

HMI USER GUIDE

For FARRAR® CYCLONE™ Freezers



Document History

Revision	Date	CO	Supersession	Revision Description
A	21 OCT 2025*	30137	n/a	Initial release.

* Date submitted for Change Order review. Actual release date may vary.

Document Updates

This document is furnished for information use only, is subject to change without notice and should not be construed as a commitment by FARRAR®. FARRAR assumes no responsibility or liability for any errors or inaccuracies that may appear in the informational content contained in this material. For the purpose of clarity, FARRAR considers only the most recent revision of this document to be valid.

Support Information

Instructions for Use and Service Manuals provide additional product information. Manuals are available at <https://www.farrarscientific.com>.

Notices and Disclaimers

The HMI (Human Machine Interface) User Guide provides information about use of the HMI as it pertains to FARRAR Ultra-low freezers. Refer to the product Instructions for Use or Service Manual for general information. Refer to the product service manual for additional information about the equipment on which the HMI is installed.

Copyright and Trademark

©2025 TRANE TECHNOLOGIES LIFE SCIENCES LLC. All Rights Reserved.

Confidential / Proprietary Notices

Use of any portion(s) of this document to copy, translate, disassemble or decompile, or create or attempt to create by reverse engineering or otherwise replicate the information from FARRAR Scientific products is expressly prohibited.

The HMI utilizes open source components. For a list of the specific open source programs, their associated licenses and copies of the applicable program in source code format, please contact FARRAR Scientific at 14400 Bergen Blvd, Noblesville, Indiana 46060 USA; or contact FARRAR Technical Service (800-242-7197 or 740-374-8300).

Disclaimer

This manual is intended as a guide to provide the operator with necessary instructions on the proper use and maintenance of certain FARRAR products.

Any failure to follow the instructions as described could result in impaired product function, injury to the operator or others, or void applicable product warranties. FARRAR accepts no responsibility for liability resulting from improper use or maintenance of its products.

The screenshots and component images appearing in this guide are provided for illustrative purposes only, and may vary slightly from the actual software screens and/or product components.

Contents

1	About This User Guide	3
1.1	Safety Symbols and Precautions	3
2	HMI (Human Machine Interface) Overview	4
2.1	Features	4
3	Using the Touchscreen	5
3.1	Touch Techniques	5
3.2	Care of the HMI Screen	5
4	Initial Startup	6
4.1	User Setup	6
4.2	Monitoring System Setup	8
4.3	Alarm Settings	10
5	Home Screen Basics	11
6	HMI User Options	12
6.1	Unit Information	12
6.2	System Health	12
6.3	System Settings	13
6.4	More System Functions	13
7	Managing Calibration, Maintenance and Defrost Functions	14
7.1	Calibration Intervals and Reminders	14
7.2	Maintenance Intervals and Reminders	15
7.3	Manual Defrost	16
7.4	Time of Day Defrost	17
7.5	Adaptive Defrost	18
8	System Health Monitoring	19
8.1	Temperature Status	19
8.2	Alarm Log	19
8.3	Data Download	20
	APPENDIX A - Default Values	21

1 About This User Guide

This User Guide provides information on how to operate the HMI interface as it relates to the FARRAR® CYCLONE™ freezer. Refer to the product Instructions for Use or Service Manual for general information.

1.1 Safety Symbols and Precautions

Symbols found in this document

The following symbols are used in this manual to emphasize certain details for the user:



Task Indicates procedures which need to be followed.



Note Provides useful information regarding a procedure or operating technique when using FARRAR products.

NOTICE Advises the user against initiating an action or creating a situation which could result in damage to equipment; personal injury is unlikely.

2 HMI (Human Machine Interface) Overview

NOTICE

- To avoid injury, before using the HMI, read all instructions in the associated product Instructions for Use manual.
- To avoid damage to the HMI unit, read all instructions provided in this user guide.

2.1 Features

The HMI consists of an intuitive user interface and navigation buttons. The touchscreen is contained within the instrument bezel, as are additional features.

Touchscreen

The interface to the HMI system.

USB Port

Connect a flash memory device to download temperature data or upload firmware.

Alarm Status Light Bars

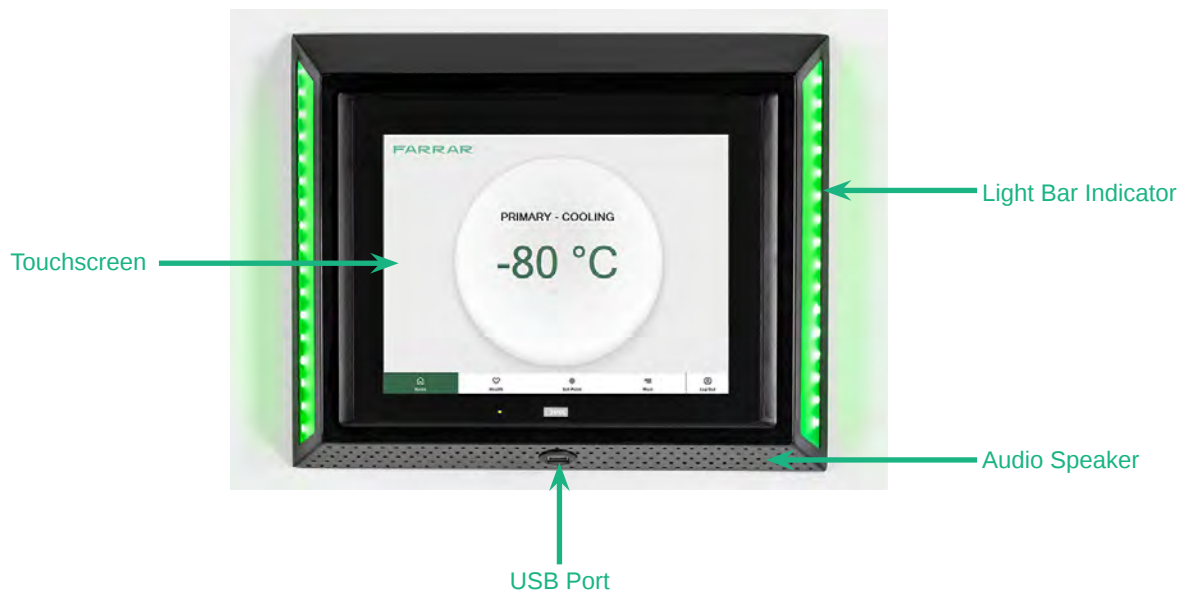
Colors changing from green to yellow or red provide a visual indication of the active system alarm status.

Ethernet/RJ45 Connection (Not shown)

Allows the system to provide and receive data or commands to and from external devices.

Audio Speaker

Provides an audible signal when alarm conditions are met.



3 Using the Touchscreen

The touchscreen and touch techniques make the HMI easy to use. Icons, status indicators, and navigation buttons let the user see and respond to HMI system conditions and events.

3.1 Touch Techniques

Touch-select Touch once to select an item.

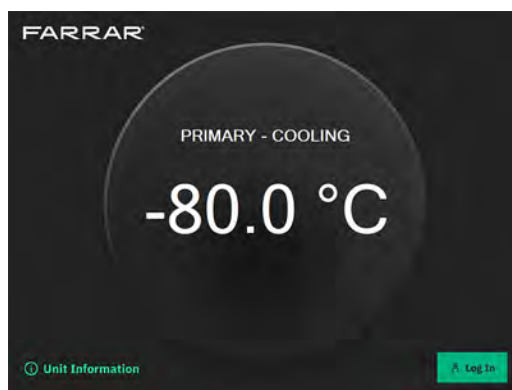
Touch-hold To accelerate, touch-hold an arrow key to select an item. Continue to hold for accelerated scrolling.
(Applicable in the alarm log only).

3.2 Care of the HMI Screen

- To avoid damage to the touchscreen, do not apply pressure on the front of the display bezel or around the screen borders.
- To preserve optimal touch sensitivity, keep the screen clean of foreign objects. Avoid excessive dust accumulation on the screen.
- Do not expose the HMI screen to liquids or a harsh environment that contains excessive dust, heat or humidity.
- Clean the HMI screen with a clean, dry cotton cloth.

4 Initial Startup

When the HMI is powered on, the IDLE screen appears, displaying the cabinet's internal temperature. To view unit information, touch the Unit Information icon in the lower left corner. The Log In button in the lower right corner provides access to HMI functions. An Administrator should create user accounts for each user during the initial startup.



IDLE Screen

4.1 User Setup

A unique user name and password must be created for each user. During setup, users must be assigned to one Security Group. Each Security Group allows access to specific functions. One factory-default user account exists for each security group upon initial setup. Default user names and passwords can be modified or retained as is. It is important to maintain at least one user name and password for each Security Group.

Table 1. Security Group Access

Security Group	Edit User Login	View Info Screens	Upload Project Data	Download Project Data	Turn Unit Off/Auto	Access Health Screens	Modify Set Points	Modify all Settings
Administrator	X	X	X	X				
Operator		X		X	X			
Reader		X		X				
Maintenance		X			X	X		
Supervisor		X			X	X	X	
Service		X			X	X	X	X

Notes

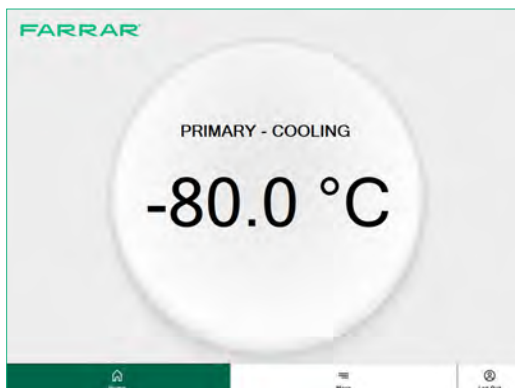
- The designated Administrator should set up their account with a unique user name and password upon first login.
- Each user should be assigned to only one security group.
- Upon start-up, Administrator access is given to the factory-set default User Setup account.
- Passwords must contain a minimum of four (4) characters and no more than 15 characters.
- It is necessary to maintain an Administrator and Service security group account to perform essential functions. FARRAR recommends retaining the default settings for these two security groups. In the event no users have been assigned to these security groups and the default account information is deleted or lost, the HMI will need to be factory-programmed to restore use.

Table 2. Default Security Group User Names and Passwords

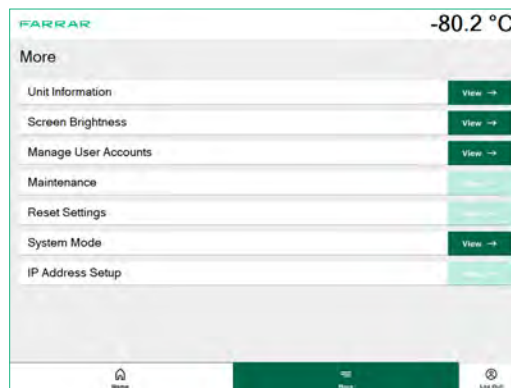
Security Group	Default User Name	Default Password
Administrator	User Setup	FARRAR
Operator	Operator	OPER8
Reader	Read	READ
Maintenance	Maintenance	MAIN10
Supervisor	Supervisor	SUPER
Service	Service	LTS1

✓ Create User Accounts

1. From the IDLE screen, select the **Log In** button. The Login screen appears with an alphanumeric keypad.
2. Enter the User Setup password (*default password is FARRAR*). The Home screen appears.



Home screen



More screen

3. Select the **MORE** button. The More screen appears with a menu of options.
4. Select the **View** button next to the Manage User Accounts option to access the User Account screen.

User ID	1	X
User Name	User Setup	
Password	*****	
Security Group	Admin	Detail
▲	▼	Edit Add Delete

User ID	5	X																																													
User Name	John1																																														
Password																																															
Security Group	Show <table border="1"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>0</td><td>BS</td> </tr> <tr> <td>Q</td><td>W</td><td>E</td><td>R</td><td>T</td><td>Y</td><td>U</td><td>I</td><td>O</td><td>P</td><td>CLR</td> </tr> <tr> <td>123 abc</td><td>A</td><td>S</td><td>D</td><td>F</td><td>G</td><td>H</td><td>J</td><td>K</td><td>L</td><td>CAN</td> </tr> <tr> <td>17#</td><td>Z</td><td>X</td><td>C</td><td>V</td><td>B</td><td>N</td><td>M</td><td colspan="3"></td><td>ENT</td> </tr> </table>		1	2	3	4	5	6	7	8	9	0	BS	Q	W	E	R	T	Y	U	I	O	P	CLR	123 abc	A	S	D	F	G	H	J	K	L	CAN	17#	Z	X	C	V	B	N	M				ENT
	1	2	3	4	5	6	7	8	9	0	BS																																				
	Q	W	E	R	T	Y	U	I	O	P	CLR																																				
123 abc	A	S	D	F	G	H	J	K	L	CAN																																					
17#	Z	X	C	V	B	N	M				ENT																																				
Security Group	Operator																																														
Edit User OK CANCEL																																															

User Account screens

User ID	5	X
User Name	John1	
Password	*****	
Security Group	Operator	
Edit User OK CANCEL		

5. On the User Account screen, select the **Add** button. An alphanumeric keyboard appears and the User ID field is auto-populated with the lowest available number.
6. Select the User Name field and enter a user name. Touch the **ENT** (enter) button to save the user name.
7. Select the Password field and use the keyboard to create a unique password. Touch the **ENT** button to save the password.
8. In the Security Group field, touch the **Change** button to assign the desired Security Group. The Security Group list appears.

Gr. 1~5	Gr. 6~10	Gr. 11~15	Close
Gr. 1	Administrator		
Gr. 2	Operator		
Gr. 3	Reader		
Gr. 4	Service		
Gr. 5	Maintenance		

Gr. 1~5	Gr. 6~10	Gr. 11~15	Close
Gr. 6	Supervisor		
Gr. 7			
Gr. 8			
Gr. 9			
Gr. 10			

Security Group screens

User ID	5	X
User Name	John1	
Password	*****	
Succeed		
OK		

User Account Acceptance screen

- At the top of the Security Group screen, select the tab that corresponds with the desired Security Group.
- Select the security group desired for the account and touch **Close** to save your selection and return to the User Account screen.
- Once all fields are completed, touch the **OK** button at the bottom of the User Account screen. The Succeed message will display confirming the profile has been saved.
- Press the **OK** button below the Succeed message to complete the process. The User Account screen appears with the most recent information entered.
- Touch the **X** button to return to the More screen. (If creating multiple User Accounts, repeat steps 4 through 13)
- Touch the **Home** button to return to the Home screen.

4.2 Monitoring System Setup

Current date and time information should be entered upon startup for the FARRAR® CYCLONE™ freezer. This information is used for scheduling maintenance tasks via the HMI and for logging system errors.

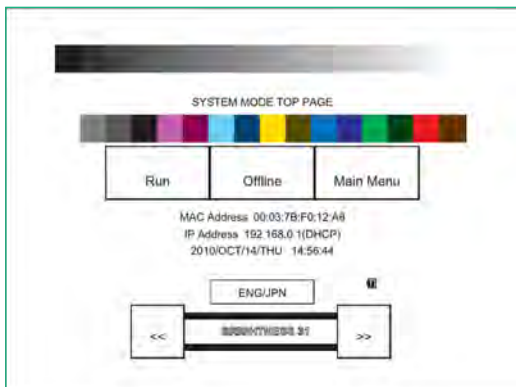
Screen brightness can be adjusted to improve the visibility of the displayed information.

Note

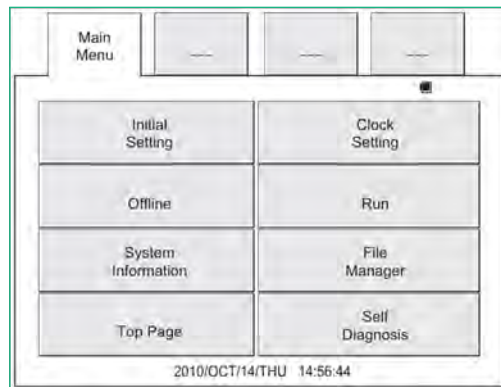
Only users with Administrator level access may update date and time information.

Set Date and Time

- Log in using an Administrator level password.
- Select the **More** button at the bottom of the screen. The More screen appears.
- Select the **View** button on the System Mode line. The System Mode screen appears.

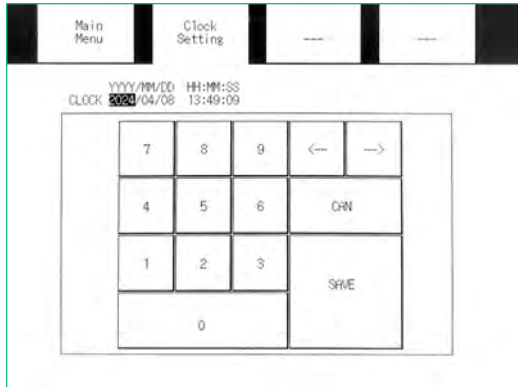


System Mode screen



System Mode Main Menu screen

- Select **MAIN MENU** at the top of the screen. The Main Menu screen appears.
- Touch the **Clock Setting** button. A numeric keypad appears.



Numeric Keypad

6. Use the left and right arrow keys to highlight each date or time field to change, then enter the new values using the numeric keypad.
7. Once completed, touch **SAVE** to save the information and return to the Main Menu.
8. Touch **Run** to return to the Home screen

✓ Adjust Screen Brightness

Note

Only users with Administrator or Service level access may modify screen brightness.

1. Log in using an Administrator or Service level password.
2. Select the **More** button at the bottom of the screen. The More screen appears.
3. Select the **View** button on the Screen Brightness line. The Adjust Brightness box appears in the upper left corner of the display.
4. Use the arrow buttons to adjust the brightness to the desired level.
5. Touch the **X** button to save the setting and return to the More screen.
6. Touch the **Home** button to return to the Home screen or the **Logout** button to log out of the HMI.



More screen with Adjust Brightness

4.3 Alarm Settings

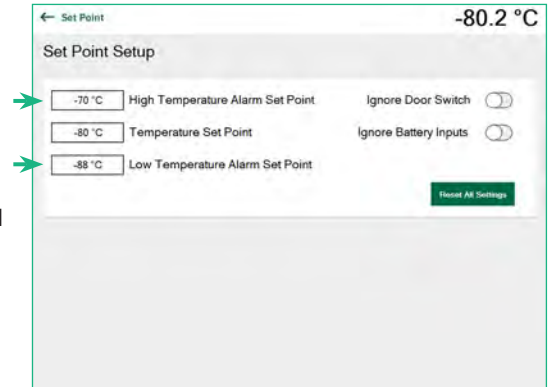
Temperature set points and alarm delay settings can be adjusted to comply with the facility's requirements. The alarm delay settings indicate the time interval between the onset of an alarm condition and the activation of the visual and audible alarms.

Notes

- Only users with a Supervisor or Service level access may update Alarm Options through the Maintenance screen menu.
- Alarm settings can also be modified through the Set Point screen.

Modify Temperature Alarm Set point

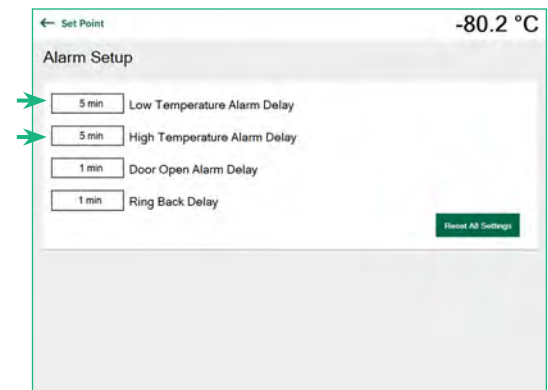
1. Log in using a Supervisor or Service level password.
2. Select the **Set Point** button at the bottom of the screen. The Set Point screen appears.
3. Select the **View** button on the Set Point Setup line. The Set Point Setup screen appears.
4. Touch the desired **Temperature Alarm Set Point** field. The selected box turns green and a numeric keypad appears.
5. Enter the desired temperature alarm set point then touch the **Enter** button to save.
6. Touch the Set Point back arrow to return to the Set Point screen.
7. Touch the **Home** button to return to the Home screen or the **Logout** button to log out of the HMI.



Set Point Setup - Alarm Set Points

Modify Alarm Delay

1. Log in using a Supervisor or Service level password.
2. Select the **Set Point** button at the bottom of the screen. The Set Point screen appears.
3. Select the **View** button on the Alarm Setup line. The Alarm Setup screen appears.
4. Touch the desired **Temperature Alarm Delay** box. The selected box turns green and a numeric keypad appears.
5. Enter the desired temperature alarm delay then touch the **Enter** button to save.
6. Touch the Set Point back arrow to return to the Set Point screen.
7. Touch the **Home** button to return to the Home screen or the **Logout** button to log out of the HMI.



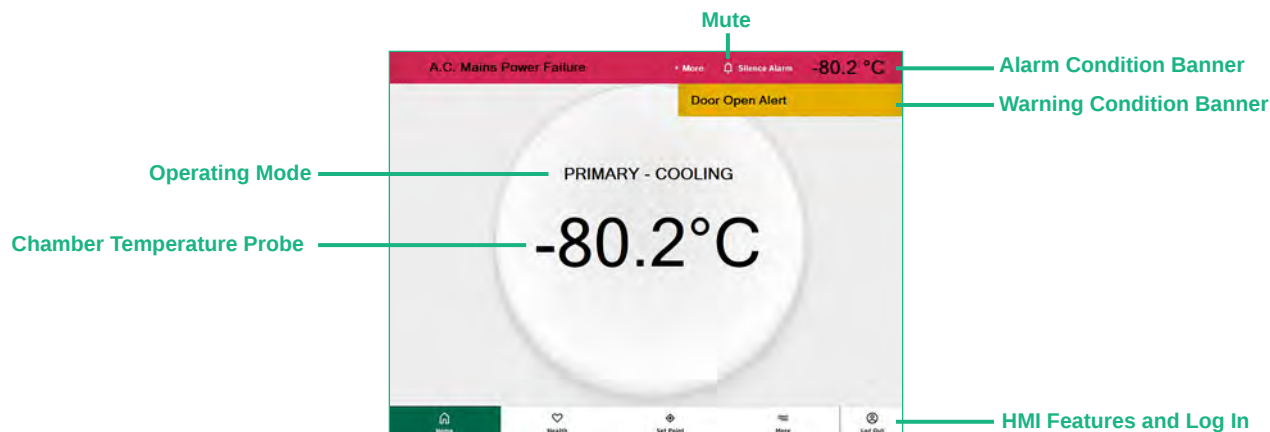
Alarm Setup - Temp Alarm Delay

5 Home Screen Basics

The Home screen displays current unit monitoring information and provides access to additional control and data features.

Notes

- To temporarily silence active alarms, touch the Mute icon within the Alarm Banner.
- Users with Maintenance, Supervisor, or Service level access may view all alert events and acknowledge alarm events.



Alarm and warning alert banners are displayed at the top of the screen. Alarms, which appear in red, are both audible and visual. Active alarms can be muted by touching the Mute icon. If more than one alarm is active, +More will appear in the alarm banner. Authorized users can touch +More to view the alarm log and acknowledge events. An alarm bell may appear at the top of the Home screen if an alarm has occurred and cleared on its own. Touching the alarm bell will take the user to the alarm log to view alarm details.

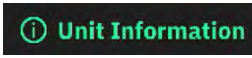
Warnings are displayed in yellow. If more than one warning is active, +More will appear in the warning banner. Authorized users can touch +More to view a list of active warnings.

The circle in the center of the screen shows the current Chamber Temperature Probe reading and Operating Mode. The unit has six operating modes: PRIMARY – COOLING, PRIMARY – CYCLED OFF, DEFROSTING, RECHARGING COIL, MANUAL MODE and OFF.

Buttons located at the bottom of the screen provide access to additional features. From left to right, the preset buttons are: Home, Health, Set Point, More, and Log Out.

Notes

- Active buttons appear in green.
- Only the Home and More buttons appear at the bottom of the screen when logged in as a Reader or Administrator security group user.
- Access to menu options within the Health and More menus vary by security group.
- The Unit Information button only appears on the **IDLE** screen and is not password protected.

Buttons	Description
	Touch to view Unit Information (only available from the IDLE screen prior to login)
	Touch to return to the Home screen.
	Touch to open the Health menu. Menu options include: Calibrate Chamber Temperature Probe, Set Calibration and Maintenance Intervals, Timers Status, Temperatures, and Alarm Log.
	Touch to view or modify unit Set Points.
	Touch to open the More menu. Menu options include: Unit Information, Screen Brightness, Manage User Accounts, Maintenance, Reset Settings, System Mode, and IP Address Setup.
 	Touch to log in or log out of the system.

6 HMI User Options

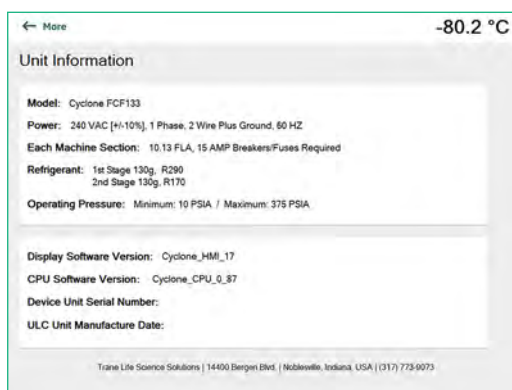
HMI user options are security group dependent. Only users with the appropriate security level login may perform certain tasks. (Refer to Section 4.1, Table 1 for user access per security level)

6.1 Unit Information

The Unit Information screen can be accessed directly from the IDLE screen without requiring a login. Much of the data displayed corresponds to the information found on the Product Specification Label located on the back of the unit. Additionally, details about the installed software version are included.

Note

Unit Information can also be accessed by selecting the More button at the bottom of the Home screen.



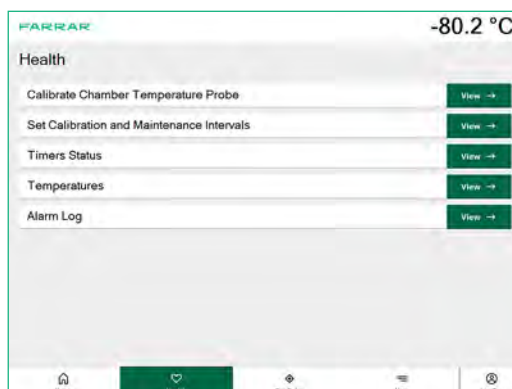
Unit Information screen

6.2 System Health

The Health screen offers information about the overall condition of the CYCLONE™ freezer. Settings that affect system health can be adjusted to ensure optimal freezer performance. Selecting the View button next to each entry opens a detailed screen where settings can be viewed or modified.

Note

Only users with Maintenance, Supervisor or Service security group authorization may access the Health menu.



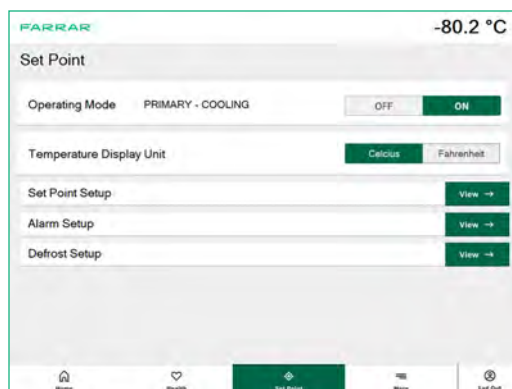
Health Screen

6.3 System Settings

Temperature, alarm, and defrost settings can be viewed and adjusted on the Set Point screen. Selecting the View button next to each entry opens a screen displaying the current settings. Additionally, the compressors can be controlled by toggling the Operating Mode OFF or ON.

Note

Only users with Supervisor or Service security group authorization may access the Set Point screen.



Set Point Screen

6.4 More System Functions

The More screen offers a menu of options for monitoring and maintaining the system. The available options for each menu item vary according to the user's security access level. Actionable View buttons are displayed in a darker color, while lighter-colored buttons indicate options that are not accessible to the user.

Notes

- All users may view screens containing unit information.
- Only users with Service security group authorization may select the Maintenance option.



More Screen

7 Managing Calibration, Maintenance and Defrost Functions

Consistent scheduling of calibration and maintenance tasks is important for the optimal performance of the CYCLONE™ freezer. Reminders for these tasks are generated at the preset intervals and will appear on the HMI display as scheduled.

Note

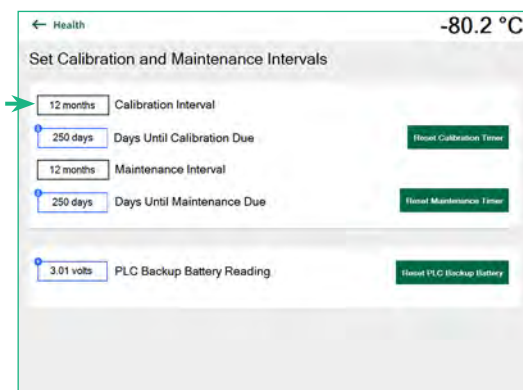
- Only users with Maintenance, Supervisor or Service level security group authorization may access the Set Calibration and Maintenance Intervals screen.
- The current date and time must be set for reminder warnings to display as expected. (see Section 4.2)

7.1 Calibration Intervals and Reminders

The Chamber Temperature probe should be calibrated at regular intervals to ensure accurate temperature readings. Incorrect temperature data can affect the quality, safety, and effectiveness of stored products. Once intervals are established, the HMI will display a reminder warning to indicate calibration is due.

Set Calibration Intervals

1. Log in using a Maintenance, Supervisor or Service level password.
2. Select the **Health** button at the bottom of the screen. The Health screen appears.
3. Select the **View** button on the Set Calibration and Maintenance Intervals line. The Set Calibration and Maintenance Intervals screen appears.
4. Touch the Calibration Interval field. The selected box turns green and a numeric keypad appears.
5. Enter the desired interval number then touch the **Enter** button to save.
6. Touch the Health back arrow to return to the Health screen.
7. Touch the **Home** button to return to the Home screen or the **Logout** button to log out of the HMI.



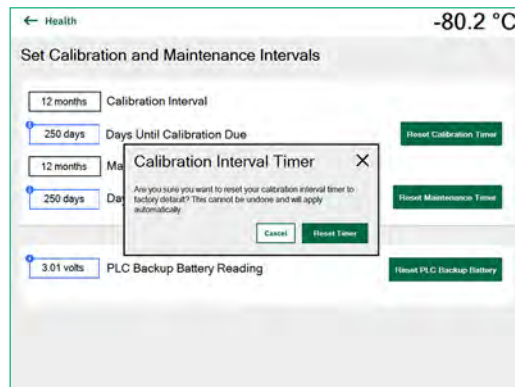
Set Calibration and Maintenance Intervals screen

Note

The Calibration Timer must be reset once calibration is complete to clear the reminder warning.

Reset Calibration Interval Timer

1. Log in using a Maintenance, Supervisor or Service level password.
2. Select the **Health** button at the bottom of the screen. The Health screen appears.
3. Touch the **Reset Calibration Timer** button. The Calibration Interval Timer confirmation message appears.
4. Touch the **Reset Timer** button. The Days Until Calibration Due value returns to the factory default.
5. Touch the Health back arrow to return to the Health screen.
6. Touch the **Home** button to return to the Home screen or the **Logout** button to log out of the HMI.



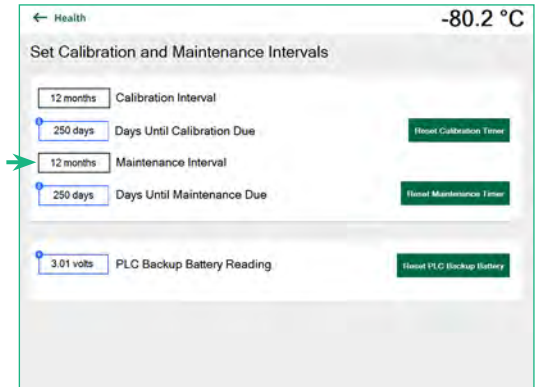
Calibration Interval Timer Confirmation screen

7.2 Maintenance Intervals and Reminders

Routine maintenance activities should be scheduled and performed regularly to prevent performance issues which could lead to extended equipment downtime or equipment failure. Once maintenance intervals are set, the HMI will display a reminder warning to indicate maintenance is due.

✓ Set Maintenance Intervals

1. Log in using a Maintenance, Supervisor or Service level password.
2. Select the **Health** button at the bottom of the screen. The Health screen appears.
3. Select the **View** button on the Set Calibration and Maintenance Intervals line. The Set Calibration and Maintenance Intervals screen appears.
4. Touch the Maintenance Interval field. The selected box turns green and a numeric keypad appears.
5. Enter the desired interval number then touch the **Enter** button to save.
6. Touch the Health back arrow to return to the Health screen.
7. Touch the **Home** button to return to the Home screen or the **Logout** button to log out of the HMI.



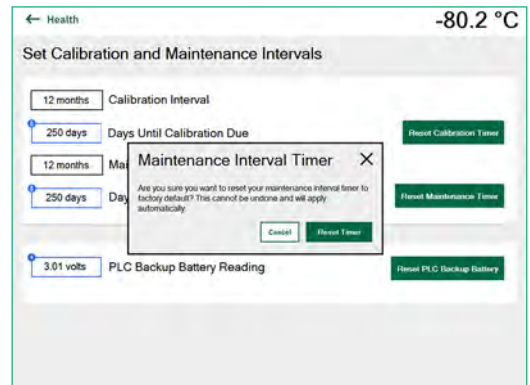
Set Calibration and Maintenance Intervals screen

i Note

The Maintenance Timer must be reset once maintenance is complete to clear the reminder warning.

✓ Reset Maintenance Interval Timer

1. Log in using a Maintenance, Supervisor or Service level password.
2. Select the **Health** button at the bottom of the screen. The Health screen appears.
3. Touch the **Reset Maintenance Timer** button. The Maintenance Interval Timer confirmation message appears.
4. Touch the **Reset Timer** button. The Days Until Maintenance Due value returns to the factory default.
5. Touch the Health back arrow to return to the Health screen.
6. Touch the **Home** button to return to the Home screen or the **Logout** button to log out of the HMI.



Maintenance Interval Timer Confirmation screen

7.3 Manual Defrost

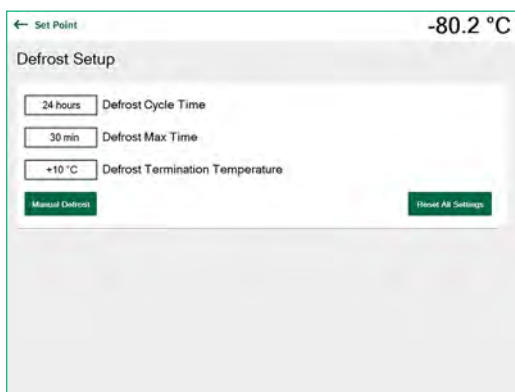
The CYCLONE™ freezer is equipped with automatic defrost for the evaporator coils that initiates according to the Defrost settings. If there is a temporary change in operating conditions resulting in ice build up, a Manual Defrost may be initiated.

Notes

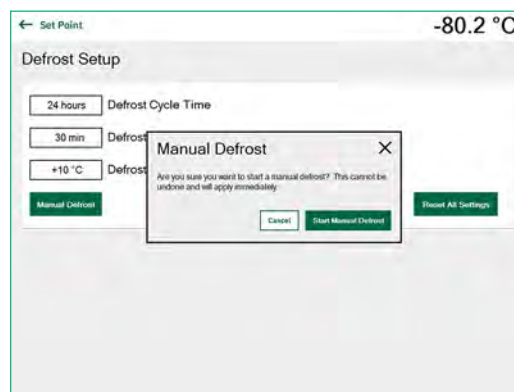
- FARRAR does not recommend changing defrost settings. Consult FARRAR Technical Service before changing any defrost setting.
- The Defrosting status message may take several minutes to appear on the Home screen as the unit prepares for the defrost process.
- Users with Supervisor level access do not have access to The Reset All Settings button.

Initiate Manual Defrost

1. Log in using a Supervisor or Service level password.
2. Select the **Set Point** button at the bottom of the screen. The Set Point screen appears.
3. Select the **View** button on the Defrost Setup line. The Defrost Setup screen appears.

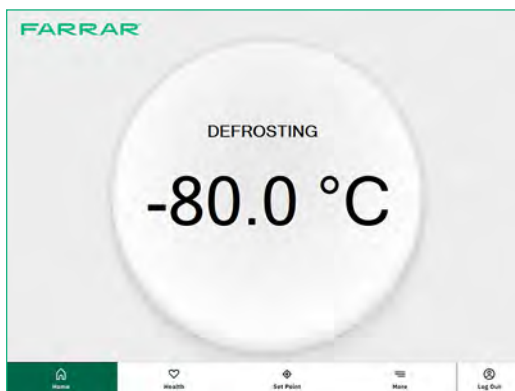


Defrost Setup screen



Manual Defrost confirmation screen

4. Touch the **Manual Defrost** button. The Manual Defrost confirmation message appears.
5. Touch the **Start Manual Defrost** button to begin the defrost process. The confirmation message disappears.
6. Touch the Set Point back arrow to return to the Set Point screen.
7. Touch the **Home** button to return to the Home screen or the **Logout** button to log out of the HMI.

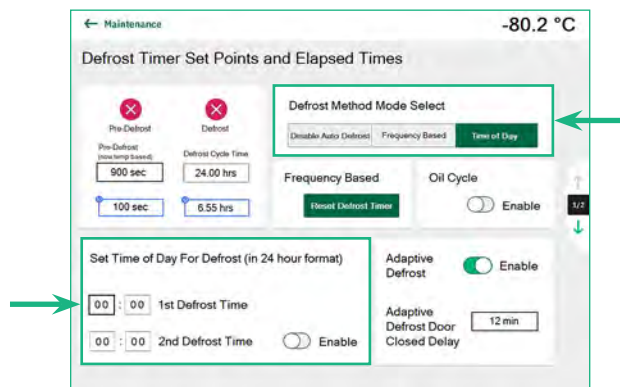


Home screen (Defrosting in progress)

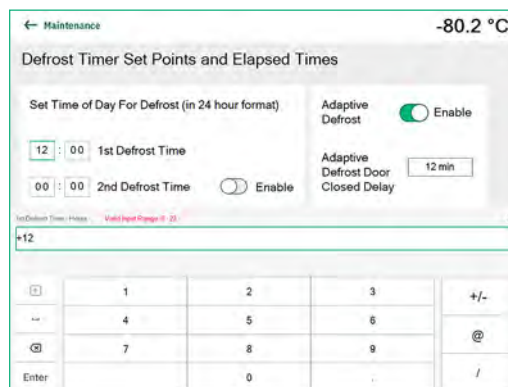
8. Once the defrost process begins, the status information above the chamber temperature on the Home screen changes to "Defrosting".
9. Once the defrost process is complete, the status information on the Home screen returns to "PRIMARY - COOLING".

7.4 Time of Day Defrost

The Time of Day Defrost mode allows the user to select the preferred time(s) to initiate an automated defrost cycle. One or two defrost cycles may be scheduled within a 24 hour period allowing frequently accessed units to maintain operating efficiency.



Defrost Timer Set Points and Elapsed Times/Time of Day mode



Set Time of Day for Defrost keypad

Notes

- Only users with Service level security group authorization may access the Defrost Timer Set Points and Elapsed Times screen.
- Entering a 2nd Defrost Time is optional.
- Defrost times must be entered using a 24 hour format.

Set Up Time of Day Defrost

1. Log in using a Service level password.
2. Select the **More** button at the bottom of the screen. The More screen appears.
3. Select the **View** button on the Maintenance line. The Maintenance screen appears.
4. Select the **View** button on the Defrost Timer Set Point and Elapsed Times line. The Defrost Timer Set Point and Elapsed Times screen appears.
5. Touch the **Time of Day** button located in the Defrost Method Mode Select box. The Time of Day button turns green and the 1st Defrost Time boxes are outlined in black indicating the time may be set.
6. Touch the hour box, a numeric keypad appears. Enter the desired defrost start time hour and touch **Enter** to save.
7. Touch the minutes box, a numeric keypad appears. Enter the desired defrost start time minutes and touch **Enter** to save. (Continue to step 10 if not entering a 2nd Defrost Time.)
8. If entering an optional 2nd Defrost Time, toggle the **Enable** button to enable the time boxes. The 2nd Defrost Time hour box is outlined in black indicating the time may be set.
9. Repeat steps 6 and 7 to enter the 2nd Defrost Time setting.
10. Touch the Maintenance back arrow to return to the Maintenance screen.
11. Touch the **Home** button to return to the Home screen or the **Logout** button to log out of the HMI.

7.5 Adaptive Defrost

← Maintenance -80.2 °C

Defrost Timer Set Points and Elapsed Times

Pre-Defrost (900 sec), Defrost (24.00 hrs), Adaptive Defrost (Enable), Defrost Cycle Time (24.00 hrs), Frequency Based, Oil Cycle (Enable), Set Time of Day For Defrost (1st Defrost Time, 2nd Defrost Time), Adaptive Defrost Door Closed Delay (12 min).

Defrost Timer Set Points and Elapsed Times/Adaptive Defrost - pg 1

← Maintenance -80.2 °C

Defrost Timer Set Points and Elapsed Times

Drain Heat (0 sec), Drain Pan Heat (0 sec), Cool Heat (0 sec), Drain Pan Additional On (100 sec), Drain Pan Pre-Heat Time (0 sec), Defrost Duration Limit (30 min, Elapsed 0.00 min), Recharge Limit (900 sec, Elapsed 0 sec).

Defrost Timer Set Points and Elapsed Times- pg 2

Notes

- Adaptive Defrost is Enabled by default.
- Contact FARRAR Technical Service before changing Adaptive Defrost settings.
- Pre-defrost functions do not occur when an Adaptive Defrost is initiated.
- The Defrost Duration Limit and Recharge Limit timers will start once the defrost becomes active.

The Adaptive Defrost function helps maintain optimal performance by preventing excessive frosting on evaporator coils or ductwork. The Adaptive Defrost is initiated under specific conditions to ensure efficient operation.

Note

8.1 Temperature Status

← Health -80.2 °C

Temperatures

-80.2 °C	Temperature Set Point
-80.8 °C	Chamber Temperature
-27.7 °C	ISHX Temperature
-90.5 °C	Evaporator Coil Temperature
+23.8 °C	Drain Pan Temperature

8.2 Alarm Log

Acknowledge an Alarm

- [illegible]

19

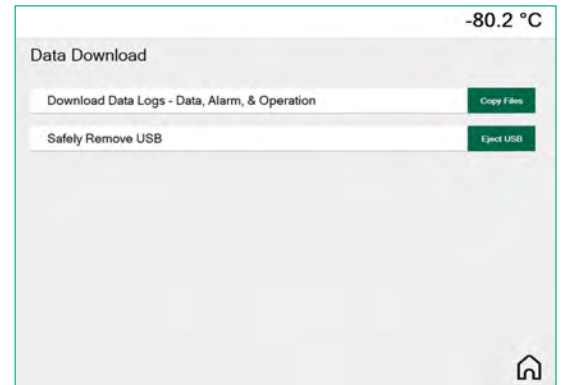
8.3 Data Download

Notes

- Only users with Administrator, Operator or Reader access may download data from the HMI.
- Downloads can take several minutes. To avoid having to restart the process, **DO NOT** remove the USB before the download is complete.
- A Result pop-up appears when the data download is complete.
- Removing the USB after a download is complete may result in a message indicating the USB was not removed safely. This message does not impact the HMI or the data download.

Download Data Logs

1. Insert a USB into the USB port at the bottom of the display bezel. The Data Download screen appears.
2. Touch the **Copy Files** button. A Confirmation pop-up box appears.
3. Touch the **Run** button in the Confirmation pop-up. A Password pop-up box with an alphanumeric keyboard appears.
4. Use the **Up** and **Down** arrows to select the appropriate user login security group (*User Setup/Administrator, Operator or Reader*)
5. Enter an Administrator, Operator or Reader level password and touch the **ENT** (Enter) button to confirm. The Password box disappears.
6. The Home screen appears and the data download begins.
7. Once the download is complete, a Result pop-up box appears. Touch the **Ack** (Acknowledge) button to acknowledge the download is complete.
8. Remove the USB. (A message indicating the USB was not removed safely can be disregarded)



Data Download screen

APPENDIX A - Default Values

NOTICE

Changing factory settings may impact the performance of the unit. Contact FARRAR Technical Service for more information.



Note

Settings and values in red are view only and cannot be modified.

Access through the Health Screen menu:

Settings	HMI Screen Location(s)	Default Value
Chamber Set Point*	Temperatures	-80.0°C
Calibration Interval	Set Calibration and Maintenance Intervals	12 months
Maintenance Interval	Set Calibration and Maintenance Intervals	12 months

* Also found on the Home Screen and the Top Banner

Access through the Set Point menu:

Settings	HMI Screen Location(s)	Default Value
High Temperature Alarm Set Point*	Set Point Setup	-70.0°C
High Temp Alarm Delay*	Alarm Setup	5 minutes
Low Temp Alarm Set Point*	Alarm Setup	-88.0°C
Low Temp Alarm Delay Time*	Alarm Setup	5 minutes
Door Open Too Long Delay Time*	Alarm Setup	30 seconds
Ring Back Delay	Alarm Setup	1 minute
Defrost Cycle Time	Defrost Setup	24 hours
Defrost Max Time	Defrost Setup	30 minutes
Defrost Termination Temperature	Defrost Setup	10°C

* Also accessible by selecting Alarm Options from the Maintenance menu.

Access through the More menu Maintenance option:

Settings	HMI Screen Location(s)	Default Value
Temperature Set Point	Temperature Set Points & Readings	-80.0°C
Evaporator Fan on Set Point (Pulldown)	Temperature Set Points & Readings	-10.0°C
Defrost Termination Temperature	Temperature Set Points & Readings	10.0°C
2nd Stage ISHX Start Temperature	Temperature Set Points & Readings	-20.0 °C
Drain Pan Defrost Temperature Set Point	Temperature Set Points & Readings	110.0 °C
Time After Defrost to Continue Low Speed	Evaporator Fan Defrost Settings	5 minutes
Temp Rise to Stop Evaporator Fan	Evaporator Fan Defrost Settings	0.5 °C
Wait Time Between Cycles	Evaporator Fan Defrost Settings	30 seconds
Pre-Defrost	Defrost Timer Set Points and Elapsed Times	900 seconds
Defrost Cycle Time	Defrost Timer Set Points and Elapsed Times	24 hours
Defrost Method Mode	Defrost Timer Set Points and Elapsed Times	Frequency Based
Adaptive Defrost	Defrost Timer Set Points and Elapsed Times	Enable
Adaptive Defrost Door Closed Delay	Defrost Timer Set Points and Elapsed Times	12 minutes
Drain Pan Additional On	Defrost Timer Set Points and Elapsed Times	100 seconds
Drain Pan Pre-Heat Time	Defrost Timer Set Points and Elapsed Times	0 seconds
Defrost Duration Limit	Defrost Timer Set Points and Elapsed Times	30 minutes
Recharge Limit	Defrost Timer Set Points and Elapsed Times	900 seconds
ISHX Temperature for 1st Stage Compressor During Defrost	Defrost Cycle Parameters	-15.0 °C
Coil SSR Heater Power Level	Defrost Cycle Parameters	100 %
Drain Pan SSR Heater Power Level	Defrost Cycle Parameters	100 %
Degrees Coil Colder That Setpoint For Recharge to End After Defrost	Defrost Cycle Parameters	10.0°C

Settings	HMI Screen Location(s)	Default Value
Degrees Above Setpoint to Begin PID	Set 1st Compressor Speed <i>(ISHX Temperature Based)</i>	4 °C
ISHX Setpoint for 1st Compressor PID	Set 1st Compressor Speed <i>(ISHX Temperature Based)</i>	-24.0 °C
Degrees Below Setpoint for Minimum Speed	Set 1st Compressor Speed <i>(ISHX Temperature Based)</i>	5 °C
1st Compressor Constant Speed Temperature Band	Set 1st Compressor Speed <i>(ISHX Temperature Based)</i>	1 °C
1st Stage Delay (On Time)	Set 1st Compressor Speed <i>(ISHX Temperature Based)</i>	15 seconds
Degrees Above Setpoint to Begin PID	Set 2nd Compressor Speed <i>(Chamber Temperature Based)</i>	1.5 °C
Time to Setpoint	Set 2nd Compressor Speed <i>(Chamber Temperature Based)</i>	10 minutes
2nd Stage Delay (On Time)	Set 2nd Compressor Speed <i>(Chamber Temperature Based)</i>	15 seconds
Proportional Max Speed	Set 2nd Compressor Speed <i>(Chamber Temperature Based)</i>	100%
Interstage Warm Limit	Failure Detection Settings	-5.0 °C
Interstage Alarm Reset Timer	Failure Detection Settings	3600 seconds
Interstage Cold Limit	Failure Detection Settings	-35.0 °C
Refrig System ISHX Lock Out Time Delay	Failure Detection Settings	660 seconds
Evaporator Coil Too Cold Setting	Failure Detection Settings	-95.0 °C
Evaporator Coil Too Cold Reset Hysteresis	Failure Detection Settings	0.5 °C
Evap Coil Too Cold Alarm/Lockout Delay	Failure Detection Settings	120 °C



FARRAR®

14400 Bergen Boulevard, Noblesville, IN 46060
T: 800.242.7197 | www.farrarscientific.com
lssinfo@tranetechnologies.com

Life Science Solutions

A business unit of Trane Technologies

All trademarks referenced are the trademarks of their respective owners
© 2025 Trane Technologies Life Sciences LLC. All Rights Reserved.
LSFU-SVM001A-EN
360464/A