channel selection Default value: 10 Range value: 10 - 25</p>	<p>ZigBee channel</p> <p>This parameter links specific Terminal Equipment Controllers to specific ZigBee® Pro coordinators. For every Terminal Equipment Controller reporting to a coordinator, ensure you set the SAME channel value both on the coordinator and the Terminal Equipment Controller(s).</p> <p>Using channels 15 and 25 is recommended.</p> <p>The default value of 10 is NOT a valid channel. The valid range of available channels is from 11 to 25.</p>
<p>ZigBee status Read only</p>	<p>ZigBee status</p> <p>The following read only messages show in this field:</p> <p>Not Det: ZigBee® Pro module not detected Pwr On: ZigBee® Pro module detected but not configured No NWK: ZigBee® Pro configured but no network joined Joined: ZigBee® Pro network joined Online: Communicating</p>



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 prevents any new ZigBee® Pro devices from joining network through this controller.



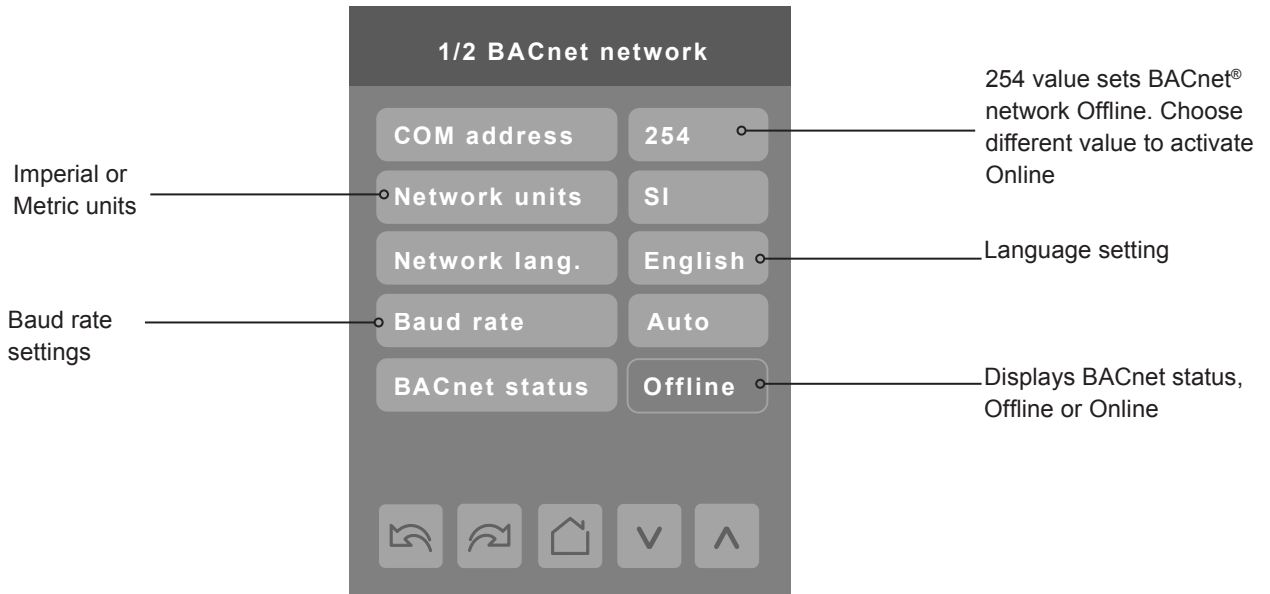
Note: The display will return to the home screen when no activity is detected for 1 minute.

PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
IEEE address Default value = 0x0000	The extended IEEE ZigBee® node address is used to identify 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

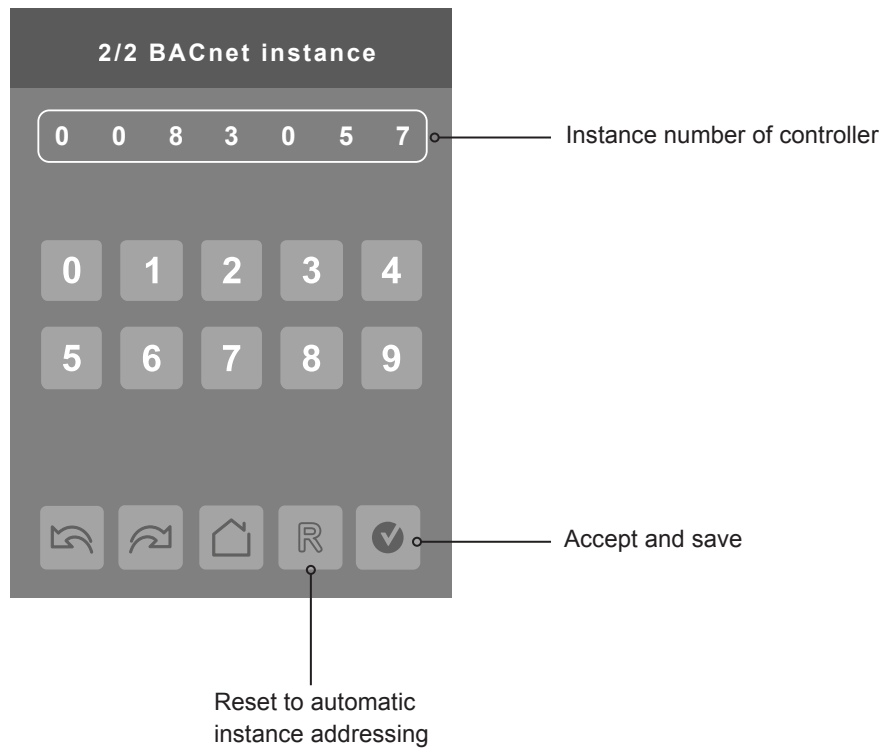
Configuration parameters default value	Significance and adjustments
<p>Comm address Terminal Equipment Controller networking address Default value: 254 Range: 0 to 254</p>	<p>Communication Address For BACnet® MS-TP models, the valid range is from 1 to 127. Default value of 254 disables BACnet® communication for the Terminal Equipment Controller.</p>
<p>Network units Default value: Imperial</p>	<p>Measurement Units Imperial: network units shown as Imperial units. SI: network units shown as International Metric units.</p>
<p>Network lang Default value: English</p>	<p>Language Settings Choice of network language/object names transmitted over network. All available choices: (English, French, and Spanish).</p>
<p>Baud rate Default value: Auto</p>	<p>Baud Rate Auto: automatically detects BACnet® MS/TP baud rate. Other choices: (115200, 76800, 57600, 38400, 19200, and 9600). Leave the value at auto unless instructed otherwise.</p>

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 SE8300U5B00 with a COM address of 57 is generated as “83057”.

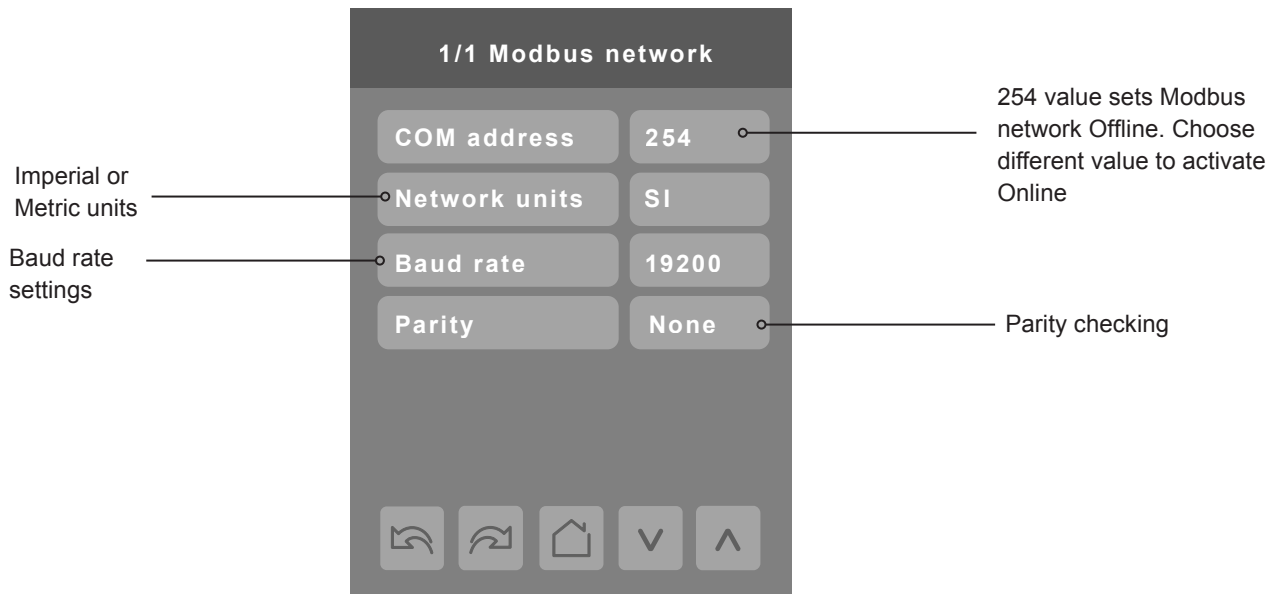
The default instance number appears first. To change the instance number, use number pad and press **Accept and save**.

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



MODBUS NETWORK SETTINGS

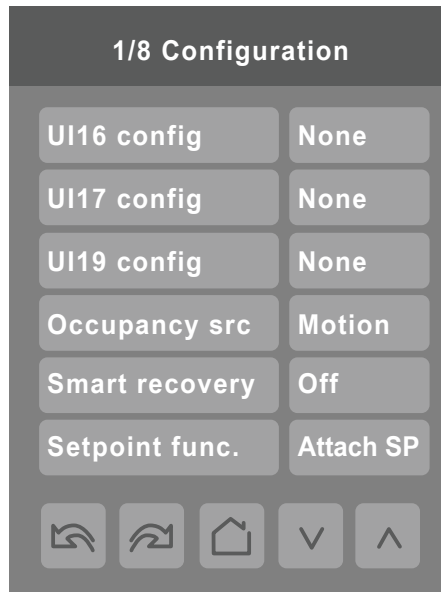
Modbus network set-up screen shows when Modbus is detected in model. Select desired parameter and use up or down arrow to set parameter to desired value.



PARAMETER DETAILS

Configuration Parameters Default Value	Significance and Adjustments
Comm address Terminal Equipment Controller networking address Default value: 254 Range: 0 to 254	Communication Address Default value of 254 disables Modbus communication for the Terminal Equipment Controller.
Network units Default value: Imperial	Measurement Units Imperial: network units shown as Imperial units. SI: network units shown as International Metric units.
Baud rate Default value: 19200 + Even Parity	Baud Rate Auto: automatically detects baud rate. Other choices: (115200, 76800, 57600, 38400, 19200, and 9600). Leave the value at auto unless instructed otherwise.
Parity Default value: None	Parity Parity checking of the data character frame (Even, Odd, or no parity (None)).

CONFIGURATION PARAMETERS SCREEN 1/8



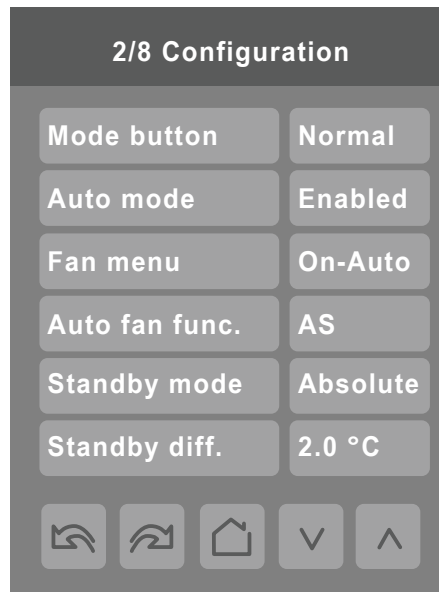
PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
<p>UI 16 Universal input no.1 configuration</p> <p>Dry contact to 24 Vac Com.</p> <p>Default value: None (MV46 = 1)</p>	<p>None: No function will be associated with the input. Input can be used for remote network monitoring.</p> <p>Rem NSB: Occupancy input via a dry contact to 24 Vac Com.</p> <ul style="list-style-type: none"> • Open contact = Occupied • Closed contact = Unoccupied <p>Window: Disables instantly Heating and Cooling outputs if a window and/or patio door is opened. The Fan output(s) remain operational.</p> <ul style="list-style-type: none"> • Open contact = Window opened, disables Heat and Cool and display "Window" alarm • Closed contact = Normal operation <p>Motion NO: Remote Occupancy sensor with a Normally Opened contact, contact closure = Motion.</p> <p>Motion NC: Remote Occupancy sensor with a Normally Opened contact, contact closure = Motion.</p> <p>Fan lock: When (G) Fan output is activated, if this input is not activated after 10 seconds, the thermostat will disable Heat and Cool outputs and display "Fan Lock" alarm.</p> <ul style="list-style-type: none"> • Open contact = No airflow alarm • Closed contact = Airflow present, normal operation

PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
UI 17 Universal input no.2 configuration Default value: None	Universal Input 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 Terminal Equipment Controller LCD screen when the input is energized. Service: backlit flashing Service alarm shows on Terminal Equipment Controller LCD screen when input is energized.
UI 19 Universal input no.3 configuration Default value: None	Universal Input 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.
Occupancy src Default value: Motion	Occupancy Source Local Motion: the local occupancy status is received from a motion sensor. Local Schedule: the local occupancy status is determined by the schedule. Note: Occ command in the schedule menu can be set to Local Occ in which case Local occ points to Occ source.
Smart recovery Smart recovery enabled Default value: Off Smart recovery is automatically disabled if UI 16 and / or UI 17 are configured remote NSB	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 controller will automatically optimise the equipment start time. In any case, the latest a system will restart is 10 minutes prior to the occupied period time.
Setpoint func. Local setpoint settings Default value: Dual SP	Setpoint function Set the local setpoint interface for the user Dual SP (Dual Occupied Setpoints Adjustment) Attach SP (Two Occupied Setpoint Adjustment)

CONFIGURATION PARAMETERS SCREEN 2/8



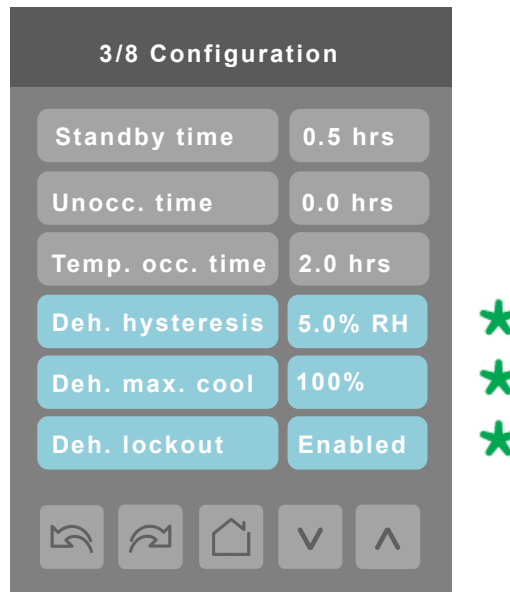
PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
Mode button Default value: Normal	Mode button Normal: Displays temperature Setpoints on main screen Off-auto: Hides or simplifies temperature Setpoints on main screen
Auto mode Default value: On	Auto Mode Enables auto function for the mode button For sequences 2, 4, and 5 only On: auto active (Off-Cool-Heat-Auto) Off: auto not active (Off-Cool-Heat)
Fan menu Default value: On-Auto	Fan Speeds User fan menu presented is dependent on selected fan sequence of operation for the fan coil. L-M-H: 3 Speed configuration using 3 fan relays. L-H: 2 Speed configuration using 2 fan relays. L-M-H-A: 3 Speed configuration with Auto fan speed mode using 3 fan relays. Auto Mode operation is dependent on Auto Fan parameter. L-H-A: 2 Speed configuration with Auto fan speed mode using 2 fan relays. Auto Mode operation is dependent on Auto Fan parameter. On-Auto: single Speed configuration. Auto is for Fan on demand/ On is On all the time.

PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
<p>Auto fan func. Auto Fan Function Default value: AS</p>	<p>Automatic Fan Function Auto Speed Fan Mode operation for Fan Menu (L-M-H-A) or (L-H-A). AS: In Occupied, Standby and Override modes, the Fan stays ON at Low speed even if there is no demand for Heating or Cooling. In Unoccupied mode the Fan turns Off all speeds when there is no demand for Heating or Cooling. AS/AD: In any Occupancy mode, the Fan turns Off all speeds when there is no demand for Heating or Cooling.</p>
<p>Standby mode Default value: Abs</p>	<p>Standby Mode Choose which standby setpoints are used for control. Abs: absolute; Standby entered values are used for standby mode. Offset: offset; Occupied setpoints +/- Standby diff. used for standby mode.</p>
<p>Standby diff. Default value: 2 °C (3 °F)</p>	<p>Standby Difference When Standby mode is Relative, standby setpoints are calculated as: Standby cool: Cool setpoint + Standby diff. Standby heat: Heat setpoint - Standby diff. Adjustable from 0.5 a 2.5 °C (1 - 5 °F)</p>

CONFIGURATION PARAMETERS SCREEN 3/8



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

PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
Standby time Default value: 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 Terminal Equipment Controller stand-by setpoints become active. Range: 0.5 to 24.0 hours in 0.5 hours increments.
Unocc. time Default value: 0.0 hours	Unoccupied Time Time delay between the moment where the Terminal Equipment Controller toggles to stand-by mode, and the time which the Terminal Equipment 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 Terminal Equipment Controller to drift from stand-by mode to unoccupied mode when PIR functions are used. Range: 0.0 to 24.0 hours in 0.5 hours increments.


PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
<p>Temp. occ. time Default value: 2 hours</p>	<p>Temporary Occupancy Time</p> <p>Temporary occupancy time with occupied mode setpoints when override function is enabled.</p> <p>When Terminal Equipment Controller is in unoccupied mode, function is enabled with either the menu or UI2 configured as remote override input.</p> <p>Range: 0 - 24 hours.</p>
<p>Deh. hysteresis Default value: 5% RH</p>	<p>Humidity Control Hysteresis</p> <p>Used only if dehumidification sequence is enabled:</p> <p>Range: 2 to 20% RH</p> <p>Models with humidity sensor only.</p>
<p>Deh. max. cool Default value: 100%</p>	<p>Maximum Dehumidification Cooling</p> <p>Maximum cooling valve position when dehumidification is enabled. This can be used to balance smaller reheat loads installed in regards to the capacity of the cooling coil.</p> <p>Range: 20 to 100 %</p> <p>Models with humidity sensor only.</p>
<p>Deh. lockout Default value: Enabled</p>	<p>Dehumidification Lockout</p> <p>Typically toggled through the network. This variable enables or disables dehumidification based on central network requirements from the BAS front end.</p> <p>Enabled: Dehumidification Authorized</p> <p>Disabled: Dehumidification Not Authorized</p> <p>Models with humidity sensor only.</p>

CONFIGURATION PARAMETERS SCREEN 4/8

4/8 Configuration

CPH	4
Control type	Floating
BO8 out time	15 min.
BO8 aux. config	Reheat
Floating time	1.5 min
Action	DA



PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
<p>CPH Default value: 4 CPH</p>	<p>Cooling Output Cycles/Hr Sets maximum number cycles per hour under normal control operation. It represents the maximum number of cycles equipment turns ON and OFF in one hour. A higher CPH represents a higher accuracy of control at the expense of wearing mechanical components faster. Range: 3, 4, 5, 6,7 and 8 CPH.</p>
<p>Control Type Control type for Triac models Default: Floating</p>	<p>Control Output for FCU Valves Defines type of control output for type of valves installed for the FCU application On/Off: normally opened or normally closed 24 VAC 2 position valves Floating: modulating 3 wires control of 24 VAC floating valves Analog: analog modulating control of 2-10 Vdc valves Refer to proper control diagram according to selected control type outputs.</p>

PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
BO8 out time Default value: 0 = 15 minutes (4 CPH)	Reheat Output Time Sets reheat output time base. Valid only if reheat sequences are enabled. 0: 15 minutes 1: 10 seconds for solid state relays
BO8 aux. config Aux contact function used for reheat if sequence is set to use BO8 for reheat through network or local. Ignore this parameter. Default value: Reheat	Binary Output Terminal Output directly follows occupancy of the Terminal Equipment Controller. 1) Auxiliary NO: Occ or St-By = Contact Closed / Unoccupied = Contact Opened 2) Auxiliary NC: Occ or St-By = Contact Opened / Unoccupied = Contact Closed. Output to follow directly main occupancy and Fan on command. Typically used for 2 position fresh air damper applications. 3) Auxiliary NO: Occ or St-By & Fan On = Contact Closed / Unoccupied and Fan On or Off = Contact Opened 4) Auxiliary NC: Occ or St-By & Fan On = Contact Opened / Unoccupied and Fan On or Off = Contact Closed
Floating Time Floating actuator stroke timing value Default value: 1.5 minutes floating actuator timing	Floating Time Maximum stroke time of floating valve actuator. Range: 0.5 to 9.0 minutes in 0.5 minute increments
Action For Analog Heating signals Default value: DA signal	Direct Acting/Reverse Acting Reverse Acting or Direct Acting signal for Analog Output signals DA = 0 to 100 % = 0 to 10VDC RA = 0 to 100 % = 10 to 0VDC

CONFIGURATION PARAMETERS SCREEN 5/8

5/8 Configuration

Prop. band	3.0
No. of pipes	2
Operation seq.	Heat only
Purge sample	0.0 hrs
Purge open	1 min
Temp. sensor	Remote

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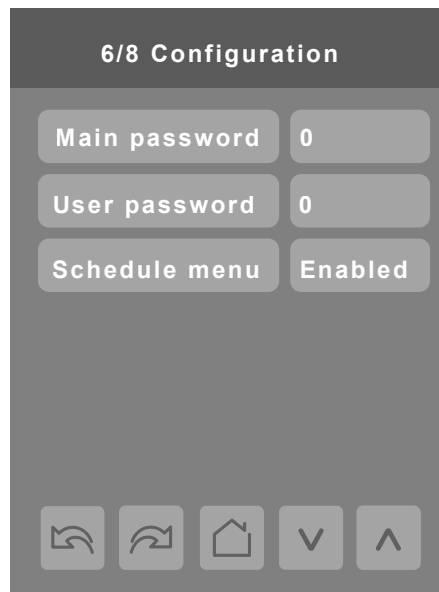
PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments																														
Prop. band Default value: 3	Proportional Band Setting Adjusts proportional band used by the Terminal Equipment Controller PI control loop. Note: default value of 3.0 gives satisfactory operation in most normal installation cases. The use of a superior proportional band different than the factory one is normally warranted in applications where Terminal Equipment Controller location is problematic and leads to unwanted cycling of the unit. A typical example is a wall mounted unit where Terminal Equipment Controller is installed between return and supply air feeds and is directly influenced by the supply air stream of unit. <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr style="background-color: #008000; color: white;"> <th style="width: 20%;">Value</th> <th colspan="2" style="width: 80%;">Effective Proportional Band</th> </tr> <tr> <td></td> <th style="width: 30%;">Fahrenheit</th> <th style="width: 50%;">Celsius</th> </tr> </thead> <tbody> <tr><td style="text-align: center;">3</td><td style="text-align: center;">3</td><td style="text-align: center;">1.2</td></tr> <tr><td style="text-align: center;">4</td><td style="text-align: center;">4</td><td style="text-align: center;">1.7</td></tr> <tr><td style="text-align: center;">5</td><td style="text-align: center;">5</td><td style="text-align: center;">2.2</td></tr> <tr><td style="text-align: center;">6</td><td style="text-align: center;">6</td><td style="text-align: center;">2.8</td></tr> <tr><td style="text-align: center;">7</td><td style="text-align: center;">7</td><td style="text-align: center;">3.3</td></tr> <tr><td style="text-align: center;">8</td><td style="text-align: center;">8</td><td style="text-align: center;">3.9</td></tr> <tr><td style="text-align: center;">9</td><td style="text-align: center;">9</td><td style="text-align: center;">5.0</td></tr> <tr><td style="text-align: center;">10</td><td style="text-align: center;">10</td><td style="text-align: center;">5.6</td></tr> </tbody> </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																													

PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments																								
No. of pipes Default value: 4 pipes	Pipe Setting Type Installed Defines type of system installed. 2 Pipes: limits number of sequences of operation available from 0 - 4. It also enables heat/cool operation from the same output. 4 Pipes: can access all sequences of operation from 0 - 2. Also enables heat/cool operation from different output.																								
Operation seq. Default value: Sequence #1	Sequence Operation Selects initial sequence of operation required by installation type and application. <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr style="background-color: #008000; color: white;"> <th>System Modes</th> <th>System = 2 Pipes</th> <th>System = 4 Pipes</th> </tr> </thead> <tbody> <tr> <td>Off - Cool</td> <td>Cooling Only</td> <td>Cooling Only</td> </tr> <tr> <td>Off - Heat</td> <td>Heating Only</td> <td>Heating Only</td> </tr> <tr> <td>Off - Auto - Heat - Cool</td> <td>Cooling With Electric Reheat</td> <td>Cooling With Electric Reheat</td> </tr> <tr> <td>Off - Heat</td> <td>Heating With Electric Reheat</td> <td>Heating With Electric Reheat</td> </tr> <tr> <td>Off - Auto - Heat - Cool</td> <td>N/A</td> <td>4 = Cooling and Heating (2 modulating outputs)</td> </tr> <tr> <td>Off - Auto - Heat - Cool</td> <td>N/A</td> <td>5 = Cooling/Heating (2 modulating outputs) with reheat</td> </tr> <tr> <td></td> <td colspan="2">For 2 Pipe output applications, the system is limited if configured for local changeover COS, COC/NC or COC/NC. The current water temperature detected by the RU1 then limits the system mode available for the local configuration or network write.</td> </tr> </tbody> </table>	System Modes	System = 2 Pipes	System = 4 Pipes	Off - Cool	Cooling Only	Cooling Only	Off - Heat	Heating Only	Heating Only	Off - Auto - Heat - Cool	Cooling With Electric Reheat	Cooling With Electric Reheat	Off - Heat	Heating With Electric Reheat	Heating With Electric Reheat	Off - Auto - Heat - Cool	N/A	4 = Cooling and Heating (2 modulating outputs)	Off - Auto - Heat - Cool	N/A	5 = Cooling/Heating (2 modulating outputs) with reheat		For 2 Pipe output applications, the system is limited if configured for local changeover COS, COC/NC or COC/NC. The current water temperature detected by the RU1 then limits the system mode available for the local configuration or network write.	
System Modes	System = 2 Pipes	System = 4 Pipes																							
Off - Cool	Cooling Only	Cooling Only																							
Off - Heat	Heating Only	Heating Only																							
Off - Auto - Heat - Cool	Cooling With Electric Reheat	Cooling With Electric Reheat																							
Off - Heat	Heating With Electric Reheat	Heating With Electric Reheat																							
Off - Auto - Heat - Cool	N/A	4 = Cooling and Heating (2 modulating outputs)																							
Off - Auto - Heat - Cool	N/A	5 = Cooling/Heating (2 modulating outputs) with reheat																							
	For 2 Pipe output applications, the system is limited if configured for local changeover COS, COC/NC or COC/NC. The current water temperature detected by the RU1 then limits the system mode available for the local configuration or network write.																								
Purge sample Default value: 2 hours	Time interval between valve samples. Opens valve for a short period adjusted by Purge open parameter to sample pipe temperature to decide between heating or cooling mode. Adjustable for 0 to 4 hours (0 = disable).																								
Purge open Default value: 2 minutes	Time valve opens to sample pipe temperature to decide between heating or cooling mode. Adjustable for 1 to 3 minutes.																								
Temp. sensor Default Value: Remote	Selection of room temperature sensor <ul style="list-style-type: none"> 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 Lua4RC script. 																								

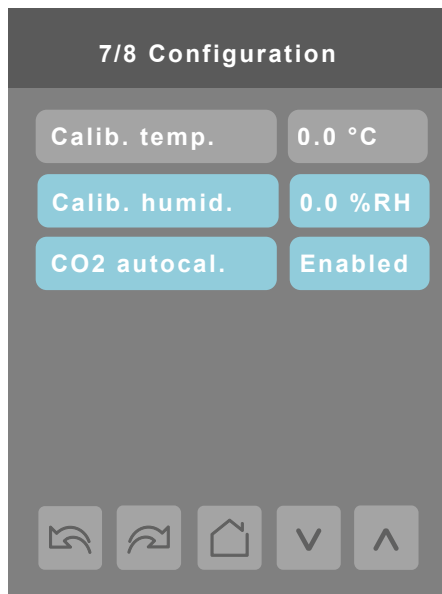
CONFIGURATION PARAMETERS SCREEN 6/8



PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
Main password Default value: 0	Main Password Installer password. This parameter sets a protective access password to prevent unauthorised access to configuration menu parameters. Default value of 0 does not prompt a password or lock access configuration menu. Range: 0 - 9999.
User Password Default value: 0	User Password End user password. This parameter sets a protective access password to prevent user unauthorised access to main screen adjustments. Default value of 0 does not prompt a password. Range: 0 - 9999.
Schedule menu Default value: Enabled Toggles activation of schedule menu direct access	Enabled: The Schedule Menu is directly accessible from the main screen via a touch in the upper corner (see page 4). Disabled: The Schedule Menu can only be accessed through the Setup Menu screens. Dis.no.clk: Clock function disabled. En.no.clk: Clock function enabled.

CONFIGURATION PARAMETERS SCREEN 7/7

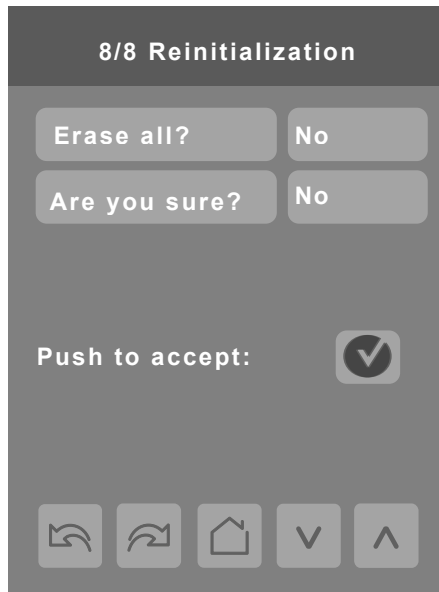


* Parameter only displayed on models with built in humidity sensor.

PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
Calib. temp. Default value: 0.0 °C or °F	Calibration Temperature Room temperature sensor calibration. Offset can be added or subtracted to actual displayed room temperature. Range: ± 2.5 °C, 0.5 °C increments (± 5.0 °F, 1.0 °F increments).
Calib. humid. Default value: 0% RH	Humidity Calibration Humidity sensor calibration. Offset can be added or subtracted to actual displayed humidity. Range: ± 15.0 %RH (models with humidity sensor only).
CO2 autocal. Default value: Enabled	Enable or Disable CO2 sensor auto calibration.

CONFIGURATION PARAMETERS SCREEN 8/8



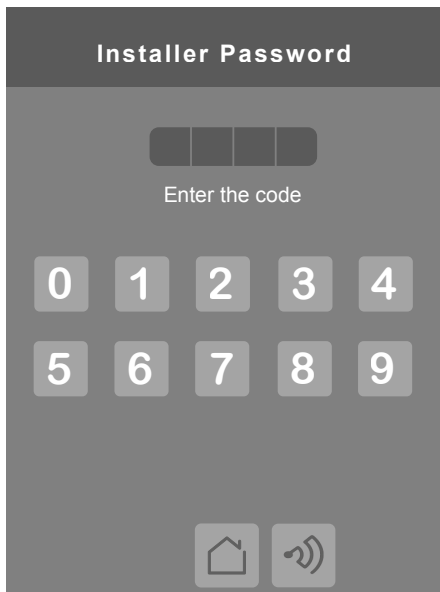
PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
Erase all? Default value: No	Erase All Answering Yes on both and pressing Accept button erases all values and changes to factory default values except the following network related values: <ul style="list-style-type: none"> • 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 enter the password for the Installer and User

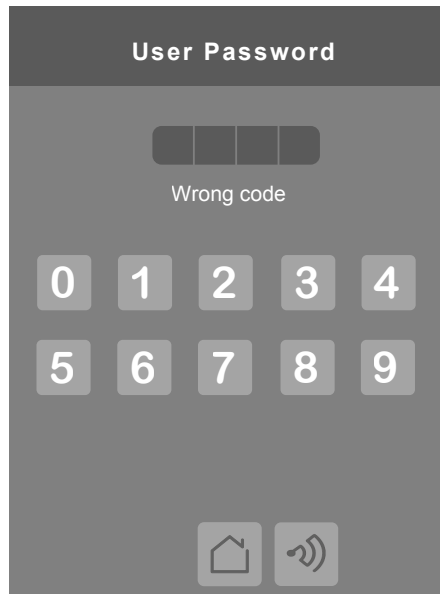
Installer Password



1. 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.
2. Installer password prompt automatically disappears after 10 seconds if no value is entered.
3. An error code is automatically generated if incorrect password is entered.
4. 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



1. 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.
2. User password prompt automatically disappears after 10 seconds if no value is entered.
3. User is permitted access to controller interface to change any allowed settings when correct password is entered.
4. Password lock resumes after 1 minute of non activity.

PASSWORD PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
Main password Default value: 0	Installers Password Parameter sets a protective access password to prevent unauthorised access to the configuration menu parameters. A default value of 0 does not prompt a password or lock access to configuration menu. Range: 0 to 9999.
User password Default value: No	Are You Sure? Parameter sets a protective access password to prevent User unauthorised access to main screen adjustments. A default value of 0 does not prompt for a password. Range: 0 to 9999.


SETPOINT SETTINGS 1/2



SETPOINT PARAMETER DETAILS


Configuration parameters default value	Significance and adjustments
Unocc. cool Default value: 26.5 °C (80 °F)	Unoccupied Cooling Unoccupied cooling setpoint range: 2.0 to 37.5 °C (54 to 100 °F).
Standby cool Default value: 25.5 °C (78 °F)	Standby Cooling The value of this parameter should be set between occupied and unoccupied cooling setpoints. Ensure difference between standby and occupied value can be recovered in a timely fashion when movement is detected in the zone. Stand-by cooling setpoint range: 12.0 to 37.5 °C (54 to 100 °F).
Occ. cool Default value: 24.0 °C (74 °F)	Occupied Cooling Cooling setpoint range: 12.0 to 37.5 °C (54 to 100 °F).
Occ. heat Default value: 22.0 °C (72 °F)	Occupied Heating Heating setpoint range: 12.0 to 37.5 °C (54 to 100 °F).
Standby heat Default value: 20.5 °C (69 °F)	Standby Heating The value of this parameter should be 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. Stand-by heating setpoint range: 4.5 to 32.0 °C (40 to 90 °F).
Unocc. heat Default value: 16.5 °C (62 °F)	Unoccupied Heating Unoccupied heating setpoint range: 4.5 to 32.0 °C (40 to 90 °F).

SETPOINT SETTINGS 2/2

 Parameter only displayed on models with built in humidity sensor.

2/2 Setpoints

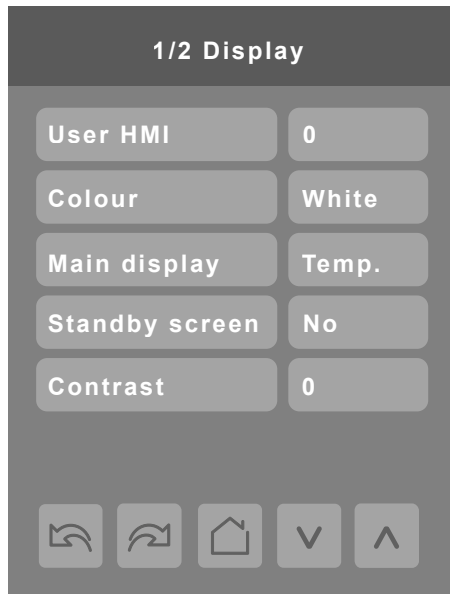
Default heat	22.0 °C	
Min. deadband	1.5 °C	
Max. heating	32.0 °C	
Min. cooling	12.0 °C	
Supply air SP	13.0 °C	★
Dehum. SP	50.0 %RH	★



SETPOINT PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
Default heat Default value: 22.0 °C (73 °F)	Default Heat 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; 18.5 to 26.5 °C (65 to 80 °F). Parameter is only used when Stand-by mode = Offset.
Min. deadband Default value: 1.5 °C (3 °F)	Minimum Deadband Minimum deadband value between heating and cooling setpoints applied only when any setpoints are modified. Range: 1.0 to 2.5 °C, 0.5 °C increments (2, 3, 4 or 5 °F, 1.0 °F increments).
Max heating Default value: 32 °C (90 °F)	Maximum Heating Maximum occupied and unoccupied heating setpoint adjustment. Range: 4.5 to 32.0 °C (40 to 90 °F).
Min. cooling Default value: 12.0 °C (54 °F)	Minimum Cooling Minimum occupied and unoccupied cooling setpoint adjustment. Range: 12.0 to 37.5 °C (54 to 100 °F).
Dehum. SP Default value: 50% RH	Dehumidification Setpoint Used only if dehumidification sequence is enabled: Range is: 30-95% RH (models with humidity sensor only).

DISPLAY SETTINGS 1/2

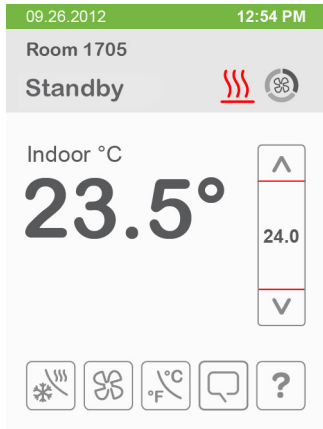


SETPOINT PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
User HMI Default value: 0	User HMI Select user HMI type. Range: 0 to 11.
Colour Default value: White	White Change background colors according to set font colors.
Main display Default value: Temp.	Main Display Shows room 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.
Contrast Default value: 0	Controls the screen contrast and brightness. -5 is least bright, most contrast; 5 is most bright, least contrast. Range: -5 to 5

User HMI for hospitality

Hospitality 0



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

Hospitality 1



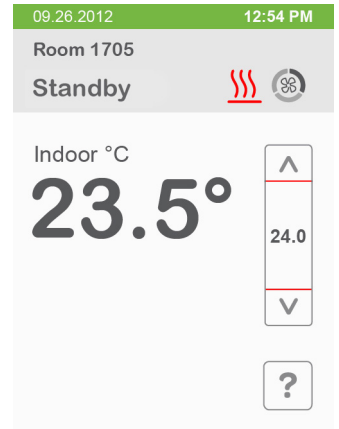
- Setpoint adjustment
- System mode setting
- Fan mode setting
- User help menu

Hospitality 2



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

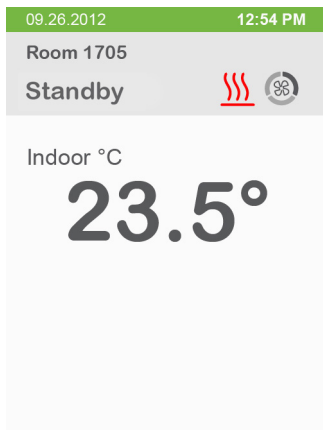
Hospitality 3



- Setpoint adjustment
- User help menu

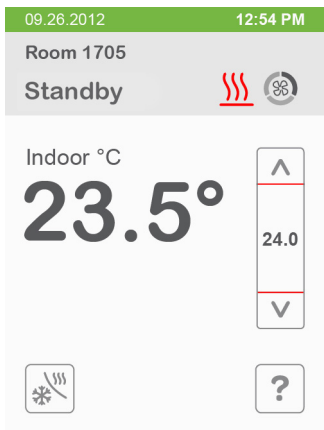
Parameters are model dependent and may not appear on certain models.

Hospitality 4



- Fully locked interface with no user settings

Hospitality 5



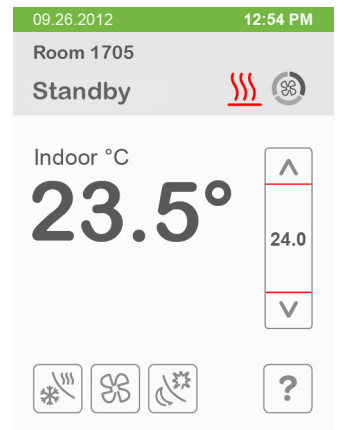
- Setpoint adjustment
- System mode setting
- User help menu

Hospitality 6



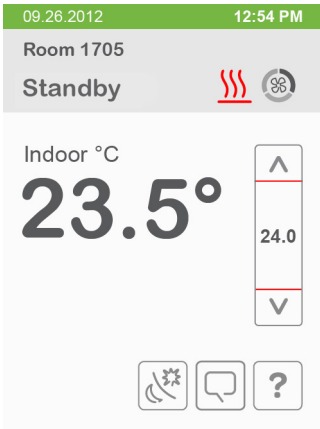
- Setpoint adjustment
- System mode setting
- Fan mode setting
- Local unit scale adjustment
- User help menu

Commercial 7



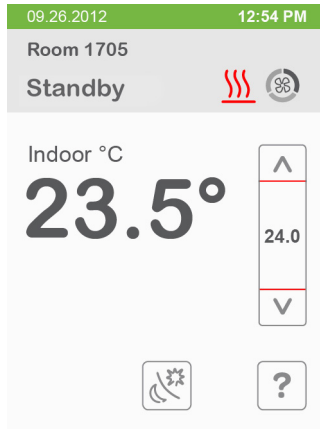
- Setpoint adjustment
- System mode setting
- Fan mode setting
- unoccupied mode overdrive
- User help menu

Commercial 8



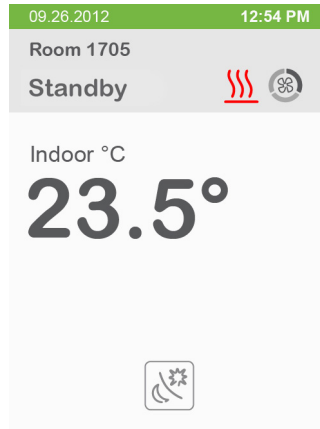
- Setpoint adjustment
- Unoccupied mode override
- Local user language
- User help menu

Commercial 9



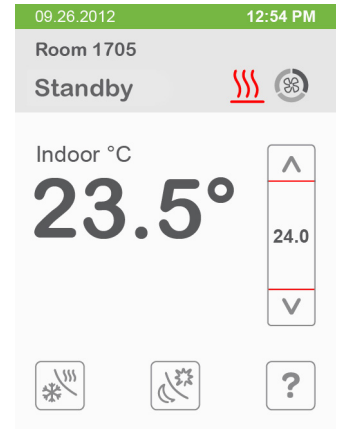
- Setpoint adjustment
- Unoccupied mode override
- User help menu

Commercial 10



- Unoccupied mode override

Commercial 11



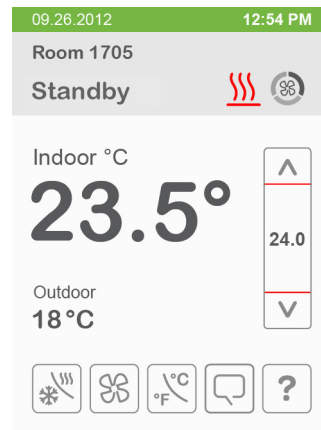
- Setpoint adjustment
- System mode setting
- Unoccupied mode override
- User help menu

Note:

The day/night setback button appears only in unoccupied mode from 7 to 11 in HMI Commercial. 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.

Heating only configuration

09.26.2012 12:54 PM

Room 1705

Standby

Setpoint °C

23.5°

Humidity 45% | Outdoor 18°C

On/Off icon is used instead of system mode icon when sequence of operation is set to either heating on or cooling only.

Time and Date show only when a network time synchronisation command is received.

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.

09.26.2012 12:54 PM

Room 1705

Standby

Cooling Setpoint °C

23.5°

Humidity 45% | Outdoor 18°C

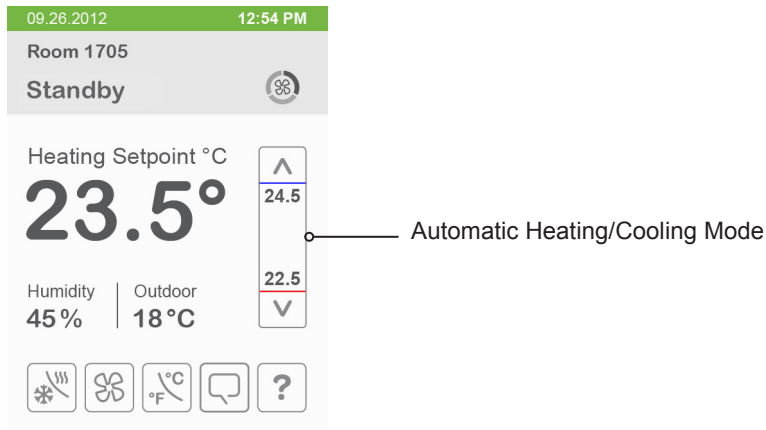
Cooling mode or cooling only sequence of operation.

Setpoint adjustment for heating mode

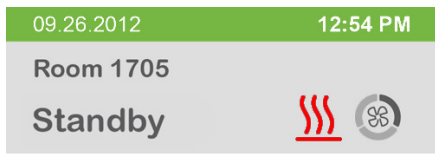
In automatic mode, setpoint showing at the top of the set point bar located directly under the blue line represents the actual occupied cooling setpoint.

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



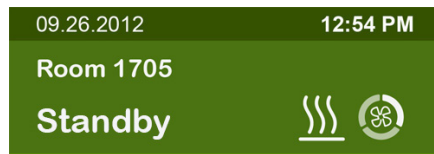
Indoor °C
23.5°

Humidity | Outdoor
45% | 18 °C

24.0



White



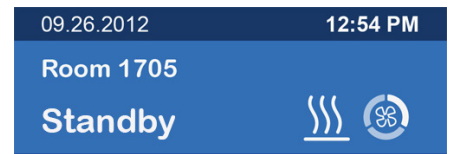
Indoor °C
23.5°

Humidity | Outdoor
45% | 18 °C

24.0



Green



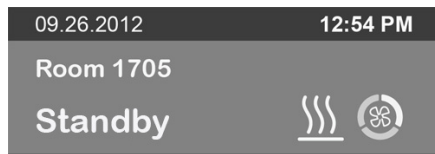
Indoor °C
23.5°

Humidity | Outdoor
45% | 18 °C

24.0



Blue



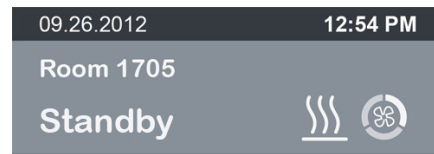
Indoor °C
23.5°

Humidity | Outdoor
45% | 18 °C

24.0



Dark Grey



Indoor °C
23.5°

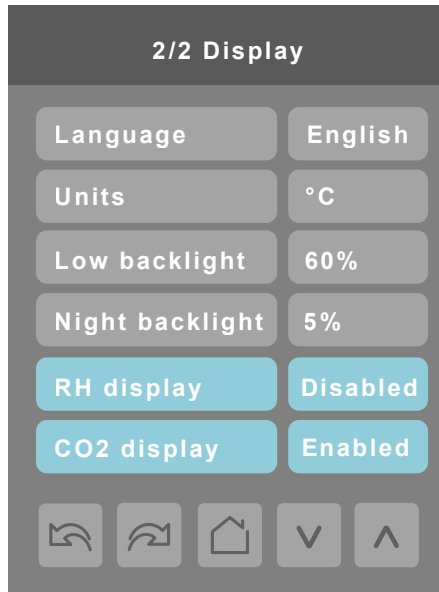
Humidity | Outdoor
45% | 18 °C

24.0



Grey

DISPLAY SETTINGS 2/2



* Parameter only displayed on models with built in humidity sensor.

SETPOINT PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
Language Default value: English Only EN, FR and SP available for BACnet models.	Language Select language for main display. Choices: English, French, Spanish, Chinese, Russian, Arabic, Bulgarian, Czech, Danish, Dutch, Finnish, German, Hungarian, Indonesian, Italian, Norwegian, Polish, Portuguese, Slovak, Swedish, Turkish
Units Default value: °C	Temperature Units Sets default local scale value when Terminal Equipment Controller powers up. °C for Celsius. °F for Fahrenheit.
Low backlight Default value: 60%	Backlight Display Set display backlight intensity after 2 minutes of keyboard inactivity. Adjustable: 0 to 100%.

SETPPOINT PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
<p>Night backlight Default value: 5%</p>	<p>Night Backlight Display Set display backlight intensity after 2 minutes of keyboard inactivity. Adjustable: 0 to 100%. 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.</p>
<p>RH display Default value: Disabled</p>	<p>Relative Humidity Display Enables display of humidity below room temperature on the display (On): Display %RH. (Off): Do not display %RH. Models with humidity sensor only</p>
<p>CO2 display Default value: Disabled</p>	<p>CO2 Levels Display Enables display of carbon dioxide (CO2) below room temperature on the display (On): Display %CO2. (Off): Do not display %CO2 . Models with CO2 sensor only.</p>

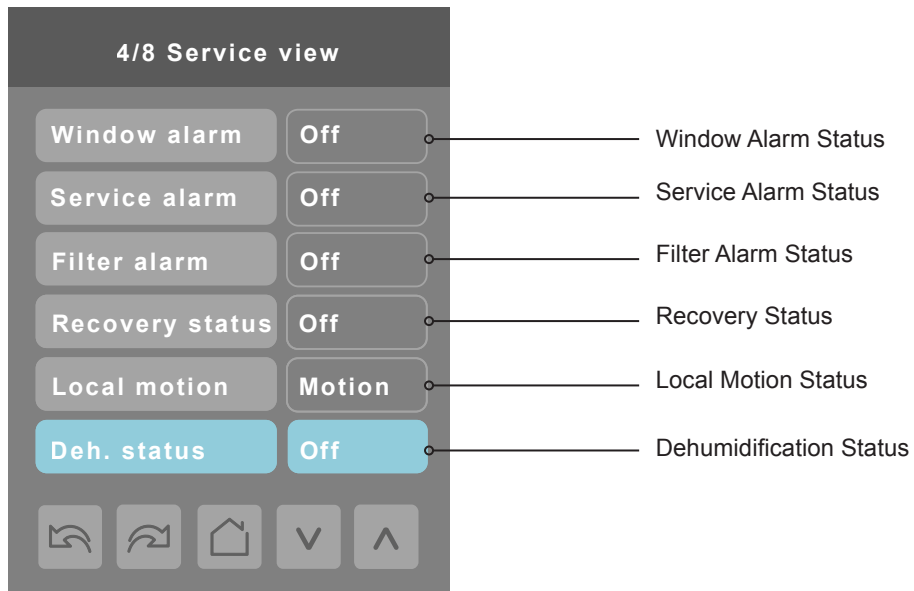
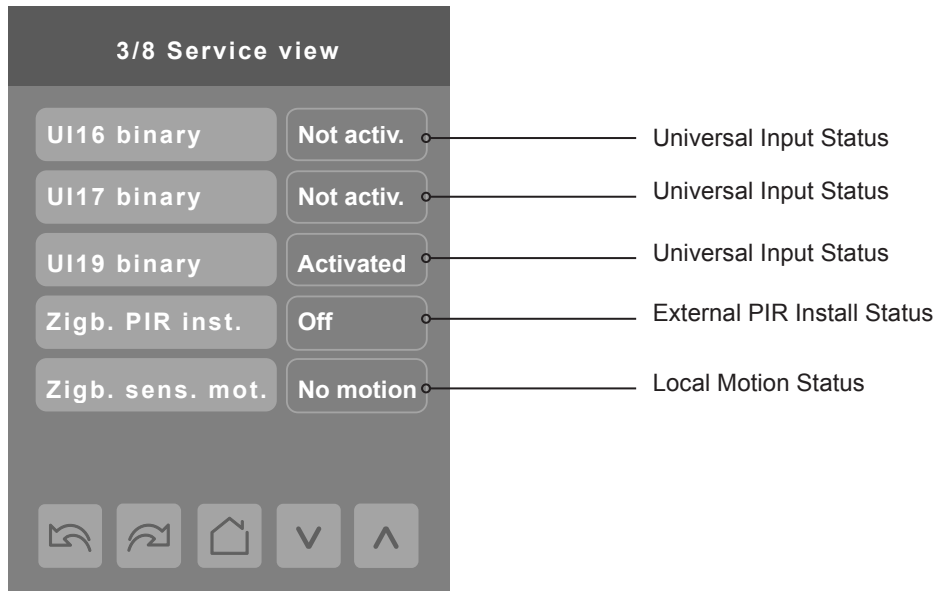
SERVICE VIEW SCREENS

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.

- Firmware Revision
- Room Temperature
- Changeover Temperature
- Remote Temperature
- Outdoor Temperature
- Room Humidity

* Parameter only displayed on models with built in humidity sensor.

- Effective Occupancy
- PI Cooling Demand
- PI Heating Demand
- Cooling Demand Limit
- Heating Demand Limit
- Supply Temperature



Parameter only displayed on models with built in humidity sensor.

5/8 Service view

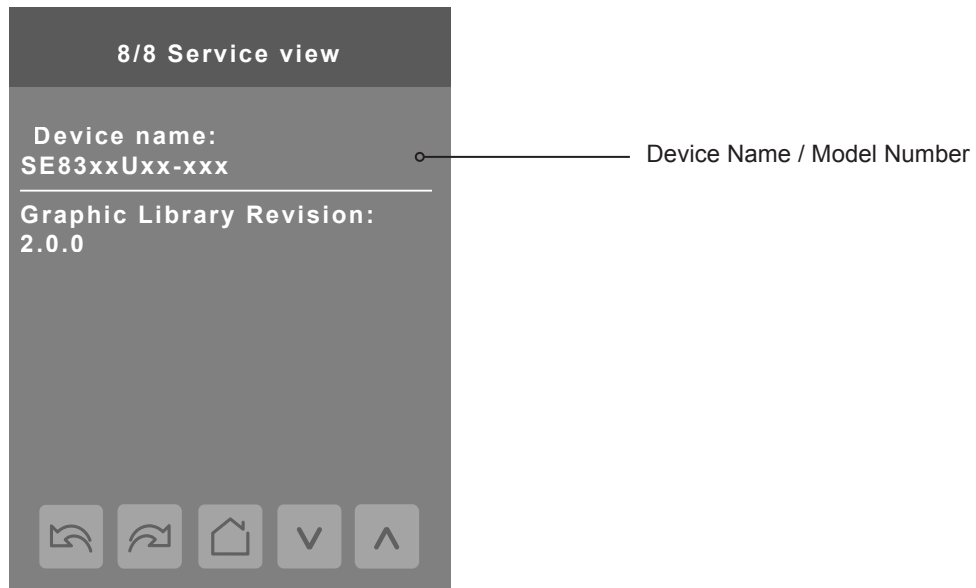
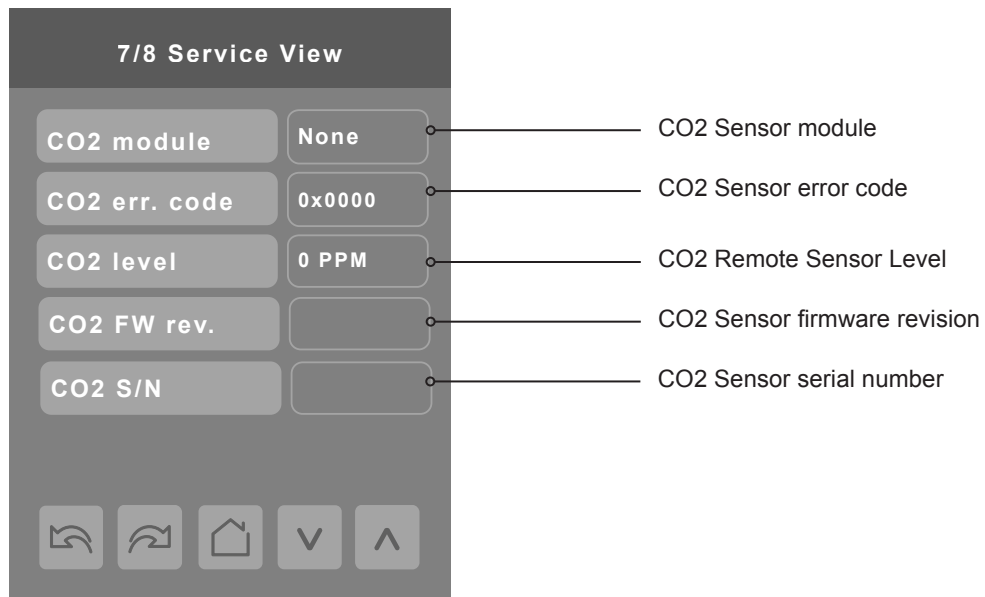
UO9 config	Binary	Universal Output Configuration
UO10 config	Binary	Universal Output Configuration
UO11 config	Binary	Universal Output Configuration
UO12 config	Binary	Universal Output Configuration
Term.24 10V	0.0 Vdc	0-10Vdc Universal Input

Navigation icons: Back, Forward, Home, Down, Up

6/8 Service view

UI19 type	Sensor	Universal Input Configuration
UI20 type	Sensor	Universal Input Configuration
UI22 type	Sensor	Universal Input Configuration
UI23 type	Sensor	Universal Input Configuration
UI24 type	Voltage	Universal Input (Voltage)

Navigation icons: Back, Forward, Home, Down, Up



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 SE8300U5B00 thermostat with a MAC address of 41 is connected to a network, its default Device Name is SE8300UxB00-41 and its default BACnet Device ID is 83041.

TEST OUTPUTS

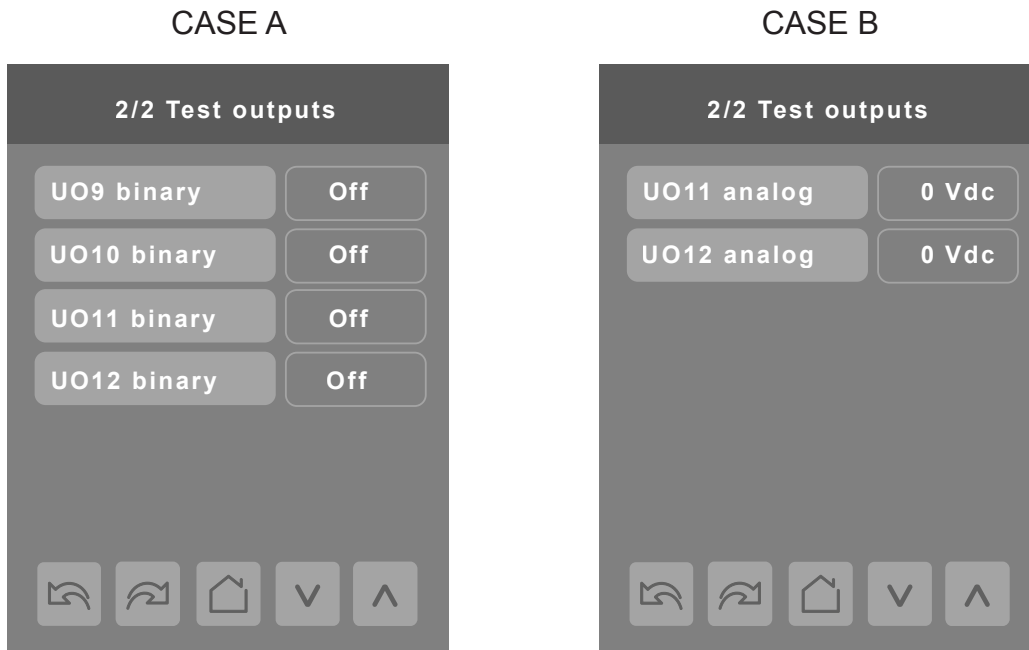


Note 1: Cooling output can also be used for heating on two pipes systems.

Note 2: 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 3: 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



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 Floating or 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. The English language is always enabled.

APPENDIX A: TERMINAL CORRESPONDENCE

The terminals of an SE8300 are identified differently and have a wider range of possible functions compared to those of any of the SE7000 series Room Controllers. Nonetheless, there is a direct correspondence of functions between the terminals of the SE7000 series and the SE8300 series. Consult the table below to verify the appropriate terminal when replacing a SE7000 Room Controller with a SE8300 Room Controller.

SE7000		SE8300	
Terminal name	Terminal ID	Terminal name	Terminal ID
Binary Input 1	BI1	Universal Input 16	UI16
Binary Input 2	BI2	Universal Input 17	UI17
Universal Input 3	UI3	Universal Input 19	UI19
Sensor Common	Scom	Terminal 18 Common	COM
Remote Sensor	RS	Universal Input 20	UI20 - RS
Sensor Common	Scom	Terminal 21 Common	COM
Mix/Supply Sensor	MS	Universal Input 22	UI22 - SS

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