
BACiQ FC/AC Thermostat

Operations Manual

By ASI Controls



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Introduction

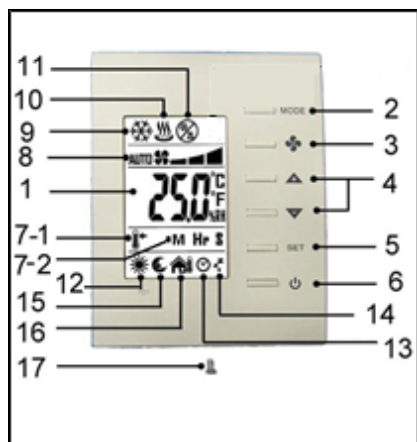
BACiQ-FC/AC Overview

The BACiQ-FC/AC BACnet communicating thermostat is a cost effective device for controlling a variety of rooftop AC and Fancoil equipment and providing a convenient user interface. The thermostat can communicate with any standard BACnet front end or gateway via MSTP.

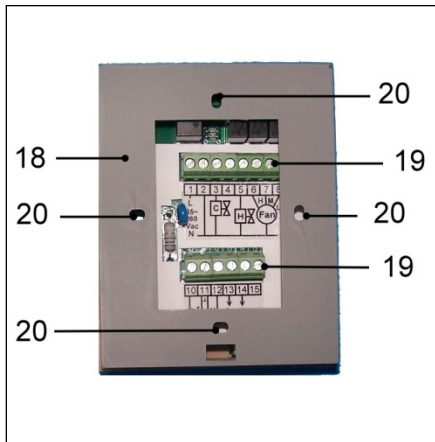


Thermostat Layout

Front view



Back view



#	Item	Description
1	LCD	Display temperature and working status.
2	MODE button	Access to user and engineer menu and for setting confirmation
3	FAN button	Toggle to change Fan mode: Auto or continuous.Low/Med/Hi
4	UP & DOWN buttons	Increase & decrease setting or previous/next item
5	SET button	Setting for °C/°F and/or Sleep mode, countdown Timer
6	On/Off button	Turn on/off thermostat
7-1	Set-point icons	Displaying set-point temperature while it is flashing
7-2	M icon	Indicates “After Hour Operation” initiated while it is shown.
8	Fan icons	Indicates Fan status
9	Flake icon	Indicates Cooling mode
10	Hot spring icon	Indicates Heating mode
11	No cooling & heating(only Fan)icon	Indicates Ventilation mode
12	Sun icon	Indicates room is occupied
13	Clock	Countdown timer is enables while it is shown
14	Sleep	Sleep mode is enabled while it is shown
15	Moon Sign	Indicates room is unoccupied
16	Outdoor icon	Indicates door/ window is open
17	Cover screw	Screw to tighten back cover with front cover
18	Back plate	Plate for mounting on electric box
19	Wiring terminal blocks	Terminals for wiring
20	Mounting holes	Holes for mounting on electric box

About this Document

This manual was produced using *Doc-To-Help*®, by Component One, LCC. This manual, ASI BAS Appliance User Manual, DOC-1716, and Windows™ help system was last revised on 2016-03-04. ASI Controls is always working to improve our products. Should you have any questions, or suggestions that would help our products better meet your needs, or that would help us serve you better, please call, write, or e-mail to:

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Installation

Mounting

Mounting on electric box

Separate the back plate from the controller by loosening the cover screw.

Align the mounting holes of the backplate with the screw holes of the electrical box (applicable to 65x65 or US standard box).

Attach the back plate to the electrical box by tightening the back plate screws with a Phillips head screwdriver.

DO NOT let the bolt head rise above the level of the mounting holes on the back plate -- it might cause a short circuit in the controller.

Mounting front cover

Lock the front cover to the back plate by tightening the cover screw underneath with a Phillips head screw driver.

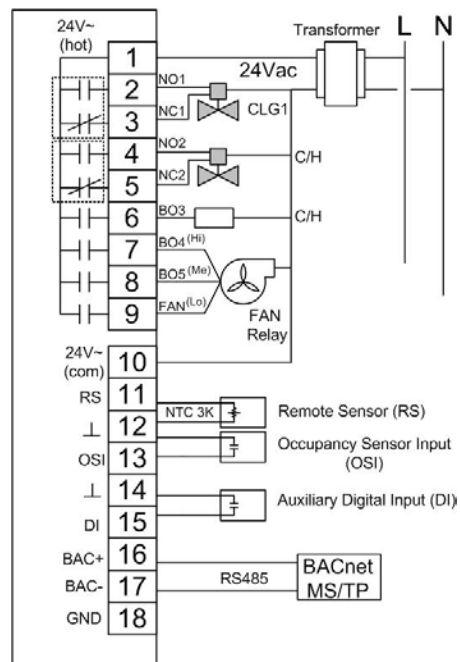
Wiring

24VAC Power

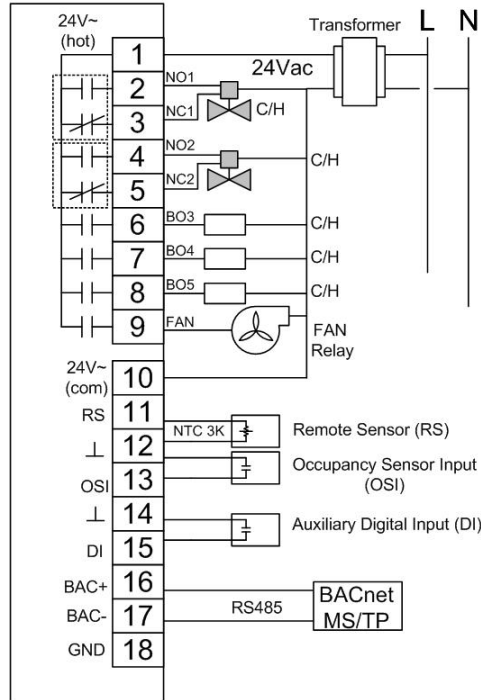
Multiple BACiQ thermostats and other ASI controllers can be powered from the same transformer as long as voltage and power requirements are met and all hots are connected and all commons are connected

Wiring Examples

Cooling/Heating and 3-speed Fan Control



Cooling/Heating and 1-speed Fan Control




Operation







User Mode

Buttons on the front of the thermostat provide user control of the thermostat (User Mode). The thermostat can be configured to enable or disable any of the buttons. When a button is disabled, pressing the button is ignored.

General

- Power switch  “ON” or “OFF” starts and stops the thermostat. When OFF, the thermostat does not control – all outputs are off. Zone temp is displayed.
- When thermostat is “ON”, press any button to start User Mode operation.
- Press “MODE” button to switch between different cooling/heating modes.
- Press UP/ DOWN button to change the setpoint.
- Press “FAN” button to toggle between different fan speeds.
- Press the “SET” button to access Timer and Sleep modes. Pressing the “SET” button for more than 3 seconds causes the units of temperature to toggle between °F or °C.

Thermostat Display

#	Item	Description	Remarks
1	Normal Display	Display current room or set-point temperature	A Configuration choice determines whether current room temp or setpoint is displayed
2	Temperature Setting 	Set the required temperature	Configuration choices limit how high or how low the setpoint can be set.
3	Mode Select 	Select the working mode: Cooling (), Heating (), or Ventilating ().	Configuration choices can limit which modes are available.
4	Fan Auto/ Continuous 	Change Fan mode for Auto speed or continuous Low/Med/Hi speed.	Configuration choices can limit which speeds are available.

Navigating the Thermostat Buttons

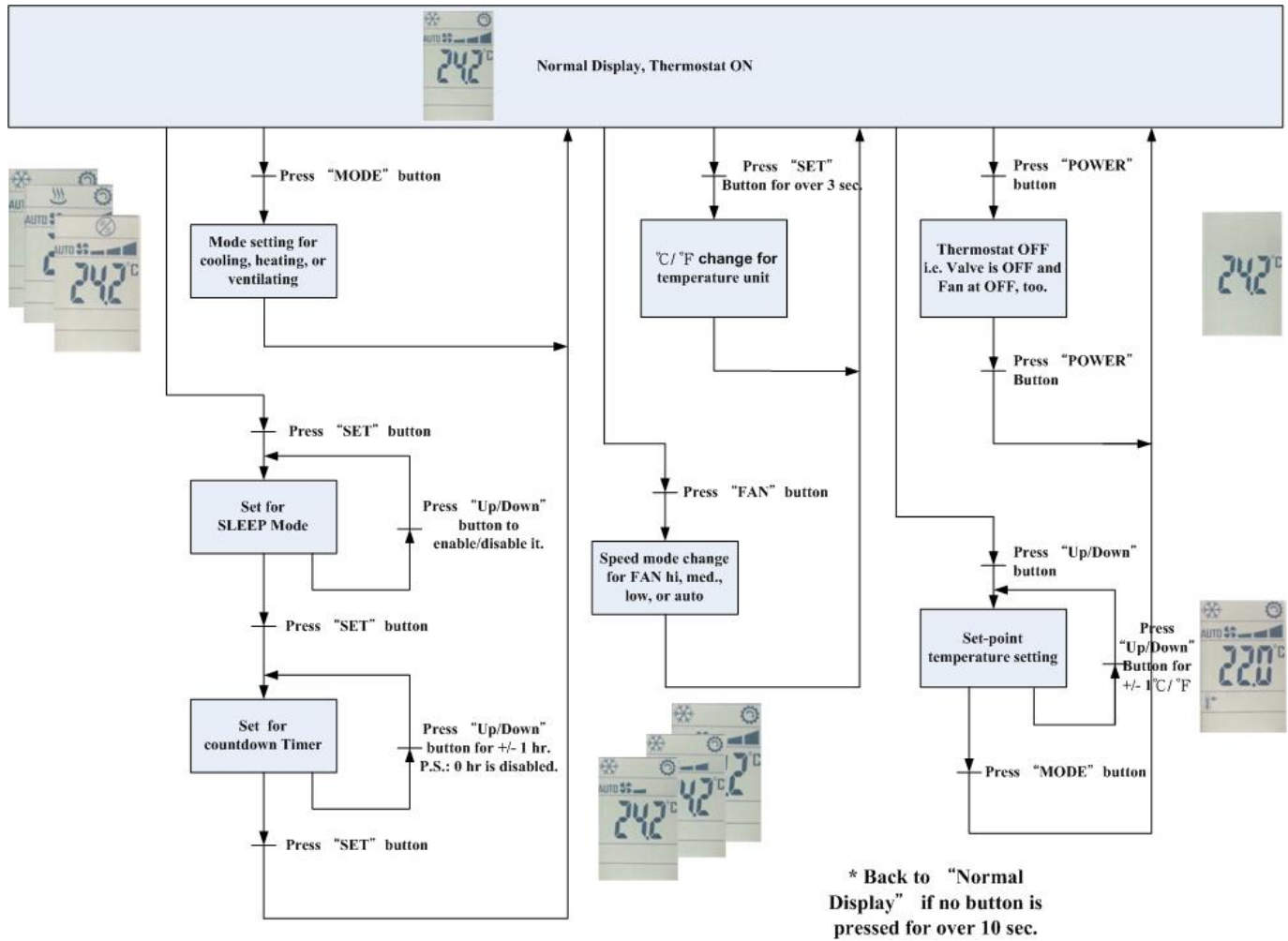


Fig. 2 User Mode operation sequence

Control Sequence

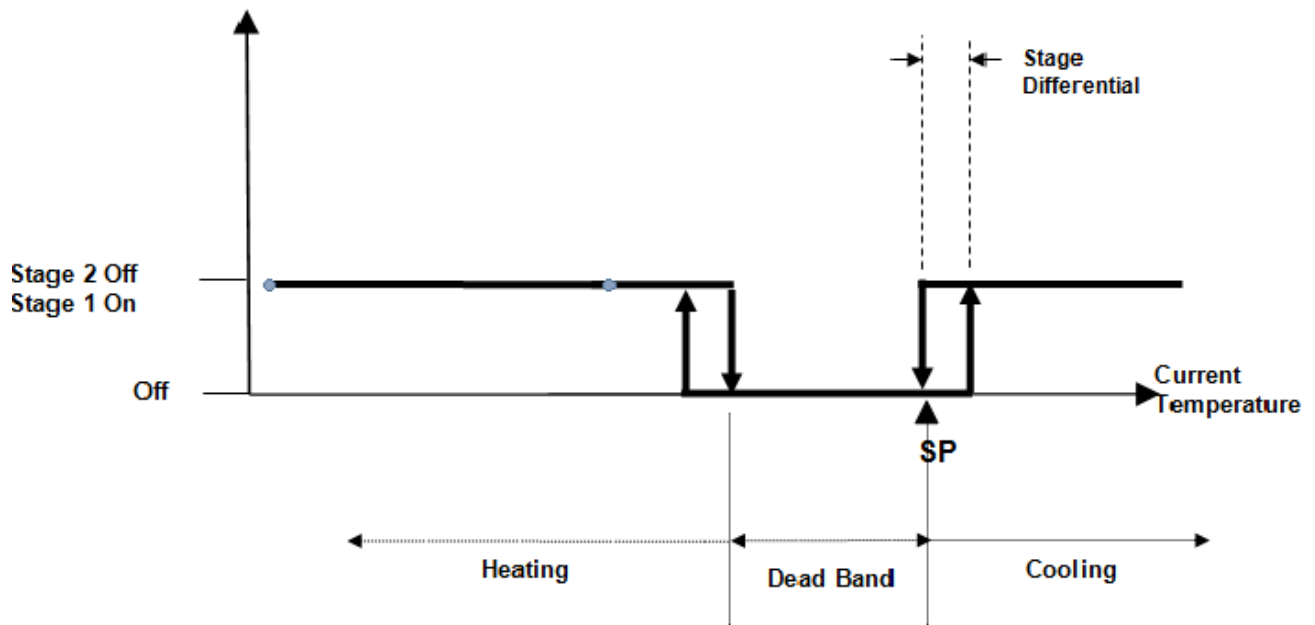
Cooling/Heating

The thermostat utilizes a PI algorithm to move between stages of cooling and heating. Several key, configurable parameters are used in the algorithm.

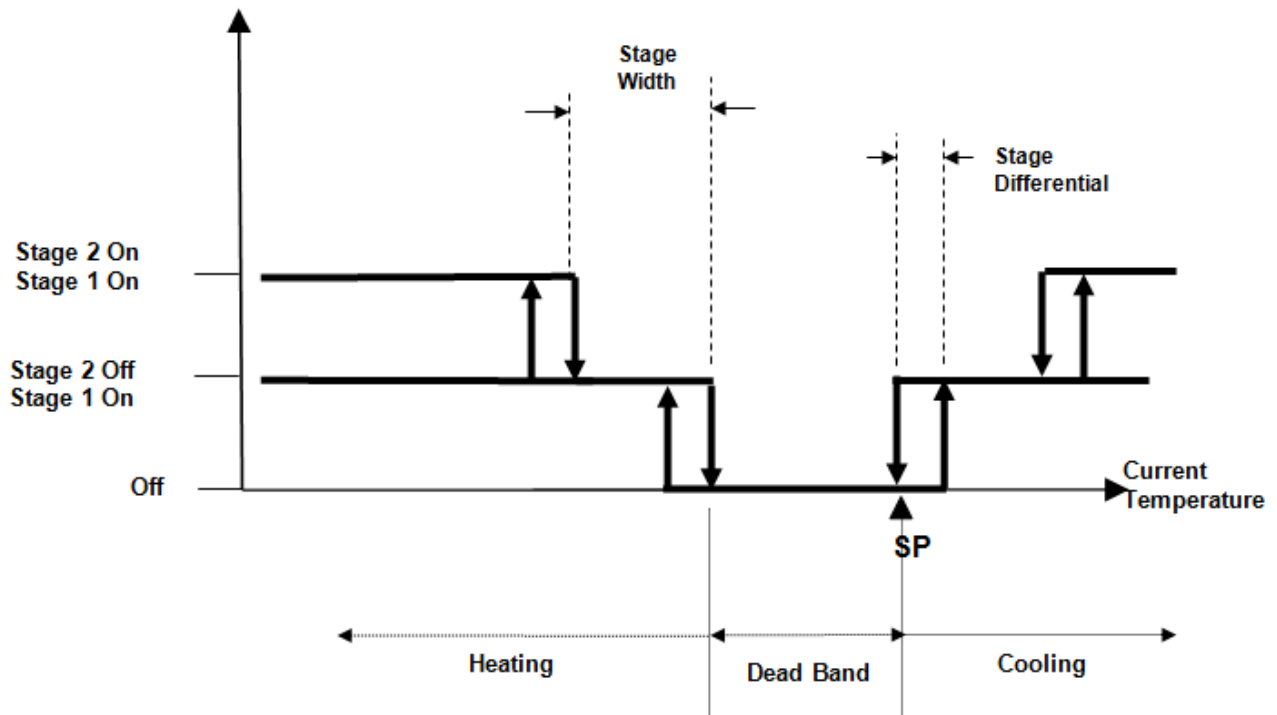
- **# stages of cooling** (up to 2)
- **# stages of heating** (up to 2)
- **Temperature Setpoint** – single setpoint for occupied operation. Temperature Setpoint defines the occupied cooling setpoint. The heating setpoint is determined by subtracting deadband from Temperature Setpoint.
- **OSIC** (unoccupied cooling setpoint)
- **OSIH** (unoccupied heating setpoint)
- **Deadband** – delta in degrees between occupied cooling and heating setpoints

- **Proportional Band Stage-Width** – when multiple stages are allocated, determines the threshold in degrees between activation of one stage and the next stage. This is the key tuning parameter for the proportional part of the PI algorithm.
- **Differential** – provides hysteresis. For cooling, stage one is activated when current temperature reaches Temperature Setpoint + differential. The stage is deactivated when current temperature drops below Temperature setpoint. The reverse is true for heating (heating setpoint is given by Temperature Setpoint – deadband).
- **Integral Cycle Time** – in seconds, determines how much history the PI algorithm looks at when computing error. Higher numbers of seconds cause the PI algorithm to move more slowly in changing the number of stages active.
- **Control type** – several combinations of cooling/heating or both, automatic or manual changeover, 2 pipe or 4 pipe operation.

1-stage Cooling and Heating Control, Auto Changeover for example



2-stage Cooling and Heating Control, Auto Changeover for example



Fan Control

Fan speed can be manually controlled from the fan button on the thermostat (if enabled) or set by communication line. Depending upon configuration fan speed can be set to low, medium, or high as well as automatic. In automatic mode, the thermostat selects a fan speed based on the difference between Current Temperature and Setpoint and the number of fan speeds configured.

OSI (Occupancy Sensor Input) Contact Status

When the contact is activated (Room unoccupied), a “Moon (☾)” icon will be shown on the LCD and the thermostat will change the set-point temperatures of Cooling & Heating to be OSIC & OSIH (unoccupied cooling and heating, refer to Engineering Mode table for details.) When the contact is deactivated (Room is occupied), it will set the set-point to Temperature Setpoint (occupied setpoint).

BACnet Supervisor Control of Operating State

OSI contact detection can be disabled. In this case the room status should be set through BACnet communication using the BV1 object.


DI (Auxiliary Digital Input) Contact Status

When the DI contact is activated (Door/window open), an “Outdoor (🏠)” icon will be shown on the LCD and the thermostat will be stopped. i.e., heating/cooling outputs are turned off and the fan is stopped.

Disabling DI Contact Detection

DI contact detection can be turned off. In this case, the Door/Window status will become “closed” as default.

Fan Delay

When heating stops and the lowest fan speed is set to Stop, the fan will keep running for an additional 2 minutes before shutting off. While the 2-minute fan delay is active, the FAN () icon will be flashing.

After Hours Operation

This operation is available only if the thermostat on/off button is locked (disabled) and occupancy sensor control is disabled. After hours operation is normally initiated when the thermostat is in unoccupied state.

After hours can be initiated in 3 ways: 1) pressing the on/off button on the thermostat, 2) BACnet supervisor turning on BV1, or setting the AFHr parameter in engineering mode. When triggered, the thermostat controls to its normal setpoint for a number of minutes given by AV23 (Engineering mode AHrH). When this operation is initiated, “M (**M**)” icon will be shown. When the after hours timer counts down to zero, the thermostat returns to its normal unoccupied state.

If an after hours request is received while in occupied state, an internal timer will be activated – if the thermostat is commanded to go to unoccupied prior to the expiration of the timer, the thermostat will enter after hours mode for the time remaining on its after hours timer.

If the thermostat is in after hours mode and receives an occupied command, after hours mode will be cancelled and the thermostat will run in occupied mode.

Override Digital Outputs Status Operation

This series of thermostats provide objects for overriding outputs through BACnet communication if the BACnet supervisor requires this. The Lock object - “AV17” - is used for enabling/disabling override control. Objects “BV7~13” are used for overriding outputs. Please check the objects table respectively for details. Note that, when override control is set in AV17 all outputs will freeze in their current state waiting for supervisor commands. All outputs will return to their normal operation when override control in AV17 is reset.

Countdown timer function

1~24 hours settable countdown timer to turn off all (cooling, heating and Fan) control outputs after the time expires.

Sleep mode function

Raises the set-point temperature 2°C in 2 hours (0.5°C per 30 minutes) when this function is enabled.

Engineer Mode Operation

Engineering mode should only be used by trained personnel because it can substantially affect control results. To operate in engineering mode:

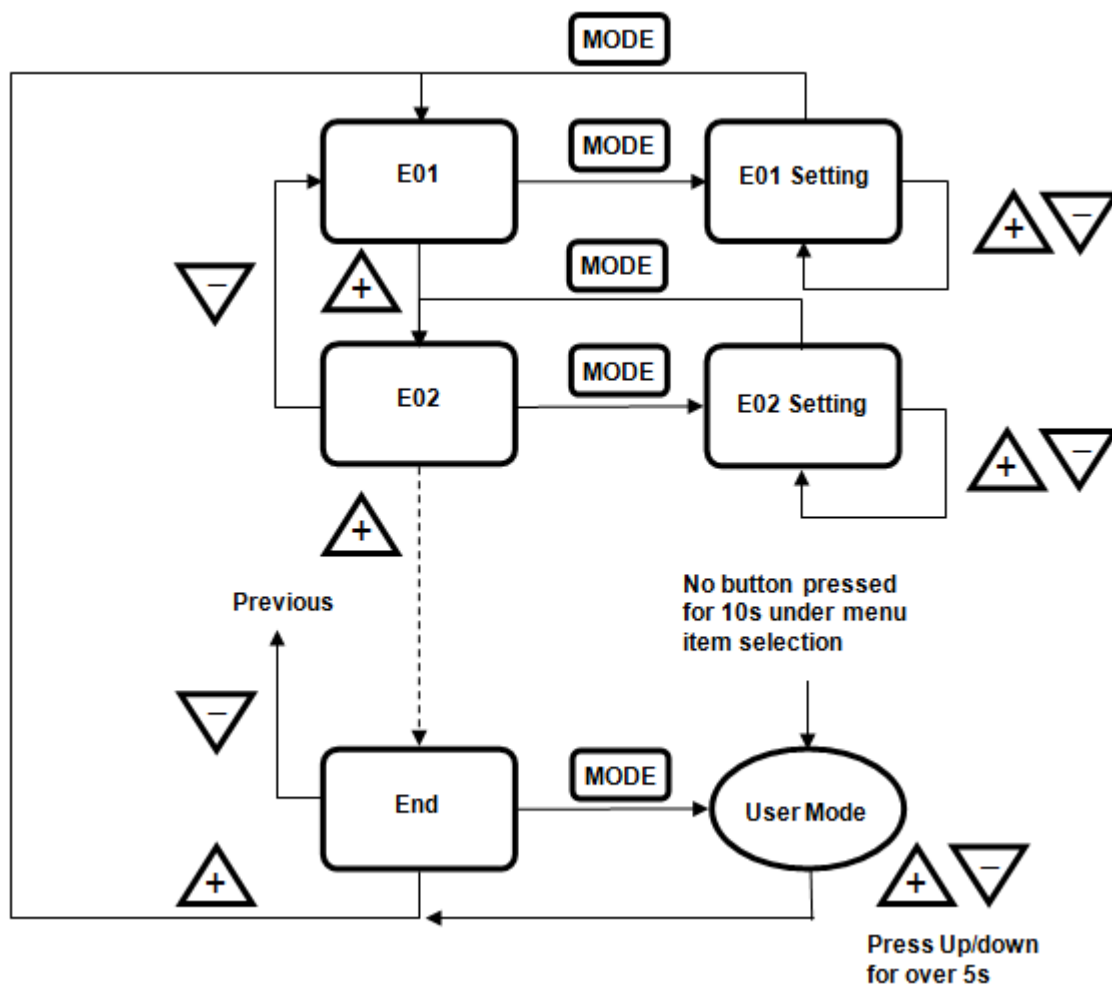
When thermostat is “ON”, press “Up” and “Down” buttons for over 5 seconds to enter into Engineer mode;

Press **UP** or **DOWN** button to rotate the menu item and press **MODE** button to enter into the item;

Press UP or DOWN button to change the setting and press MODE button to confirm the setting and return to menu item selection. If no button is pressed for 10 seconds, the display will go back to the menu item selection and then back to User mode with no change in settings.

To leave Engineer Mode, rotate till “End” and press **MODE** button or don't press a button for 10 seconds.

Engineer Mode Operation Flow Chart



Engineering Mode Menu Item Descriptions

Note: BACnet MSV objects duplicate many of the Engineering Mode functions but values are different. MSV values are 1-based while Engineering Mode values are 0-based. Example: Lowest Fan Speed value for “Stop” is 0 in Engineering Mode but is 1 for BACnet object MSV 4

Item	Mnemonic	Description	°C Type		°F Type		Step
			Default	Range	Default	Range	
1	db	Deadband	1.0	0~10.0	2.0	0~18.0	0.5 (°C/°F)
2	OSIC	Unoccupied(ESI) cooling set point	30.0	25.0~30.0	85	77.0~86.0	1.0 (°C/°F)
3	OSIH	Unoccupied(ESI) heating set point	18.0	10.0~22.0	65	50.0~72.0	1.0 (°C/°F)
4	I-t	Integral Time and Output Cycle Time	90	10~500	90	10-500	10 (Sec.)
5	C-do	Cooling or compressor Stages	1	0~2	1	0~2	1
6	H-do	Heating plus Aux. Heat Stages	1	0~3	1	0~3	1
7	SP-L	Low limit for temperature set point	18.0	0~50.0	65	32.0~122.0	1.0 (°C/°F)
8	SP-H	High limit for temperature set point	30.0	0~50.0	85.0	32.0~122.0	1.0 (°C/°F)
9	OFS	Current temperature offset	0.0	-10.0~10.0	0.0	-18.0~18.0	0.1 (°C/°F)
10	Pb	Proportional band or stage width	1.0	0~10.0	2.0	0~18.0	0.1 (°C/°F)
11	diFF	Stage differential	0.5	0.1~1.0	0.9	0.1~1.8	0.1 (°C/°F)
12	LOC	0~16383 Bit Definition --- Bit 0: Lock MODE button 1: Lock FAN button 2: Lock Up button 3: Lock Down button 4: Lock SET button 5: Lock On/Off button 6: Lock OSI detection 7: Lock Auxiliary DI detection 8: Lock the modification for communication parameters i.e. baud rate, MAC addr, and device instance 9: DOs set by T'stat(0) or BMS(1) 10: Occ/ Unocc Default Setting on Power Up (0: Occ; 1: Unocc)	0x00F3	0~0x1FFF	0x00F3	0~0x1FFF	1

		11: Timer (0:disable, 1: enable) 12: Sleep (0:disable, 1: enable) 13~15: Reserved *Bit Value 0: Unlock 1: Lock Examples: 0- Unlock all 1- Lock MODE Button 2- Lock Down Button 3- Lock MODE & Down Buttons ... 256- Lock the modification for communication parameters 512- DOs set by BMS 1024- Unoccupied 2048- Enable Timer 4096- Enable Sleep Resolution: 1					
13	OSI	ESI contact definition	0	0~1	0	0~1	0: N.O. 1: N.C.
14	OCC	Command occpied/ unoccpiied	0	0~1	0	0~1	0: Occ 1: Unocc.
15	AFHr	Initiate After Hour operation	0	0~1	0	0~1	0: No 1: Yes
16	rS	Present Temperature is getting from built-in temperature Sensor, remote temperature sensor, or assigned through communication	0	0~2	0	0~2	0: built-in 1: remote 2: assigned through communication
17	-SP-	Display present value of temperature or set-point for Normal Displaying	0	0-1	0	0-1	0: display PV 1: display SP
18	door	Door or Windows contact definition	0	0~1	0	0~1	0: N.O. 1: N.C.
19	LFAn	Lowest Fan speed in Auto fan mode	1	0~3	1	0~3	0: stop 1: low 2: Med. 3: Hi
20	FAns	Total Fan Stages	1	0~3	1	0~3	1
21	Baud**	Baud rate	38.4 (depends on Model Number.)	9.6 kbps 19.2 kbps 38.4kbps 57.6kbps 76.8kbps	38.4 (depends on Model Number.)	9.6 kbps 19.2 kbps 38.4kbps 57.6kbps 76.8kbps	
22	Addr**	MS/TP MAC address	1	0~AdrH (Default: 0~127)	1	0~AdrH (Default: 0~127)	1

23	devH**	Device instance no. - Hi bytes	600	0~4194	600	0~4194	1
24	devL**	Device instance no. - Low bytes	001	0~999 (if ID-H ≤ 4193) 0~302 (if ID-H = 4194)	001	0~999 (if ID-H ≤ 4193) 0~302 (if ID-H = 4194)	1
25	AdrH	Max_Master -- The highest allowable address for master nodes.	127	1~127	127	1~127	1
	type	Set Cooling/ Heating, 2/ 4 Pipes, Auto/ Manual Control Type	2	0~4	2	0~4	0: 2-Pipe, Cooling Only 1: 4-Pipe, Manual Cooling/ Heating Changeover 2: 4-Pipe, Auto Cooling/ Heating Changeover 3: 2-Pipe, Heating Only 4: 2-Pipe, Manual Cooling/ Heating Changeover
	AHrH	Maximum After Hours Time	60	0~240 Minutes	60	0~240 Minutes	10
26	tESt	Self-Diagnostic					
27	rSt	Reset all parameters as factory defaults					
28	End	Exit Engineer Mode					

** Note: 1. Changing these values needs to unlock modification for communication parameters in advance. Please refer to the parameter LOC(Lock, AV17) for details.
2. Device instance number = “devH” *1000 + “devL” = 0~4194302. ex. If “devH” is 600 and “devL” is 001, then the Device instance number = 600001.

BACnet Specification

Note: MSV objects duplicate many of the Engineering Mode functions but values are different. MSV values are 1-based while Engineering Mode values are 0-based. Example: Lowest Fan Speed value for “Stop” is 0 in Engineering Mode but is 1 for BACnet object MSV 4

Object name	Type & Instance	Description	Range and Definition	Default
Thermostat	Device 400001	Object_Identifier (R)		
		Object_Name (R,W)		BACnet Thermostat
		Vendor_Name		ASI Controls
		Vendor_Identifier (R)		162
		Model_Name (R)		BACiQ-FC/AC
		Description (R,W)		BACnet MS/TP Master Thermostat
		Max_Master (R,W)	1~127	127
OSI Contact Definition	BV 0	Occupancy Sensor Input Contact Definition	0: N.O. 1: N.C.	0
Occupancy Command	BV 1	Command Occupied/Unoccupied	0: Unoccupied 1: Occupied	1
After Hours Request	BV 2	Initiate After Hours Operation	0: No 1: Yes	0
PV-SP Displaying	BV 3	Display Present Value of Temperature or Set Point	0: Display PV 1: Display SP	0
Auxiliary DI Contact Definition	BV 4	Auxiliary Digital Input Contact Definition	0: N.O. 1: N.C.	0
On-Off Control	BV 5	Thermostat On/Off	0:Off, 1:On	1
Temperature Scale	BV 6	°C/ °F	0: °C 1: °F	1
Relay 1 Control	BV7	Relay 1 On/Off Control	0:Off, 1:On Note: This is writable only when the value of AV17 is equal or larger than 512.	R
Relay 2 Control	BV8	Relay 2 On/Off Control	0: Off, 1: On Note: This is writable only when the value of AV17 is equal or larger than 512.	R

Object name	Type & Instance	Description	Range and Definition	Default
Relay 3 Control	BV9	Relay 3 On/Off Control	0: Off, 1: On Note: This is writable only when the value of AV17 is equal or larger than 512.	R
Relay 4 Control	BV10	Relay 4 On/Off Control	0: Off, 1: On Note: This is writable only when the value of AV17 is equal or larger than 512.	R
Relay 5 Control	BV11	Relay 5 On/Off Control	0: Off, 1: On Note: This is writable only when the value of AV17 is equal or larger than 512.	R
Relay 6 Control	BV12	Relay 6 On/Off Control	0: Off, 1: On Note: This is writable only when the value of AV17 is equal or larger than 512.	R
Relay 7 Control	BV13	Relay 7 On/Off Control	0: Off, 1: On Note: This is writable only when the value of AV17 is equal or larger than 512.	R
OSI Status	BI 0	Status of Occupancy Sensor Input	0: Not activated 1: activated	R
Auxiliary DI Status	BI 1	Status of Auxiliary Digital Input	0: Not activated 1: activated	R
Cooling/ Heating Output Status	BI 2	Status of Cooling/ Heating Control Output	0: Off 1: On	R
Relay 1 Status	BI 3	Status of Relay 1	0:Off, 1:On	R
Relay 2 Status	BI 4	Status of Relay 2	0:Off, 1:On	R
Relay 3 Status	BI 5	Status of Relay 3	0:Off, 1:On	R
Relay 4 Status	BI 6	Status of Relay 4	0:Off, 1:On	R
Relay 5 Status	BI 7	Status of Relay 5	0:Off, 1:On	R
Relay 6 Status	BI 8	Status of Relay 6	0:Off, 1:On	R
Relay 7 Status	BI 9	Status of Relay 7	0:Off, 1:On	R
Occupancy Status	BI10	Occupied/ Unoccupied Status	0:Unoccupied 1:Occupied	R
Control Bypass Status	BI11	Control Bypassed due to Window/door open	0:Normal 1:Bypassed	R

Object name	Type & Instance	Description	Range and Definition	Default
Temperature Setpoint	AV 0	Setpoint Temperature (SP)	°C :0.0 ~ 50.0 °F :32.0~122.0°F Resolution: 0.5°C/°F (Note: High limit defined by AV13, Low limit defined by AV12.)	73.0°F 23.0°C
Temperature Override	AV 1	Assigned Current Temperature	-99.9 ~ 999.9 Resolution: 0.1°C/°F	-3000
Timer Off	AV 2	Timer Off	0~24 if timer Off available; 0~0 if unavailable Resolution: 1	0
Hr-Running Time	AV 3	Running Time of Valve (Hr.)	0~65535 (Hr.) for reading but 0~30000 (Hr.) for writing. Resolution: 1	0
M-Running Time	AV 4	Running Time of Valve (M.)	0~59 (Minute) Resolution: 1	0
Sec-Running Time	AV 5	Running Time of Valve (Sec.)	0~59 (sec.) Resolution: 1	0
Deadband	AV 6	Deadband	°C :0.0~10.0 °C °F :0.0~18.0 °F Resolution: 0.5	2.0°F 1.0°C
Unoccupied Cool Setpoint	AV 7	Unoccupied Cooling Setpoint	°C :20.0~30.0 °C °F : 77.0~86.0 °F Resolution: 1	85.0°F 30.0°C
Unoccupied Heat Setpoint	AV 8	Unoccupied Heating Setpoint	°C :10.0~22.0 °C °F : 50.0~72.0 °F Resolution: 1	65.0°F 18.0°C
Integral-Cycle Time	AV 9	Integral Time and Output Cycle Time	10-500 (sec.) Resolution: 10	90
Cooling Stages	AV 10	Set Cooling or compressor Stages	0~2	1
Heating Stages	AV 11	Set Heating plus Aux. Heat Stages	0~3	1
Low Setpoint Limit	AV 12	Low Limit for Setpoint Temperature	°C : 0.0 ~ 50.0°C °F : 32.0~122.0°F Resolution: 1	65.0°F 18.0°C
High Setpoint Limit	AV 13	High Limit for Setpoint Temperature	°C : 0.0 ~ 50.0°C °F : 32.0~122.0°F Resolution: 1	85.0°F 30.0°C
Temperature Offset	AV 14	Offset for Current Temperature	°C :-10.0~10.0 °C °F : -18.0~18.0 °F Resolution: 0.1	0

Object name	Type & Instance	Description	Range and Definition	Default
Proportional Band- Stage Width	AV 15	Proportional Band or Stage Width	°C :0.0~10.0 °C °F : 0.0~18.0 °F Resolution: 0.1	2.0°F 1.0°C
Stage Differential	AV 16	Stage Differential	°C :0.1~1.0 °C °F : 0.1~1.8 °F Resolution: 0.1	0.9°F 0.5°C

Lock	AV 17	Lock	<p>0~16383 Bit Definition --- Bit 0: Lock MODE button (1) 1: Lock FAN button (2) 2: Lock Up button (4) 3: Lock Down button (8) 4: Lock SET button (16) 5: Lock On/Off button (32) 6: Lock OSI detection (64) 7: Lock Auxiliary DI detection (128) 8: Lock the modification for communication parameters i.e. baud rate, MAC addr, and device instance (256) 9: DOs set by T'stat(0) or BMS(1) (512) 10: Occ/ Unocc Default Setting on Power Up (0: Occ; 1: Unocc) (1024) 11: Timer (0:disable, 1: enable) (2048) 12: Sleep (0:disable, 1: enable) (4096) 13~15: Reserved</p> <p>*Bit Value 0: Unlock 1: Lock</p> <p>Examples: 0- Unlock all 1- Lock MODE Button 2- Lock Down Button 3- Lock MODE & Down Buttons ... 256- Lock the modification for communication parameters 512- DOs set by BMS 1024- Unoccupied 2048- Enable Timer 4096- Enable Sleep</p> <p><i>For combinations, add the number in parentheses for each bit to be locked. The sum total is the new lock value.</i></p> <p>Resolution: 1</p>	0x00F3
Set Control Type	AV 18	Set Cooling/ Heating, 2/ 4 Pipes, Auto/ Manual Control Type	<p>0: 2-Pipe, Cooling Only 1: 4-Pipe, Manual Cooling/ Heating Changeover 2: 4-Pipe, Auto Cooling/ Heating Changeover 3: 2-Pipe, Heating Only 4: 2-Pipe, Manual Cooling/ Heating Changeover</p>	2

Object name	Type & Instance	Description	Range and Definition	Default
Set Fan Stages	AV 19	Set Total Fan Stages	0~3	1
MAC Address	AV 20	MAC Address	0~127(confined by Max master) Resolution: 1 (Note: Changing this value needs to unlock modification for communication parameters in advance. i.e AV17=0~255 or 512~768. Please refer to LOCK(AV17) for details)	1
Device Instance	AV 21	Device Instance	0~4194302 (Note: Changing this value needs to unlock modification for communication parameters in advance. i.e AV17=0~255 or 512~768. Please refer to LOCK(AV17) for details)	400001
After Hours Timer	AV22	After Hours Countdown Timer	0~Max After Hours Time Resolution: 1 (minutes)	0
Max After Hours Time	AV23	Set Maximum After Hours Time	0~240 minutes Resolution: 5 (minutes)	60
Fan Mode	MSV 0	Fan Mode	1~ (number of fan stages + 1) 1: auto 2: low 3: med. 4: hi	1
System Mode	MSV 1	Working Mode: Heat, Cool or Ventilation	1~4 but not all selectable depending on configuration and working status. The System Mode is 1 or 3 available if working on cooling; the System Mode is 2 or 4 available if working on heating. 1: cool mode 2: heat mode 3: Ventilation @ cool mode 4: Ventilation @ heat mode	1

Object name	Type & Instance	Description	Range and Definition	Default
Sleep	MSV 2	Sleep	1~6 if available. 1~1 if unavailable Note: 1: off, 2: 0 hr. sleep 3: 0.5 hr. sleep 4: 1 hr. sleep 5: 1.5 hrs. sleep, 6: 2 hrs. sleep	1
Temperature Source	MSV3	Select Present Temperature source: Built-in sensor, Remote sensor, or Communication.	1: built-in temp. sensor 2: remote temp. sensor 3: assigned through communication	1
Lowest Fan Speed	MSV 4	Lowest Fan Speed in Auto Fan Mode during Occupied	1~ (max. fan stages + 1) 1: stop 2: low 3: Med. 4: Hi.	2
Fan Speed Status	MSV 5	Fan Speed Status	1~ (max. fan stages + 1) 1: Stop 2: Low 3: Med 4: Hi	R
Baud Rate	MSV 6	Baud Rate	1: 9600 bps 2: 19200 bps 3: 38400 bps 4: 57600 bps 5: 76800 bps (Note: Changing this value needs to unlock modification for communication parameters in advance. i.e AV17=0~255 or 512~768. Please refer to LOCK(AV17) for details)	3
Current Temperature	AI 0	Current Temperature	-99.9 - 999.9 degC and degF	R

Object name	Type & Instance	Description	Range and Definition	Default
Temp SP Status	AI 1	Temperature Setpoint (SP) Status (Note: This is active setpoint for the current operating state.)	-99.9 - 999.9 degC and degF	R
Wall Sensor	AI 2	Wall Sensor Value	-99.9 - 999.9 degC and degF	R
Remote Sensor	AI 3	Remote Sensor Value	-99.9 - 999.9 degC and degF	R
AI 3 Value	AI 4	Not used		
Current Humidity	AI 5	Not used		
Humidity SP Value	AI 6	Not used		
Current pressure	AI 7	Not used		
Pressure SP Value	AI 8	Not used		

Network Diagram

