# **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

1/2 Setup	
Network o	———— Enter BACnet <sup>®</sup> & ZigBee <sup>®</sup> network settings (only if ZigBee is detected)
Configuration •	Enter parameter configuration menu
Setpoints - Display o	Enter setpoint and display settings
Service View o	——— Enter status and service view
Test Outputs o	Enter output testing mode
Language Selection o	Enable selected language(s)*
Return to Discover Mode	The Controller General Note:
home screen becomes discover	able on the wireless
ZigBee <sup>®</sup> network for	or 1 minute (thisAdjustable parameter

Note: The following menus show according to context:

- ZigBee menu shows if ZigBee card detected.

not configured)

- Network choice inside does not show if no network is available

button is hidden if ZigBee® settings are



\*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.



to enter the Schedule

#### **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.

Clock	
Time format	AM-PM
Time	6:58 PM
Year	2014
Month	Jan.
Day	24
Weekday	Sunday

Configuration parameters default value	Significance and adjustments
<b>Time Format</b> 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.
<b>Time</b> 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 <b>Time Format</b> parameter value.
<b>Year</b> Default value: 2000	Current year
<b>Month</b> Default value: Jan.	Current month
<b>Day</b> Default value: 01	Current day
<b>Weekday</b> 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.

**** Schedule      ⊶	
Occupied 1:	
Unoccupied 1:	
Occupied 2:	
Unoccupied 2:	
Occupied 3:	
Unoccupied 3:	

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

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.



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



Configuration parameters default value	Significance and adjustments
Set function to	None: No sensor function configured for this zone
Describe function of specified wireless sensor	Door: Sensor is a door contact switch
Default value: None	Window: Sensor is a window contact switch
	Motion: Sensor is a motion sensor
	<b>Status</b> : Updates the BACnet status of the sensor, but no action is taken by the internal logic of the controller.
	<b>Remove</b> : 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	Close: Sensor in closed state (door/window only)
Current status of information received from the sensor Read 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.	Low: Battery power level is low, replacement or recharge will be needed soon
Read only	<b>Normal</b> : Battery power level is in the normal range, replacement or recharge is not currently needed.
	None: Sensor does not use a battery
Comm. Status	Default: Not paired
Sensor pairing state Read only	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.



Configuration parameters default value	Significance and adjustments
Program cmd	Run: The LUA script is activated and will run continuously until
Default value: Run	deactivated.
	Stop: The LUA script is deactivated
Program status	Running: The LUA script is current active
Read only	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	No error: No errors in the LUA script are detected.
Read only	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.

3/3 Lua	
Param. A (AV25) 5 •	A parameter defined by a LUA script displays in red text.
Param. B (AV26) 0	
Param. C (AV27) 8 •	but it can be user-configured to
Param. D (AV28) 0	use a different default value.
Param. E (AV29) 0	
Param. F (AV30) 0	

Configuration parameters default value	Significance and adjustments
Parameter A Default value: 0 Default value can be changed by user	<b>AV25</b> 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	<b>AV26</b> 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	<b>AV27</b> The value(s) of this parameter depends on what is assigned to it using the LUA script function
<b>Parameter D</b> Default value: 0 Default value can be changed by user	<b>AV28</b> 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	<b>AV29</b> The value(s) of this parameter depends on what is assigned to it using the LUA script function
<b>Parameter F</b> Default value: 0 Default value can be changed by user	<b>AV30</b> 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.



Configuration Parameters Default Value	Significance and Adjustments
<b>Optional prot.</b> 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.



Configuration parameters default value	Significance and adjustments
Com address	Communication Address
Terminal Equipment Controller networking address Default value: 254	For wireless models, the use of the COM address is not mandatory.
Range value: 0 - 254	The COM address is an optional way to identify a device on the network.

Configuration parameters default value	Significance and adjustments
ZigBee Pan ID	ZigBee Pro PAN ID
Personal Area Network Identification Default value: 0 Range value: 1 - 1000	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).
	Default value of 0 is NOT a valid PAN ID. The valid range of available PAN IDs is from 1 to 1000.
	Range 1 to 500 for centralized networked applications using a ZigBee® Pro Coordinator.
	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.
ZigBee channel	ZigBee channel
Channel selection Default value: 10 Range value: 10 - 25	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).
	Using channels 15 and 25 is recommended.
	The default value of 10 is NOT a valid channel. The valid range of available channels is from 11 to 25.
ZigBee status	ZigBee status
Read only	The following read only messages show in this field:
	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

	2/3 Zigbee ne	twork	
Door contact	• Door status	Closed	
	Door installed	No •	Indicates if door contact is installed
Window contactstatus if installed	• Window status	Closed	
	Win. installed	No •	Indicates if window contact is installed
Battery status of wireless switch	• Low bat. alarm	Off	Automatically allows
	Permit join	On •	ZigBee <sup>®</sup> Pro devices to join the network through
: Display returns to home screen			this controller.

**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	Permit Join
Default value: On	Changing this value to Off prevents any new ZigBee <sup>®</sup> Pro devices from joining network through this controller.

3/3 Zigbee network	
IEEE address 0x0000 •	—— Only last 4 digits in HEX show

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 <sup>®</sup> 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.



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

#### **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.



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

#### **CONFIGURATION PARAMETERS SCREEN 1/8**



Configuration parameters default value	Significance and adjustments
<b>UI 16</b> Universal input no.1 configuration	<b>None</b> : No function will be associated with the input. Input can be used for remote network monitoring.
Dry contact to 24 Vac Com.	<b>Rem NSB</b> : Occupancy input via a dry contact to 24 Vac Com.
Default value: None (MV46 = 1)	Closed contact = Unoccupied
	<b>Window</b> : Disables instantly Heating and Cooling outputs if a window and/or patio door is opened. The Fan output(s) remain operational.
	<ul> <li>Open contact = Window opened, disables Heat and Cool and display "Window" alarm</li> </ul>
	<ul> <li>Closed contact = Normal operation</li> </ul>
	<b>Motion NO:</b> Remote Occupancy sensor with a Normally Opened contact, contact closure = Motion.
	<b>Motion NC:</b> Remote Occupancy sensor with a Normally Opened contact, contact closure = Motion.
	<b>Fan lock:</b> 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.
	• Open contact = No airflow alarm
	Closed contact = Airflow present, normal operation

Configuration parameters default value	Significance and adjustments
UI 17	Universal Input No. 2
Universal input no.2 configuration	None: no function associated with input.
	Door Dry: door contact and motion detector.
	Override: temporary occupancy remote override contact.
	<b>Filter:</b> backlit flashing filter alarm shows on the Terminal Equipment Controller LCD screen when the input is energized.
	<b>Service:</b> backlit flashing Service alarm shows on Terminal Equipment Controller LCD screen when input is energized.
UI 19	Universal Input No. 3
Universal input no.3 configuration Default value: None	<b>None:</b> no function associated with input though input can be used for remote network monitoring.
	<b>COC/NH:</b> change over dry contact; normally heat. Used for hot/ cold water or air change over switching in 2 pipe systems.
	<b>COC/NC:</b> change over dry contact; normally cool. Used for hot/ cold water or air change over switching in 2 pipe systems.
	<b>COS:</b> change over sensor. Used for hot/cold water or air changeover switching in 2 pipe systems.
Occupancy src	Occupancy Source
Default value: Motion	<b>Local Motion:</b> the local occupancy status is received from a motion sensor.
	<b>Local Schedule:</b> the local occupancy status is determined by the schedule.
	<b>Note:</b> Occ command in the schedule menu can be set to Local Occ in which case Local occ points to Occ source.
Smart recovery	Off = no smart recovery
Smart recovery enabled Default value: <b>Off</b> Smart recovery is automatically disabled if UI 16 and / or UI 17 are configured remote NSB	The occupied schedule time is the time at which the system will restart.
	<b>On</b> = 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.	Setpoint function
Local setpoint settings Default value: Dual SP	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**



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

Configuration parameters default value	Significance and adjustments
Auto fan func.	Automatic Fan Function
Auto Fan Function Default value: AS	Auto Speed Fan Mode operation for Fan Menu (L-M-H-A) or (L-H-A).
	<b>AS:</b> 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.
	<b>AS/AD:</b> In any Occupancy mode, the Fan turns Off all speeds when there is no demand for Heating or Cooling.
Standby mode Default value: Abs	Standby Mode
	Choose which standby setpoints are used for control.
	Abs: absolute; Standby entered values are used for standby mode.
	<b>Offset:</b> offset; Occupied setpoints +/- Standby diff. used for standby mode.
Standby diff.	Standby Difference
Default value: 2 °C ( 3 °F )	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)

#### **CONFIGURATION PARAMETERS SCREEN 3/8**



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

Configuration parameters default value	Significance and adjustments
Standby time	Standby Time
Default value: 0.5 hours	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	Unoccupied Time
Default value: 0.0 hours	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.

Configuration parameters default value	Significance and adjustments
<b>Temp. occ. time</b> Default value: 2 hours	Temporary Occupancy Time
	Temporary occupancy time with occupied mode setpoints when override function is enabled.
	When Terminal Equipment Controller is in unoccupied mode, function is enabled with either the menu or UI2 configured as remote override input.
	Range: 0 - 24 hours.
Deh. hysteresis	Humidity Control Hysteresis
Default value: 5% RH	Used only if dehumidification sequence is enabled:
	Range: 2 to 20% RH
	Models with humidity sensor only.
<b>Deh. max. cool</b> Default value: 100%	Maximum Dehumidification Cooling
	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.
	Range: 20 to 100 %
	Models with humidity sensor only.
Deh. lockout	Dehumidification Lockout
Default value: Enabled	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 4/8**



Configuration parameters default value	Significance and adjustments
СРН	Cooling Output Cycles/Hr
Default value: 4 CPH	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.
Control Type Control type for Triac models Default: Floating	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.

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	Binary Output Terminal
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	Output directly follows occupancy of the Terminal Equipment Controller.
	1) Auxiliary NO: Occ or St-By = Contact Closed / Unoccupied = Contact Opened
	<b>2) Auxiliary NC:</b> 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.
	<b>3) Auxiliary NO:</b> 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 Time
Floating actuator stroke timing value Default value: 1.5 minutes floating actuator timing	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 <b>DA</b> = 0 to 100 % = 0 to 10VDC
	<b>RA =</b> 0 to 100 % = 10 to 0VDC

#### **CONFIGURATION PARAMETERS SCREEN 5/8**



Configuration parameters default value	Sign	ificance and adjustme	ents
Prop. band	Proportional Band Set	ting	
Default value: 3	Adjusts proportional bar PI control loop.	nd used by the Terminal	Equipment Controller
	<b>Note:</b> 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.		
	Value	Effective Prop	ortional 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

Configuration parameters default value	Sig	nificance and adjustm	ents
No. of pipes	Pipe Setting Type Installed		
Default value: 4 pipes	Defines type of system installed.		
	<b>2 Pipes:</b> limits number 0 - 4. It also enables he	of sequences of operati eat/cool operation from t	on available from he same output.
	4 Pipes: can access al enables heat/cool operation	l sequences of operation ation from different outp	n from 0 - 2. Also ut.
Operation seq.	Sequence Operation		
Default value: Sequence #1	Selects initial sequence application.	e of operation required b	y installation type and
	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 modulat- ing outputs)
	Off - Auto - Heat - Cool	N/A	5 = Cooling/Heating (2 modulating out- puts) with reheat
		For 2 Pipe output appl is limited if configured COS, COC/NC or CO water temperature det limits the system mode configuration or netwo	ications, the system for local changeover C/NC. The current ected by the RU1 then e available for the local rk write.
<b>Purge sample</b> Default value: 2 hours	Time interval between v adjusted by Purge oper decide between heating	valve samples. Opens v n parameter to sample p g or cooling mode.	alve for a short period ipe temperature to
	Adjustable for 0 to 4 ho	ours (0 = disable).	
<b>Purge open</b> Default value: 2 minutes	Time valve opens to sa ing or cooling mode.	mple pipe temperature t	o decide between heat-
	Adjustable for 1 to 3 mi	nutes.	
Temp. sensor	Adjustable for 1 to 3 mi Selection of room temp	nutes. erature sensor	
Default Value: Remote	<ul> <li>Remote: Room Co UI20 terminal is en on UI20 terminal, F internal sensor and connecting the ser room controller will ture sensor.</li> <li>Local: Room Contr if UI20 terminal is u other temperature be used for averag</li> </ul>	ntroller uses internal ter npty. If a valid temperatu Room Controller will auto d use the remote sensor isor, or, if the sensor val automatically re-enable roller uses internal temp used. Typical use for ret monitoring via BACnet p je internal sensor with re	nperature sensor only if ure sensor is connected omatically disable its as control point. Dis- ue is out-of-range, the e its internal tempera- erature sensor even urn air temperature or point UI20. It can also emote sensor using a

#### **CONFIGURATION PARAMETERS SCREEN 6/8**



Configuration parameters default value	Significance and adjustments
Main password	Main Password
Default value: 0	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.
<b>User Password</b> 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	<b>Enabled:</b> The Schedule Menu is directly accessible from the main screen via a touch in the upper corner (see page 4).
	<b>Disabled:</b> 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 DETAILS**

sensor.

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

#### **CONFIGURATION PARAMETERS SCREEN 8/8**



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

#### **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.

Configuration parameters default value	Significance and adjustments
Main password	Installers Password
Default value: 0	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	Are You Sure?
Default value: No	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.

#### **PASSWORD PARAMETER DETAILS**

#### **SETPOINT SETTINGS 1/2**



#### SETPOINT PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
Unocc. cool	Unoccupied Cooling
Default value: 26.5 °C (80 °F)	Unoccupied cooling setpoint range: 2.0 to 37.5 °C (54 to 100 °F).
Standby cool	Standby Cooling
Default value: 25.5 °C (78 °F)	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	Occupied Heating
Default value: 22.0 °C (72 °F)	Heating setpoint range: 12.0 to 37.5 °C (54 to 100 °F).
Standby heat	Standby Heating
Default value: 20.5 °C (69 °F)	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	Unoccupied Heating
Default value: 16.5 °C (62 °F)	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.

#### SETPOINT PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
<b>Default heat</b> 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 $^\circ\text{C}$ (65 to 80 $^\circ\text{F}).$
	Parameter is only used when Stand-by mode = Offset.
Min. deadband	Minimum Deadband
Default value: 1.5 °C (3 °F)	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	Maximum Heating
Default value: 32 °C (90 °F)	Maximum occupied and unoccupied heating setpoint adjustment.
	Range: 4.5 to 32.0 °C (40 to 90 °F).
Min. cooling	Minimum Cooling
Default value: 12.0 °C (54 °F)	Minimum occupied and unoccupied cooling setpoint adjustment.
	Range: 12.0 to 37.5 °C (54 to 100 °F).
Dehum. SP	Dehumidification Setpoint
Default value: 50% RH	Used only if dehumidification sequence is enabled:
	Range is: 30-95% RH (models with humidity sensor only).

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#### **DISPLAY SETTINGS 1/2**



#### SETPOINT PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments
User HMI	User HMI
Default value: 0	Select user HMI type.
	Range: 0 to 11.
Colour	White
Default value: White	Change background colors according to set font colors.
Main display	Main Display
Default value: Temp.	Shows room temperature or setpoint
Standby screen	Standby Screen
Default value: No	When the device is left unattended for 2 minutes background backlight dims.
	Installers can load a custom image for brand identification.
Contrast	Controls the screen contrast and brightness.
Default value: 0	-5 is least bright, most contrast; 5 is most bright, least contrast.
	Range: <b>-5 to 5</b>

#### User HMI for hospitality

Local user language

User help menu

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Hospitality 0	Hospitality 1	Hospitality 2	Hospitality 3	
09.26.2012         12:54 PM           Room 1705         \$	09.26.2012         12:54 PM           Room 1705         Standby	09.26.2012         12:54 PM           Room 1705         Standby	09.26.2012         12:54 PM           Room 1705	
Indoor °C <b>23.5°</b> 24.0 V	Indoor °C <b>23.5°</b> 24.0 V	Indoor °C <b>23.5°</b> 24.0 V	Indoor °C <b>23.5°</b> 24.0 V	
	*** 88	.,℃ <b>〔 〔 〕</b>	?	
<ul> <li>Setpoint adjustment</li> <li>System mode setting</li> <li>Fan mode setting</li> <li>Local unit scale adjustment</li> </ul>	<ul> <li>Setpoint adjustment</li> <li>System mode setting</li> <li>Fan mode setting</li> <li>User help menu</li> </ul>	<ul> <li>Local unit scale adjustment</li> <li>Local user language</li> <li>User help menu</li> </ul>	<ul><li>Setpoint adjustment</li><li>User help menu</li></ul>	

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

Hospitality 4	Hospitality 5	Hospitality 6	Commercial 7
09.26.2012 12:54 PM	09.26.2012 12:54 PM	09.26.2012 12:54 PM	09.26.2012 <b>12:54 PM</b>
Room 1705	Room 1705	Room 1705	Room 1705
Standby <u>)))</u> (8)	Standby <u>)))</u> (89)	Standby <u>)))</u> (39)	Standby <u>)))</u> (39)
Indoor °C <b>23.5°</b>	Indoor °C <b>23.5°</b> 24.0 V	Indoor °C <b>23.5°</b> 24.0 V	Indoor °C <b>23.5°</b> 24.0 V
	*	*** SS .** .	* * * * *
<ul> <li>Fully locked interface with no user settings</li> </ul>	<ul> <li>Setpoint adjustment</li> <li>System mode setting</li> <li>User help menu</li> </ul>	<ul> <li>Setpoint adjustment</li> <li>System mode setting</li> <li>Fan mode setting</li> <li>Local unit scale adjustment</li> <li>User help menu</li> </ul>	<ul> <li>Setpoint adjustment</li> <li>System mode setting</li> <li>Fan mode setting</li> <li>unoccupied mode overdrive</li> <li>User help menu</li> </ul>

## Commercial 8

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Λ

24.0

V

?

09.26.2012

Room 1705

Standby

Indoor °C

12%		
01	$  \sim  $	

- Setpoint adjustment
- Unoccupied mode
   override
- Local user language
- User help menu
- 09.26.2012
   12:54 PM

   Room 1705
   Standby
   ∭ (20)

   Indoor °C
   ▲
   ▲

   23.5°
   ▲
   ↓

   (V)
   ↓
   ↓
   <

**Commercial 9** 

- Unoccupied mode override
  - User help menu
- 23.5°

**Commercial 10** 

**\$\$\$** 

Room 1705

Standby

Indoor °C

 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**

09.26.2012	12:54 PM	09.26.2012	12:54 PM	09.26.2012	12:54 PM
Room 1705		Room 1705		Room 1705	
Standby	<u> </u>	Standby	<u> </u>	Standby	<u> </u>
Setpoint °C 23.5	<b>O</b> 24.0	Indoor °C 23.5	<b>^</b> 24.0	Indoor °C <b>23.</b>	5° ^
Humidity Outdoor 45% 18°C	V	Humidity Outdo	c v	Outdoor 18 °C	V
SS .FC		**** BB •F		***	.⊧℃ <a></a> ?

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

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

#### Heating only configuration



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.



#### 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



#### 

#### Dark Grey



Green

09.26.2012

Blue

12:54 PM

\*

sensor.



#### **SETPOINT PARAMETER DETAILS**

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

#### SETPOINT PARAMETER DETAILS

Configuration parameters default value	Significance and adjustments	
Night backlight	Night Backlight Display	
Default value: 5%	Set display backlight intensity after 2 minutes of keyboard inactivity.	
	Adjustable: 0 to 100%.	
	Parameter only available for models with motion/light detec- tors. 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.	
RH display	Relative Humidity Display	
Default value: Disabled	Enables display of humidity below room temperature on the display	
	(On): Display %RH. (Off): Do not display %RH.	
	Models with humidity sensor only	
CO2 display	CO2 Levels Display	
Default value: Disabled	Enables display of carbon dioxide (CO2) below room tempera- ture on the display	
	(On): Display %CO2.	
	(UT): Do not display %CO2	
	Models with CO2 sensor only.	

#### 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.

	1/8 Service	view		
	Firmware rev.	1.0 -		Firmware Revision
	Room temp.	xx.x °C -		Room Temperature
	UI19 changover	xx.x °C -		Changeover Temperature
	UI20 temp.	xx.x °C		Remote Temperature
	Outdoor temp.	xx.x °C •		Outdoor Temperature
*	Room humidity	xx.x %RH		Room Humidity
			*	Parameter only displayed on models with built in humidity sensor.

2/8 Service	view		
Effective occ.	Occupied	<b></b>	- Effective Occupancy
PI cool demand	0%		PI Cooling Demand
PI heat demand	0%	<b></b>	PI Heating Demand
Cool dem. limit	0.0%		 <ul> <li>Cooling Demand Limit</li> </ul>
Heat dem. limit	0.0%		 <ul> <li>Heating Demand Limit</li> </ul>
Supply temp.	xx.x °C		- Supply Temperature



4/8 Service	view		
Window alarm	Off	Win	dow Alarm Status
Service alarm	Off -	Ser	vice Alarm Status
Filter alarm	Off •-	Filte	r Alarm Status
Recovery status	Off -	Rec	overy Status
Local motion	Motion -	Loc	al Motion Status
Deh. status	Off •	Deh	umidification Status
	<b>V A</b>	Derom	otor only displayed on
		model	s 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

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)





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.



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	СОМ	
Remote Sensor	RS	Universal Input 20	UI20 - RS	
Sensor Common	Scom	Terminal 21 Common	СОМ	
Mix/Supply Sensor	MS	Universal Input 22	UI22 - SS	

# Technical Support

For any issues with SmartStruxure Solution or SmartStruxure Lite, contact Schneider Electric Technical Support according to your region.

### North America (NAM) Product Support

Building Management Systems (BMS): www.nampss.com

## **Global Product Support**

Building Management Systems (BMS): productsupport.BMS@schneider-electric.com

Schneider Electric is the global specialist in energy management and automation. With revenues of 25 billion in FY2014, our 170,000 employees serve customers in over 100 countries, helping them to manage their energy and process in ways that are safe, reliable, efficient and sustainable. From the simplest of switches to complex operational systems, our technology, software and services improve the way our customers manage and automate their operations. Our connected technologies will reshape industries, transform cities and enrich lives.

At Schneider Electric, we call this Life Is On.