



Bosch EasyStart

Wireless Interface Application
for GreenSource CDi Series SM Model Water Source Heat Pump (WSHP)



BOSCH

Installation & Operation Manual

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1 Key to Symbols

1.1 Warnings



Warnings in this document are identified by a warning triangle printed against a grey background. Keywords at the start of the warning indicate the type and seriousness of the ensuing risk if measures to prevent the risk are not taken.

The following keywords are defined and can be used in this document:

- ▶ **DANGER** indicates a hazardous situation which, if not avoided, will result in death or serious injury.
- ▶ **WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.
- ▶ **CAUTION** indicates a hazardous situation which, if not avoided, could result in minor to moderate injury.
- ▶ **NOTICE** is used to address practices not related to personal injury.

Important Information



This symbol indicates important information where there is no risk to property or people.

1.2 Safety Warnings



IMPORTANT: Read the entire instruction manual before starting installation.



WARNING: Installation and servicing of this equipment can be hazardous due to system pressure and electrical components. Only trained and qualified personnel should install, repair, or service the equipment.



WARNING: Before performing service or maintenance operations on the system, turn off the main power to the unit. Electrical shock could cause personal injury or death.

2 Application

The Bosch EasyStart (BES) Application is used for the installation, commissioning and troubleshooting of the Greensource CDi Series SM Model Water Source Heat Pump (WSHP). The EasyStart App provides a wireless interface to the Heat Pump Controller (HPC) via a Wireless Interface Module (WIM) and will allow the user to:

1. Live monitor diagnostics information.
2. View the history of faults.
3. Configure unit settings.
4. Access information for successful troubleshooting.

The look and feel has been kept consistent between the Android, iOS and Windows applications. This reduces the training burden when deploying the application to the field.

3 Platform Requirements

The following platforms and operating systems will support the Bosch EasyStart application:

- Android 4.1 and above
- iOS 11.4 and above, iOS 12.0 is recommended
- Windows 10 and Windows 7 (PC)

3.1 Limitations

Following are the limitations for Bosch EasyStart application.

- Bosch EasyStart app is designed and optimized to work with tablets and not smartphones.

4 App Installation

The App can be accessed, downloaded and installed via Android's Google Play, Apple's App Store or downloaded from the Bosch Pro HVAC website (www.boschprohvac.com). A Bosch Pro account and login credentials required for download of the Windows application.

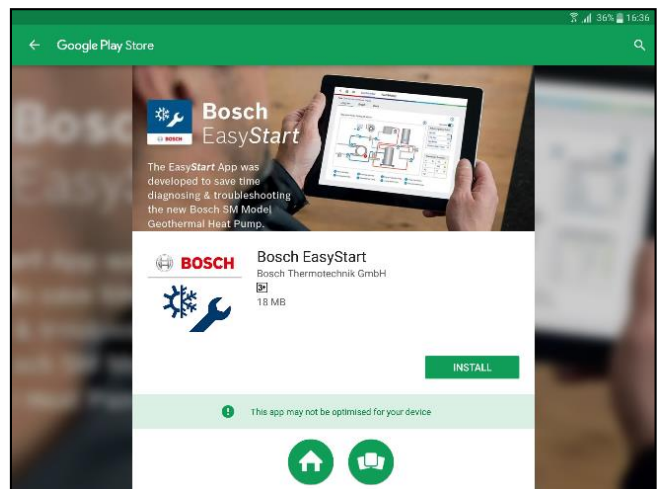


Figure 1: Google Play

Search for any of the following keywords to find the app:

- Bosch
- Bosch EasyStart
- Geo Install Tool
- Geo Installation Tool
- Geothermal Service Tools
- Greensource Service Tools
- HVAC Install Tool
- HVAC Installation Tool
- HVAC WSHP Service Tool

From the list of available apps, select the “Bosch EasyStart” and download/install.

Once installed, click or tap on the application icon to launch.

5 Navigation of App

Upon launching the app, the user will see the Splash Screen then be presented with legal information and finally the User Guide.

The first time the EasyStart application is executed an End User License Agreement (EULA), Open Source Software and End User License Agreement must be reviewed and accepted before proceeding.



Figure 2 Splash Screen

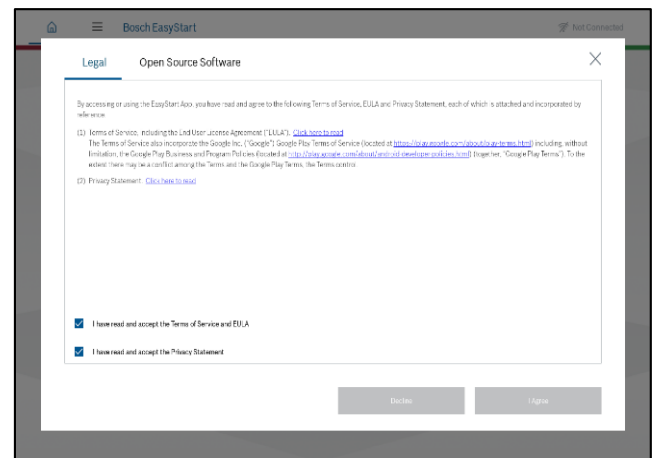


Figure 3: Legal Information

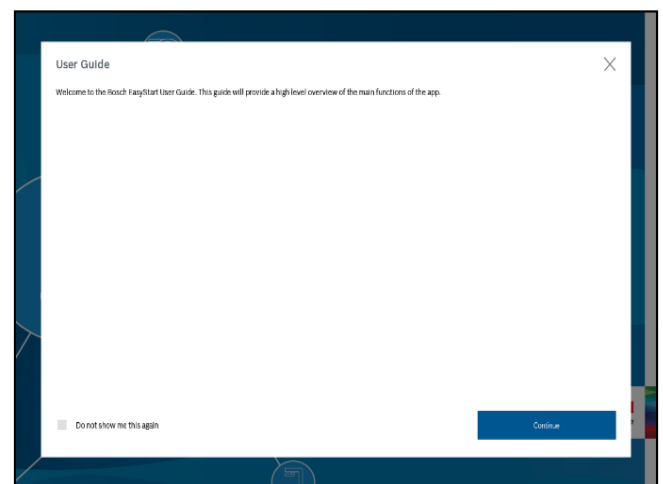


Figure 4 User Guide

6 User Guide

The User Guide contains information on the following features: Connect to unit, Monitor Unit, Live Monitor & Fault History, Configure Unit Settings, Unit Data Management, App Information, Unit Information, Help and Demo Mode. First time users should practice navigating through each tap to familiarize the type of information being conveyed.

On the left side of the screen, a "Users Guide" pop-up will be displayed whenever the application is launched. The user can either display this option or hide it whenever the app is opened. Checking the option box "Do not Show me again" hides the pop-up and prevents it from being shown in the future. The extended menu option provides the same information. Tap on the features presents in the left side to get information about each and every features.

6.1 Connect to Unit

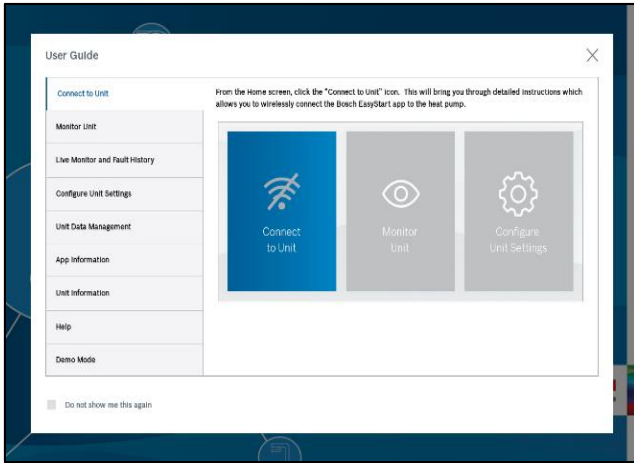


Figure 5: Connect to Unit

From the Home screen, tap or click the “Connect to Unit” icon. Detailed instruction provides the necessary steps required to connect the EasyStart application to the heat pump wirelessly.

6.2 Monitor Unit

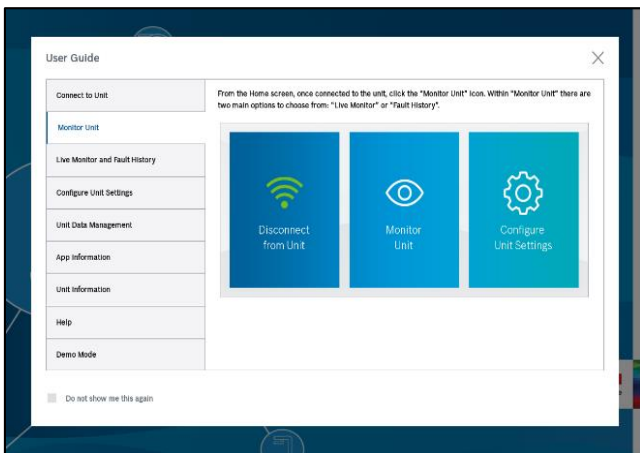


Figure 6: Monitor Unit

From the Home screen, once connected to the unit, tap or click the “Monitor Unit” icon. Within “Monitor Unit” there are two main options to choose from: “Live Monitor” or “Fault History.”

6.3 Live Monitor & Fault History

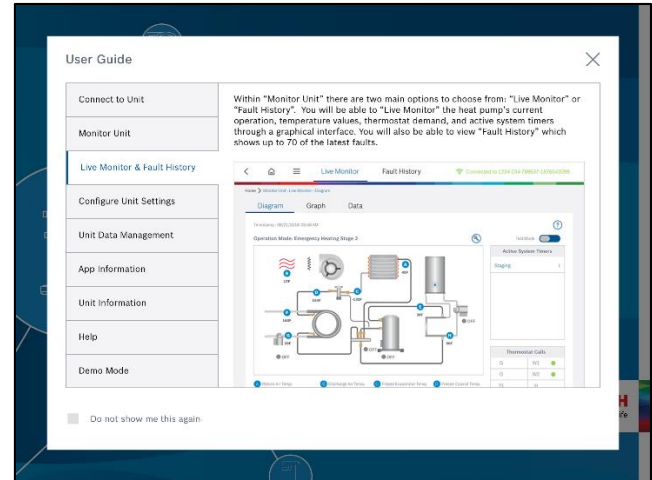


Figure 7: Live Monitor & Fault History

The “Live Monitor” provides a view of the Heat Pump’s current operation, temperature values, thermostat demand, and active system timers through the graphical interface. The user will also be able to view “Fault History” which shows up to 70 of the latest faults.

6.4 Configure Unit Settings

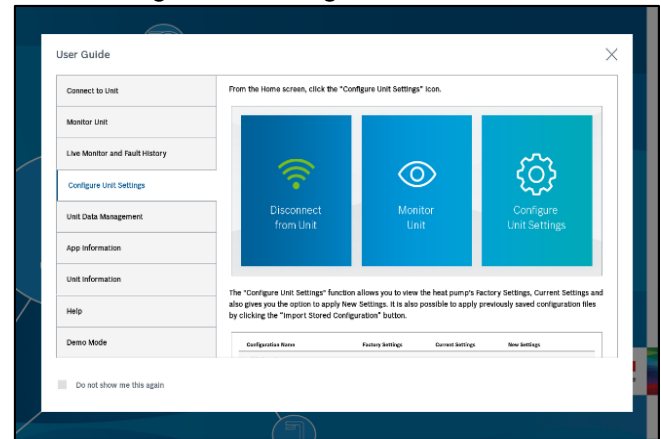


Figure 8: Configure Unit Settings

From the Home screen, tap the “Configure Unit Settings” icon. The “Configure Unit Settings” function provides a view of the heat pumps’ Factory Settings, Current Settings, and the option to change the unit’s existing settings. Previously save configuration may be restored by tapping the “Import Stored Configuration” button.

6.5 Unit Data Management

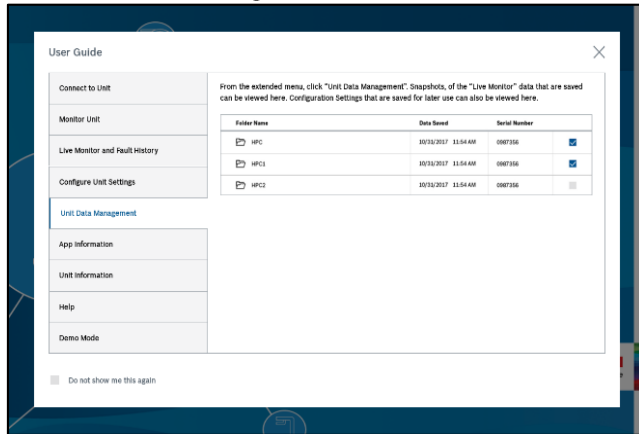


Figure 9: Unit Data Management

From the extended menu, tap “Unit Data Management” to view saved configuration and snapshot data. Snapshots of the “Live Monitor” data that is saved can be viewed here. Configuration Settings that are saved for later use can also be viewed in this screen.

6.6 App Information

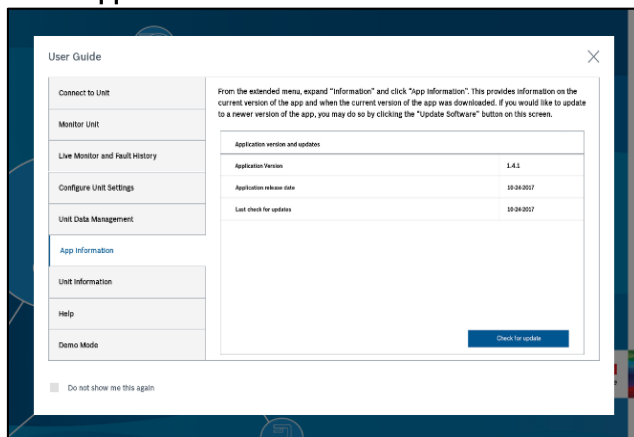


Figure 10: App Information

From the extended menu, expand “Information” and tap “App Information”. This provides information on the current version of the app and when the current version of the app was downloaded. If the user would like to update the Bosch EasyStart app to a newer version, tap the "Check for update" button on this screen.

6.7 Unit Information

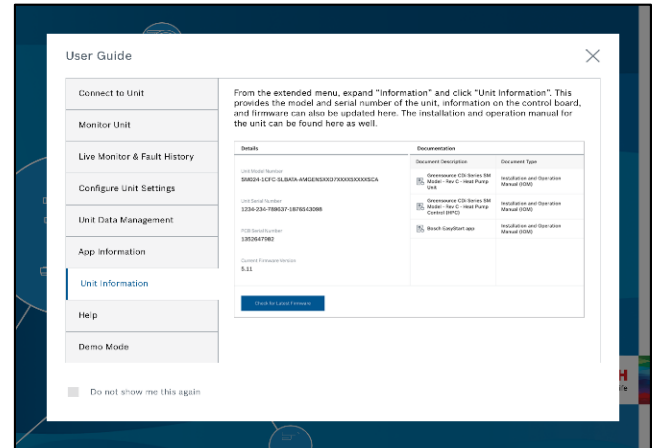


Figure 11: Unit Information

From the extended menu, expand "information" and click or tap "unit information" to show the model, serial number, control board information, and firmware version. New firmware, when available, can be updated here. The installation and operation manuals for the Heat Pump Control (HPC) board, SM Rev. C unit, and Bosch EasyStart app may be view by clicking or tapping on the manual name.

6.8 Help

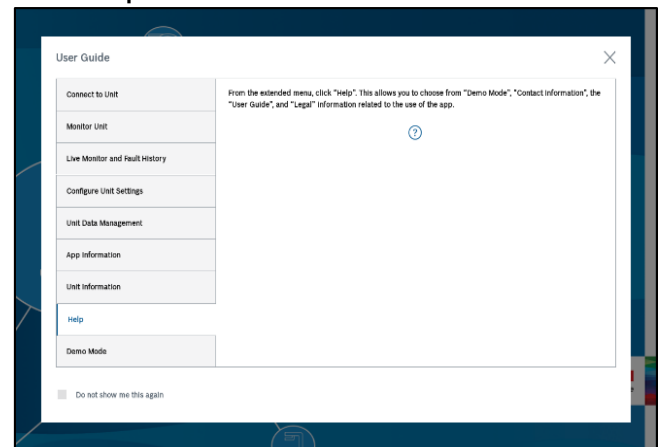


Figure 12: Help

From the extended menu, click or tap “Help” to access the help topics. This allows you to choose from “Demo Mode”, “Contact Information”, the “User Guide”, and “legal” information related to the use of the app.

6.9 Demo Mode

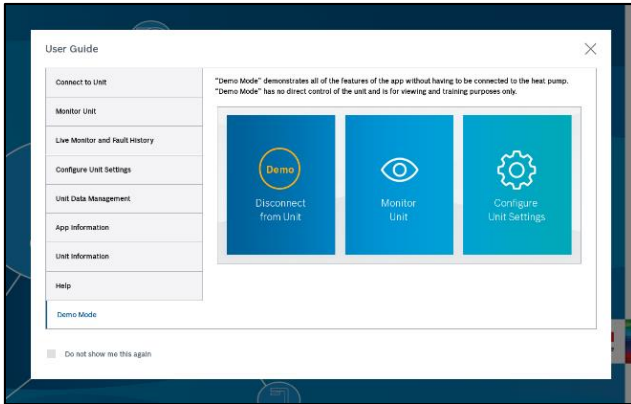


Figure 13: Demo Mode

“Demo Mode” demonstrates all of the features of the app without having to be connected to the heat pump. “Demo Mode” has no direct control of the unit and is for viewing and training purposes only.

Once the user guide is navigated through, tap close button on the right side top of the screen to redirect to the home screen.

7 Home Screen

The Home screen provides the means to navigate throughout the EasyStart application. See Figure 14.

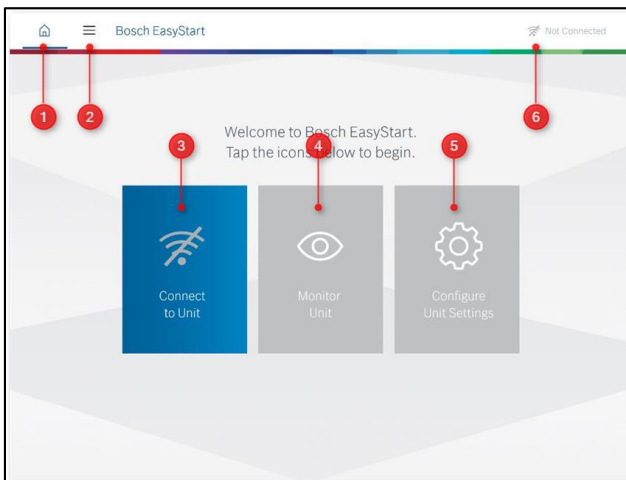


Figure 14: Home Screen Elements

[1] Home Button

[2] Extended Menu Button

[3] Connect (disconnect) to Unit

[4] Monitor Unit

[5] Configure Unit Settings

[6] Connection Status

In order to connect to the appliance, tap the “Connect to Unit” button shown in figure 14. Once this is selected, the “Connect to unit via Wi-Fi” screen will appear.

7.1 Connect to Unit

The first message instructs the user to physically press the button on the Wireless Interface Module (WIM) to activate.



Figure 15: Connect to unit via Wi-Fi – Pop up

Once the button is pressed, the WIM will broadcast a Wi-Fi network connection unique to the specific SM unit WIM. Once the WIM is activated and the user presses the continue button within the app (Wi-Fi Connection methods diverge here, depending on the platform: Android, iOS or Windows).

7.1.1 Android

1. Open Bosch EasyStart app and then tap Connect to Unit icon. The connection Guide will open, instructing user how to connect to the unit. See the figure 15.
2. Once the user taps the continue button, the app will redirect to a page that lists available Bosch Wi-Fi networks. See Figure 16.

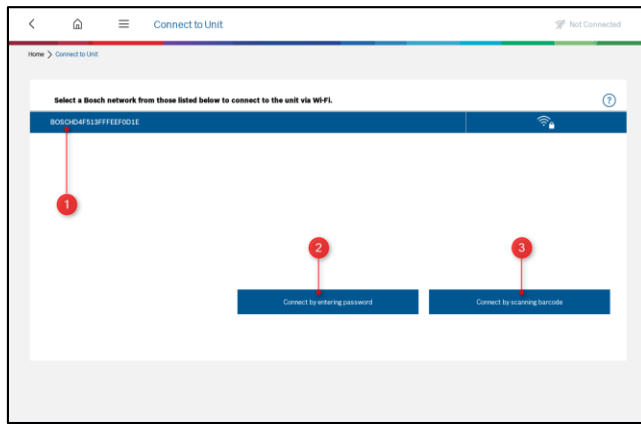


Figure 16: Wi-Fi List

[1] Network

[2] Password Entry Option: Manual

[3] Password Entry Option: Scan Barcode

3. Select the appropriate Wi-Fi and connect by using either one of the below options.
 - a. Connect by entering password
 - b. Connect by scanning barcode
4. By choosing “Connect by entering password”, the user will need to look on the Wi-Fi WIM to obtain the password and enter it in the opened popup window. Next, tap continue. See the figure 17.

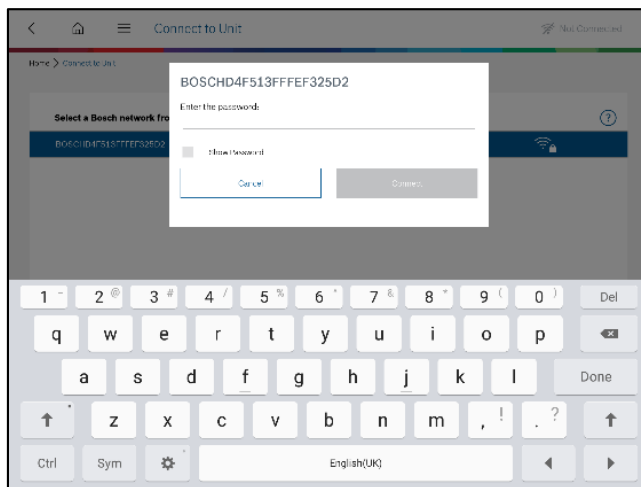


Figure 17: Enter Password

5. By choosing “Connect by scanning barcode”, hold the tablet over the QR code present on the WIM and app will automatically get the password from QR code and trying to connect HPC.

6. Once it connected successfully it will redirect to home screen and “Not connected” status will be changed to “Connected” and connected device serial number will be displayed in the right side header of the app. See the figure 18.

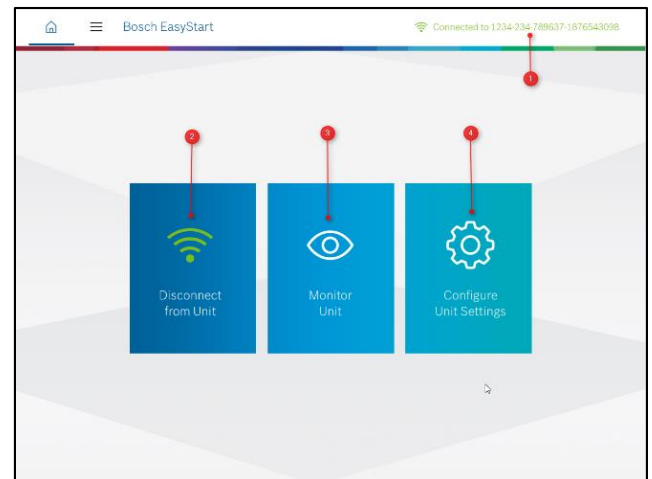


Figure 18: Home Screen when connected

[1] Unit Serial Number

[2] Disconnect from Unit

[3] Monitor Unit

[4] Configure Unit Settings

If the Bosch EasyStart app is not successful in connecting to the WIM, an error message will appear "Cannot connect to WIM." It is recommended that the user contact Bosch Customer Service.

Once the EasyStart app is connected to the Heat Pump WIM, the user can view live data from the unit in different formats: diagram, graph, data view, and configuration settings.

7.1.1.1 Use of Tablet QR Code Reader (Android)

- Hold tablet steady and place tablet's camera over the QR code so it fits within the non-greyed middle region of the screen.
- If QR code is blurry adjust your distance and tap screen to refocus camera.
- Clean the camera lens if image is still blurry.
- Tablets will not use flash function when scanning. Make sure there is adequate lighting and no shadows fall on the QR code.

7.1.2 Apple iOS

1. Open Bosch EasyStart app and then tap the Connect to Unit icon. The connection Guide will open and instructing user how to connect to the unit. See the figure 15.
2. Go to iPad Settings, then select the Wi-Fi tab
3. Make sure HPC unit Wi-Fi is turned on indicated by a red LED. Tap the Wi-Fi network which you want to connect (HPC Wi-Fi names begin with 'BOSCH'). See figure 19). Enter the password that is located on the Wi-Fi WIM and tap the join button.

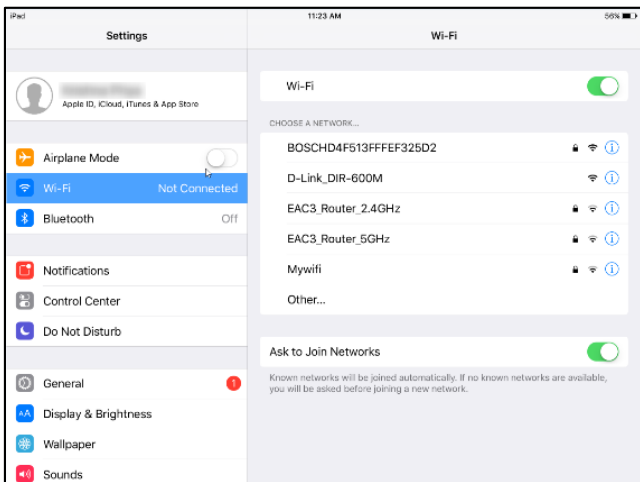


Figure 19: IPAD - Wi-Fi Settings

4. Once the device is connected with Wi-Fi successfully, go back to the Bosch EasyStart app.
5. Now the app will prompt the user with the text “Your device is connected with Wi-Fi. Do you want to connect to the HPC unit now? Press “Yes” button to connect to the HPC unit.
6. Once the HPC is connected successfully to the Bosch EasyStart app, “Not connected” status will be changed to “Connected” and connected device serial number will be displayed in the right side header of the app. See the Figure 18.

7.1.3 Microsoft Windows

1. Open Bosch EasyStart PC app. Tap the “Connect to unit” icon which will navigate to the next window where it will show instruction how to connect HPC unit with app. See the figure 15.
2. Press the ‘Windows key’ and ‘A’ to bring up the Action Center (or swipe in from the right on a touchscreen.)

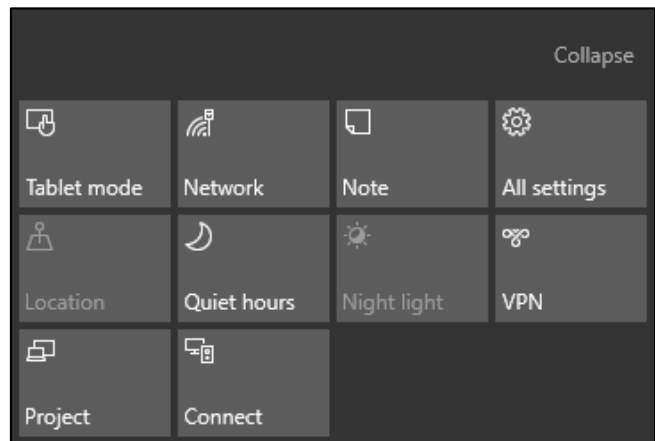


Figure 20: Action Center

3. Tap on the Wi-Fi icon and select the Bosch Wi-Fi network from the list (BOSCHXXXX).

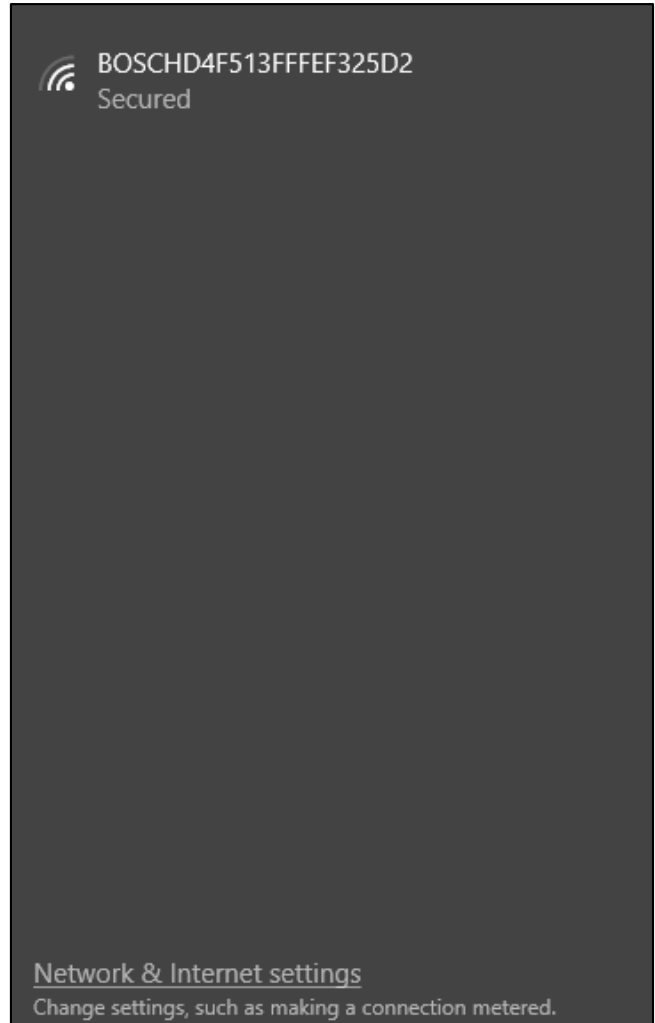


Figure 21: BOSCH Wi-Fi

4. The password must be entered manually.
5. Once the system is connected to the Wi-Fi successfully, go back to the Bosch EasyStart app,
6. Now the app will prompt to the user with the text "Your device is connected with Wi-Fi. Do you want to connect to the HPC unit now? Press "Yes" button to connect to the HPC unit.
7. Once connected to the HPC, "Not connected" status will be changed to "Connected" and connected device serial number will be displayed in the right side header of the app. See the figure 18.

7.1.4 Common to all platforms

The Bosch EasyStart app is "Not Connected" mode and the device is connected with Wi-Fi. Then the app react as follows.

1. If the device (Android Tablet, Apple iPad or Windows PC) is connected with the WIM Wi-Fi (BOSCH Wi-Fi) then press the "Connect to Unit" icon. The Bosch EasyStart app will connect to the HPC unit and "Not Connected" status will be changed to "Connected."
2. If the device is connected with any other local Wi-Fi, It will try to connect but will show error message as "Unable to connect. Please try again" and then followed by it will display help screen.

7.2 Disconnect From Unit

The Installer can disconnect from the unit by either going to the Extended Menu and proceeding to "Disconnect from Unit" option or by tapping the disconnect from the unit icon in the home screen.

Once disconnected from the unit, the Bosch EasyStart app will change from "Connected to Unit" to "Not Connected".

8 Monitor Unit

Within the Monitor Unit section, the user will be able to select either "Live Monitor" the appliance in three different formats or view the "Fault History". Let's begin with the Live Monitor Screen:

8.1 Live Monitor

The user will be able to view the "Diagram" page as a default landing page when "Monitor Unit" icon is tapped.

8.1.1 Diagram

The "Diagram" page will display the following:

- Component Operating Status
- Thermostat Demand
- Active System Timers
- Test Mode Toggle

An example is given in Figure 22.

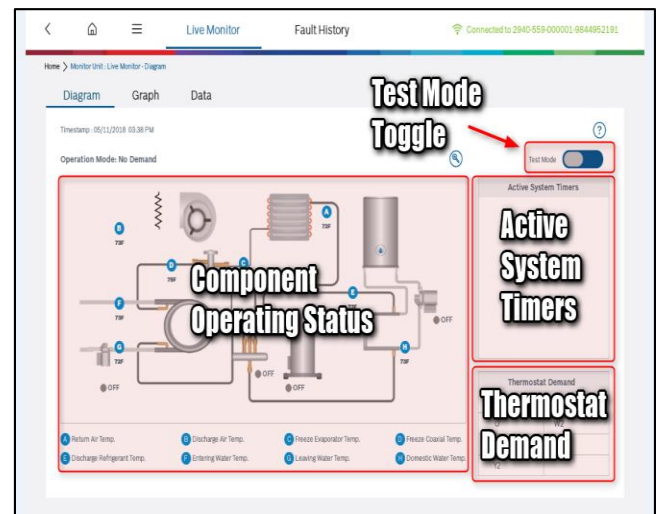


Figure 22: Diagram View

Areas of the live monitor are unique and convey different types of information; each area will be explained further in the following sections.

8.1.1.1 Component Operating Status

A units systems components are pictorially diagrammed with each major component labeled. See the highlighted region below:

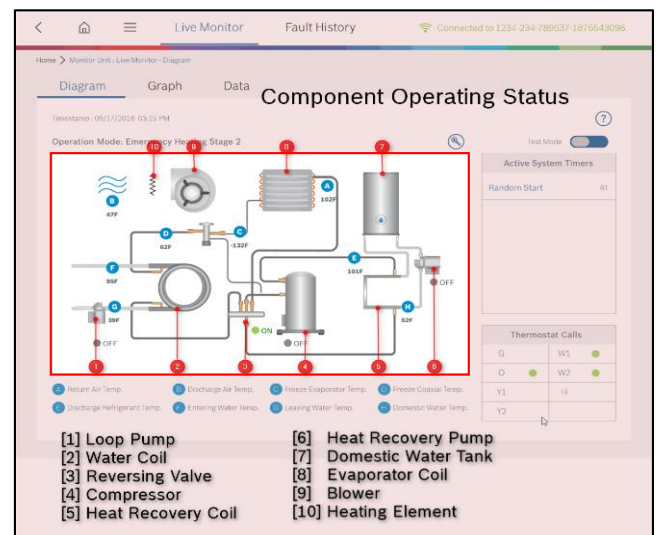


Figure 23: Components

The vital components of the heat pump are shown in the diagram view as well as eight temperature sensors and their respective locations within the refrigeration circuit. The components are clickable, each purpose explained within the heat pump. The components and any faults that occur during operation are displayed (ON/OFF/Stage 1/Stage 2). The eight temperature sensors are the following type:

- A. RAT - Return Air Temperature
- B. DAT - Discharge Air Temperature
- C. FZE - Freeze Evaporator Temperature
- D. FZC - Freeze Coaxial Temperature
- E. DRT - Discharge Refrigerant Temperature
- F. EWT - Entering Water Temperature
- G. LWT - Leaving Water Temperature
- H. DWT - Domestic Water Temperature

When the faults occur warning symbols is displayed on “Diagram” view of Live Monitor screen based on the corresponding fault detections from the HPC unit. These warning symbols is located on or near the component which is most relevant to the fault.

By tapping or clicking the warning symbol, the user can view the fault information. The possible faults for each components are described below.

On Sensors Locations

Fault Code	Fault Information
0x07	DAT sensor is not connected/open circuit. Economy mode will not function, no other effect on unit operation.
0x0F	DAT sensor is short circuited. Economy mode will not function, no other effect on unit operation.
0x08	RAT sensor is not connected/open circuit. Economy mode will not function, no other effect on unit operation.
0x10	RAT sensor is short circuited. Economy mode will not function, no other effect on unit operation.
0x09	LWT sensor is not connected/open circuit. Unit will operate with warnings.
0x11	LWT sensor is short circuited. Unit will operate with warnings.
0x0A	EWT sensor is not connected/open circuit. Unit will operate with warnings.
0x12	EWT sensor is short circuited. Unit will operate with warnings.
0x0B	DWT sensor is not connected/open circuit. Heat Recovery Package will not function.
0x13	DWT sensor is short circuited. Heat Recovery Package will not function.
0x0C	DRT sensor is not connected/open circuit. Heat Recovery Package will not function.
0x14	DRT sensor is short circuited. Heat Recovery Package will not function.
0x0D	FZE sensor is not connected/open circuit. Unit operation disabled.

0x15	FZE sensor is short circuited. Unit operation disabled.
0x0E	FZC sensor is not connected/open circuit. Unit operation disabled.
0x16	FZC sensor is short circuited. No unit operation.

Table 1: Alert notifications associated with temperature sensors

On the Compressor

Fault Code	Fault Information
0x24	Compressor is shut down due to ASC timer delay. No unit operation.
0x30	High pressure is detected as soft lockout. No unit operation.
0x31	Low pressure is detected as soft lockout. No unit operation.
0x01	High Pressure Hard Lockout Fault (HPS). No unit operation.
0x02	Low Pressure Hard Lockout Fault (LPS). No unit operation.

Table 2: Alert notifications associated with Compressor

Generic Faults and not related to a specific component

Fault Code	Fault Information
0x18	Not cooling, DAT > RAT. [Stage-1]. No effect on unit operation.
0x19	Heating, DAT > RAT. [Stage-2]. No effect on unit operation.
0x1A	Not heating, DAT < RAT. [Stage-1]. No effect on unit operation.
0x1B	Cooling, DAT < RAT. [Stage-2]. No effect on unit operation.
0x1D	High loop temperature is detected (LWT > limit). No effect on unit operation.
0x1F	High loop temperature is detected (EWT > limit). No effect on unit operation.
0x20	Not cooling (LWT <= EWT). No effect on unit operation.
0x21	Not heating (LWT >= EWT). No effect on unit operation.
0x05	Brownout voltage fault is detected due to low power supply voltage. No unit operation.
0x25	Power fail fault is detected due to no power supply voltage for few milliseconds. No effect on unit operation.

Table 3: Generic Faults

On the Water Loop

Fault Code	Fault Information
0x26	Freeze condition is detected in water loop (EWT < Set Point). Compressor operation is disabled, Electric Heat Energized.

Table 4: Alert notifications associated with Water Loop

On the Loop Pump

Fault Code	Fault Information
0x23	Low water flow is detected using EWT, LWT. No effect on unit operation.
0x22	No water flow is detected using EWT, LWT. No unit operation.

Table 5: Alert notifications associated with Loop Pump

Below the Evaporator

Fault Code	Fault Information
0x04	Condensate overflow fault is detected due to condensation. No unit operation.

Table 6: Alert notifications associated with Evaporator

On the Evaporator Coil

Fault Code	Fault Information
0x06	Caution: Freeze condition is detected as hard lockout at evaporator coil. See FZE trip timer in the Active System Timers.
0x2E	Caution: Freeze condition is detected as soft lockout at evaporator coil. See FZE trip timer in the Active System Timers.

Table 7: Alert notifications associated with Evaporator Coil

On the Condenser Coil

Fault Code	Fault Information
0x03	Caution: Freeze condition is detected as hard lockout at condenser coil. See FZC trip timer in the Active System Timers.
0x2F	Caution: Freeze condition is detected as soft lockout at condenser coil. See FZC trip timer in the Active System Timers.

Table 8: Alert notifications associated with Condenser Coil

On the Blower

Fault Code	Fault Information
0x2C	Fan motor is detected as hard lockout. No unit operation.
0x2D	Fan motor is detected as soft lockout. No unit operation.

Table 9: Alert notifications associated with Blower

8.1.1.2 Thermostat Demand

Thermostat demand area, highlighted below. A green indicator dot will signal a thermostat call (ON).

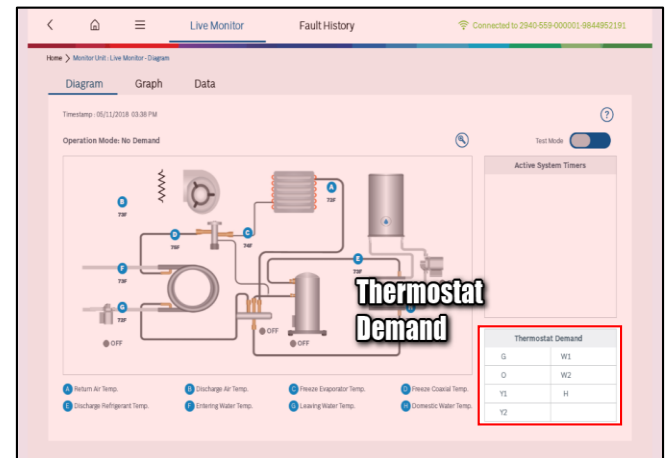


Figure 24: Thermostat Demand

The thermostat demand can be comprised of valid combination of the following signals:

1. G - Fan call signal (Blower)
2. O - Reversing Valve call Signal (Reverse Valve)
3. Y1 - Compressor 1st stage call signal (Compressor 1)
4. Y2 - Compressor 2nd stage call signal (Compressor 2)
5. W1 - Electric Heat 1st stage call Signal (Heat 1)
6. W2 - Electric Heat 2nd stage call Signal (Heat 2)
7. H - Dehumidification call Signal (Dehumidification)

8.1.1.3 Active System Timers

The active system timers will display the following clickable timers. Once a timer expires it will be removed from the list.

1. Random Start Delay
2. Anti-Short Cycle
3. Low Pressure
4. Compressor Stage 1
5. Compressor Stage 2
6. LWT High Limit
7. EWT High Limit

8. FZC Trip Timer
9. FZE Trip Timer
10. HRP Pump Sample Rate
11. Low Loop Water Protection
12. Staging
13. Loop Pump to Compressor Delay
14. Test Mode

Tap or click on the active timer for additional details.

Timers/Delays	Description
Random Start	Delay to protect the power supply from inrush of current when starting up after a power failure.
Anti-short Cycle (ASC)	Delay to protect compressor from short cycling.
Low Pressure	Timer to allow low pressure fault to recover.
Compressor Stage 1 (CS1)	Run time of stage 1 compressor.
Compressor Stage 2 (CS2)	Run time of stage 2 compressor.
LWT High Limit	Timer to set LWT High Limit fault once it has crossed its threshold limit.
EWT High Limit	Timer to set EWT High Limit fault once it has crossed its threshold limit.
FZC Trip	Timer to allow freeze coaxial fault to recover.
FZE Trip	Timer to allow freeze evaporator fault to recover.
HRP Pump Sample	Timer between hot water sampling.
Low Loop Water Protection	Delay to allow the loop to warm up to envelope operational temperatures.
Staging	All peripherals are enabled with sufficient delay to avoid any power surge.
Loop Pump to Compressor Delay	Timer to allow adequate water flow before compressor energizes
Test Mode	Timer before Test Mode expires.

Table 10: Active System Timers

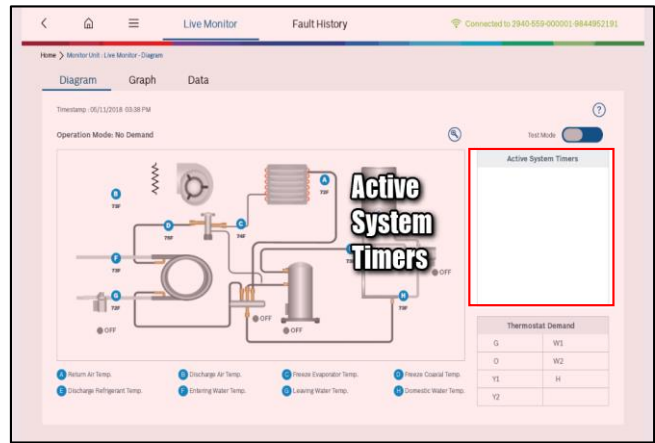


Figure 25: Active System Timers

8.1.1.4 Test Mode

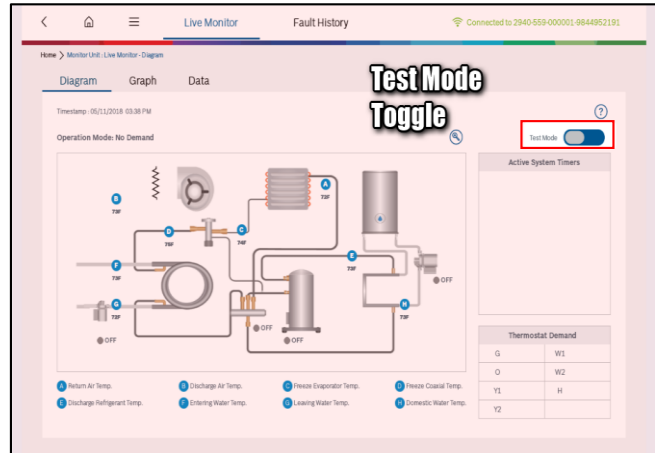


Figure 26: Test Mode Switch

Test mode provides a means for an installer to test a unit configuration by reducing the built in timers of the HPC control. The unit will operate but with reduced wait times thus providing a means to observe a units behavior in a compressed time period.

Test mode was designed for the purpose of commissioning, testing and diagnostics. The use of Test Mode should be limited to trained HVAC professionals.

To enable test mode, first navigate to monitor screen as show in Figure 26 and then taping the Test Mode toggle button.

Once activated, unit timers and delays are set to 10 seconds. The timers and delays that are adjusted by Test Mode are listed in Table 10.

Test Mode automatically expires after 20 minutes. A user may end Test Mode at any time by tapping on the Test Mode toggle button.

NOTICE: Continuous operation of the unit in test mode can lead to accelerated wear and premature failure of components. Discontinue use of test mode after troubleshooting/servicing.

The next tab within “Live Monitor” section is “Graph”.

8.1.2 Graph

The “Graph” tab will display the following:

1. EWT – Entering Water Temperature.
2. LWT – Leaving Water Temperature.
3. RAT – Return Air Temperature.
4. DAT – Discharge Air Temperature.
5. DWT – Domestic Water Temperature.
6. DRT – Discharge Refrigerant Temperature.
7. FZE – Freeze Evaporator Temperature.
8. FZC – Freeze Coaxial Temperature.

See an example of the graph screen in Figure 27.

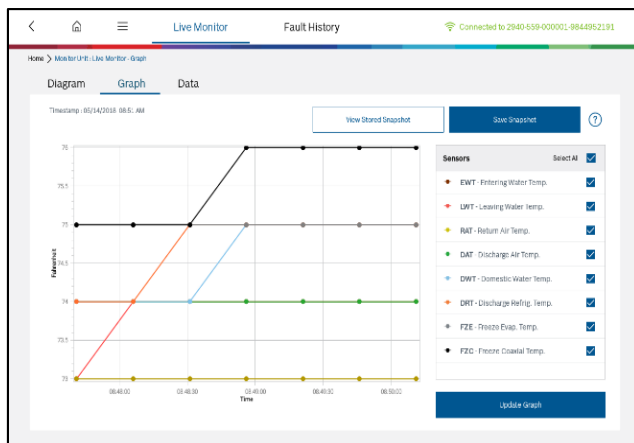


Figure 27: Graph View

The graph section plots the last five minutes of the eight temperature sensors. The default setting is to display all eight; to view a different selection, check the boxes to the right of the thermistor and select “Update Graph”.

The user also has the option to view stored snapshot and save snapshots by tapping the corresponding button. (More on Snapshot in section [Stored Data Snapshot](#)) The next tab within “Live Monitor” section is “Data”.

8.1.3 Data

The “Data” tab displays snapshot data elements in a table view with each individual element collected listed below:

1. EWT – Entering Water Temp.

2. LWT – Leaving Water Temperature.
3. RAT – Return Air Temperature.
4. DAT – Discharge Air Temperature.
5. DWT – Domestic Water Temperature.
6. DRT – Discharge Refrigerant Temperature.
7. FZE – Freeze Evaporator Temperature.
8. FZC – Freeze Coaxial Temperature.
9. G – Thermostat Signal
10. O – Thermostat Signal
11. Y1 – Thermostat Signal
12. Y2 – Thermostat Signal
13. W1 – Thermostat Signal
14. W2 – Thermostat Signal
15. H – Thermostat Signal

See an example of the data screen in Figure 28.

The screenshot shows the 'Data' tab in the Live Monitor application. It displays a table of sensor readings for the last 5 minutes. The table has columns for time intervals and rows for various sensors. The sensors listed are EWT, LWT, RAT, DAT, DWT, DRT, FZE, FZC, G, O, Y1, and Y2. The readings for temperature sensors are numerical values, while thermostat signals (G, O, Y1, Y2) are 'On' or 'Off'.

	11:10:25	11:10:50	11:11:15	11:11:40	11:12:05	11:12:30	11:12:55	11:13:20	11:13:45	11:14:10	11:14:35	11:15:00
EWT	73	73	73	73	73	73	73	73	73	73	73	73
LWT	72	72	72	72	72	72	72	72	72	72	72	72
RAT	71	72	72	72	72	72	72	72	72	72	71	71
DAT	72	72	73	73	73	73	73	73	72	72	72	72
DWT	73	73	73	73	73	73	73	73	73	73	73	73
DRT	73	73	73	74	74	74	74	73	73	73	73	73
FZE	75	75	74	74	74	75	75	75	75	75	75	74
FZC	75	75	75	75	75	75	75	75	75	75	75	75
G	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
O	On	On	On	On	On	On	On	On	On	On	On	On
Y1	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off

Figure 28: Data View

In this section, the user will be able to view the last 5 minutes worth of data for the eight temperature sensors as well as the 7 thermostat signals.

The user also has the option to view stored snapshot and save snapshots by tapping the corresponding buttons (More on Snapshot in section [Stored Data Snapshot](#)). The next section within “Monitor Unit” is “Fault History”.

8.2 Fault History

Within the fault history page the following information will be available for each fault/warning:

1. Fault Name
2. Fault Code
3. Fault Time
4. Fault Snapshot (if available)

See an example of the Fault History screen in Figure 29.

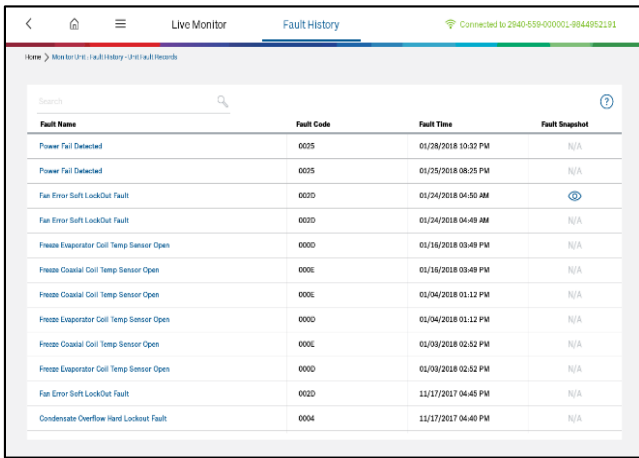


Figure 29: Fault History

Tap the “Fault Name” to get more detailed description about the fault. Each fault has a corresponding Fault Code, which will provide the time when the fault occurred and provide access to the snapshot (if available).

Up to 70 faults can be displayed in the fault history.

Fault Code	Fault Name	Fault Description
0x01	High pressure hard lockout fault	A high-pressure condition has been detected and the high-pressure switch is open. Compressor has shutdown. High pressure is located on the HPC board connection P2-10, 9. Assure there is no condition that causes high-pressure switch to be open and reset HPC.
0x02	Low pressure hard lockout fault	A low pressure condition has been detected, the low-pressure switch is open and the compressor will run for two minutes, if the condition remains compressor will shut down. The low-pressure switch is terminated on the HPC board connection P2 -8, 7. Assure there is no condition that causes low-pressure switch to be open and reset HPC.

0x03	Freeze coaxial hard lockout fault	The freeze temperature sensor installed in the coaxial coil has detected freeze condition. The compressor will not run. Sensor is located in the condenser section on entering refrigerant pipe and terminated on the HPC board connection P2 - 5, 6. Assure there is no condition that causes freezing and reset HPC.
0x04	Condensate overflow hard lockout fault	Condensate drain pan sensor has detected an overflow condition; sensor is located on the HPC board connection P2 – 2. Assure no water is present and reset HPC.
0x05	Brownout soft lockout fault	HPC power supply has experienced a brownout condition, please check Unit primary power and assure it matches unit operating range. Unit will resume normal operations once ASC delay has expired AND fault condition is removed.
0x06	Freeze evaporator hard lockout fault	The Freeze Temperature sensor has detected a freeze condition. If the sensor is open the compressor will not run. Sensor is located in the condenser section between the air coil and the Thermal Expansion Valve (TXV). It is terminated on the HPC board connection P2 - 4, 5. Assure there is no condition that causes freezing and reset HPC.
0x09	Leaving water temperature sensor open	LWT sensor is not connected/open circuit. Unit will operate with warnings.
0x0A	Entering water temperature sensor open	EWT sensor is not connected/open circuit. Unit will operate with warnings.
0x0B	Domestic water temperature sensor open	DWT sensor is not connected/open circuit. Heat Recovery Package will not function.
0x0C	Discharge refrigerant temperature sensor open	DRT sensor is not connected/open circuit. Heat Recovery Package will not function.

0x0D	Freeze evaporator coil temperature sensor open/short	The Freeze Temperature sensor has failed, please verify its wiring. If the sensor is open the compressor will not run. Sensor is located in the condenser section between the air coil and the Thermal Expansion Valve (TXV). It is terminated on the HPC board connection P2 - 4, 5.
0x0E	Freeze coaxial coil temperature sensor open/short	The Freeze Temperature sensor installed in the coaxial coil has failed please verify its wiring. If the sensor is open/shorted the compressor will not run. Sensor is located in the condenser section on entering refrigerant pipe and terminated on the HPC board connection P2 - 5, 6.
0x11	Leaving water temperature sensor short	LWT sensor is short circuited. Unit will operate with warnings.
0x12	Entering water temperature sensor short	EWT sensor is short circuited. Unit will operate with warnings.
0x13	Domestic water temperature sensor short	DWT sensor is short circuited. Heat Recovery Package will not function.
0x14	Discharge refrigerant temperature sensor short	DRT sensor is short circuited. Heat Recovery Package will not function.
0x15	Freeze evaporator temperature sensor short	FZE sensor is short circuited. No unit operation.
0x16	Freeze coaxial temp. short	FZC sensor is short circuited. No unit operation.
0x19	Heating with cooling demand	Not cooling, DAT > RAT. No effect on unit operation.
0x1B	Cooling with heating Demand	Not heating, DAT < RAT. No effect on unit operation.
0x1D	High leaving water temperature fault	High leaving water temperature fault. No effect on unit operation.
0x20	Water coil does not provide the expected temperature for cooling operation	Not cooling, LWT ≤ EWT. No effect on unit operation.
0x21	Water coil does not provide the expected temperature for heating operation	Not heating, LWT ≥ EWT. No effect on unit operation.

0x22	No water flow detected	No water flow is detected using EWT, LWT. No unit operation.
0x25	Power fail detected	HPC power supply has experienced a no power supply for few milliseconds, please check Unit primary power and assure it matches unit operating range. Unit will resume normal operations once fault condition is removed.
0x2C	Fan error hard lockout fault	Blower failure hard lockout motor was attempted to start more than 3 times. Check for blower motor integrity, change if needed.
0x2D	Fan error soft lockout fault	Blower failure soft lockout fan motor did not provide feedback check connections. Unit will resume normal operations once ASC delay has expired AND fault condition is removed.
0x2E	Freeze evaporator soft lockout fault	The freeze temperature sensor installed at air coil has detected freeze condition. If the sensor is open/shorted the compressor will not run. Sensor is located in the condenser section between the air coil and the Thermal Expansion Valve (TXV). It is terminated on the HPC board connection P2 - 4, 5. Unit will resume normal operations once ASC delay has expired AND fault condition is removed.
0x2F	Freeze coaxial soft lockout fault	The freeze temperature sensor installed at coaxial coil has detected freeze condition. The compressor will not run. Sensor is located in the condenser section on entering refrigerant pipe and terminated on the HPC board connection P2 - 5, 6. Unit will resume normal operations once ASC delay has expired AND fault condition is removed.

0x30	High pressure soft lockout fault	A high-pressure condition has been detected and the high-pressure switch is open. Compressor has shutdown. High pressure is located on the HPC board connection P2 - 10, 9. Unit will resume normal operations once ASC delay has expired AND fault condition is removed.
0x31	Low pressure soft lockout fault	A low-pressure condition has been detected and the low-pressure switch is open. Compressor will run for the next two minutes. If the condition remains same, then compressor will shut down. The low-pressure switch is located on the HPC board connection P2 - 8, 7. Unit will resume normal operations once ASC delay has expired AND fault condition is removed.

Table 11: Faults displayed in Fault History

By default snapshot will be generated for the following faults when they occurred.

Fault Code	Remarks
0x01	High Pressure Switch Fault (HPS) : Hard Lock Out
0x02	Low Pressure Switch Fault (LPS) : Hard Lock Out
0x03	Condenser Coil Fault (FZC) : Hard Lock Out
0x04	Condensate Water Overflow Fault Plate (COND) : Hard Lock Out
0x05	Brownout Fault (BO) : Soft Lock Out
0x06	Evaporator Coil Fault (FZE) : Hard Lock Out
0x0D	Evaporator Temperature Sensor Open (FZE)
0x0E	Condenser Coil Temperature Sensor Open (FZC)
0x1C	High Leaving Water Temperature Fault
0x2C	Fan Error Hard Lockout Flt
0x2D	Fan Error Soft Lockout Flt
0x2E	Evaporator Coil Fault (FZE) : Soft Lock Out

0x2F	Condenser Coil Fault (FZC) : Soft Lock Out
0x30	High Pressure Switch Fault (HPS) : Soft Lock Out
0x31	Low Pressure Switch Fault (LPS) : Soft Lock Out

Table 12: Snapshot generated faults

By tapping the Eye icon attached to a fault that is within the fault history page, this will allow the user to view the Fault Snapshot. This snapshot will be saved locally for later reference. The user can view this saved snapshot from **Extended Menu-> Unit Data Management-> Stored Data Snapshot** option (More on Snapshot in section [Stored Data Snapshot](#)).

8.2.1 Viewing Fault Snapshot

The Fault Snapshot is comprised of two tabs: Graph and Data. The Graph and Data tabs will contain the same information as the live monitor screen EXCEPT that they will have last five minutes worth of data before the fault occurred.

8.2.1.1 Graph tab

The "Graph" tab will display the following:

1. EWT – Entering Water Temperature.
2. LWT – Leaving Water Temperature.
3. RAT – Return Air Temperature.
4. DAT – Discharge Air Temperature.
5. DWT – Domestic Water Temperature.
6. DRT – Discharge Refrigerant Temperature.
7. FZE – Freeze Evaporator Temperature.
8. FZC – Freeze Coaxial Temperature.

See an example of the graph screen below:

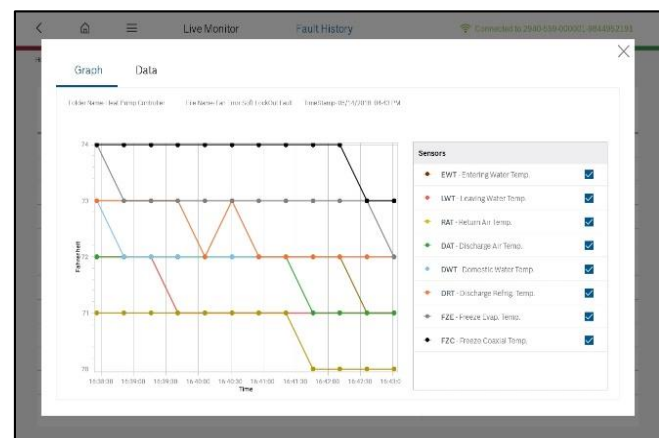


Figure 30: Fault Snapshot - Graph

Similar to the Live Monitor screen, the user can select data from the last five minutes for any or all of the eight temperature sensors to graph.

The default setting is to display all eight; if the user wants a different selection, check the boxes to the right of the thermistor and select “Update Graph”.

8.2.1.2 Data tab

The Data tab will display the following:

1. EWT – Entering Water Temperature.
2. LWT – Leaving Water Temperature.
3. RAT – Return Air Temperature.
4. DAT – Discharge Air Temperature.
5. DWT – Domestic Water Temperature.
6. DRT – Discharge Refrigerant Temperature.
7. FZE – Freeze Evaporator Temperature.
8. FZC – Freeze Coaxial Temperature.
9. G – Thermostat Signal
10. O – Thermostat Signal
11. Y1 – Thermostat Signal
12. Y2 – Thermostat Signal
13. W1 – Thermostat Signal
14. W2 – Thermostat Signal
15. H – Thermostat Signal

See an example of the data screen below:

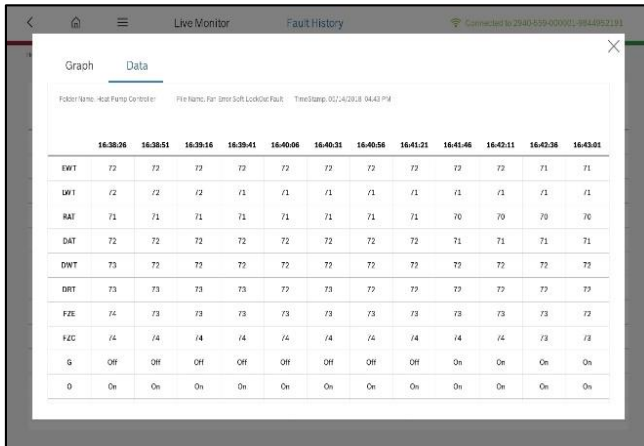


Figure 31: Fault Snapshot - Data

In this section, the user will be able to view the last five minutes worth of data for the eight thermistor as well as the seven thermostat signals.



The fault snapshot will be available only for the latest occurrence of any of the following safety related faults.

Error Code	Remarks
0x01	High Pressure Switch Fault (HPS) : Hard Lock Out
0x02	Low Pressure Switch Fault (LPS) : Hard Lock Out
0x03	Condenser Coil Fault (FZC) : Hard Lock Out
0x04	Condensate Water Overflow Fault (COND) : Hard Lock Out
0x05	Brownout Fault (BO) : Soft Lock Out
0x06	Evaporator Coil Fault (FZE) : Hard Lock Out
0x0D	Evaporator Temperature Sensor Open (FZE)
0x0E	Condenser Coil Temperature Sensor Open (FZC)
0x1C	High Leaving Water Temperature Fault
0x2C	Fan Error Hard Lockout Flt
0x2D	Fan Error Soft Lockout Flt
0x2E	Evaporator Coil Fault (FZE) : Soft Lock Out
0x2F	Condenser Coil Fault (FZC) : Soft Lock Out
0x30	High Pressure Switch Fault (HPS) : Soft Lock Out
0x31	Low Pressure Switch Fault (LPS) : Soft Lock Out

Table 13: Safety Related Faults

9 Configure Unit Settings

During the installation period, the “Configuration Unit Settings” feature is mainly used by installers to customize the default HPC factory settings. The following options are provided for easier installation:

User is allowed to select “Configure Unit Settings” option from Home screen ONLY if app was connected to HPC Unit successfully. See Figure 32.

Select "Configure Unit Settings" from the home screen once the wireless connection is successfully established.

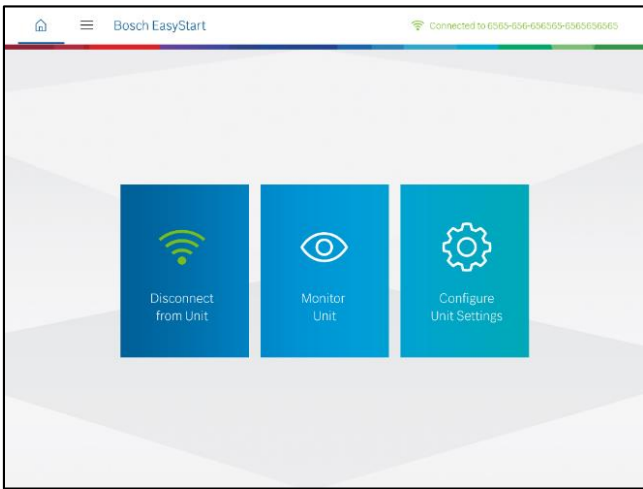


Figure 32: Home - Configure Unit Settings

Using this feature user can edit required configurations parameters and update into the HPC unit.

NOTICE: It is extremely important to select the appropriate temperature set point for your freeze protection strategy to protect your heat pump from freezing.

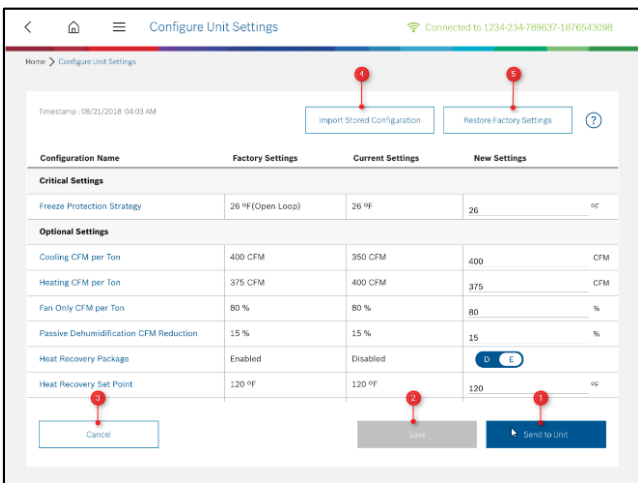


Figure 33: Configure Unit Settings

- [1] **Send to Unit** - Writes the values in the "New Settings" column to the configuration memory of the unit (both one at a time or a batch of several settings).
- [2] **Save** - Save "Current Settings" values in local storage.
- [3] **Cancel** - Cancel all changes from "New Settings" column by using "Cancel" button.

- [4] **Import Stored Configuration** - Import previously configured settings from local storage & loads it in "New Settings" column.
- [5] **Restore Factory Settings** - Import "Factory Settings" from local storage and loads it in "New Settings" column.

By tapping or clicking the symbol , the installer can view the help content about "Configure Unit Settings".

There are 24 configuration parameters are available as described below.

Critical Settings	Description	Default Value	Values / Ranges
Freeze Protection Strategy	Configures the set point for the freeze coaxial temperature protection according to your application (loop type or presence of antifreeze). Refer to the HPC IOM for the recommended freeze protection setting.	26 °F	15 °F – 26 °F
Optional Settings			
Cooling CFM per Ton	Configures the blower's cubic feet per minute airflow in cooling mode.	400 CFM	300 CFM – 450 CFM
Heating CFM per Ton	Configures the blower's cubic feet per minute airflow in heating mode.	375 CFM	300 CFM – 450 CFM
Fan Only CFM	Configures the blower's cubic feet per minute airflow in ventilation mode.	80 %	50 % – 100 %
Passive Dehumidification CFM reduction	Configures the blower's cubic feet per minute airflow reduction percentage in passive dehumidification mode.	15 %	15 % – 40 %

Heat Recovery Package	Configures the appliance to run with a Heat Recovery Package (HRP). The heat recovery package uses waste heat to generate discharge refrigerant to generate domestic hot water.	Enabled	Enabled / Disabled
Heat Recovery Set Point	Configures the temperature set point for domestic hot water production.	120 °F	110 °F – 140 °F
Heat Recovery Sample Rate	Configures the sample rate for domestic hot water production. This is the frequency that the system will check the temperature of the water returning from the domestic hot water tank.	3 S/hr	2 S/hr – 6 S/hr
Electric Heat Size	Configures the size of electrical heating elements in wattage.	0 KW	0 KW, 5 KW, 10 KW, 15 KW and 20 KW
Low Loop Water Protection	Configures the appliance to run with low loop water protection. If there is not enough heat in the water loop, the compressor ceases to operate to allow the system to recover (heat buildup above low loop control set point). Once the temperature in the water loop recovers, the compressor will resume normal operation.	Disabled	Enabled / Disabled
Low Loop Control Set Point	Configures the set point for the entering water temperature in low loop water protection.	34 °F	20 °F – 50 °F

Loop Pump Compressor Delay	Configures the delay between energizing the loop pump and the compressor.	30 s	30 s – 240 s
Mode of Compressor Operation	Configures the appliance to run in either comfort or economy mode. Comfort mode of operation will upstage the compressor from stage 1 to stage 2 in accordance with the thermostat demand; Economy mode of operation will upstage the compressor from stage 1 to stage 2 with a delay based on the progression of the discharge air temperature. Only once progression has plateaued, will stage 2 be energized.	Comfort	Comfort / Economy
Down-Staging	Configures the appliance to run in unlatched or latched mode. Unlatched mode of operation will downstage the compressor from stage 2 to stage 1 in accordance with the thermostat demand; Latched mode of operation will not downstage from stage 2 to 1 until all compressor demand has been removed.	Unlatching	Unlatching / Latching
Number of Lockouts	Configures the allowable number of soft lockouts (per hour) before a hard lockout occurs.	3	2 – 4

Lockout Reset	Selects the method for resetting the appliance after a hard lockout. By selecting R, you are removing the compressor call (Y1) and allowing for power reset only. By selecting Y1, you are allowing for Y1 or R to reset.	On Y1	On R / On Y1
Units of Temperature	Selects the temperature units (F or C) used in the app.	°F	°F / °C
Alarm Type	Select the signal type used for the alarm output (pulse or constant).	Pulse	Pulse / Constant
Date	Sets the date for the real time clock. The date is recorded with the recorded data. This may be necessary if the app is not reading the correct date or if the control board in the unit is replaced.	Current date	-
Time	Sets the time for the real time clock. The time is recorded with the recorded data. This may be necessary if the app is not reading the correct time or if the control board in the unit is replaced.	Current time	-
High Efficiency Mode	Configures the appliance to run in most efficient mode, changing the blower motor profile (changing the CFM).	Disabled	Enabled / Disabled
Compressor Runtime Counter Reset	Resets the recorded runtime of the compressor. This is ONLY necessary if the compressor is replaced.	Disabled	Enabled / Disabled

Model Number	Sets the model number of the appliance. This setting should ONLY be changed if instructed to do so by Customer Service (and if the control board for your unit has been replaced).	-	-
Serial Number	Sets the serial number of the appliance. This setting should ONLY be changed if instructed to do so by Customer Service (and if the control board for your unit has been replaced).	-	-

Table 14: Configuration Parameters

9.1 Importing Previous Stored Configurations

Bosch EasyStart app allows the installer to import saved configuration from the local storage.

1. Press the “Import Stored Configuration” button.
2. It will open up the page where the list of saved folders will be displayed. See figure 34.

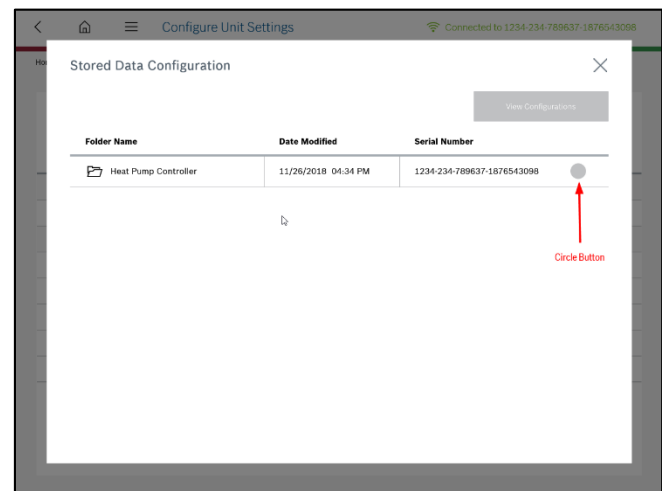


Figure 34: Saved Configuration

3. Choose the folder by tapping “Circle Button” provided in the row and “View Configurations” button will be enabled. Tap that button.
4. It will open the page which loads list of saved configuration files available in the selected folder. See figure 35.

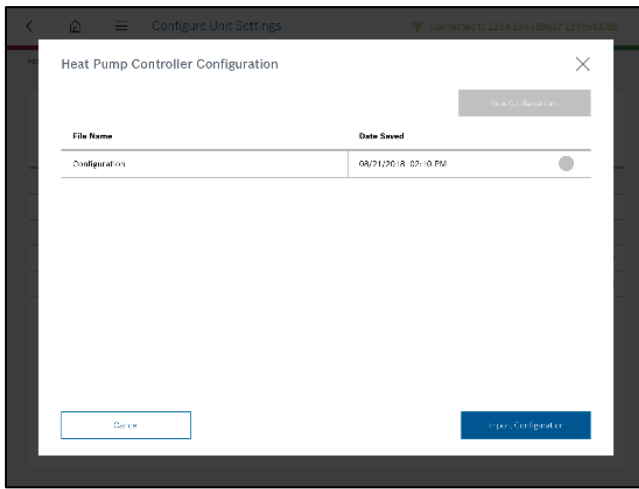


Figure 35: Configuration Files

- Choose any of the configuration file by tapping circle button and then tap “Import Configuration” button located in the bottom. A configuration may be view before importing press “View Configurations” button on the top of the page. It displays the data stored in selected configuration. See figure 36.

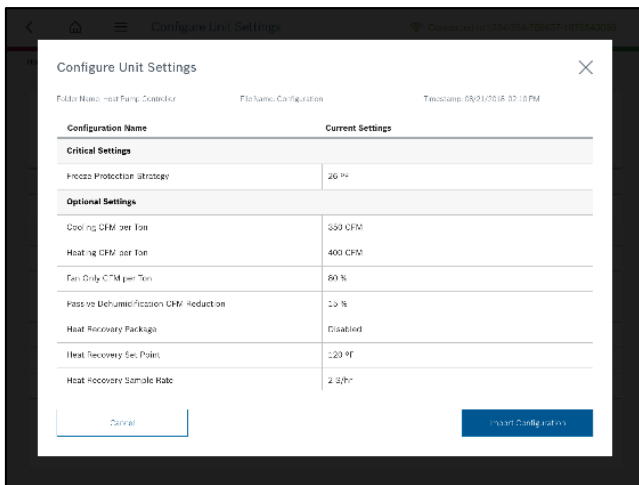


Figure 36: Configuration Details

- The imported values are updated in the “New Settings” column in “Configure Unit settings” view with information strip. See figure 37.

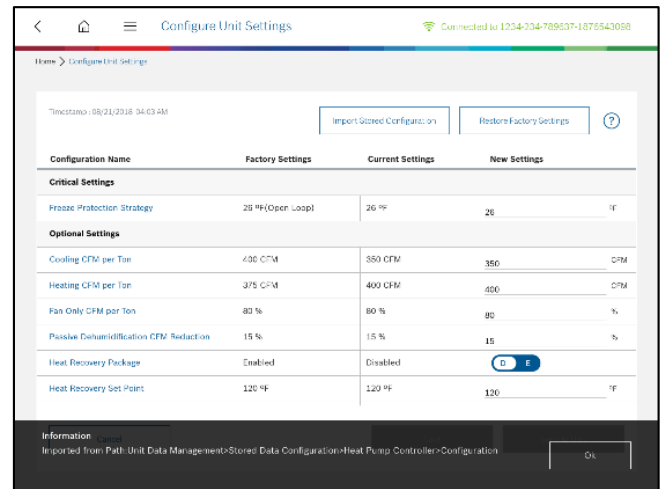


Figure 37: Imported Configuration

- Now tap “Send to Unit” button and confirm the prompt popup. The imported configuration is sent updating the HPC configuration. A success message will be displayed. See figure 38.

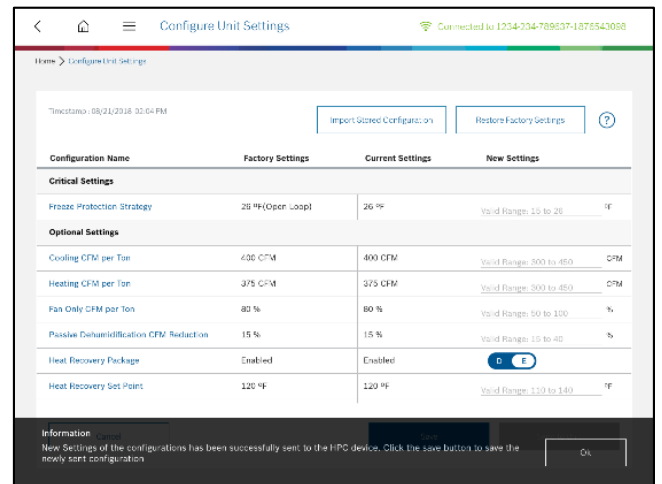


Figure 38: Send to Unit – Success

9.2 Restore Factory Settings:

Bosch EasyStart app allows an installer to reset the HPC unit configuration.

- Tap the “Restore Factory Settings” button and the popup will show caution information about restoring unit. Tap continue to proceed restore. See figure 39.

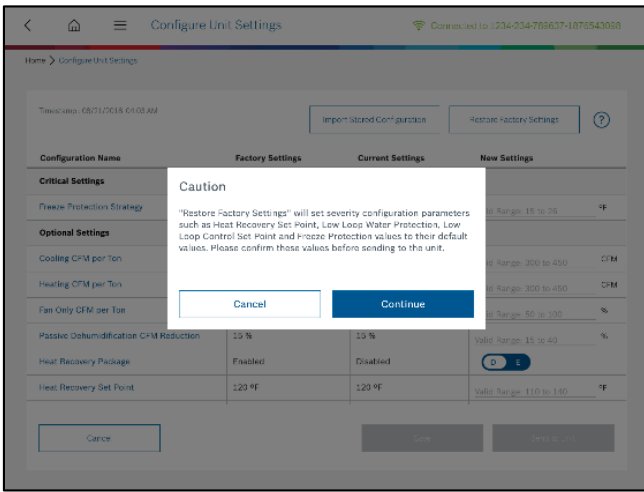


Figure 39: Restore - Caution

2. The default values are updated in the “New Settings” column.
3. Tap “Send to Unit” button
4. The HPC is now reset to the default factor configuration.

10 Extended Menu

The extended menu may be used to navigate to any screen within the app. See figure 40.

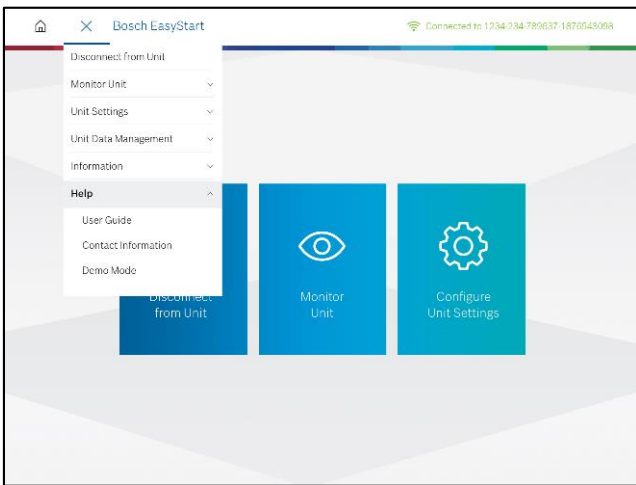


Figure 40: Extended Menu

10.1 Connect to Unit

Tap or click on the menu option "Connect to Unit"; if a Wi-Fi is established with the WIM, it will connect to the HPC unit and redirect to home screen. If the device is not connected with the WIM, it will redirect to connect to unit view.

If the app is connected, In this case if you tap the “Disconnect from Unit” from the extended menu Bosch EasyStart app will be disconnected from the HPC unit and it will redirect to home screen.

10.2 Monitor Unit

Tap on “Monitor Unit” option and it will give two more options to navigate such as “Live Monitor” and “Fault History”.

By tapping “Live Monitor” user can view the live monitor diagram, graph and data.

By tapping “Fault History”, user can view faults which have recently occurred with the unit. It’s applicable only if app is connected with HPC unit or app is running in demo mode

Extended menu “Monitor Unit” options will be displayed when the app is in “Not connected” state, but no user interaction is allowed.

10.3 Unit Settings

Tap on extended menu option “Configure Unit Settings” which navigates to the Configure Unit Settings view. Navigation is allowed only, if the app is connected with HPC unit or in demo mode.

Extended menu option “Configure Unit Settings” will be displayed when it’s in “Not connected” state, but no user interaction is allowed.

10.4 Unit Data Management

Installer can view stored configuration and snapshot files when connected and when not connected to an HPC appliance.

10.4.1 Stored Data Configuration

Installer can elect to view all Heat Pump Controller folders when they tap on stored configuration option.

If the Bosch EasyStart app is connected to any HPC appliance then the folders related to that HPC are displayed. If it is not connected, then all the saved configurations will be listed in this view. See figure 41.

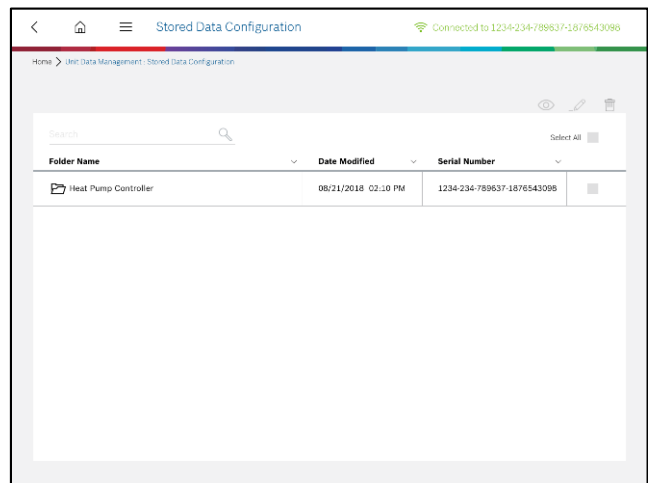


Figure 41: Stored Configuration




Folders will be sorted with the last modified first. See the sample configuration list in the below table.

Folder Name	Date Modified	Serial Number
Heat Pump Controller (3)	12/01/2017 10:27 AM	3940-657-000001-7735048149
Heat Pump Controller (2)	11/02/2017 10:27 AM	4940-657-000001-7735048149
Heat Pump Controller	10/03/2017 10:27 AM	5940-657-000001-7735048149

Table 15: Sample Configuration Folders List

The installer may view, rename and delete the required folders. Additionally sort the table content by tapping the down arrow which is present in the table header columns.

Using the given search option, an installer can search the folder/file by folder name, date and or serial number.

If the Installer selects a single folder by tapping “Checkbox” in the row, all the three icons (View , Edit  and Delete ) presents in the top of the table will be enabled to manipulate the selected folder.

If the Installer selects multiple checkboxes then the “Delete” icon is only enabled and the other two icons “Edit” and “View” will be disabled. At a time single folder can be edited or viewed.

10.4.1.1 Edit Folder Name

1. Select any of the folders listed in table and tap the checkbox, then the three icons will be enabled.
2. Tap the “Edit” icon, then selected folder name will change into editable mode. See figure 42.

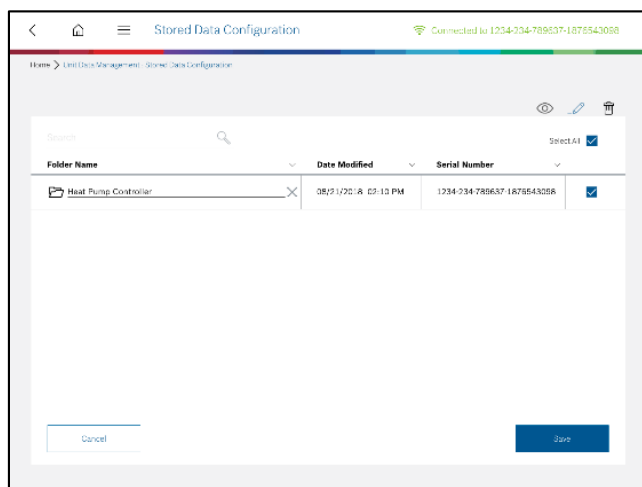


Figure 42: Edit Folder Name

3. Update the folder name and tap “Save” button in the bottom. Now the updated folders name appears in the folder name column.

10.4.1.2 Delete Folder

The installer can delete the folder/file by selecting one “Checkbox” and then “Delete” icon.

An installer may delete all the listed folders/files by tapping “Select All” checkbox on the top right of the table and followed by “Delete” icon.



If the user deletes a folder, all the files inside the folder will also be deleted. This action is permanent and the files cannot be recovered.

10.4.1.3 View Folder

An installer can view the selected folder files by tapping “View” icon. Tap the eye icon and it will load the files presents in the selected folder in the next view.

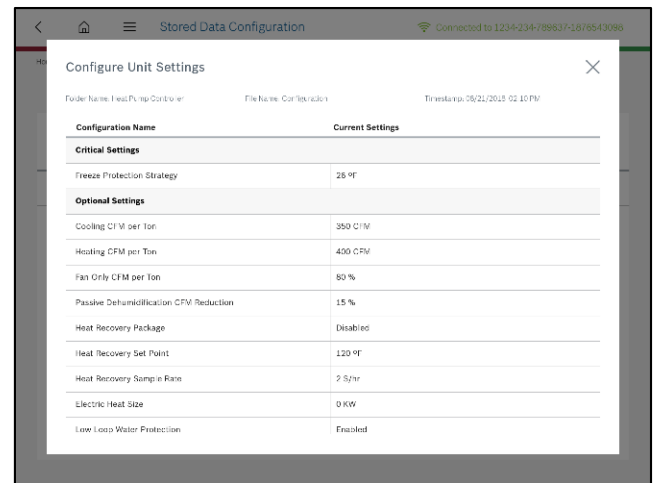


Figure 43: Configuration Details View

Here installer can view configuration files in format as mentioned in the below table.

File Name	Date Modified
Configuration (3)	01/10/2018 10:27 AM
Configuration (2)	12/10/2017 10:27 AM
Configuration	11/10/2017 10:27 AM

Table 16 : Sample Configuration Files List

Like the folders view, Edit, Delete and View actions can be performed. Tapping view icon reveals the details about the selected configuration file in the popup. See figure 43.

10.4.2 Stored Data Snapshot

Stored snapshots are saved files from the Monitor unit screen (data and graph view) and may be viewed in the fault history view window.

An installer can view all Heat Pump Controller folders when he taps on stored snapshot option.

Folders will be sorted with the last modified first.

Folder Name	Date Modified	Serial Number
Heat Pump Controller (3)	12/01/2017 10:27 AM	3940-657-000001- 7735048149
Heat Pump Controller (2)	11/02/2017 10:27 AM	4940-657-000001- 7735048149
Heat Pump Controller	10/03/2017 10:27 AM	5940-657-000001- 7735048149

Table 17: Sample Snapshot Folders List

Similar to Stored Data Configuration, an installer may edit, delete and view actions with snapshot folders.

When the user taps the view icon from folder view, it will load the list of snapshot files inside that folder in the next page. Files are sorted with last file modified first.

File Name	Date Modified	File Name
Live Snapshot (3)	01/10/2018 10:27 AM	Live Snapshot (3)
Live Snapshot (2)	12/10/2017 10:27 AM	Live Snapshot (2)
Live Snapshot	11/10/2017 10:27 AM	Live Snapshot
High Pressure Hard Lockout Fault#	10/08/2017 10:27 AM	High Pressure Hard Lockout Fault#

Table 18: Sample Snapshot Files List

Tapping View icon from the files page, the installer can view the Graph and Data when the faults occurred. See figure 44.



Figure 44: Stored Snapshot – View

10.5 Information

Navigating to the “Information” menu, an installer may review the following details:

1. App Information
2. Unit Information
3. Legal

These options are always available without the need for the EasyStart having an active HPC Wi-Fi connection.

10.5.1 App Information

Tapping on App Information provides details about the apps without an active wireless connection to the HPC.

1. Application version
2. Application release date
3. Last check for update

Along with the above information “Check for update” button will be displayed. See figure 45.

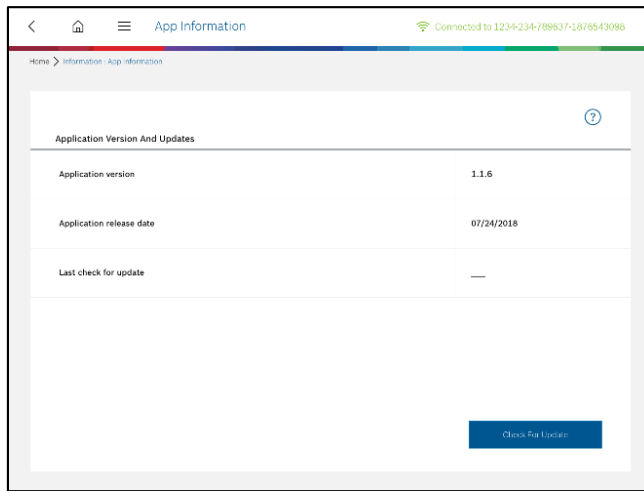



Figure 45: App Information

The user can perform app update routine when user taps on “Check for update” button. App will respond differently based on Wi-Fi connectivity status.

Connected to HPC Unit via Wi-Fi	Connected to internet Via Wi-Fi or Mobile Network	Action
Yes	Yes (via mobile data)	Navigate to play store.
Yes	No	Display a popup says “You cannot check for app updates because you are not connected to the internet. To check for app updates, please connect to home Wi-Fi or mobile data. By continuing you will be automatically disconnected from the unit.”
No	Yes (via mobile or Wi-Fi)	Navigate to play store.
No	No (via Wi-Fi / Mobile data)	Display a popup says “To check for app updates, please connect to home Wi-Fi or mobile data.”

Table 19: App behaviour based on Wi-Fi Connectivity when Check for update

Tapping the  symbol the installer can view help information about the app.

10.5.2 Unit Information

The installer can view the following information in unit information section when the Bosch EasyStart app is in “Connected” mode.

1. Unit Model Number
2. Unit Serial Number
3. PCB Serial Number
4. Current Firmware Version
5. Operational Manual

Along with above information “Check for latest firmware” button will be available in the bottom of page. Using this button, the installer can update the HPC unit firmware. See figure 46.

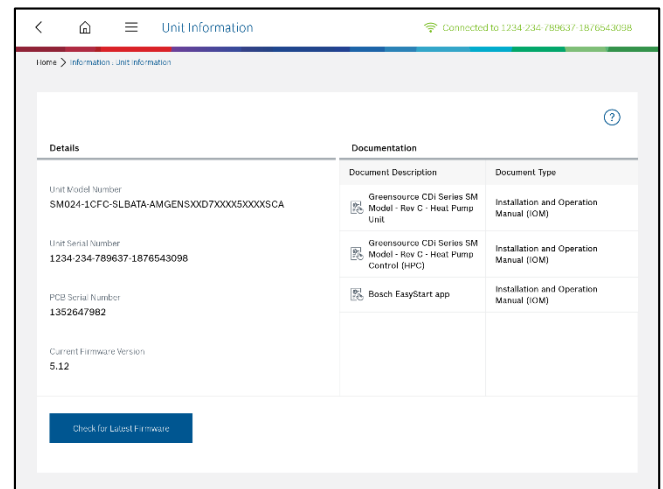


Figure 46: Unit Information

During “Not Connected” state no information will be provided and “Check for Latest Firmware” button will be in disabled mode.

10.5.2.1 Flash Firmware

1. Tap the “Check for Latest Firmware” button, it will open a popup with three latest firmware versions. See Fig 47.

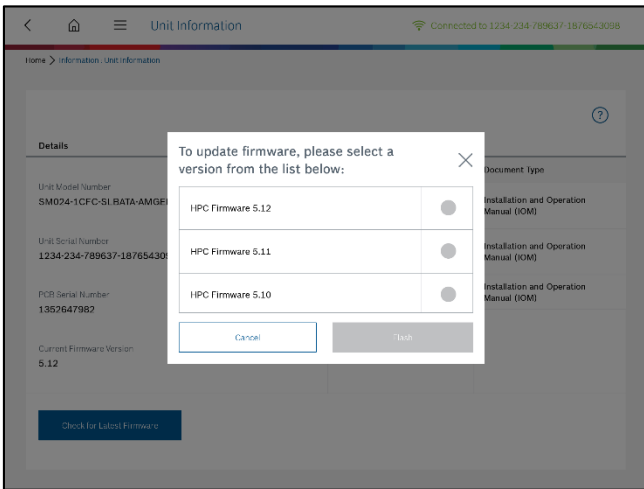


Figure 47: Flash Firmware

2. Choose the firmware to flash the HPC unit. The Flash button will then become enabled.
3. Tap the “Flash” button. Flashing will start. At this moment the BES app will be changed to “Connected to Boot-loader” status.
4. Progress bar will indicate flashing process. Once it is 100% completed, the “Done” button will be shown with success message “Firmware updated successfully” in the same popup. The flashing operation takes a few minute and should not be interpreted until finished.
5. Tap the “Done” button, a pop-up will close and the latest updated firmware version will be updated in “Current Firmware Version” section. The BES app will be changed to connected status.



Stay within 5 feet from the unit during flash update. Do not turn off your device Android Tablet, iPad or PC while the update is in progress.

If any problem occur during flashing, the app will transition to boot loader mode. The connection status will show "Connected to Boot-Loader" status in the header. Until successful flash, the app will show connected to boot-loader status. Please contact customer support if flash recovery is unsuccessful.

10.5.2.2 Operation Manual

There are three operation manuals included in the app. Those are,

1. Greensource CDi Series SM Model – Rev C – Heat Pump Unit
2. Greensource CDi Series SM Model – Rev C – Heat Pump Control (HPC)
3. Bosch EasyStart app



The installer can view the manual by clicking the icon. It will open a popup with selected manual pdf. The installer can go through the manual to get more information.

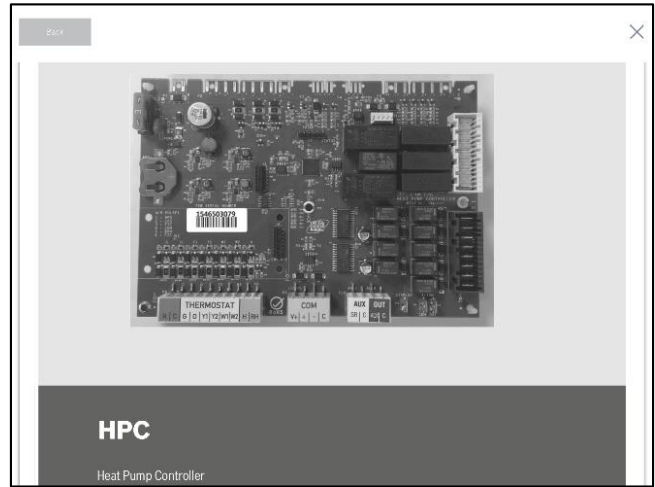


Figure 48: HPC - Operation Manual Popup

10.5.3 Legal

Tap on “Legal” from extended menu and it will open pop-up screen with legal information. The privacy statement, end user license agreement, and terms and conditions will be provided as links. See figure 49.

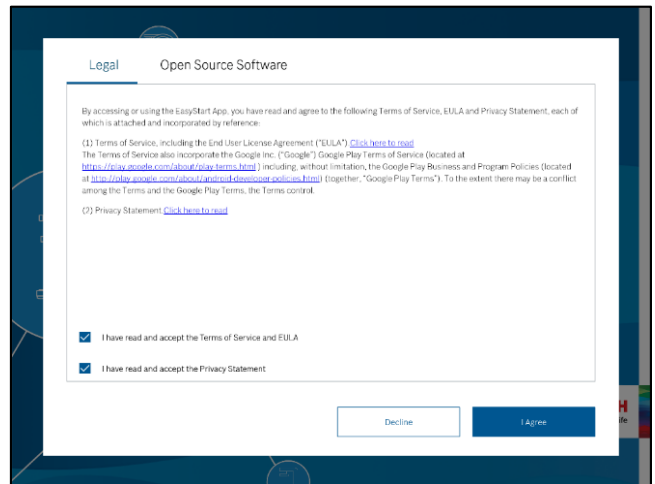


Figure 49: Legal

Tap the links to view details about EULA and Privacy statement pdf files in the popup.

10.5.3.1 Open Source Software

In this tab the installer can view the information about third party copyrights used in the Bosch EasyStart app. See figure 50.

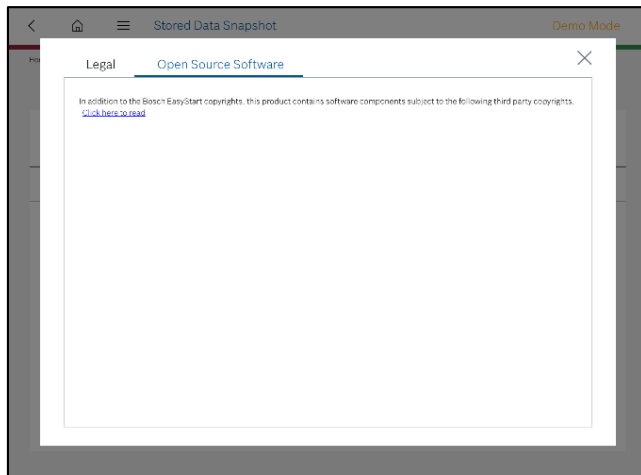


Figure 50: Open Source

10.6 Help


User can navigate to help menu to get the following details:

1. User Guide
2. Contact Information
3. Demo Mode

These options are always available regardless of the HPC connection status.

10.6.1 User Guide

Tap on "User Guide" option, it will navigate to the pop-up which gives an overview about the user guide section.

Tap the "Continue" button and to load next popup which a brief introduction about each individual feature of Bosch EasyStart app with example screenshots. The installer can exit the popup by tapping  button at any point of time.

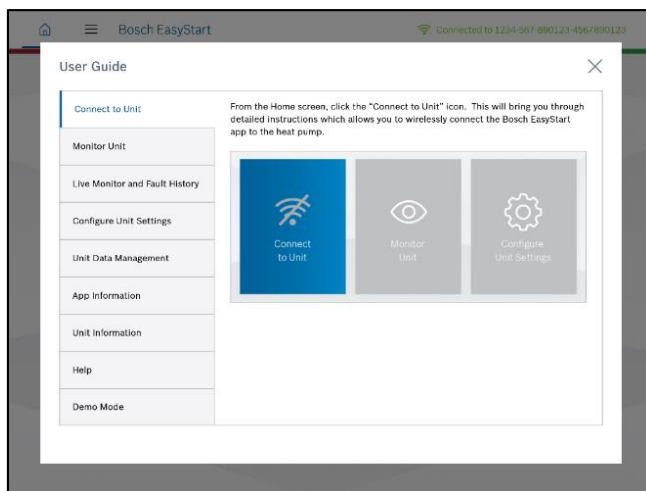


Figure 51: User Guide

10.6.2 Contact Information

Tap on the "Contact Information" option from the extended menu to view the technical support options. See figure 52.

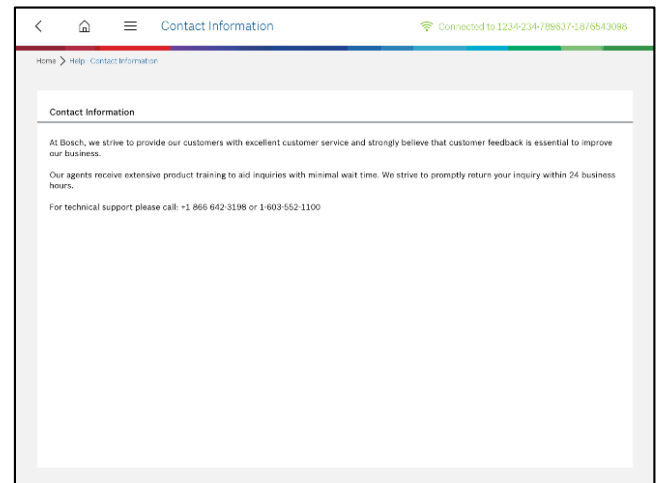


Figure 52: Contact Information

10.6.3 Demo Mode

Tap or click on "Demo Mode" option from the extended menu. In demo mode, all features and functions of the EasyStart application can be explored using simulated data and without having to be connected to a HPC unit.

An installer can start using demo mode using **Extended Menu -> Help -> Demo Mode** option. Once started, the demo state will run until it is turned off by the user. See figure 53 and 54.

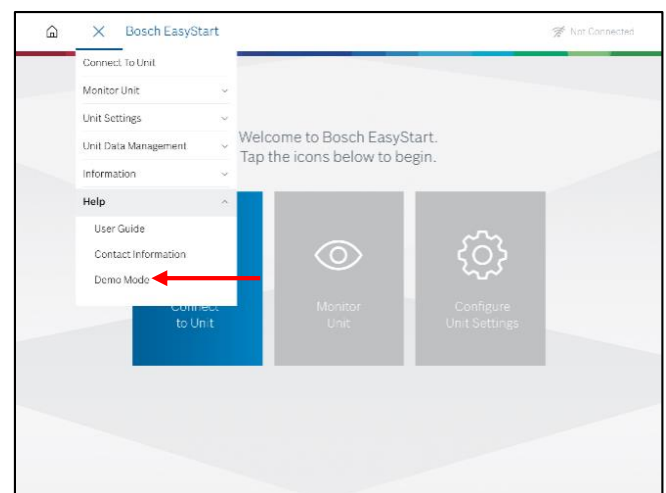


Figure 53: Start Demo Mode



Demo function enables when connection icon displays Demo.

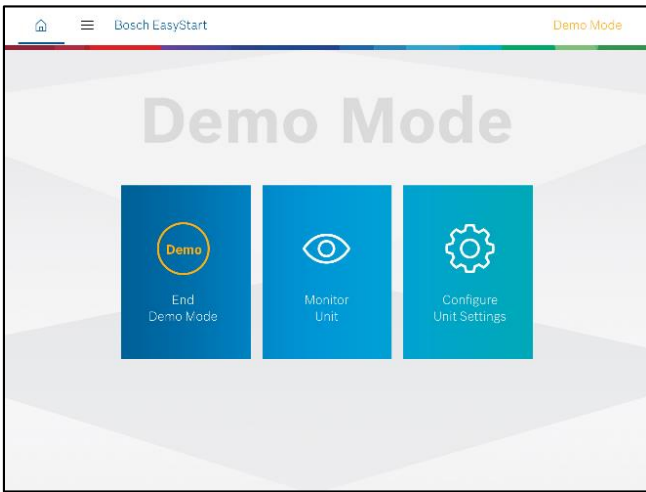


Figure 54: Home Screen - Demo Mode

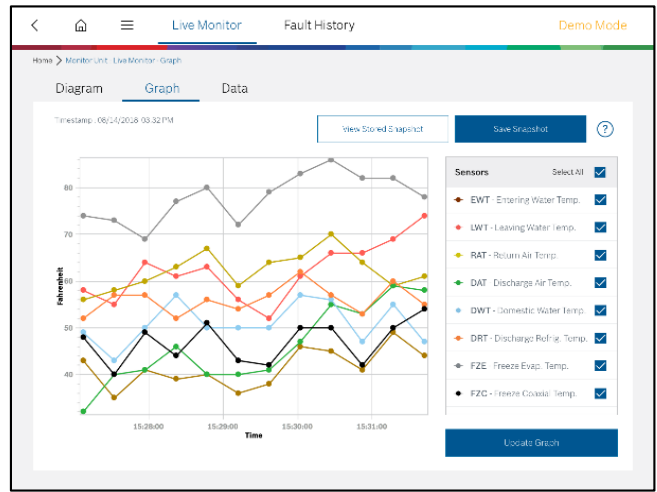


Figure 56: Graph - Demo Mode

10.6.3.1 Live Monitor

1. Tap on monitor unit from the home screen.
2. It will navigate to monitor unit.
3. Within the Monitor Unit section, you will be able to “Live Monitor” the appliance in three different formats, or view the “Fault History” with simulated data.

Live monitor screens will show faults and timers to replicate a live behaviors of an HPCunit in demo mode.

Graph and Data section provides simulated data in a random manner with the provision to save live snapshot data in demo mode.

In demo mode the last saved file will be maintained. The same file is overwritten if a new live snapshot file is saved.

	15:27:07	15:27:32	15:27:57	15:28:22	15:28:47	15:29:12	15:29:37	15:30:02	15:30:27	15:30:52	15:31:17	15:31:42
EWT	52	55	50	51	55	51	48	44	53	56	50	46
LWT	61	58	65	62	62	60	64	57	63	56	55	57
RAT	55	46	51	45	46	43	49	49	47	52	61	64
DAT	60	62	56	54	46	40	33	32	32	25	29	36
DWT	63	61	56	56	53	59	64	59	53	46	48	42
DRT	24	20	20	28	24	33	41	41	50	53	49	44
FZE	61	57	66	66	64	69	63	68	71	79	83	80
FZC	58	60	64	61	65	61	61	52	59	50	50	48
G	On	On	On	On	Off	Off	Off	Off	Off	Off	On	On
O	Off	Off	Off	Off	On	On	On	Off	Off	Off	On	On

Figure 57: Data - Demo Mode

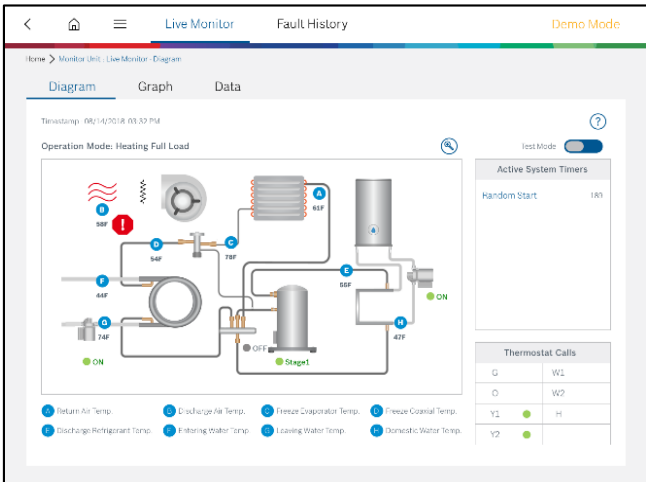


Figure 55: Live Monitor - Diagram

10.6.3.2 Fault History

Fault history lists simulated faults with prefix “Demo_”. An Installer can view the fault snapshot data by tapping the eye icon if it is available.

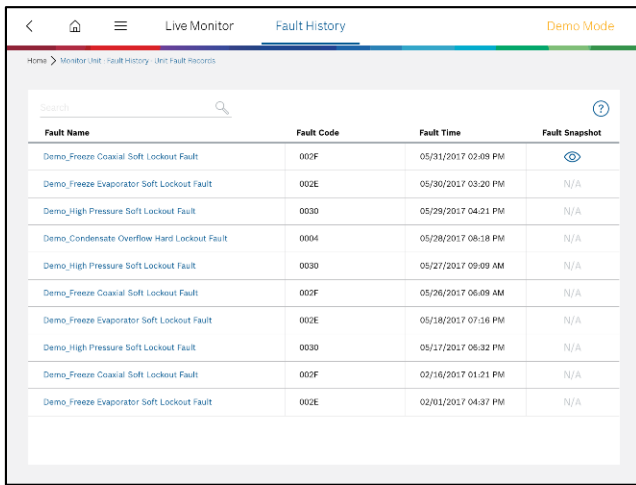


Figure 58: Fault History - Demo Mode

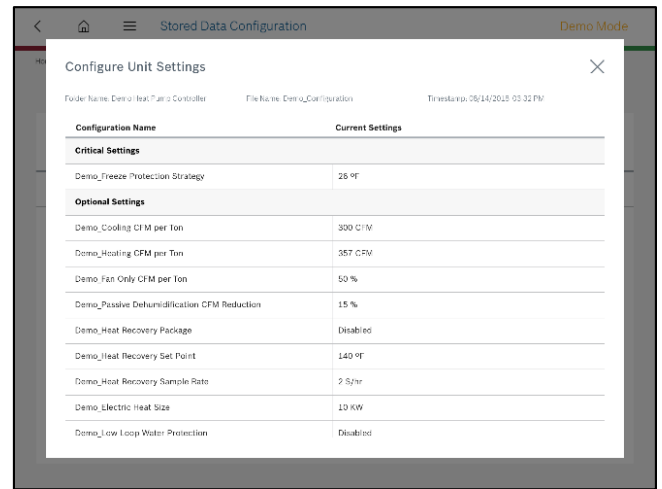


Figure 60: View Configuration - Demo

10.6.3.3 Configure Unit Settings

1. Tap on the Configure Unit Settings.
2. The app will load the Configure Unit Settings view with simulated data.
3. An installer may perform all configuration activities with the simulated data.
4. In demo mode the last saved configuration file will be maintained. The same file is overwritten if a new configuration is saved.

10.6.3.4 Stored Data Configuration

The installer will be able to perform all “Unit Data Management” activities with saved simulated data from extended menu option.

Only demo files will be shown during demo mode. An installer can view the demo files but they cannot edit or delete the file. The edit and delete option is disabled in Demo mode. See figure 59.

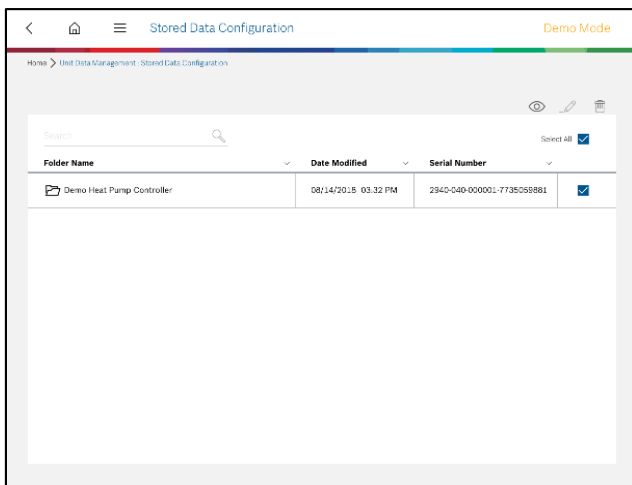


Figure 59: Stored Data Configuration

10.6.3.5 Stored Data Snapshot

An Installer can view the stored snapshot files which are saved in demo mode. See figure 61.

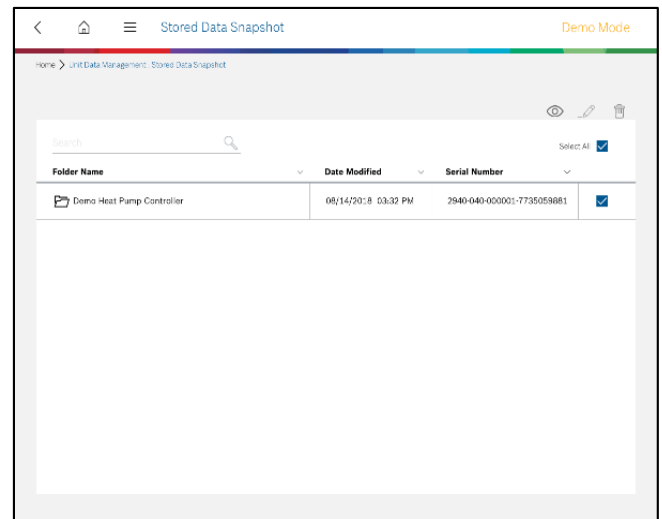


Figure 61: Stored Data Snapshot



Figure 62: View Stored Snapshot - Demo

10.6.3.6 App Information

It will show the app version with prefix "Demo_". Also it will display application release date and Check for update date as MM/DD/YYYY.

If the installer taps "Check for update" button, the app instructs the user to disconnect demo mode and connect Internet or Local Wi-Fi connection to update the app (if the device is not connected to any network) or else it will redirect to Google Play / App Store. For windows app it will redirect to www.boschprohvac.com website to update the application.

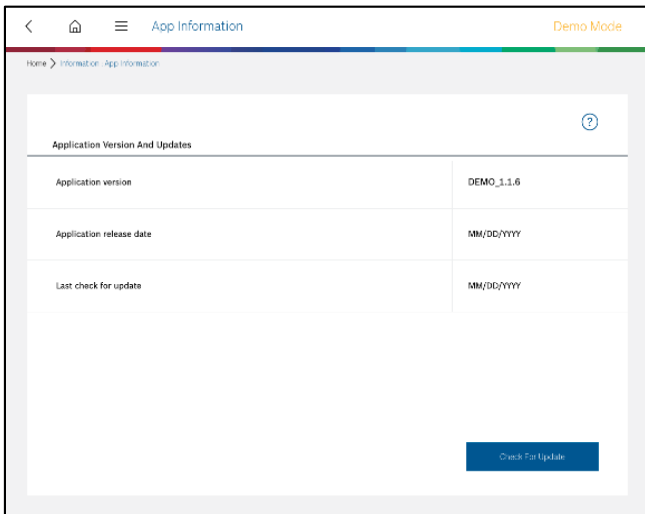


Figure 63: App Information - Demo Mode

10.6.3.7 Unit Information

The unit information menu provides a sample demo model and serial numbers as follows:

Model Number: SM036-1VTC-FRTADC-CMGXXXXXD7HXX4XXXSBA

Serial Number: 2940-040-000001-7735059881

The rest of the data will be displayed as simulated format XXXXX_Demo. If the installer taps "Check for Latest Firmware", in the popup there will be only one firmware file and the flash button will be disabled.

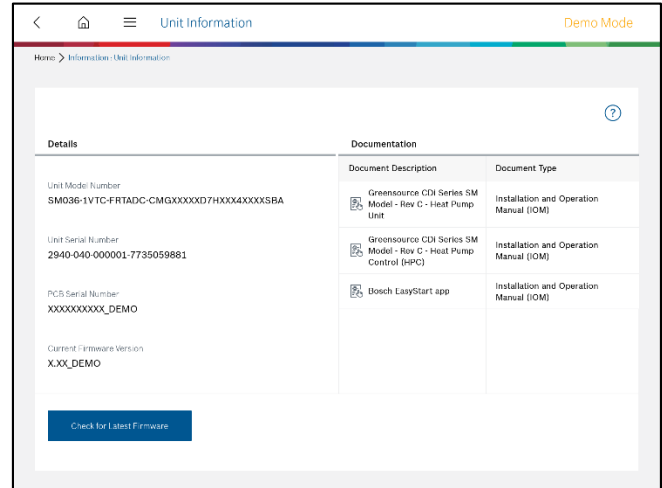


Figure 64: Unit Information - Demo Mode

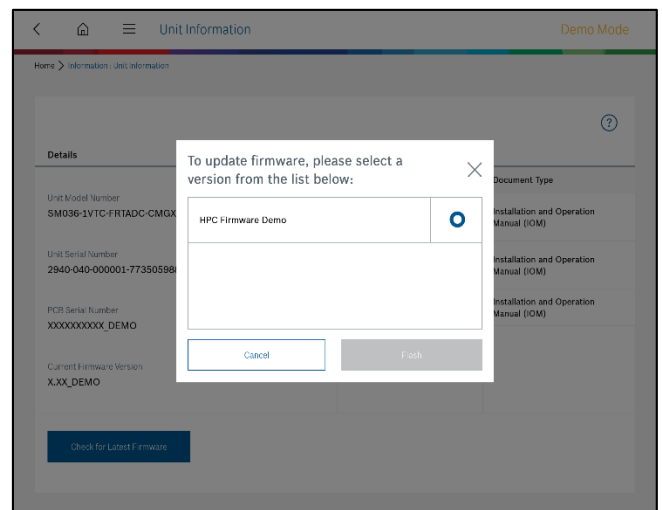


Figure 65: Firmware Flash Popup – Demo

10.6.3.8 Disconnect Demo Mode

An installer can disable the disconnect which turns off demo mode either by going to the **Extended Menu** -> **Help** -> **End Demo Mode** option or by tapping the End Demo Mode icon in the home screen.

Once disconnected from demo mode the app state will change to "Not Connected" mode.

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