Smart Equipment™ Controls Quick Start Guide

General

Before you begin configuring your unit controller ensure that you understand the application and identify the equipment configuration.

- Constant Volume
- Variable Air Volume (VAV)
- Economizer
- Hot Gas Reheat
- Dual Stage
- Four Stage
- Heat Pump
- Thermostat Controls
- Network Sensor Control
- Space Sensor Control
- Discharge Air Control

Understanding the LCD

After you apply power to your rooftop unit (RTU), a start-up sequence begins on the unit control board (UCB) LCD. When the controller is ready, the screen is blank if no faults are present. Use the joystick and the two push buttons below the LCD, to navigate through the menus. See the following figure.

**Figure 1: Joystick and push buttons on the UCB**

Move the joystick up and down to move the > cursor and scroll through the selections in the active section of the menu.

Each menu selection is either a sub-menu or a property. You can perform the following actions.

- Press ENTER to display the items in the sub-menu or the values of the selected property.
- Press ENTER to display the current value of the selected property.
- Move the joystick up or down to display the values of other properties.

See the following figure and Smart Equipment™ 4.0 UCB navigation examples.

Figure 2: UCB top level menu
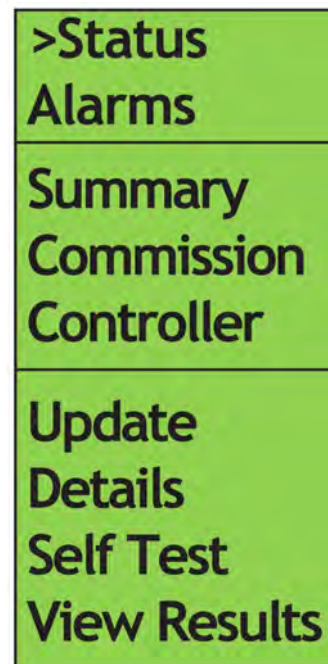
⚠ WARNING

Unit control boards with part numbers SE-SPU1001-5, SE-SPU1011-5, SE-SPU1002-5, SE-SPU1012-5 have a different hardware component than previous board versions. This new component does not allow down-grading of these boards to any firmware older than 3.3.1.186. If a user attempts to install an older version, the message `Info 1025` displays on the LCD screen to indicate that it cannot accept an older firmware version.
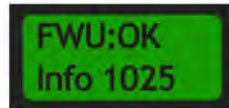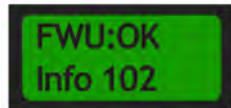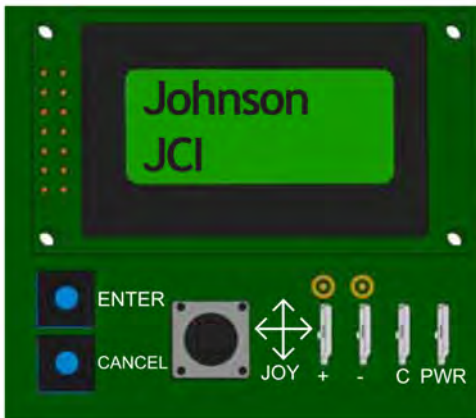
Start-up sequence

When you apply power to the unit the UCB begins the following start-up sequence. During the start-up sequence, the joystick, ENTER button, and CANCEL button do not function.

1. The LCD scrolls the text `Johnson Controls` on the top line and `JCI` on the bottom line.

Figure 3: Start-up display

2. The display backlight and green power LED light and remain lit as long as power is applied to the C and 24V terminals.

3. The red fault LED lights, goes off briefly, and then flashes throughout the start-up sequence.

4. The green SA bus LED lights briefly.

5. The LCD shows a countdown on the top line.

Figure 4: Start-up countdown
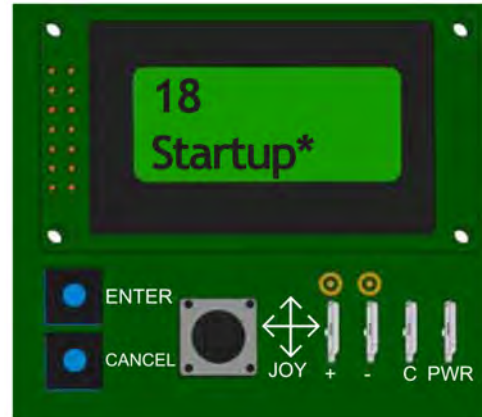
6. After approximately 15 seconds, the green SA bus LED does one of the following.

   - Lights to indicate that the UCB has not established communication and is awaiting communication from SA bus devices

   - Flashes to indicate the UCB established communication with SA bus devices

After the start-up sequence finishes in 90 to 120 seconds, the display shows the current operating status. For example, `idle`, `startup delay`, or `cooling` on both lines if no alarm is active. The red fault LED stops flashing and turns off. The joystick, ENTER button, and CANCEL button are operational.

Commissioning

The following figure shows the commissioning view second level menus. The commissioning view consists of five main menus and several sub-menus.

Figure 5: Commissioning view: second level menus
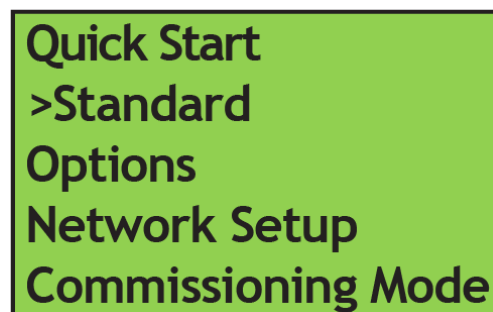
Commissioning view sub-menus

Your equipment configuration determines which menus appear in the commissioning view.

- Use the joystick to move between the menu options.

- Press ENTER to select an option.

See SE UCB display menu guide 3.4 for the outline of the Commission menu and a detailed table of all menus, sub-menus, and properties.

Validating your configuration

Use the **Details** > **Service** menu to ensure that your configuration parameters are correct. This view shows the input values for each input. You can view the sensors and coil sensors values.

If no input value appears, the display shows `No Input`. This is a convenient way to ensure that all your configuration parameters are set and reading properly.

» **Important:** Save your configuration parameters to a flash drive using the **Update** > **Backup** menu before you perform a firmware update.

Connecting your flash drive for a firmware update

1. Connect your flash drive to the USB port on the UCB. `USB: Wait` appears on the LCD. See the following figure.

Figure 6: USB connection display
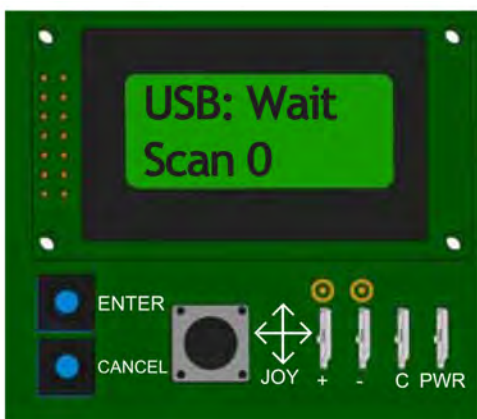
Note

ⓘ **Note:** If you do not see `USB: Wait` after you connect your flash drive to the UCB, ensure that it is properly connected. If it is properly connected and you do not see `USB: Wait`, your flash drive may not be compatible with the UCB or is defective.

2. Wait a few seconds, the top line of the LCD displays `USB: OK`.

The Scan number indicates the files and folders in the top level of the flash drive that are compatible with the UCB.

Figure 7: USB scan
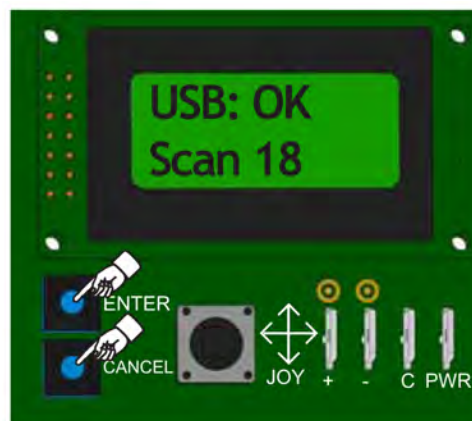
3. Keep the flash drive connected to the UCB after the scan completes.

You can press the ENTER button, CANCEL button, or move the joystick up or down to navigate through the display menu.

Performing a system configuration backup

1. Connect your flash drive to the USB port on the UCB.

2. When `USB OK` appears on the LCD, use the joystick on the UCB to select **Update** and press ENTER.

3. Select **Backup** and press ENTER. See the following figure.

Figure 8: Backup menu

Figure 9: Backup complete

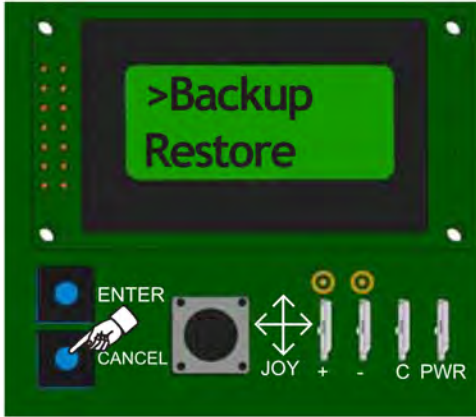`BKP: Wait` appears while the backup is in progress. During the backup procedure, the colon (:) flashes on the top line and the percentage increases on the bottom line of the display. The backup completes in approximately 30 seconds.

4. When `BKP:OK` appears on the LCD and the percentage shows `100`, you may remove the flash drive from the USB port.

After the backup completes, a comma separated value (.csv) restoration file is created in the top level of the flash drive. The file name is drawn from the date and time settings in the UCB at the time you create the file. The restoration file size is generally less than 30 KB. The following figure shows an example of the .csv file name structure.

Figure 10: Restoration file name structure

Use the *Upgrade* > *Restore* menu to restore the backup file to the unit and retrieve the configuration after you perform an upgrade or make setpoint changes.

Use the partial cloning feature to take the configuration parameters from the backup file from one unit and update the data on another unit. Use the *Upgrade* > *Part Clone* menu on the unit that you want to update.

ⓘ **Note:** Only use the Full Cloning feature when you have to replace the UCB board.

Updating Smart Equipment™ software

The following sections describe the procedures for updating Smart Equipment™ software.

Auto update - FWU: firmware update

In the release of version 3.3.1.186, an auto update feature was added called firmware update (FWU). This feature determines if there are any mismatches in the firmware versions on all applicable control boards on the unit. For example, on the Economizer, FDD1, FDD2, or 4-stage boards.

ⓘ **Note:** If you use version 3.3.1.186, you must perform the firmware update twice back to back.

If there are any mismatches, the auto update process begins and automatically pushes the 4.0.0.XXXX version to all applicable boards on the unit. This may take 7 to 30 minutes depending on the number of control boards.

ⓘ **Note:** Do not use the joystick, ENTER button, or CANCEL button during the auto update process.

The auto update feature required a change to the memory size on the UCB. You can install the 4.0.0.XXXX firmware revision in an older board with a 4 MB memory, but it cannot perform the auto update function.

ⓘ **Note:** REV. G indicates a 4 MB board. REV. H indicates a 8 MB board.

If the auto update fails for any reason, the LCD displays `Firmware mismatch` and the fault LED blinks. If this occurs, you must manually update the firmware. See Performing a manual update.

Loss of power

If loss of power occurs during the auto update process, the UCB re-attempts the update when the power is restored. The following sequence is performed.

• 90 seconds after the normal startup sequence is complete the UCB determines whether there are still firmware mismatches.

- The UCB attempts the auto update up to a maximum of five times.

If the auto update is unsuccessful after five attempts, you must manually update the firmware. See Performing a manual update.

Performing a manual update

If you want to update a 3.1 level board (8 MB) with an older 3.0 level firmware, you must perform the update twice.
You require a flash drive with the appropriate software file ending in .pkg to perform the update. You must save the file at the top level of the flash drive.
See Connecting your flash drive for a firmware update.

Figure 11: Display update

1. Connect your flash drive to the USB port on the UCB.

2. When `USB OK` appears on the LCD, use the joystick on the UCB to select **Update** and press ENTER.

    The first line displays `View Ver`.

    a. If you want to verify the version in the UCB, press ENTER. The current version is displayed.
    b. Press CANCEL to return to the Update menu.

3. Use the joystick to select **Backup** and press ENTER.

4. When the top line of the display shows `BKP: OK` and the second line shows `100`, press CANCEL to return to the Update menu and press ENTER.

5. Use the joystick to select **LoadFirm** and press ENTER.

6. When the list of firmware versions appears, select **4.0.0.XXXX.secusb.pkg** or the firmware version required and press ENTER.

If the firmware file is not displayed, use the joystick to select the appropriate file.

7. When `Confirm?` appears on the LCD, press ENTER.

    The firmware may take five to 15 minutes to load, `FWU WAIT` appears on the LCD screen. The UCB reboots during the process and the LCD goes blank. When the LCD displays the main menu and the startup timer ends, the upload is finished.

8. Use the joystick on the UCB to select **Update** and press ENTER.

9. Select **Restore** and press ENTER.

10. Select **RTUxxxx.csv** and press ENTER.

11. When `Confirm?` appears on the LCD, press ENTER.

    The LCD displays `RTR:OK`and reboots. When the startup timer ends, the configuration is restored.

When the firmware update is complete, proceed with parameter checks.

Viewing the version of the economizer

The economizer board must be connected to the system to view the version.

1. Use the joystick on the UCB to select **Contrler** and press ENTER.

    The first line displays `Firm`.

Figure 12: Display update

2. Use the joystick to select **SysCntlrs** and press ENTER.

    The first line displays `Misc`.

3. Use the joystick to select **Econ** and press ENTER.

    The first line displays `EconMainVer`.

4. Press ENTER.

   The second line displays the version of software installed in the economizer.

Smart Equipment™ 4.0 UCB navigation examples

The following section details the navigation and viewing of the LCD display screen on the Smart Equipment™ control. The control is installed in various commercial Ducted Systems packaged and split system equipment. The following information provides a step-by-step demonstration on how to navigate the basic status menu and how to change basic configuration settings. The navigation steps outlined in this demonstration apply to most menus in the Smart Equipment™ control.

Understanding the Local LCD
After you apply power to your Rooftop Unit (RTU), a start-up countdown begins on the Unit Control Board (UCB) LCD. When the controller is ready, the screen is blank because no faults are present. Use the joystick and the two push buttons below the LCD, to navigate through the menus.

Step 1 - After the start-up countdown is complete the first screen displayed is the "Startup Delay" screen. Move Joystick. Scroll down to "Details" then press "ENTER".

Step 2 - Scroll down to "Econ" and press "ENTER".

Step 3 - "Setup and Service" will now appear. Press "ENTER".

Step 4 - Scroll down to "Econ-MinPos" then press "ENTER".

Step 5- To adjust the minimum position percentage move the joystick to the right to increase and to left decrease. Then Press "ENTER". **WAIT 5-7 SECONDS FOR VALUE ONSCREEN TO UPDATE!**

Toggle Left to Decrease ◀
Toggle Right to Increase ▶

Screen Will Flash

DOWN   UP
◀   ▶

Press the "Cancel" button to exit each menu level. Repeatedly pressing "Cancel" returns the menu to the first "Status, Alarms" screen.

Press the CANCEL button multiple times to exit each menu level. When the LCD returns to the `Status, Alarms` display the next demonstration can begin. This demonstration shows the commissioning menu.

Step 1 - After the start-up countdown is complete the first screen displayed is the "Startup Delay" screen. Move Joystick. Scroll down to "Details" then press "ENTER".

Joy Stick Down

Update
>Details

Press Enter

Step 2 - Scroll down to "Htg" and press "ENTER".

Step 3 - "Setup and Service" will now appear. Press "ENTER".

Joy Stick Down

Clg
>Htg

Press Enter

>Setup
Service

Press Enter

Step 4 - press "ENTER" to select "Htg-En".

Joy Stick Down

>Htg-En
#HtgStgs

Press Enter

Step 5- To change the selection move the joystick to the right and choose either "YES" or "NO". Then Press "ENTER". **WAIT 5-7 SECONDS FOR VALUE ONSCREEN TO UPDATE!**

Screen Will Flash

Htg-En
No

These few pages provide a simple demonstration how to navigate the menu's of the Smart Equipment™ control containing Version 4.0 firmware. Please utilize this document along with the additional information in the Users Guide and detailed navigation menu to adjust the control to customer preferences or job specifications.

NOTE: IF OPERATING THE EQUIPMENT WITH A THERMOSTAT, THE UCB SETPOINTS AND PARAMETERS SHOULD NOT REQUIRE ALTERATION; HOWEVER, THERE MAY BE THE CASE WHERE MINIMUM OUTSIDE AIR, LEAD-LAG OR OTHER CUSTOM SETTINGS ARE REQUIRED. PLEASE READ THIS DOCUMENT IN DETAIL TO UNDERSTAND THE IMPLICATIONS OF MAKING CHANGES BEFORE PROCEEDING. IT IS STRONGLY RECOMMENDED THAT A BACKUP OF PARAMETER SETTINGS BE SAVED ON A USB DRIVE BEFORE MAKING ANY MAJOR CHANGES TO THE CONTROL!

Figure 13: basic_unit_nav_40

SE UCB DISPLAY MENU GUIDE 4.0

>Status

Press 1x
ENTER
CANCEL
JOY + - C PWR
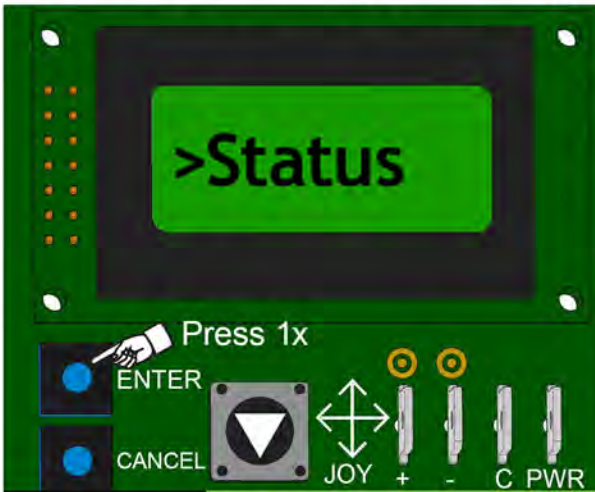
MENU	Status☞	
SUB MENU	Thermostat☞	
Y1-TSTAT	OFF	(24VAC INPUT TO Y1 TERM)
Y2-TSTAT	OFF	(24VAC INPUT TO Y2 TERM)
Y3-TSTAT	OFF	(24VAC INPUT TO Y3 TERM)
Y4-TSTAT	OFF	(24VAC INPUT TO Y4 TERM)
W1-TSTAT	OFF	(24VAC INPUT TO W1 TERM)
W2-TSTAT	OFF	(24VAC INPUT TO W2 TERM)
W3-TSTAT	OFF	(24VAC INPUT TO W3 TERM)
G-TSTAT	OFF	(24VAC INPUT TO G TERM)
OCC-TSTAT	ON	(T-STAT INPUT ONLY)

MENU	Status☞	
SUB MENU	▼SmokeCtrl☞	
OPRPURGECMD	FALSE	(ACTIVEPURGECMD)
PURGECMDSRC	RATEMP	(PURGECMDSOURCE)
PURGE	FALSE	(PURGE INPUT STATUS)
NETPURGE	FALSE	(PURGECOMMANDSTATUS)
SD	NORMAL	(SD 24 VAC INPUT STATUS)

Legend

DEFAULT SETTINGS IN RED	BLUE = UCB CONDITIONAL PARAMETER
TAN = ECONOMIZER BOARD PRESENCE	DKGREEN = ECONOMIZER BOARD PRESENCE + ANOTHER CONDITION

▼▲◄► Joystick navigation
☞Press Enter 1 time
☞▼Press Enter Scroll Down
Press Cancel to return
to Previous Menu

MENU	Status☞	
SUB MENU	▼Status☞	
UNIT-S	IDLE	(UNIT STATUS)
ECON-S	DISABLED	(ECONOMIZER STATUS)
EXF-S	OFF-IDLE	(EXHAUST FAN STATUS)
FAN-S	OFF-IDLE	(FAN STATUS)
HGR-S	OFF-IDLE	(HOT GAS REHEAT STATUS)
CLG-S	OFF-IDLE	(COOLING STATUS)
DFS	NORMAL	(DIRTY FILTER SWITCH)
UCB24VAC FOROUTP	.3VAC	(UCB 24VAC INPUT)

MENU	Status☞	
SUB MENU	▼SysCntlrs	
ECONCNTLR	NOT PRESENT	(ECON BRD COMM STATUS)
4STGCNTLR	NOT PRESENT	(FC BUS BACNET NETWORK ADDRESS)
FDDMCNTLR	NOT PRESENT	(REFR CIRC 1-2 STATUS)
FDDSCNTLR	NOT PRESENT	(REFR CIRC 3-4 STATUS)

>Alarms

Press 1x
ENTER
CANCEL
JOY + - C PWR
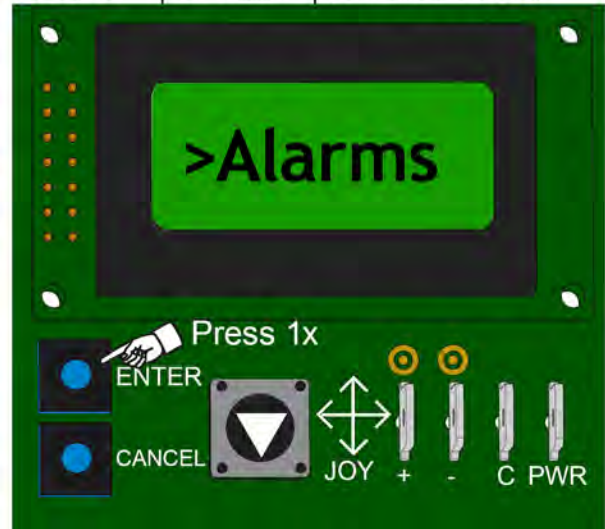
MENU	▼Alarms☞	
NO EVENTS	(NO ACTIVE ALARM)	
ALARM DESCRIPTION	(MOST RECENT ALARM)	
ALARM DESCRIPTION	(2ND MOST RECENT ALARM)	
ALARM DESCRIPTION	(3RD MOST RECENT ALARM)	
ALARM DESCRIPTION	(4TH MOST RECENT ALARM)	
ALARM DESCRIPTION	(5TH MOST RECENT ALARM)	

>Summary

Press 1x
ENTER
CANCEL
JOY + - C PWR
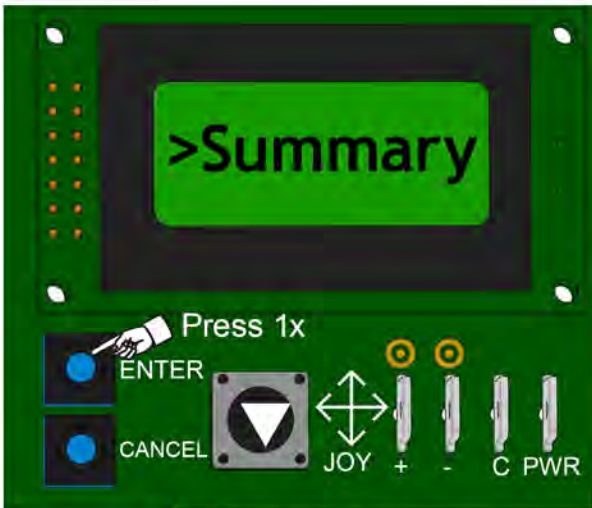
MENU	▼Summary	
SUB MENU	☞Sensors	
SUB MENU	☞Operational Mode☞	
OPROAT	73.0 F	(OPERATIONAL OUTDOOR AIR TEMPERATURE)
OPRST	73.0 F	(SPACE TEMPERATURE IN USE)
OPRSSO	.0 F	(SPACE SETPT OFFSET IN USE)
OPRSH	49.6 %H	(SPACE HUMIDITY IN USE)
OPROAH	19%H	(OA HUMIDITY IN USE)
OPRIAQ	477PPM	(IAQ IN USE)
OPROAQ	990PPM	(OUTDOORAIRQUALITY IN USE)
OPRPURGECMD	FALSE	(ACTIVEPURGECMD)

MENU	▼Summary	
SUB MENU	☞Sensors☞	
SUB MENU	▼Sensors☞	
SAT	(60.7 F)	(S A TEMP THERMISTER INPUT)
RAT	(73.0 F)	(R A TEMP THERMISTER INPUT)
OAT	73.0 F	(UCB OAT THERMISTORINPUT)
OATSRC	LOCAL INPUT	(OUTDOORAIRTEMP SOURCE)
ST	69.9 F	(SPACE TEMPERATURE INPUT)
STSRC	NETWORK SENSOR	(SPACE TEMPERATURE SOURCE)
STALARMOFFSET	(5 F)	(SPACE TEMPERATURE ALARM SETPOINT OFFSET)
STALARMDELAY	(60MIN)	(SPACE TEMPERATURE ALARM TIME DELAY)
SSO	.0 F	(SPACE TEMP SETPOINT OFFSET INPUT)
SSOSRC	NETWORK SENSOR	(SPACE TEMPERATURE SETPOINT OFFSET SOURCE)

MENU	▼Summary	
SUB MENU	☞▼Sensors☞	
SUB MENU	▼Sensors☞	
SSORANGE	(3.0 F)	(SPACE TEMPERATURE SETPOINT OFFSET RANGE)
RAH	79.4 %H	(SPACE HUMIDITY RAH INPUT)
SHSRC	LOCAL INPUT	(SPACE HUMIDITY SOURCE)
OAH	50.2 %H	(OUTDOOR AIR HUMIDITY INPUT)
OAHSRC	LOCAL INPUT	(OUTDOOR AIR HUMIDITY SOURCE)
IAQ	477PPM	(IAQ 0-10 VDC INPUT)
IAQSRC	LOCAL INPUT	(INDOOR AIR QUALITY SOURCE)
OAQ	477PPM	(OAQ 0-10VDC INPUT)
OAQSRC	LOCAL INPUT	(OUTDOOR AIR QUALITY SOURCE)
PURGECMDSRC	RATEMP	(PURGECMDSOURCE)
SAH	49%H	(SAH 0-10 VDCINPUT)
MAT	70 F	(MIXED AIR TEMPERATURE)
BLDGPRES	.095"/W	(BUILDING STATIC PRESSURE)
DCTPRS	1.50"/W	(DUCTPRES 0-5VDC INPUT)

MENU	▼Summary	
SUB MENU	▼Unit☞	
NAME	RTUxxxx	(14 CHARACTER MAX)
MODEL#	RTUxxxxx	(14 CHARACTER MAX)
SERIAL#	DEFAULT_SERIAL	(14 CHARACTER MAX)
MODELNAME		(MODEL NAME)
UNIT-S	IDLE	(UNIT STATUS)
UNITEN	ENABLE	(UNIT ENABLE)
HDWRRESET	NO	(HARDWARE RESET)
RESETLO	OFF	(RESET LOCKOUTS)

▼▲◀▶ Joystick navigation
☞Press Enter 1 time
☞▼Press Enter Scroll Down
Press Cancel to return
to Previous Menu

Legend

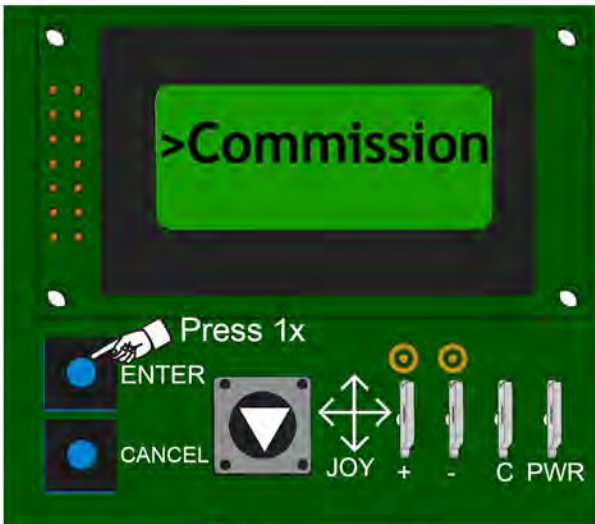| DEFAULT SETTINGS IN RED | BLUE = UCB CONDITIONAL PARAMETER |
| TAN = ECONOMIZER BOARD PRESENCE | DKGREEN = ECONOMIZER BOARD PRESENCE + ANOTHER CONDITION |

>Commission

Press 1x
ENTER
CANCEL
JOY + - C PWR

MENU	▼Commission	
SUB MENU	⮟Quick Start⮟	
#ClgStgs	4	Number of Cooling Stages Installed
#HtgStgs	3	Number of Heating Stages Installed
#HtPumpStgs	0	Number of Heat Pump Stages Installed
#RefrigSys	4	Number of Refrig Systems Installed
FanCtl-Type	Single Speed	Fan Control Type
Tstat-Only	Yes	Thermostat Only Control Enabled
FanOnOcc	Yes	Continuous Fan Operation in Occupied Mode
Econ-MinPos	%	Economizer Minimum Position Setpoint
SAT	deg F	Supply Air Temperature
RAT	deg F	Return Air Temperature
OAT	deg F	Outdoor Air Temperature Input
Clg-S	Off-Idle	Cooling Status
Htg-S	Off-Idle	Heating Status
Clg-En	Yes	Cooling Mode Enabled For Operation
Unique Equipment Identifier	Standard	Unique Equipment Identifier

MENU	▼Commission	
SUB MENU	⮟Standard⮟	
OccMode	Schedule	Occupancy Mode

MENU	▼Commission	
SUB MENU	⮟Standard⮟	
Tstat-Only	Yes	(T-Stat Input Only)
Clg-En	Yes	(Cooling Enabled/Disabled)
#ClgStgs	4	(Cooling Enabled/Disabled)
Htg-En	Yes	(Heating Enabled/Disabled)
#HtgStgs	3	(Number of Heating Stages Installed)
Econ-En	Yes	(Permit Free Cooling Operation)
Econ-MinPos	20%	(OccEconoMinPos)
LowSpeedFan-MinPos	25%	(AI-In 0-10vdc Input)
FanOnOcc	Yes	(CV ConstantFanOccupied Mode)
SATCoolLimit-En	Yes	(Enable SAT Limit)
SATCoolLimit-Sp	50 F	(SAT Limit SetPt)
ClgOATCutout-En	Yes	(LowAmbComp LO)
ClgOATCutout	45 F	(LoAmbCompLO StPt)
Unique Equipment Identifier	Standard	Unique Equipment Identifier

MENU	▼Commission	
SUB MENU	⮟▼Options⮟	
FanCtl-Type	Single Speed	(ID Blower Type)
ExFType	None	(Power Exh Fan mode selection)
#RefrigSys	4	(#Refrig Circuits)
LowAmb-En	Yes	(Low Ambient Enabled)
LeadLag-En	No	(EqualCompRuntime)
HGP-Inst	No	(Hot Gas Bypass Installed)
Htg-En	Yes	(Heating Enabled/Disabled)
Htg-Type	Staged	(Heating Control Method)
SATHtgLimit-En	Yes	SAT Air Temp Limit for Heating Enabled
SATHtgLimit-Sp	140 F	SAT Air Temp Limit For Heating Setpoint
HtgOATCutout-Sp	75 F	Outdoor Air Temp Heating Cutout Setpoint
APSSetup	None	Air Proving Switch Setup
DFSInst	Yes	Dirty Filter Switch Installed
DVent-Mode	Yes	Demand Ventilation Mode of Operation
HGR-En	No	Hot Gas Reheat Enabled For Operation
MornW-En	No	Morning Warmup Enabled

MENU	▼Commission	
SUB MENU	☞▼Options☞	
#HTPUMPSTGS	0	NUMBER OF HEAT PUMP STAGES INSTALLED
LOWAMBFANPRE-RUNCOOL	60SEC	LOW AMBIENT FAN PRE-RUN TIME FOR COOLING
PIDTUNRST	FALSE	PID TUNING RESET
LOWAMBSTART	YES	LOW AMBIENT START
SZVAVEN	OFF	SZ VAV ENABLED
NETOCCTIMEOUTEN	DISABLE	NETWORK OCCUPANCY TIMEOUT ENABLE
NETOCCTIMEOUTTIME	15MIN	NETWORK OCCUPANCY TIMEOUT TIME
PRESSURIZENOTPURGE	No	PRESSURIZE INSTEAD OF PURGE
COOLDURINGHEATLIMIT	No	COOLING ALLOWED DURING HEAT LIMIT
FDDALARMEN	ENABLE	FDD ALARM ENABLE

MENU	▼Commission	
SUB MENU	☞▼Network Setup☞	
FCBUSMODE	WIRED	(FC BUS COMM MODE)
ADDRESS	4	(FCBUSBACNETNETWORKADDRESS)
DEVICEID	1	(DEVICE OID)
BAUDRATE	AUTO	(FC BUS BAUD RATE IN USE)
DEVNAME	UCBAPP	(FCBUSBACNETNTWRKNAME)
ENCODETYPE	ANSI X3.4 (US-ASCII)	BACNET ENCODING TYPE

MENU	▼Commission	
SUB MENU	☞▼Commissioning Mode☞	
COMMISSIONING MODE	ENABLE	(COMMISSIONING MODE)
COMMISHTIMEREMAINING	MINUTES	(COMMISSIONING TIME REMAINING)
EXTENDCOMMISHTIME	YES	(EXTEND COMMISSIONING TIME)
UNITEN	SHUTDOWN	(UNIT ENABLE)
FAN	ON	(SUPPLY FAN COMMAND)
FANVFD	%	(FAN % COMMAND)
C1	ON	(COMPRESSOR STAGE COMMAND 1)
C2	ON	(COMPRESSOR STAGE COMMAND 2)
C3	ON	(COMPRESSOR STAGE COMMAND 3)
C4	ON	(COMPRESSOR STAGE COMMAND 4)
CN-FAN	ON	(CONDENSER FAN 1)
CF2	ON	(CONDENSER FAN 2)
H1	ON	(HEATING STAGE COMMAND 1)

MENU	▼Commission	
SUB MENU	☞▼Commissioning Mode☞	
H2	ON	(HEATING STAGE COMMAND 2)
H3	ON	(HEATING STAGE COMMAND 3)
HGR	%	(HOT GAS REHEAT)
HOT GAS REHEAT BLEED VALVE COMMAND	CLOSE	(HOT GAS REHEAT BLEED VALVE COMMAND)
ECON	%	(ECONOMIZER DAMPER % COMMAND)
EXFANVFD	%	(EXHAUST FAN VFD % COMMAND)
EXFAN	ON	(EXHAUST FAN COMMAND)
EAD-O	%	(EXHAUST DAMPER % COMMAND)
CANCEL ASCD TIMERS	No	(CANCEL ASCD TIMERS)

Press 1x ENTER
CANCEL
JOY + - C PWR
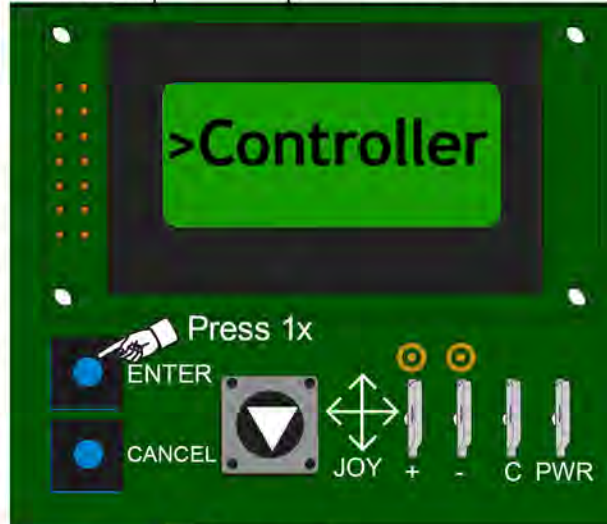
MENU	▼Controller	
SUB MENU	☞▼Network☞	
DEVNAME	UCBAPP	(FC BUS BACNET NETWORK NAME)
ADDRESS	4	(FC BUS BACNET NETWORK ADDRESS)
TIMEZONE	CENTRAL	
DESCRIPT		
COMM-S	WAITING FOR POLL	(FC BUS COMM STATUS)
FCBUSMODE	WIRED	(FC BUS COMM MODE)
OPRBAUDRATE	AUTO	(FC BUS BAUD RATE TO BE USED)
BAUDRATE	AUTO	(FC BUS BAUD RATE IN USE)
DEVICEID	1	(DEVICE OID)
LANGUAGE	ENGLISH	
UNITS	IP	(UNITS OF MEASURE TO BE USED)

MENU ▼Controller — SUB MENU ☞▼Network☞

#NetSensors	I	(Number of Network Sensors Online)
Relearn	False	(Relearn System)
EncodeType	ISO 10646 (UCS-2)	BACnet Encoding Type

MENU ▼Controller — SUB MENU ☞Firm — SUB MENU ☞UCB☞

Firm-S	Firmware Versions OK	(Firmware Status)
FirmVer	4.0.0.XXXX	(Firmware Version)
UCBMainVer	4.0.0.XXXX	(Firmware Revision)
UCBAppVer	4.0.0.XXXX	(Software App Rev)
UCBHardVer	001	(Hardware Revision)

MENU ▼Controller — SUB MENU ☞Firm — SUB MENU ☞Econ☞

EconMainVer	4.0.0.XXXX	(Firmware Revision)
EconAppVer	I223_2017.9.6.255	(Software App Rev)
EconHardVer	001	(Hardware Revision)

MENU ▼Controller — SUB MENU ☞Firm — SUB MENU ☞4 Stage☞

4StgMainVer	4.0.0.XXXX	(Firmware Revision)
4StgAppVer	I223_2017.9.6.255	(Software App Rev)
4StgHardVer	001	(Hardware Revision)

MENU ▼Controller — SUB MENU ☞Firm — SUB MENU ☞FDD Master☞

FDDMMainVer	4.0.0.XXXX	(Firmware Revision)
FDDMAppVer	I223_2017.9.6.255	(Software App Rev)
FDDMHardVer	001	(Hardware Revision)

MENU ▼Controller — SUB MENU ☞Firm — SUB MENU ☞FDD Slave☞

FDDMMainVer	4.0.0.XXXX	(Firmware Revision)
FDDMAppVer	I223_2017.9.6.255	(Software App Rev)
FDDMHardVer	001	(Hardware Revision)

MENU ▼Controller — SUB MENU ☞▼NetworkInputs☞

NetST		(FC Bus Space Temp)
NetSSO		(FC BusSpaceSetPtOffset)
NetSH		(FC BusSpaceHumidity)
NetOcc	Not Set	(FC BusOccupncyStatus)
NetTempOcc	False	(TempOccCommand)
NetIAQ		(FC Bus IAQ value)
NetFanReq		(FC BusFanOn reqst)
NetOAT		(FC Bus OA Temp)
NetOAH		(FC Bus OA Humidity)
NetOAQ		(FC Bus OA Quality)
NetPurge		(FC BusPurge Comand)
DirLoadshd	Yes/No	(Direct Loadshed)
Redline	Yes/No	(Redline)

MENU ▼Controller — SUB MENU ☞▼FDD☞

UnitType
EER
SubcoolGoal
RefrigType
HiSidePortLoc
EvapCoil-Type
CondCoil-Type
InMeterDev-Type
OutMeterDev-Type
UnitCap
FanPower
SuperHeatGoal
Altitude

MENU ▼Controller — SUB MENU ☞▼Time☞

Time Zone	Central	
DaylightSav	False	
TimeFormat	False	

MENU ▼Controller — SUB MENU ☞▼Description☞

CntrlType	CV	(Rooftop Controller Type)
EquipType	RTU	(Rooftop Equipment Type)

Press 1x

ENTER
CANCEL
JOY + - C PWR
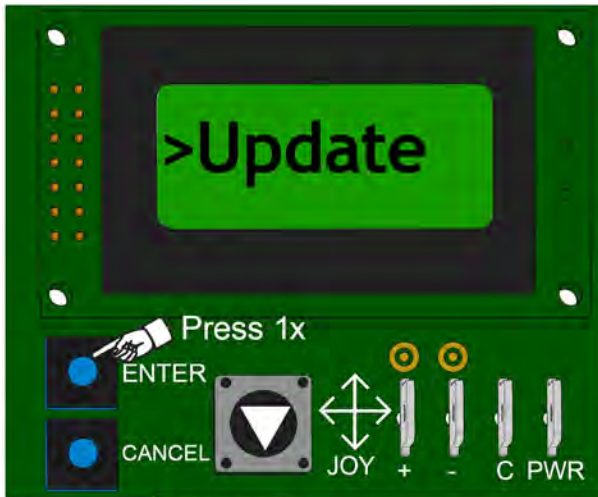
MENU	▼Update	
SUB MENU	☞View Ver☞	
4.0.0.XXXX	FIRMWARE OK	

MENU	▼Update	
SUB MENU	☞▼LoadFirm☞	
NO PACKAGE PRESENT	ERROR	USB W/FIRMWARE MUST BE PRESENT

MENU	▼Update	
SUB MENU	☞▼Backup☞	
BKP:WAIT	BCFG 0%	

MENU	▼Update
SUB MENU	☞▼Restore☞
>SERIALFLASH/BACKUPCONFIG	

MENU	▼Update
SUB MENU	☞▼Full Clone☞
>SERIALFLASH/BACKUPCONFIG	

MENU	▼Update
SUB MENU	☞▼Partial Clone☞
>SERIALFLASH/BACKUPCONFIG	

MENU	▼Update
SUB MENU	☞▼Factry Default☞
CONFIRM	

MENU	▼Update	
SUB MENU	☞▼Time☞	
>HOUR	0	(0 THROUGH 23)
MINUTE	11	(0 THROUGH 59)
DAY	1	(1 THROUGH 31)
MONTH	1	(1 THROUGH 12)
YEAR	2000	(1900 THROUGH 2155)

MENU	▼Update	
SUB MENU	☞▼Export Trend☞	
>USB	MISSING	

Press 1x

ENTER
CANCEL
JOY + - C PWR
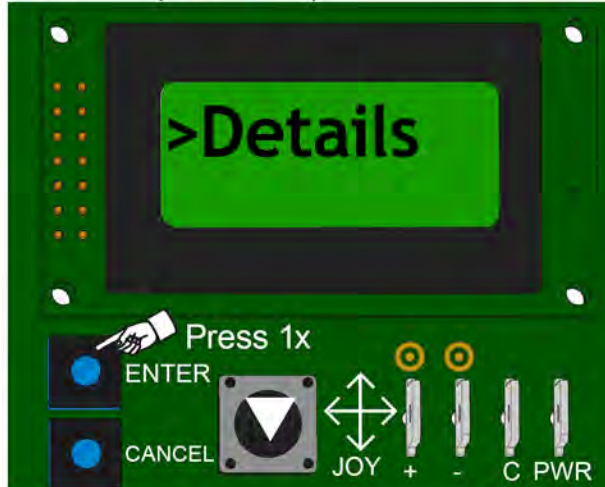
MENU	▼Details	
SUB MENU	☞OCC☞	
OccMode	EXTERNAL	OCCUPANCY MODE
OCC	UnOccUPIED	(OCCUPANCY INPUT)
OprOcc	UnOccUPIED	(OCCUPANCY STATUS)
OccSrc	LOCAL INPUT	(Occ/UnOcc STATUS SOURCE)
TempOcc	DISABLE	(TEMPORARY OCCUPANCY INPUT)
TempOccTimeout	120	(TEMPORARY OCCUPANCY TIMEOUT)
OffDurUnocc	No	(OFF DURING OCCUPIED)
OptStrt-En	No	(OPTIMAL START ENABLED)
EarlyStrtPeriod	60MIN	(EARLY START PERIOD)
PreOccPurgeEna		(PRE OCCUPANCY PURGE ENABLE)
PreOccPurgeTime	60	(PRE OCCUPANCY PURGE TIME)
PreOccUpSAT_SP	90	(PRE OCCUPANCY PURGE UPPER SETPOINT)
PreOccLowSAT_SP	45	(PRE OCCUPANCY PURGE LOWER SETPOINT)

Legend

DEFAULT SETTINGS IN RED	BLUE = UCB CONDITIONAL PARAMETER
TAN = ECONOMIZER BOARD PRESENCE	DKGREEN = ECONOMIZER BOARD PRESENCE + ANOTHER CONDITION

MENU	▼Details	
SUB MENU	☞▼Clg	
SUB MENU	☞▼Setup☞	
CLG-EN	YES	(COOLING ENABLED/DISABLED)
#CLGSTGS	1	(# OF COOLING STAGES)
#REFRIGSYS	4	(# OF REFRIG SYSTEMS)
CLGOCC-SP	72 F	(CV OCC COOLING SET POINT)
CLGUNOCC-SP	85 F	(CV UNOCC COOLING SET POINT)
C1-EN	YES	(C1 24VACOUTPUTENABLED)
C2-EN	YES	(C2 24VAC OUTPUT ENABLED)
C3-EN	YES	(C3 24VACOUTPUTENABLED)
C4-EN	YES	(C4 24VACOUTPUTENABLED)
MINRTCOOLSTG	3MIN	(MINCOMPRUNTIME)
SZVAVCLGOCC-SP	FALSE	(SZ VAV OCCUPIED COOLING SETPOINT)
SZVAVCLGUNOCC-SP	FALSE	(SZ VAV UNOCCUPIED COOLING SETPOINT)
COMMON-SP	FALSE	(COMMON SETPOINT)
AUTO CHANGEOVER	FALSE	(AUTO CHANGEOVER)
HEAT COOL SETPOINT MODE	FALSE	(HEAT COOL SETPOINT MODE)
CLGADAPTUNEN	YES	(COOLING AUTO TUNE ENABLE)
LOWAMB-EN	No	(LOW AMBIENT ENABLED)
LOWAMB1OON5OFFSP	45 F	(LOAMBOPSETPT)
LEADLAG-EN	No	(EQUALCOMPRUNTIME)
CLGOATCUTOUT-EN	YES	(LOWAMBCOMP LO)
CLGOATCUTOUT	45 F	(LOAMBCOMPLO STPT)
SATCOOLLIMIT-EN	YES	(ENABLE SAT LIMIT)
SATCOOLLIMIT-SP	45 F	(SAT LIMIT SETPT)
HGP-INST	No	(HOT GAS BYPASS PRESENT)
FREEZE-SP	26.0 F	(FREEZE CONDITION SETPOINT)
PMPOUT-EN	DISABLE	(PUMP OUT ENABLE)
LOWAMBFANPRERUNCOOL	60SEC	(LOW AMBIENT FAN PRE-RUN TIME FOR COOLING)
CLGMANUALTUNE	No	(COOLING MANUAL TUNING)
LOWAMBSTART	No	(LOW AMBIENT START)
4PIPEENA	No	(4 PIPE SPLIT ENABLE)

MENU	▼Details	
SUB MENU	☞▼Clg	
SUB MENU	☞▼Service	
SUB MENU	☞Unit☞	
STGCLGCMD	0%	(STAGED COOLING COMMAND)
OPRCVCLG-SP	72 F	(CV COOLING SET PT IN USE)
OPRVAVCLG-SP	FALSE	(VAV OPERATING COOLING SUPPLY AIR TEMP SETPOINT)
OPRSZVAVCLG-SP	FALSE	(SZ VAV OPERATING COOLING SETPOINT)
CLG-S	OFF-IDLE	(COOLING STATUS)
OPROAT	73.0 F	(OPERATIONAL OUTDOOR AIR TEMPERATURE)
OPRST	73.0 F	(SPACE TEMPERATURE IN USE)
RAT	73 F	(UCB RAT THERMISTOR INPUT)
ECON-FREE	No	(FREE COOLING AVAILABILITY)
SAT	60.7 F	(UCB SAT THERMISTOR INPUT)
Y1-TSTAT	OFF	(24VAC INPUT TO Y1 TERM)
Y2-TSTAT	OFF	(24VAC INPUT TO Y2 TERM)
Y3-TSTAT	OFF	(24VAC INPUT TO Y3 TERM)
Y4-TSTAT	OFF	(24VAC INPUT TO Y4 TERM)
CN-FAN	OFF	(CN-FAN 24 VAC OUTPUT)
CF2	OFF	(CF2 24 VAC OUTPUT)

MENU	▼Details	
SUB MENU	☞▼Clg	
SUB MENU	☞▼Service	
SUB MENU	☞▼Stage1☞	
C1-S	OFF - IDLE	(COMPRESSOR STAGE STATUS)
C1	OFF	(C1 24VACOUTPUTSTATUS)
C1ONTMR	180 SEC	(C1MINRUNTIMEREMAIN)
C1ASCDTMR	300 SEC	(C1 ASC TIMEREMAIN)
C1RUNTIM	. 0 HR	(C1 OUTPTACCUMRUNTIME)
C1-EI	? %	(EFFICIENCY INDEX 1)
C1-CI	? F	(CAPACITY INDEX 1)
C1-CONDTEMPOVRAMB		(CONDENSING TEMP OVER AMBIENT 1)
C1-EVAPTEMPVALUE		(EVAP TEMP VALUE CIRCUIT 1)
CLGCKTTESTS-1		(COOLING CIRCUIT TEST STATUS)
C1-SUPERHEAT		(SUPERHEAT)
C1-SUBCOOL		(SUBCOOLING)

MENU	▼Details	
SUB MENU	☞▼Clg	
SUB MENU	☞▼Service	
SUB MENU	☞▼Stage 2☞	
C2-S	OFF - IDLE	(COMPRESSOR STAGE STATUS)
C2	OFF	(C2 24VAC OUTPUT STATUS)
C2ONTMR	180 SEC	(C2 MINRUNTIMEREMAIN)
C2ASCDTMR	300 SEC	(C2ASC TIMEREMAIN)
C2RUNTIM	.0 HR	(C2OUTPTACCUMRUNTIME)
C2-EI	? %	(EFFICIENCY INDEX 2)
C2-CI	? F	(CAPACITY INDEX 2)
C2-CONDTEMPOVRAMB		(CONDENSING TEMP OVER AMBIENT 2)
C2-EVAPTEMPVALUE		(EVAP TEMP VALUE CIRCUIT 2)
CLGCKTTESTS-2		(COOLING CIRCUIT TEST STATUS)
C2-SUPERHEAT		(SUPERHEAT)
C2-SUBCOOL		(SUBCOOLING)

MENU	▼Details	
SUB MENU	☞▼Clg	
SUB MENU	☞▼Service	
SUB MENU	☞▼Stage 3☞	
C3-S	OFF - IDLE	(COMPRESSOR STAGE STATUS)
C3	OFF	(C3 24VACOUTPUTSTATUS)
C3ONTMR	180 SEC	(C3MINRUNTIMEREMAIN)
C3ASCDTMR	300 SEC	(C3 ASC TIMEREMAIN)
C3RUNTIM	.0 HR	(C3 OUTPTACCUMRUNTIME)
C3-EI	? %	(EFFICIENCY INDEX 3)
C3-CI	? F	(CAPACITY INDEX 3)
C3-CONDTEMPOVRAMB		(CONDENSING TEMP OVER AMBIENT 3)
C3-EVAPTEMPVALUE		(EVAP TEMP VALUE CIRCUIT 3)
CLGCKTTESTS-3		(COOLING CIRCUIT TEST STATUS)
C3-SUPERHEAT		(SUPERHEAT)
C3-SUBCOOL		(SUBCOOLING)

MENU	▼Details	
SUB MENU	☞▼Clg	
SUB MENU	☞▼Service	
SUB MENU	☞▼Stage 4☞	
C4-S	OFF - IDLE	(COMPRESSOR STAGE STATUS)
C4	OFF	(C4 24VACOUTPUTSTATUS)
C4ONTMR	180 SEC	(C4MINRUNTIMEREMAIN)
C4ASCDTMR	300 SEC	(C4 ASC TIMEREMAIN)
C4RUNTIM	.0 HR	(C4 OUTPTACCUMRUNTIME)

MENU	▼Details	
SUB MENU	☞▼Clg	
SUB MENU	☞▼Service	
SUB MENU	☞▼Stage 4☞	
C4-EI	? %	(EFFICIENCY INDEX 4)
C4-CI	? F	(CAPACITY INDEX 4)
C4-CONDTEMPOVRAMB		(CONDENSING TEMP OVER AMBIENT 4)
C4-EVAPTEMPVALUE		(EVAP TEMP VALUE CIRCUIT 4)
CLGCKTTESTS-4		(COOLING CIRCUIT TEST STATUS)
C4-SUPERHEAT		(SUPERHEAT)
C4-SUBCOOL		(SUBCOOLING)

MENU	▼Details	
SUB MENU	☞▼Clg	
SUB MENU	☞▼Sensors	
ECI	42 F	(ECI THERMISTOR INPUT)
CCI	96 F	(CCI THERMISTOR INPUT)
SLP-I		(SUCTION PRESSURE I)
LLP-I		(LIQUID PRESSURE I)
SLT-I		(SUCTION TEMPERATURE I)
LLT-I		(LIQUID TEMPERATURE I)
EC2	42 F	(EC2 THERMISTOR INPUT)
CC2	96 F	(CC2 THERMISTOR INPUT)
SLP-2		(SUCTION PRESSURE 2)
LLP-2		(LIQUID PRESSURE 2)
SLT-2		(SUCTION TEMPERATURE 2)
LLT-2		(LIQUID TEMPERATURE 2)
EC3	42 F	(EC3 THERMISTOR INPUT)
CC3	96 F	(CC3 THERMISTOR INPUT)
SLP-3		(SUCTION PRESSURE 3)
LLP-3		(LIQUID PRESSURE 3)
SLT-3		(SUCTION TEMPERATURE 3)
LLT-3		(LIQUID TEMPERATURE 3)
EC4	42 F	(EC4 THERMISTOR INPUT)
CC4	96 F	(CC4 THERMISTOR INPUT)
SLP-4		(SUCTION PRESSURE 4)
LLP-4		(LIQUID PRESSURE 4)
SLT-4		(SUCTION TEMPERATURE 4)
LLT-4		(LIQUID TEMPERATURE 4)

Legend

DEFAULT SETTINGS IN RED	BLUE = UCB CONDITIONAL PARAMETER
TAN = ECONOMIZER BOARD PRESENCE	DKGREEN = ECONOMIZER BOARD PRESENCE + ANOTHER CONDITION

MENU	▼Details	
SUB MENU	☞▼Clg	
SUB MENU	☞▼Safeties☞	
HPS1	NORMAL	(HPS1 24VAC INPUT STATUS)
HPS1-LO	NORMAL	(HIPRESS1 SWITCH STATUS)
LPS1	NORMAL	(LPS1 24VAC INPUT STATUS)
LPS1-LO	NORMAL	(LOPRESS1 SWITCH STATUS)
FS1	NORMAL	(FREEZE PROTECT1 STATUS)
FS1-LO	NORMAL	(FREEZE PROTECT1 STATUS)
HPS2	NORMAL	(HPS2 24VAC INPUT STATUS)
HPS2-LO	NORMAL	(HIPRESS2 SWITCH STATUS)
LPS2	NORMAL	(LPS2 24VAC INPUT STATUS)
LPS2-LO	NORMAL	(LOPRESS2 SWITCH STATUS)
FS2	NORMAL	(FREEZE PROTECT2 STATUS)
FS2-LO	NORMAL	(FREEZE PROTECT2 STATUS)
HPS3	NORMAL	(HPS3 24VAC INPUT STATUS)
HPS3-LO	NORMAL	(HIPRESS3 SWITCH STATUS)
LPS3	NORMAL	(LPS3 34VAC INPUT STATUS)
LPS3-LO	NORMAL	(LOPRESS3 SWITCH STATUS)
FS3	NORMAL	(FREEZE PROTECT3 STATUS)
FS3-LO	NORMAL	(FREEZE PROTECT3 STATUS)
HPS4	NORMAL	(HPS4 44VAC INPUT STATUS)
HPS4-LO	NORMAL	(HIPRESS4 SWITCH STATUS)
LPS4	NORMAL	(LPS4 44VAC INPUT STATUS)
LPS4-LO	NORMAL	(LOPRESS4 SWITCH STATUS)
FS4	NORMAL	(FREEZE PROTECT4 STATUS)
FS4-LO	NORMAL	(FREEZE PROTECT4 STATUS)

MENU	▼Details	
SUB MENU	☞▼Clg	
SUB MENU	☞▼Misc☞	
MAXTEMPHUMS-POFF	3.0 F	(MAXIMUM TEMPERATURE / HUMIDITY SETPOINT OFFSET)
TEMPHUM-SP	50%H	(*EFFECTSOPRCLG-SP)
TEMPHUMC-TRL-EN	No	(CNTRLOPERENABLE)
OPRSH	49.6 %H	(SPACE HUMIDITY IN USE)
CLGOCC-SP	72 F	(CV - OCC COOLING SETPOINT)
OPRCVCLG-SP	72 F	(CV - OPERATING COOL SET-POINT)
SZVAVCLGOCC-SP	DEG F	(SZ VAV OCCUPIED COOLING SETPOINT)
OPRSZVAVCLG-SP	DEG F	(SZ VAV OPERATING COOLING SETPOINT)

MENU	▼Details	
SUB MENU	☞▼Clg	
SUB MENU	☞▼Misc☞	
COMMON-SP	DEG F	(COMMON SETPOINT)
AUTO CHANGE-OVER	DEG F	(AUTO CHANGEOVER)
TEMPHUMVALP-ERDEGOFF	5%H	(TEMPERATURE / HUMIDITY VALUE PER DEGREE OFFSET)

MENU	▼Details	
SUB MENU	☞▼Htg	
SUB MENU	☞▼Setup☞	
HTG-EN	YES	(HEATING OPER ENABLED)
#HTGSTGS	1	(# OF HEATING STAGES)
HTG-TYPE	STAGED	(HEATINGCONTROLMETHOD)
CVHTGOCC-SP	68 F	(CV - OCC HEATING SET-POINT)
CVHTGUNOCC-SP	60 F	(CV - UNOCC HEATING SETPOINT)
VAVHTGOCC-SP	DEG F	(VAV OCCUPIED HEATING SETPOINT)
VAVHTGUNOCC-SP	DEG F	(VAV UNOCCUPIED HEATING SETPOINT)
SZVAVHTGOCC-SP	DEG F	(SZ VAV OCCUPIED HEATING SETPOINT)
SZVAVHTGUNOCC-SP	DEG F	(SZ VAV UNOCCUPIED HEAT-ING SETPOINT)
COMMON-SP	DEG F	(COMMON SETPOINT)
AUTO CHANGEOVER	DEG F	(AUTO CHANGEOVER)
HEAT COOL SETPOING MODE	HEAT	(HEATING AUTO TUNE ENABLE)
HTGADAPTUNEN	YES	(HEATING AUTO TUNE ENABLE)
SATHTGLIMIT-EN	YES	(SA HTGLIMITENABLED)
SATHTGLIMIT-SP	135 F	(SA HTGLIMITSETPT)
HTGOATCUTOUT-SP	75 F	(OUTDOOR AIR TEMP HEAT-ING CUTOUT SETPOINT)
#GASVLVS	0	(#HTPMPSTGS = 0)
#LIMSWTCHS	1	(#HTPMPSTGS = 0)
LL_ENABLE	DISABLE	(LOW LIMIT ENABLE)
LL_UPSAT_SP	80 F	(LOW LIMIT UPPER SAT SETPOINT)
LL_LOWSAT_SP	80 F	(LOW LIMIT LOWER SAT SETPOINT)
HTGMANUALTUNE	No	(HEATING MANUAL TUNING)
COOLDURINGHEATLIMIT	No	(COOLING ALLOWED DURING HEAT LIMIT)

Left Column

MENU	▼Details	
SUB MENU	☞▼Htg	
SUB MENU	☞▼Service☞	
STGHTGCMD	0%	(STAGED HEATING COMMAND)
CVOPRHTG-SP	68 F	(CV – OPERATING HEAT SET-POINT)
OPRSZ-VAVHTG-SP	DEG F	(SZ VAV OPERATING HEATING SETPOINT)
VAVO-PRHTG-SP	DEG F	(VAV OPERATING HEATING SETPOINT)
HTG-S	OFF-IDLE	(HEATING STATUS)
OPROAT	73.0 F	(OPERATIONAL OUTDOOR AIR TEMPERATURE)
OPRST	73.0 F	(SPACE TEMPERATURE IN USE)
RAT	70.4 F	(UCB RAT THERMISTORINPUT)
WI-TSTAT	OFF	(24VAC INPUT TO WI TERM)
W2-TSTAT	OFF	(24VAC INPUT TO W2 TERM)
W3-TSTAT	OFF	(24VAC INPUT TO W3 TERM)
G-TSTAT	OFF	(24VAC INPUT TO G TERM)
HI-S	OFF-IDLE	(HEATING STAGE STATUS)
HI	OFF	(IST STG HEAT OUTPUT STATUS)
HIONTMR	0 SEC	(REMAINMINRUNTIME)
HIASCDTMR	0 SEC	(REMAIN ASCD TIME)
HIRUNTIM	0 HR	(ACCUM HI RUNTIME)
H2	OFF	(2ND STG HEATINGOUTPUTSATUS)
H2-S	OFF-IDLE	(HEATING STAGE STATUS)
H2ONTMR	0 SEC	(REMAIN MIN RUNTIME)
H2ASCDTMR	0 SEC	(REMAIN ASCDTIME)
H2RUNTIM	.0 HR	(ACCUM H2 RUNTIME)
H3	OFF	(3RD STG HEATINGOUTPUTSATUS)
H3-S	OFF-IDLE	(HEATING STAGE STATUS)
H3ONTMR	0 SEC	(REMAIN MIN RUNTIME)
H3ASCDTMR	0 SEC	(REMAIN ASCDTIME)
H3RUNTIM	.0 HR	(ACCUM H3 RUNTIME)

MENU	▼Details	
SUB MENU	☞▼Htg	
SUB MENU	☞▼Safeties☞	
LIMIT	NORMAL	(LIMIT 24VAC INPUT STATUS)
LIMITLO	NORMAL	(HEAT LIMIT STATUS)
LIM2	NORMAL	(LIMIT 24VAC INPUT STATUS)
LIM2LO	NORMAL	(HEAT LIMIT STATUS)

Right Column

MENU	▼Details	
SUB MENU	☞▼Htg	
SUB MENU	☞▼Safeties☞	
LIM3	NORMAL	(LIMIT 24VAC INPUT STATUS)
LIM3LO	NORMAL	(HEAT LIMIT STATUS)
MV	OFF	(GAS VALVEI INPUT)
GV2	OFF	(GV2 PIN 24VAC INPUT STATUS)
GV3	OFF	(GV3,4 PIN 24VAC INPUT STATUS)

MENU	▼Details		
SUB MENU	☞▼Htg		
SUB MENU	☞▼Prop		
SUB MENU	☞Setup☞		
HYDHISA-SP		120 F	(HYD HI SAT SETPT)
HYDH2SA-SP		150 F	(HYD H2 SAT SETPT)
SATTEMPHYDHT-EN		No	No(HYDHTGSA TEMPER)
SATTEMPHYDHT-SP		40	(HYD HEAT TEMP SP)
HYDREVERSE		No	(MODHT 2-10VDCACTION)

MENU	▼Details	
SUB MENU	☞▼Htg	
SUB MENU	☞▼Prop	
SUB MENU	☞▼Service☞	
CVHTGOCC-SP	68 F	(CV OCC HEATING SET POINT)
CVHTGUN-OCC-SP	60 F	(CV UNOCC COOLING SET POINT)
CVOPRHTG-SP	68 F	(CV HEATING SET PT IN USE)
VAVO-PRHTG-SP	68F	(VAV OPERATING HEAT SET-POINT)
OPRSZ-VAVHTG-SP	DEG F	(SZ VAV OPERATING HEATING SETPOINT)
OPR ST	73.0 F	(SPACE TEMPERATURE IN USE)
SAT	(60.7 F)	(S A TEMP THERMISTER INPUT)
WI-TSTAT	OFF	(24VAC INPUT TO WI TERM)
W2-TSTAT	OFF	(24VAC INPUT TO W2 TERM)
HWV	0%	(HWV VDC OUTPUT)
HYDREVERSE	No	(MODHT 2-10VDCACTION)
FSHW	NORMAL	( )

MENU	▼Details	
SUB MENU	☞▼Fan	
SUB MENU	☞Setup☞	
FANCTL-TYPE	SINGLE SPEED	(ID BLWR/UNIT OP MODE)
FANON OCC	YES	(CV CONSTANT FAN IN OCCUPIED MODE)

MENU	▼Details	
SUB MENU	☞▼Fan	
SUB MENU	☞Setup☞	
FANONDLYHEAT	30SEC	(HEATFANONDELAY)
FANOFFDLYHEAT	60SEC	(HEATFANOFFDELAY)
FANOFFSTARTHEAT	YES	(FANOFF ATHEATSTART)
FANONDLYCOOL	0SEC	(COOLFANONDELAY)
FANOFFDLYCOOL	30SEC	(COOLFANOFFDELAY)
FAN ONLY-% CMD	50%	(CV IS FAN ONLY)
1CLGSTG-% CMD	70%	(CV IS 1 STG COOL)
2CLGSTG-% CMD	80%	(CV IS 2 STG COOL)
3CLGSTG-% CMDT	90%	(CV IS 3 STG COOL)
4CLGSTG-% CMD	100%	(CV IS 4 STG COOL)
1HTGSTG-%CMD	100%	(OCCUPIED: ONE STAGE OF HEAT % COMMAND)
2HTGSTG-%CMD	100%	(OCCUPIED: TWO STAGE OF HEAT % COMMAND)
3HTGSTG-%CMD	100%	(OCCUPIED: THREE STAGE OF HEAT % COMMAND)

MENU	▼Details	
SUB MENU	☞Fan	
SUB MENU	☞▼Service☞	
DEHUM%CMD	%	(DEHUMIDIFICATION % COMMAND)
LOWAMBFANPRE-RUNCOOL	SECONDS	(LOW AMBIENT FAN PRE-RUN TIME FOR COOLING)
LOWAMBFANPRE-RUNCOOL	60 SEC	
APSSETUP	NONE	(AIR PROVING SWITCH OPERATION)
DFS	NORMAL	(DFS 24VAC INPUT STATUS)
G-TSTAT	OFF	(24VAC INPUT TO G TERM)
FAN-S	OFF-IDLE	(FAN STATUS)
FAN	OFF	(FAN 24VAC OUTPUT STATUS)
FAN-RT	.0 HR	(ACCUMULATED FAN RUN-TIME)
OPRFANREQ	OFF	(OPERATING FAN RE-QUEST)
FANREQSRC	LOCAL INPUT	(FAN REQUEST SOURCE)
APS	OFF	(APS INPUT STATUS)
FANOVERLOAD	NORMAL	(FANOVRINPTSTATUS)
FANVFDFLT	NORMAL	(FLT24VACINPTSTATUS)

MENU	▼Details	
SUB MENU	☞▼Econ	
SUB MENU	☞Setup☞	
ECON-EN	YES	(ECONOFREECOOLINGENABLE)
ECON-MINPOS	10%	(ECONOMIZER MINIMUM POSITION SETPOINT)
LOWSPEEDFAN-MINPOS	25%	(OCCLOFANPOS)
LOWAMB-MINPOS	0%V	(OCCLOAMBMINPOS)
LOWAMB-SP	0 F	(LOAMBMINPOSSSETPT)
FREECLG-SEL	AUTO	(FRECLGCHNGOVRMETHOD)
FREECLG-MODE	DRY BULB	(CHNGOVERMODE)
ALLCOMPOFF-ECON	NO	(ALL COMPRESSORS OFF IN FREE COOLING)
ECONOAT-SPEN	55 F	(DRYBLBCHGOVRSETPT)
ECONOAENTH-SP	27 B/#	(ENTHCNGOVRSETPT)
DVENT-MODE	DISABLED	(DMAND VENT MODE SELECT)
DVENTMAXECONPOS	50%	(MAX ECON POSITION)
DVENTIAQ-SP	1000PPM	(DEMAND VENT IAQ SETPT)
DVENTDIFF-SP	600PPM	(IAQ-OAQ DIFFERENCE-SETPT)
IAQRANGE	2000PPM	(ID SETPT W/CO2 SENSOR INST)
OAQRANGE	2000PPM	(OD SETPT W/CO2 SENSOR INST)
ECONLOAD-EN	NO	(ECONLOADINGENABLED)
MOAFLOW-SP	10CFM	(FRESH AIR INTAKE SETPOINT)
MOA-RANGE	10000CFM	(FRESH AIR INTAKE MAX SENSOR RANGE)
ECONMECHSTP	OPTION B	(ECON MECH SETUP)
ECONFLTDETECTEN	DISABLE	(ECON FAULT DETECTION EN)
CALFAULTDETECTEN	DISABLE	(CALIBRATION FAULT DETECT ENABLE)

MENU	▼Details	
SUB MENU	☞▼Econ	
SUB MENU	☞▼Service☞	
CLG-S	OFF-IDLE	(COOLING STATUS)
ECON-S	DISABLED	
ECON-FREE	NO	(FREECOOLING AVAILABLE)
ECON	0%	(ECON 2-10VDC OUTPUT STATUS)
SAT	60.7 F	(UCB SAT THERMISTORINPUT)
OPROAT	73.0 F	(OPERATIONAL OUTDOOR AIR TEMPERATURE)
OA-ENTH	20 B/#	(CALCOA ENTHALPYINPUT)

MENU	▼Details	
SUB MENU	☞▼Econ	
SUB MENU	☞▼Service☞	
RA-ENTH	20B/#	(RA ENTHALPY INPUT)
OPRIAQ	477PPM	(INDOOR AIR QUALITY INPUT)
OPROAQ	990PPM	(OUTDOORAIRQUALITY IN USE)
FR AIR	7940CFM	(FRESH AIR INTAKE ENABLE)
ECONDAMPPOS	38	(AI-IN 0-10VDC INPUT)
ECONALRMDLY	600SEC	(FDD ECON ALARM DELAY)
ECONPOSERR	8%	(FDD ECON DAMPER ALLOW ERROR)
ECONMINERR	5%	(FDD DAMPER MIN POS TOLERANCE)

MENU	▼Details	
SUB MENU	☞▼Dvent☞	
ECON-EN	YES	(ECONOFREECOOLINGENABLE)
DVENT-MODE	DISABLED	(DEMANDVENTIMODE)
DVENTMAXECONPOS	50%	(IAQ ECON-MAXPOS)
DVENTIAQ-SP	1000PPM	(OCCIAQECONOPERSETPT)
DVENTDIFF-SP	600PPM	(OCC DIFF IAQ/OAQ SETPT)
IAQRANGE	2000PPM	(PPM@10VDCIAQ OUTPUT)
OAQRANGE	2000PPM	(PPM@10VDCOAQ OUTPUT)
OPRIAQ	477PPM	(IAQ 0-10VDCINPUT IN USE)
OPROAQ	990PPM	(OUTDOORAIRQUALITY IN USE)
ECONDAMPPOS	38	(AI-IN 0-10VDC INPUT)

MENU	▼Details	
SUB MENU	☞▼AirMonStation☞	
ECON-EN	YES	(ECONOFREECOOLINGENABLE)
FRAIR-EN	DISABLE	(FRESH AIR INTAKE ENABLE)
MOAFLOW-SP	10CFM	(FRESH AIR INTAKE SETPOINT)
MOA-RANGE	10000CFM	(FRESH AIR INTAKE MAX SENSOR RANGE)
FR AIR	7953CFM	(FRESH AIR INTAKE ENABLE)
ECONDAMPPOS	38	(AI-IN 0-10VDC INPUT)
CONTROL	40CFM	(FRESH AIR RANGE)

MENU	▼Details	
SUB MENU	☞▼PowerEx	
SUB MENU	☞Setup☞	
EXFTYPE	NONE	(PwrExFanModeSelection)
ECONDMPPOSFANON	60%	(FANONPOSITION)
ECONDMPPOSFANOFF	20%	(FANOFFPOSITION)
EXDMPPOSFANON	80%	(FANONPOSITION)
EXDMPPOSFANOFF	20%	(FANOFFPOSITION)

MENU	▼Details	
SUB MENU	☞▼PowerEx	
SUB MENU	☞Setup☞	
BLDG-SP	100"/w	(ExDMPRBLDGPRESSETPT)
DCTPRS		(DUCT STATIC PRESSURE)

MENU	▼Details	
SUB MENU	☞▼PowerEx	
SUB MENU	☞▼Service☞	
ExF-S	OFF	
ExFAN	OFF	(EX-FAN 24VACOUTPUTSTATUS)
BLDGPRES	.164"/w	(BLDGPRES 0-5VDC INPUT)
EAD-O	0%	(EXVFD2-10VDCOUTPTSTATUS)
ExFANVFD	0%	(EX VFD2-10VDC OUTPUT)
ExFAN-RUNTIME	.0 HR	(24VACOUTPUTACCRUNTIME)
ExFANVFDFLT	NORMAL	(VFD FLT24VACINPUT)

MENU	▼Details	
SUB MENU	☞▼FanVFD	
SUB MENU	☞Setup☞	
FANCTL-TYPE	SINGLE SPEED	(UNITOPMODE)
DCTPRS-SP	1.50"/w	(VAV SUPPLYDUCTPRESS SETPOINT)
DCTSHUTDOWNSP	4.5"/w	(DUCTPRESSLIMIT)
SATUP-SP	60 Fc	(VAV OCC UPPRCOOLING SAT SETPT)
SATLO-SP	55 F	(VAV OCC LOWR COOLING SAT SETPT)
SATRST-SP	72 F	(VAV OCC COOL SAT RESET SETPT)
VAVCLGUNOCC-SP	85 F	(FANCTL-TYPE = VARIABLE SPEED)
MORNW-EN	No	(VAVMORNWRMUPENABLE)
MORNWRAT-SP	71 F	(MORNWRMUPRA SETPT)
HTGOCC-EN	YES	(VAV OCC HEATING ENABLED)
VAVHTGOCC-SP	85 F	(VAV OCC HEATING SETPOINT)
HTGUNOCC-EN	No	(VAV UNOCC HEATING ENABLED)
VAVHTGUNOCC-SP	60 F	(VAV UNOCC HTG SETPOINT)
MORNC-EN	No	(MORNING COOLDOWN ENABLED)
MORNCRAT-SP	74F	(MORNING COOLDOWN SP)
OPTSTRT-EN	No	(OPTIMAL START ENABLED)
EARLYSTRTPERIOD	60MIN	(EARLY START PERIOD)
DAP-MIN	IN WC	(DISCHARGE AIR STATIC PRESSURE MINIMUM)

MENU	▼Details	
SUB MENU	☞▼FanVFD	
SUB MENU	☞Setup☞	
DAP-AlmDly	SECONDS	(Discharge Air Static Pressure Alarm Delay)
HtgOcc-En	Yes	(VAV Occ Heating Enabled)

MENU	▼Details	
SUB MENU	☞▼FanVFD	
SUB MENU	☞▼Service☞	
FanVFD	0%	(VFD 2-10 VDC output)
DctPrs	1.50"/w	(DCT PRS 0-5vdcinput)
DctPrs-Sp	1.5"/w	(DuctPressLimit)
OprVAVClg-Sp	Deg F	(VAV Operating Cooling Supply Air Temp Setpoint)
OprSZVAVHtg-Sp	Deg F	(SZ VAV Operating Cooling Setpoint)
OprVAVClg-Sp	55 F	(VAV Cooling SAT SetPt in use)
SAT	60.7 F	(UCB SAT ThermistorInput)
StgClgCmd	0%	(Staged Cooling Command)
Clg-S	Yes	(Cooling Status)
Econ-Free	No	(Free Cooling availability)
CI	OFF	(UCB CI 24 VAC output status)
C2	OFF	(Demand Vent Set Point)
C3	OFF	(4stg C3 24 VAC output status)
C4	OFF	(4stg C4 24 VAC output status)
VAVOprHtg-Sp	68 F	(VAV Heating SetPt in use)
StgHtgCmd	0%	(Staged Heating Command)
OprST	73.0 F	(Space Temperature in use)
Htg-S	OFF-Idle	(Heating Status)
H1	OFF	(CV is 1 Stg Heat)
H2	OFF	(CV is 2 Stg Heat)
H3	OFF	(CV is 3 Stg Heat)
VAV Box	OFF	(VAV Box)

MENU	▼Details	
SUB MENU	☞▼SZVAV	
SUB MENU	☞Setup☞	
SZVAVEn	No	(Single Zone VAV Enabled)
SZVAVMinFanSpd	66%	(Minimum Fan Speed)
SZVAVClgOcc-Sp	72 F	(SZ VAV Occ Clg Sp)
SZVAVClgUnocc-Sp	85 F	(SZ VAV Unocc Clg Sp)
VAVHtgOcc-Sp	68 F	(VAV - Occ Heating Setpoint)
VAVHtgUnocc-Sp	60 F	(VAV UnOcc Heating Setpt)
DATMaxHtgSP	105F	(DAT Heating Max SP)
DATSATSP	70F	(DAT Satisfied SP)
SATUp-Sp	54F	(VAV Cooling Supply Air Temp Upper Setpoint)
SATLo-Sp	54F	(VAV Cooling Supply Air Temp Lower Setpoint)

MENU	▼Details	
SUB MENU	☞▼SZVAV	
SUB MENU	☞▼Service☞	
OprSZVAV-Clg-Sp	72 F	(SZ VAV Operating Clg Sp)
OprSZ-VAVHtg-Sp	60 F	(SZ VAV Operating Heating Setpoint)
SZVAVClgLd	0%	(SZ VAV Cooling Load)
SZVAVHtgLd		(SZ VAV Heating Load)
OprST	73.0 F	(Space Temperature in use)
SAT	60.7 F	(SAT thermistor input)
FanVFD	0%	(VFD 2-10vdc output status)
Econ	0%	(ECON 2-10 VDC output status)
CI	OFF	(1st Cool 24 VAC output)
C2	OFF	(2nd+ Cool 24 VAC output)
C3	OFF	(3rd+ Cool 24 VAC output)
C4	OFF	(4th+ Cool 24 VAC output)

| MENU	▼Details	
SUB MENU	☞▼HGR	
MENU	☞Setup☞	
HGR-En	No	(Hot Gas Reheat Enabled)
SatisfiedDe-hum	False	(Dehumidify In Satisfied)
HGRAlt-En	No	(HGR Alternate Enabled)
HGRAltWrite	No	(HGR Alternate Writeable)
HGRHum-Sp	60DegF	(Hot Gas Reheat Humididty Setpoint)
HGRUnocc-En	Yes	(HGR Unocc Enabled)

MENU: ▼Details — SUB MENU: ☞▼HGR — MENU: ☞Setup☞

HGRUnoccHum-SP	70DEGF	(HGR Unocc Hum Sp)
HGR-Diff	3%	(HGR Humidity Setpoint Differential)
Mode		(Aux Mode)
Use DFS For Dehum	Yes	(Use DFS For Dehum)
SATUp-Sp	Deg F	(VAV Cooling Supply Air Temp Upper Setpoint)
SATLo-Sp	Deg F	(VAV Cooling Supply Air Temp Lower Setpoint)
SATRst-Sp	Deg F	(VAV Supply Air Temp Reset Setpoint)
DehumEvapLowSp	Deg F	(Dehum Evap Low Setpoint)
ClgOcc-Sp	Deg F	(Occupied Cooling Setpoint)
Dehum%Cmd	%	(Dehumidification % Command)
Proportional Min Out Value	%	(Proportional Min Out Value)
Proportional Max Out Value	%	(Proportional Max Out Value)
CondFan2OATCutoutSP	Deg F	(Condenser Fan 2 OAT Cutout Setpoint)
ModHGRFullOpenAllowed	Yes	(Modulating HGR Valve Full Open Allowed)

MENU: ▼Details — SUB MENU: ☞▼HGR☞ — MENU: ☞▼Service☞

StgClgCmd	0%	(Staged Cooling Command)
OprCVClg-Sp	72 F	(CV cooling set pt in use)
OprST	73.0 F	(Space Temperature in use)
OprEvapTempSp	Deg F	(Operational Evap Temperature Sp)
Evaporator Coil Temp	Deg F	(Evaporator Coil Temp)
HGRHum-Sp	60F	(Hot Gas Reheat Humididty Setpoint)
OprSH	49.6 %H	(Space Humidity in use)
HGR-S	Off-Disabled	(HGR Status)

MENU: ▼Details — SUB MENU: ☞▼HGR☞ — MENU: ☞▼Service☞

HGR	Off	(Hot Gas Reheat)
OprHGRTempSp	Deg F	(Operational HGR Temperature Sp)
SAT	Deg F	(Supply Air Temperature)
HGR	%	(Hot Gas Reheat)
Hot Gas Reheat Bleed Valve Command		(Hot Gas Reheat Bleed Valve Command)
C1	Off	(CI 24vacOutputStatus)
C2	Off	(UCB CI 24 VAC output status)
C3	Off	(C3 24vacOutputStatus)
C4	Off	(4stg C4 24 VAC output status)
RAH	(49.6 %H)	(R A Humidity 0-I0 VDC input)

MENU: ▼Details — SUB MENU: ☞▼Heat Pmp☞

#HtPumpStgs	0	(# of Heat Pumps)
TestDefrostEnable	No	(Test Defrost Enable)
CompDelayEnable	No	(Compressor Delay Enable)
DefrostCurveSel	Curve I	(Defrost Curve Select)
RevVlv	Off	(Reversing Valve)
AuxHtg	Off	(Auxiliary Heat)
Mode	Cooling	(Mode)

MENU: ▼Details — SUB MENU: ☞▼ERV-En☞

ERV-En	No	(Econ&PwrExIntrgrationW/ ERV)
ERVUnoccFan-En		(ERV Unoccupied Fan Enabled)
FanCtl-Type	Single Speed	(UnitOpMode)
Fan	Off	(UCB FAN 24 VAC output status)
Econ-Free	No	(FreeCooling available)
ExFan	Off	(EX-Fan 24 VAC output)

MENU	▼Details	
SUB MENU	☞▼T24LoadShed ☞	
LOADSHEDRATELIM	.066	(RATE LIMITER)
LOADSHEDADJUST	4.0 F	(LOAD SHED ADJUST)
LOADSHEDENABLE	No	(LOAD SHED ENABLE)

>Self Test

Press 1x
ENTER
CANCEL
JOY + - C PWR
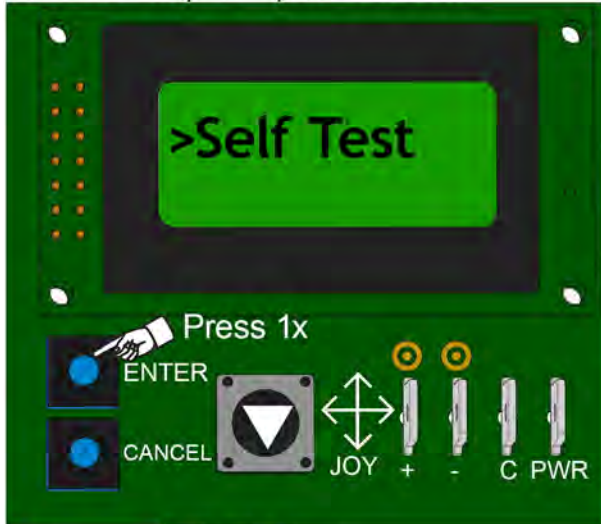
MENU	▼Self Test☞
START	(BEGINS THE SELF TEST SEQUENCE)
PAUSE	(CAUSES THE SEQUENCE TO HOLD ANY OUTPUTS ON FOR 10 MINUTES.)
CANCEL	(STOPS THE SELF TEST SEQUENCER AND RETURNS THE SEC TO NORMAL OPERATION.)
TESTSTATUS	(DISPLAYS CURRENT STATE OF THE SELF TEST SEQUENCER)
RESET	(ERASES THE PREVIOUS SELF TEST RESULTS AND PREPARES THE SELF TEST SEQUENCER FOR ANOTHER TEST RUN)

>View Result

Press 1x
ENTER
CANCEL
JOY + - C PWR
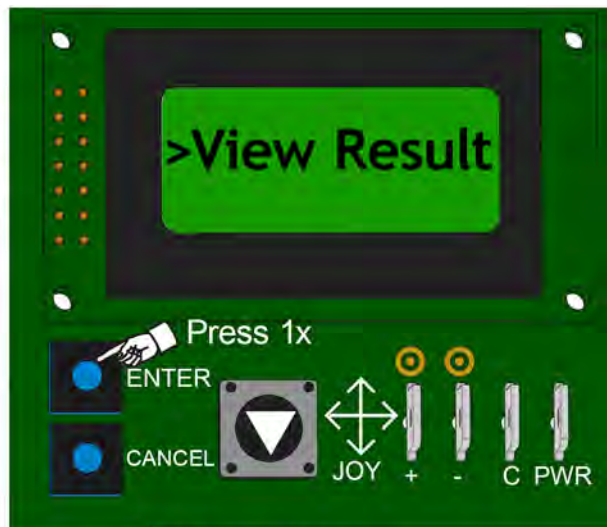
MENU	▼View Result☞	
FANRESULT	PASS-FAIL	(APS ON EARLY OR APS OFF)
C1RESULT	PASS-FAIL-WARNING	
C2RESULT	PASS-FAIL-WARNING	
C3RESULT	PASS-FAIL-WARNING	
C4RESULT	PASS-FAIL-WARNING	
H1RESULT	PASS-FAIL-WARNING	
H2RESULT	PASS-FAIL-WARNING	
H3RESULT	PASS-FAIL-WARNING	
ECONRESULT	PASS-FAIL	(DAMPER)
EXHRESULT	WARNING-PASS	(BSP NOT DROPPED)

END OF MENU