Programming Guide

IntelliPak™ with Symbio™ 800, 20 to 75 Ton

with the Tracer® TD7 Display

⚠SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

December 2018 **RT-SVP011A-EN**

Introduction

Warnings, Cautions, and Notices

Safety advisories appear throughout this manual as required. Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

The three types of advisories are defined as follows:

⚠WARNING	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
⚠CAUTION	Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.
NOTICE	Indicates a situation that could result in equipment or property-damage only accidents.

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⚠WARNING

Proper Field Wiring and Grounding Required!

Failure to follow code could result in death or serious injury. All field wiring MUST be performed by qualified personnel. Improperly installed and grounded field wiring poses FIRE and ELECTROCUTION hazards. To avoid these hazards, you MUST follow requirements for field wiring installation and grounding as described in NEC and your local/state electrical codes. Failure to follow code could result in death or serious injury.

⚠WARNING

Personal Protective Equipment (PPE) Required!

Failure to wear proper PPE for the job being undertaken could result in death or serious injury. Technicians, in order to protect themselves from potential electrical, mechanical, and chemical hazards, MUST follow precautions in this manual and on the tags, stickers, and labels, as well as the instructions below:

- **Before installing/servicing this unit, technicians MUST put on all PPE required for the work being undertaken (Examples; cut resistant gloves/sleeves, butyl gloves, safety glasses, hard hat/bump cap, fall protection, electrical PPE and arc flash clothing). ALWAYS refer to appropriate Material Safety Data Sheets (MSDS)/Safety Data Sheets (SDS) and OSHA guidelines for proper PPE.**
- **When working with or around hazardous chemicals, ALWAYS refer to the appropriate MSDS/SDS and OSHA/GHS (Global Harmonized System of Classification and Labelling of Chemicals) guidelines for information on allowable personal exposure levels, proper respiratory protection and handling instructions.**
- **If there is a risk of energized electrical contact, arc, or flash, technicians MUST put on all PPE in accordance with OSHA, NFPA 70E, or other country-specific requirements for arc flash protection, PRIOR to servicing the unit. NEVER PERFORM ANY SWITCHING, DISCONNECTING, OR VOLTAGE TESTING WITHOUT PROPER ELECTRICAL PPE AND ARC FLASH CLOTHING. ENSURE ELECTRICAL METERS AND EQUIPMENT ARE PROPERLY RATED FOR INTENDED VOLTAGE.**

Copyright

Trademarks

Agency Listings and Compliance

The European Union (EU) Declaration of Conformity is available from your local Trane® office.

Revision History

New

Table of Contents

Introduction

The purpose of this guide is to assist you in installing, programming, and operating with the TracerTD7 Display and the Web UI, which interacts with the unit controls. This guide describes how to access the screens and the types of information that appear on the screens.

The Tracer TD7 display is mounted to the unit and allows you to view data and make operational changes to the equipment.

The Web UI is a built in service tool that allows users to set up, operate, and troubleshoot the equipment.

Hardware

The Tracer TD7 is a durable factory-mounted touch screen display that is designed to operate in both indoor or outdoor environments. The TD7 display utilizes a standard 75mm VESA mounting pattern for installation in a Trane Large enclosure. Alternatively, it can be installed with a user-supplied VESA mount.

Communication

A separate Ethernet cable provides communication between the Tracer TD7 display and the unit controller.

Screen Characteristics

The 7-inch WVGA 800 x 480 resolution touch-sensitive color screen is backlit, which enables viewing in poor light conditions including outdoor usage (with the exception of direct sunlight).

Touchscreen Guidelines

The touch screen registers the downward pressure of a touch. Light, quick, yet deliberate touches are most effective. Touching with more pressure has no effect.

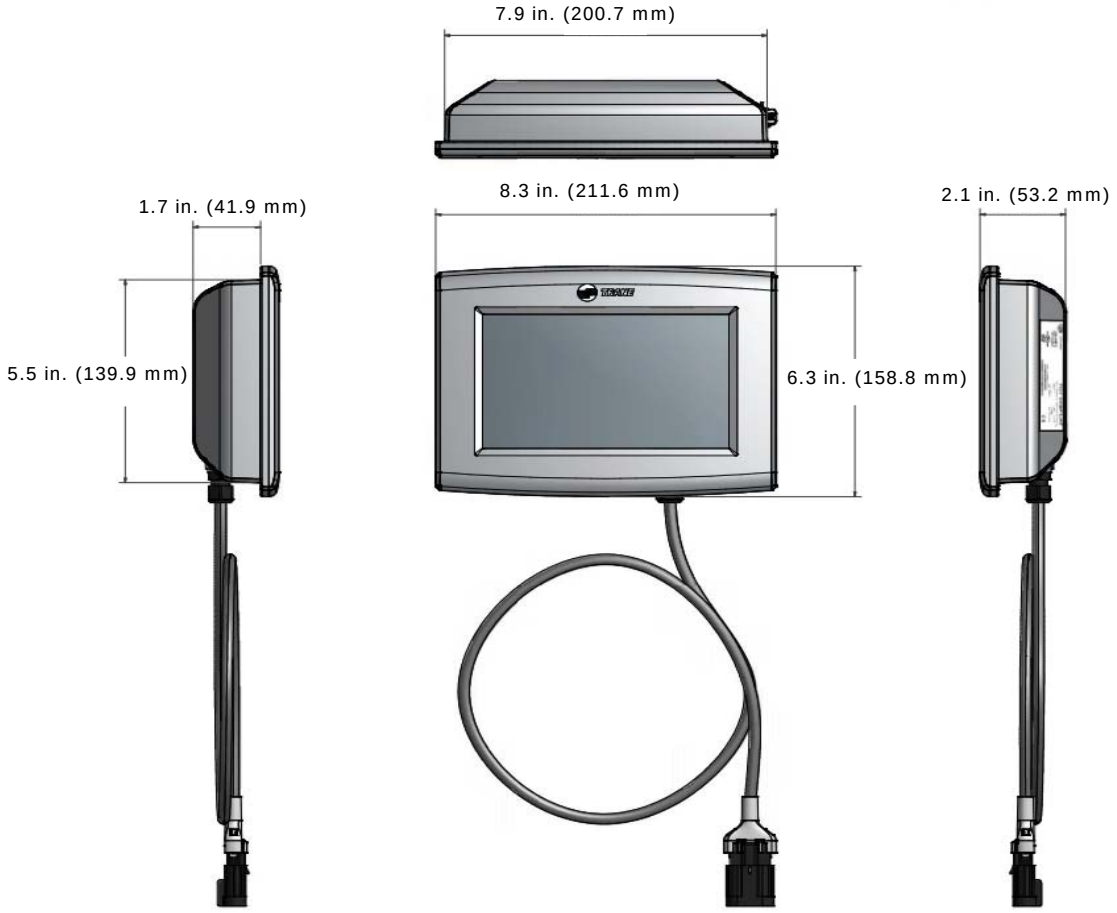
Recommended tools to use:

- finger
- thumb
- pencil eraser

Do not use:

- a screwdriver
- a pen
- a pencil point
- any other sharp or pointed object that might scratch the screen surface

Dimensions



Note: *The power cable is permanently attached to the TD7 display. The power connector provides strain relief and protection from the elements.*

Specifications and Agency Compliance

Specification	
Input power:	24 Vac +/- 15%, 21 VA, 50 or 60 Hz
Storage temperature:	-67°F to 203°F (-55°C to 95°C) Humidity: Between 5% and 100% (non-condensing)
Operating temperature:	Temperature: -40°F to 158°F (-40°C to 70°C) Humidity: Between 5% and 100% (non-condensing)
Mounting weight:	Mounting surface must support 1.625 lb (0.737 kg) Mounting Type: VESA (75 mm x 75 mm)
Environmental rating (enclosure):	IP56 (dust and strong water protected) with use of an optional Sealed Ethernet Cable
Agency Compliance	
• UL916 PAZX, Open Energy Management Equipment • UL94-5V, Flammability • FCC CFR Title 47, Part 15.109: Class A Limit, (30 MHz—4 GHz) • CE EMC Directive 2004/108/EC • CE EMC Directive 2004/108/EC	

Controller and Service Tool Requirements

Tracer TU

Tracer TU Service Tool Version 10.2 or higher is only required for TGP2 and modifications done in the field.

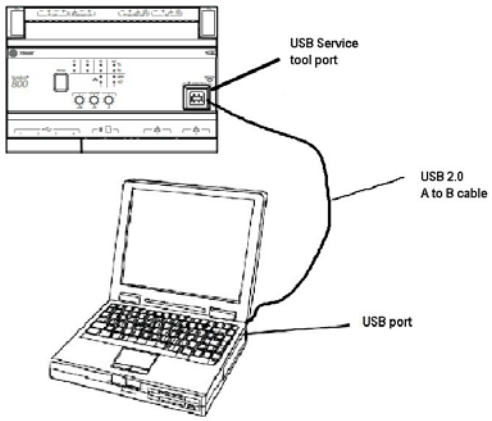
Note: *Tracer TU is not needed for normal operation. If you need to perform configuration changes, add new features, or customize the operation of the equipment, contact your local Trane office.*

Web UI

To perform firmware updates, setup communication protocols, backup and restore, scheduling, and create users or custom trend views connect using Web UI:

1. Connect a laptop to the USB service tool port using a USB 2.0 A to Be cable.
2. Open a web browser and connect to http://198.80.81.1 to access Web UI.

Figure 1. Web UI connection



Supported Browsers for Tracer Symbio Web UI

Microsoft Windows 7:

- Internet Explorer 11 (limited support)
- Mozilla Firefox (most recent version)
- Google Chrome (most recent version)

Microsoft Windows 8.1: (no support)

Microsoft Windows 10:

- Internet Explorer 11 (no support)
- Microsoft Edge (most recent version)
- Mozilla Firefox (most recent version)
- Google Chrome (most recent version)

Apple Mac OS (latest version -1)

- Mozilla Firefox (most recent version)
- Google Chrome (most recent version)
- Safari (most recent version)

Creating a New User in Web UI

Note: *For more detailed instructions on creating a new user, click the help icon in the global navigation bar within Web UI.*

To create a new user:

1. From the global navigation bar, select Admin > **Users**.
2. Click the **Create User** button.
3. Enter the user's personal information, and click **Next.**
4. On the Preferences page, determine how certain attributes on the Symbio 800 user interface will display. Click **Next**.
5. On the Data Display Units Preference page, determine the unit type in which data will be displayed. Click **Next**.
6. On the Data Display Units Preference page, determine the preferred display units. Click **Next**.
7. On the summary page, review your selections. Click **Finish** to save the new user.

Supported Languages

The TD7 display supports built-in languages:

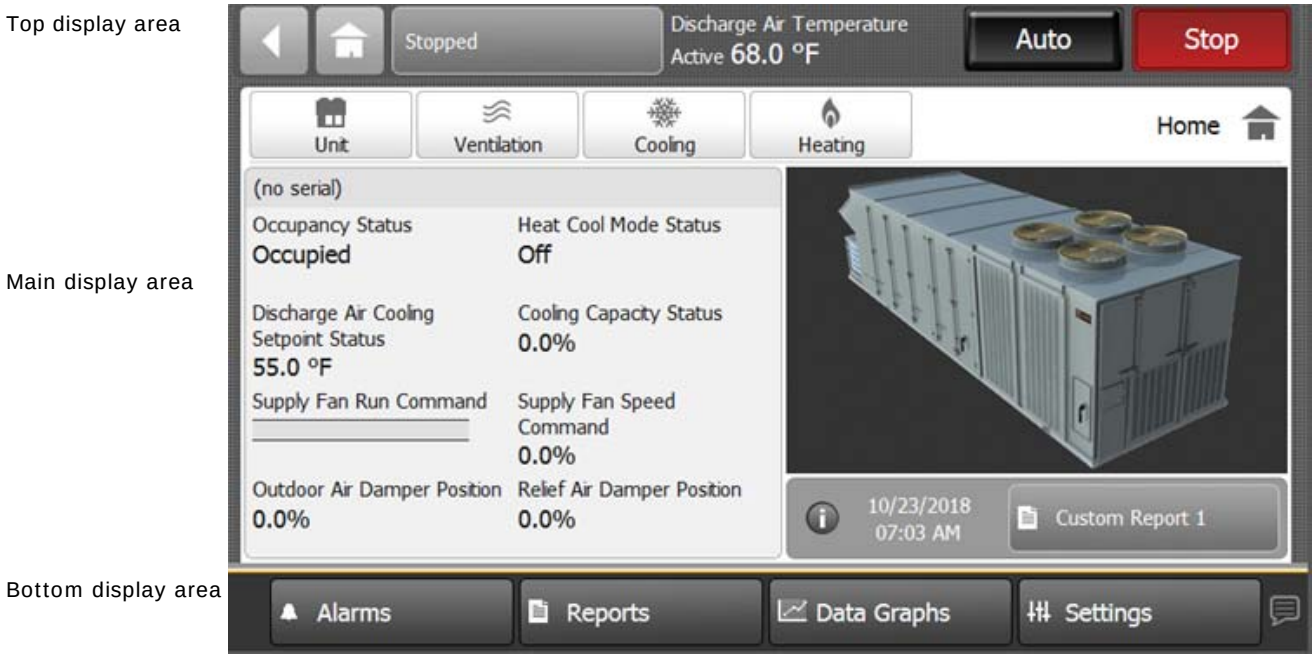
- English
- French (Canadian)
- Spanish (Latin American)

Screen Overview

There are three distinct areas on the TD7 screens:

- Top display area
- Main display area
- Bottom display area

Figure 2. Tracer TD7 display screen



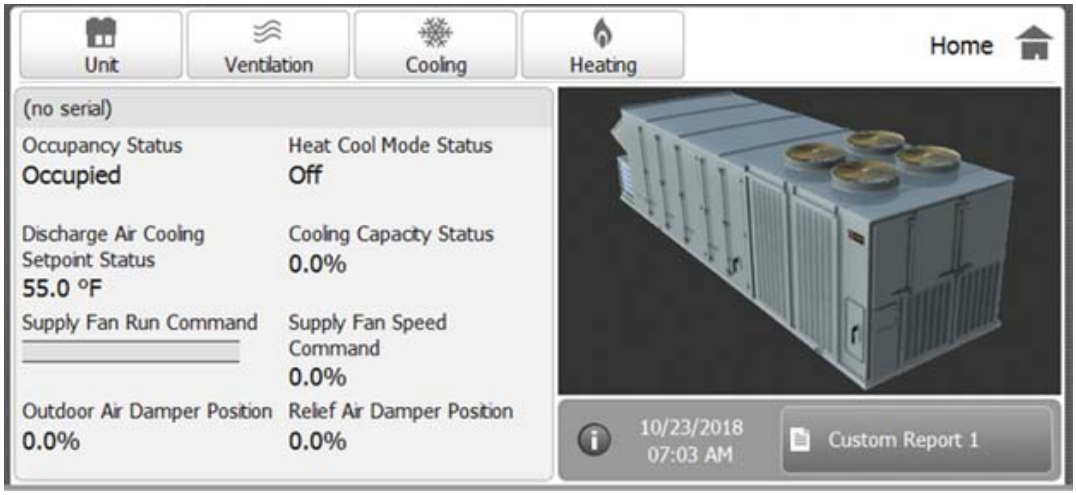
Top Display Area

	The Back button, when touched, returns to the previous screen visited.
	The Home button, when touched, navigates to the All Points Report by default. Home Can be configured to display any of the three custom reports, All Points Report, All Points in Override Report, Alarms, or custom graphic. See “Display Preferences,” p. 43.
	The Overrides Summary button provides an at-a-glance view of how many user overrides exist and provides a link to the Override Summary report.
	The Space Temperature Active or Discharge Air Temperature Active, depending on configuration is displayed in the header Data Area.

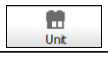
Main Display Area (Home Screen)

The Home screen is an overview of the unit and its operation. High-level status information is presented so that a user can quickly understand the mode of operation of the unit and navigate quickly to other areas of the display for more detail.

Figure 3. Tracer TD7 Main display area of home screen



Main display are buttons:

	Touch this button to view the status of unit features. Setpoints, Capacities, and damper positions.
	Touch this button to view the status of ventilation components.
	Touch this button to view the status of the cooling.
	Touch this button to view the status of heating components.
	Touch this button to access the adjust the date and time. Touch the information icon to view hardware part numbers and software version numbers.
	Touch this button to access custom reports.

Bottom Display Area

The bottom display area contains functional buttons that provide a link to the appropriate screen.

	Screen brightness settings: Touch this icon to open the brightness screen.
	Touch this button to open the Alarms screen. When an alarm is present, this button will flash red.

	Touch this button to navigate to the Reports screen.
	Touch this button to open the Data Graphs screen to view and/or edit data logs in graphical format.
	Touch this button to open the Settings screen, which contains options for manual controls, Feature settings, Binding, Unit Settings, and display settings.
	Language selection: Touch this icon to select a language that will be displayed on all screens.

Alarms

Alarms appear on the Tracer TD7 display immediately upon detection. Touch the Alarms button in the bottom display area to view the Alarms screen.

Active Alarms

Figure 4 shows the Active Alarms screen and commonly used functions. Configuration is not required in order for points in alarm to appear in the Active Alarms screen. When the alarm clears and the point returns to normal, the alarm will automatically be removed from the list.The number of active alarms is displayed in the top right portion of the screen. When an active alarm is present, the alarm button at the bottom of the screen will flash.

The Alarms screen defaults to Active Alarms. The **Active Alarms** button has a shaded appearance which indicates that you are viewing active alarms.

Figure 4. Active Alarms screen

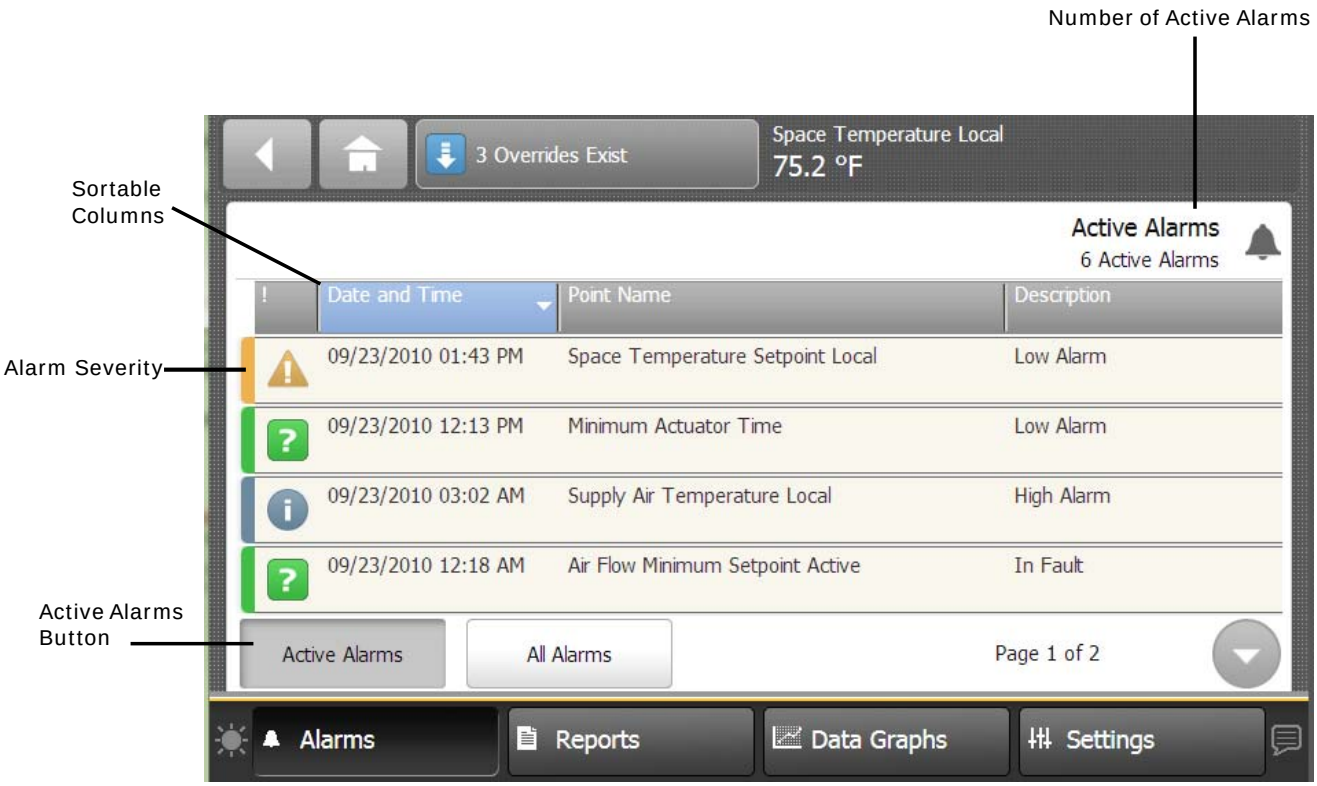
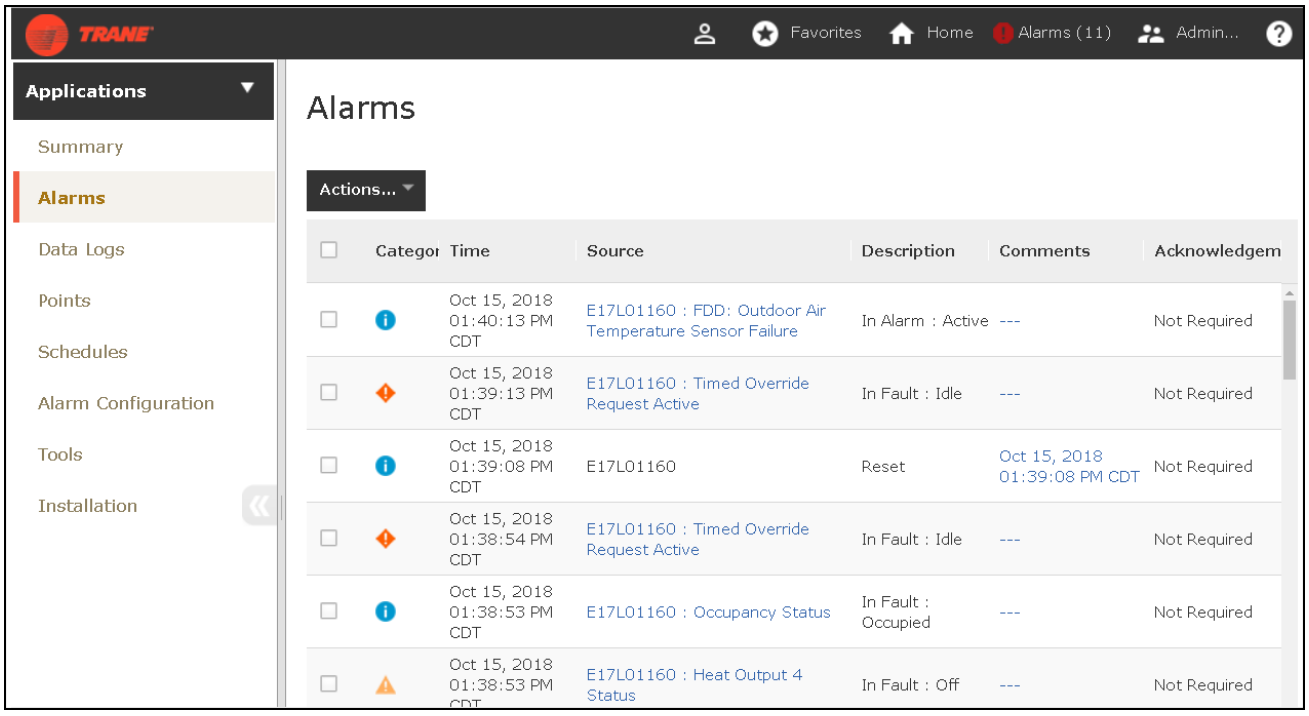


Figure 5.

On the Alarms screen, touch the Alarms button to view all alarms, commonly referred to as the event log. For the alarms to appear on the TD7 display, the point must have an alarm notification class selected. Additionally, the point must have entered the appropriate notification (In Alarm, When Failed, Return to Normal, or the notification class set to a value other than None).

Figure 6. Web UI Alarms screen



Viewing Active Alarms

- **Active alarms:** These are alarms that require attention. All alarms that are currently active appear when you view this category. Active alarms are not reset by way of the display. Active alarms will clear automatically when the condition causing the alarm is removed.
- **Historic alarms:** Touch this button to view previous alarms.

Alarm Severity

A color-code icon representing the severity of each alarm is shown under the severity (!) column. For a description of the five alarm icons, see Table 1, p. 15.

Sortable Alarms

You can sort active alarms by touching one of the column headers. Choose to sort by severity (!), date and time, point name, or description.

Reset Alarms

Touch this button to clear alarm that are no longer active.

Alarm Icons

Alarms icons appear in the left-most column of the alarms screen. They are identifiable by their shape and color.

Table 1. Alarm icons

Active Alarm Icons	Notification Class
	Critical
	Service Required
	Warning
	Information
	None
Note: Notifications classes are configured in point alarm settings section in Tracer TU.	

Sorting Alarms

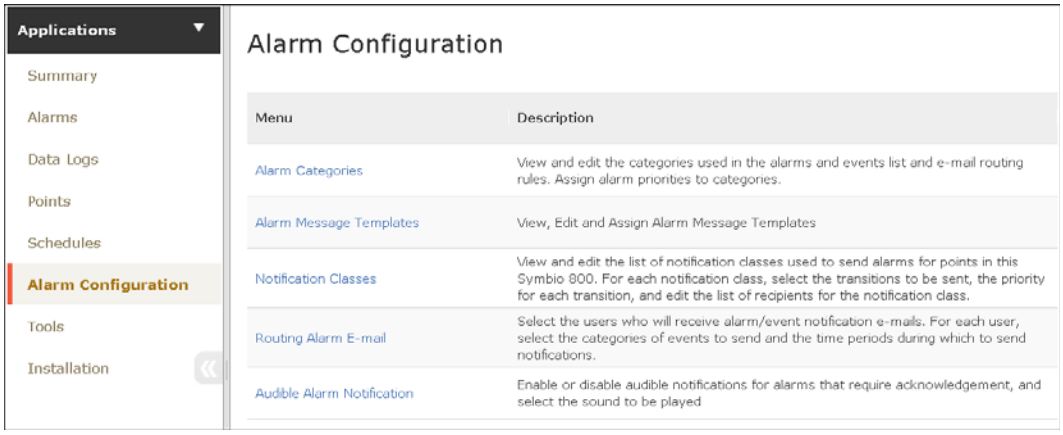
To sort alarms by a category other than date and time, touch one of the other column headings in the table. The column heading responds by changing to blue, and the alarms table re-sorts according to the blue column heading. By touching the blue column heading again, the column will change the sort direction.

- Severity (!): Active alarms are at the top, followed by the most severe, followed by the most recent.
- Date and Time (the default sort): Most recent alarms are at the top.
- Point Name: Alphabetical sort based on the point name.
- Description: Alarms are sorted alphabetically by description.

Configuring Alarms

In the web user interface, select Applications \ **Alarm Configuration**. From the Alarm Configuration screen, you can view and edit alarm categories and routing, alarm message template, and notification classes.

Figure 7. Web UI Alarm Configuration screen



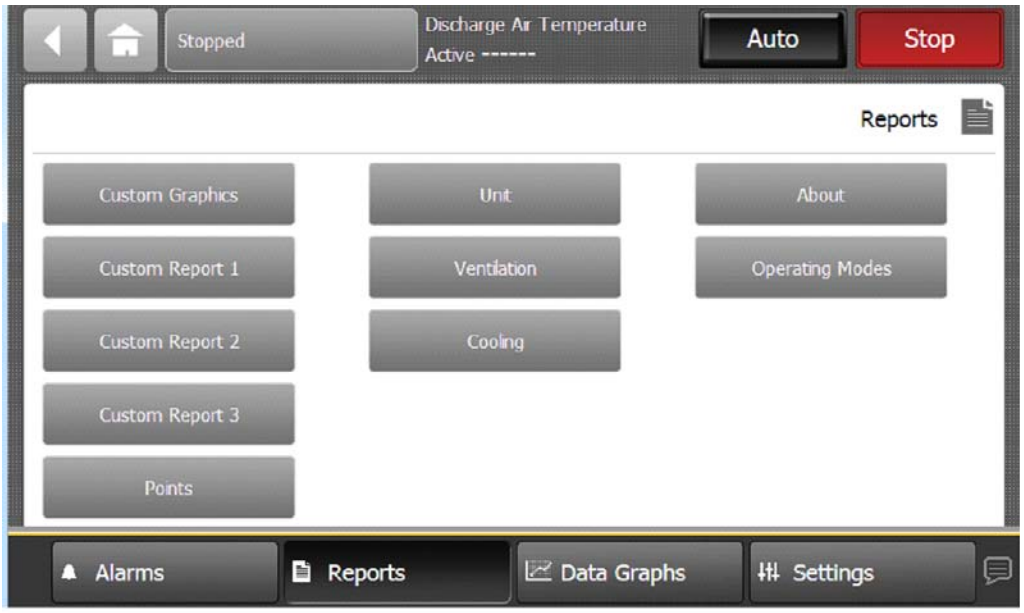
Reports

You can use the Tracer TD7 Display to view a variety of reports and create and edit custom reports.

Touch the **Reports** button in the bottom display area to view the Reports screen. The Reports screen contains the following buttons:

- Custom Report 1
- Custom Report 2
- Custom Report 3
- Points
- Override Summary
- All Points Report
- About
- Expansion Modules
- TGP2 Programs

Figure 8. Reports screen



Custom Reports

You can create up to three custom reports using the Tracer TD7 Display. Reports may contain all nine point types. A maximum of 36 pieces of data is allowed per custom report. Available reports are labeled Custom Report 1, 2, or 3.

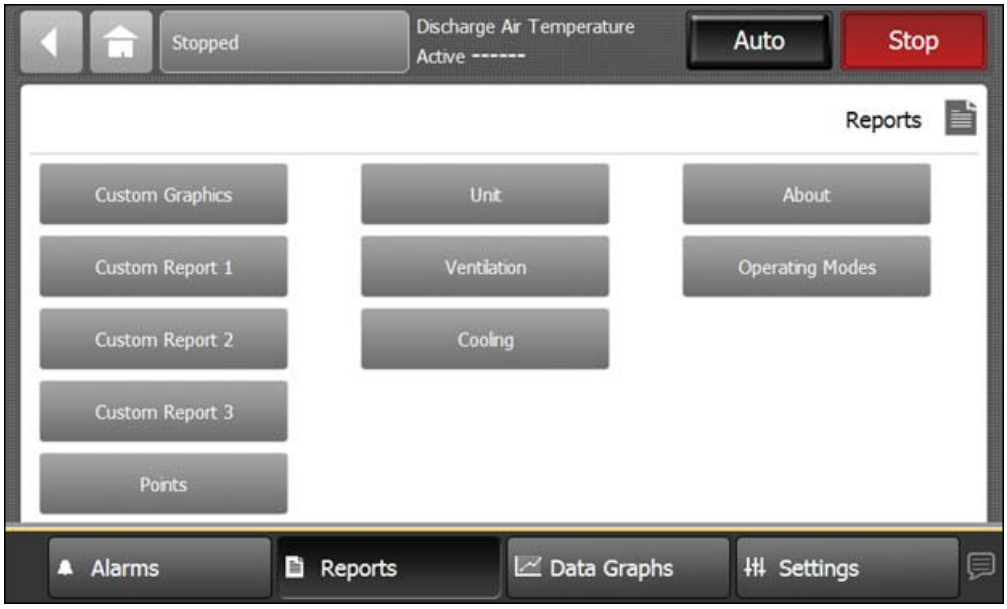
Creating a Custom Report

1. Navigate to the Reports screen, then touch one of the three custom report buttons.

   The Custom Report (1, 2, or 3) screen appears.
2. Touch the **Edit** button.

   The Edit Custom Report screen appears (Figure 9).

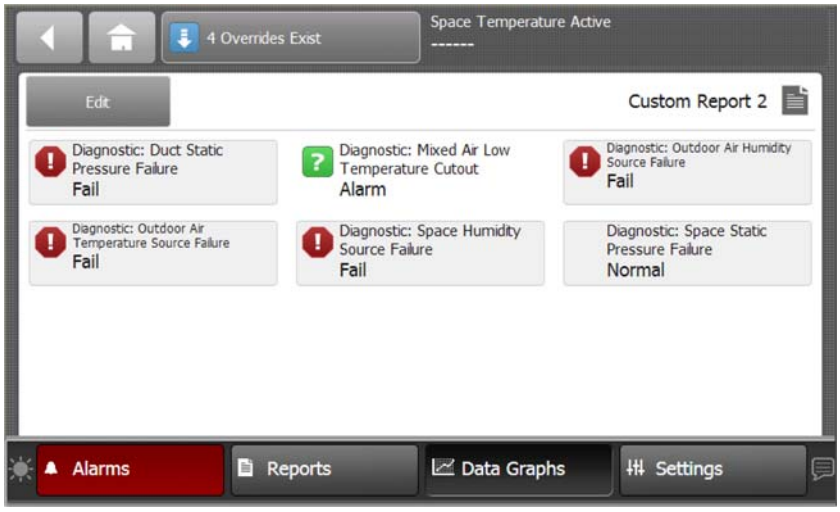
Figure 9. Creating a custom report



3. Use the up and down arrow buttons to select a point type. Add items by touching the item that is highlighted blue, then touch the **Add** button.
4. Continue adding values to your report. When you are finished, touch the **Save** button. The Custom Report screen, populated with your selected values, appears (Figure 10).

   To view the items in the selected list, touch a value in this list and use the up and down arrows to the right of the list. To change the location of an item in the list, select the item and then use the up and down arrows above the table to move the items.

Figure 10. New custom report screen

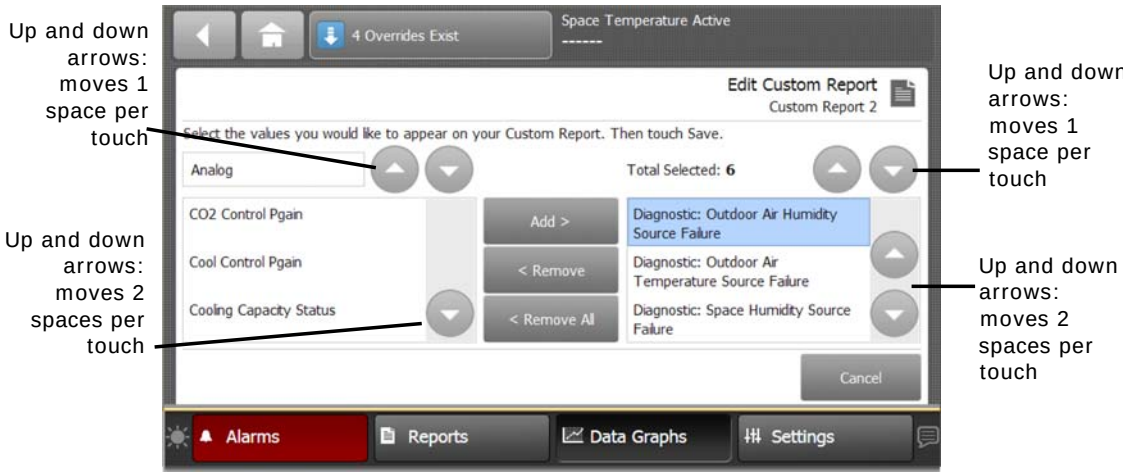


Editing a Custom Report

1. Touch **Reports** to view the Reports screen.
2. Touch the report that you want to edit.

   Follow steps 2 through 4 in "Creating a Custom Report," p. 17. to complete your edits.

Figure 11. Editing a custom report



Changing the Order of Items in a Custom Report

Items in a custom report can be rearranged according to personal preference by using the editing tools as described in Editing a Custom Report.

For example, you created the custom report shown in Figure 10, p. 18, but would prefer to move item "Diagnostic: Space Static Pressure Failure" to the top left portion of the report.

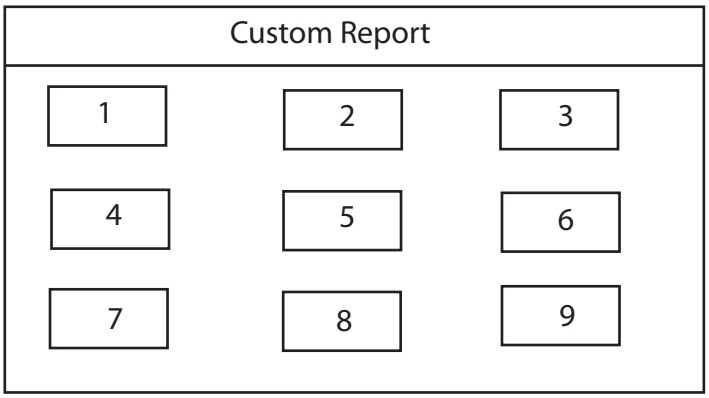
To change the order for the example described above:

1. Touch the **Edit** button on the Custom Report screen.
2. Use the arrow buttons to locate the item to be reordered. When located, touch the item which will then be highlighted blue (see Figure 11).
3. Use the arrow buttons to move the highlighted item to the top of the list (number 1 position).
4. Touch **Save**. You will be returned to the Custom Report screen, where the reordering changes now appear.

Note: *On the TD7 display, report items are ordered from left to right with the first item appearing at the top left portion of the screen. Up to nine items can appear on each Custom Report screen with a maximum of 4 screens and 36 items per report.*

The model in Figure 12 depicts a custom report screen with the first nine items displayed on the screen. Use this model to accurately reorder items in your custom reports.

Figure 12. Custom Report (order of items)



All Points Report

Touch the **All Points Report** button to view the All Points Report screen, which contains all configured points for the unit controller. Use the up and down arrows located at the right most bottom of the screen to page up or down.

Figure 13. All points report screen

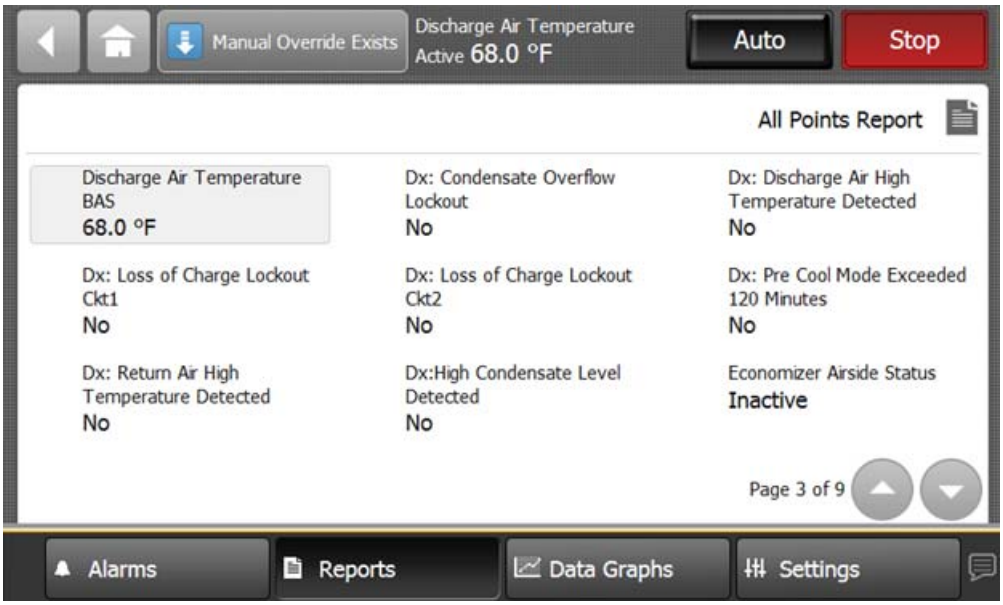
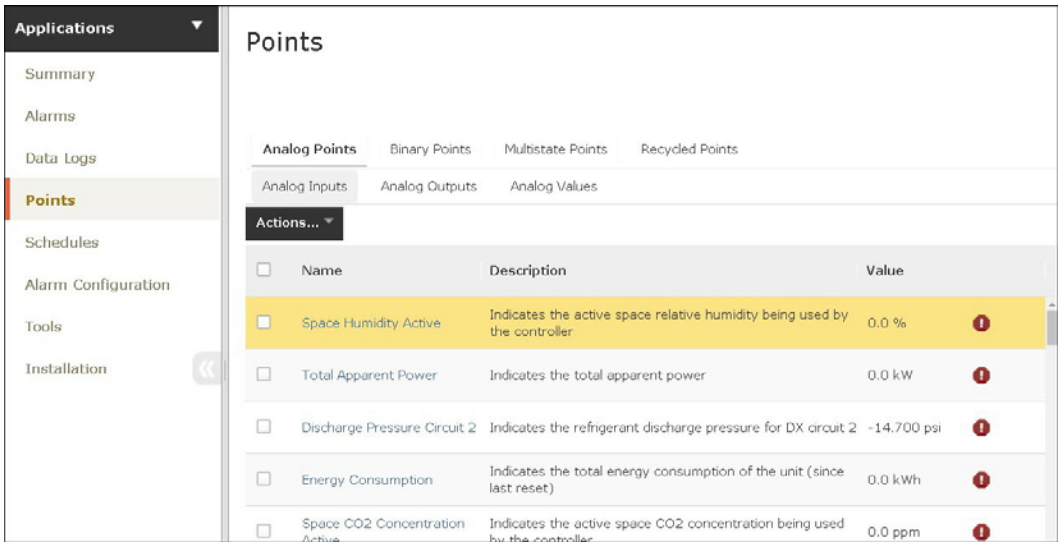


Figure 14. Web UI Points

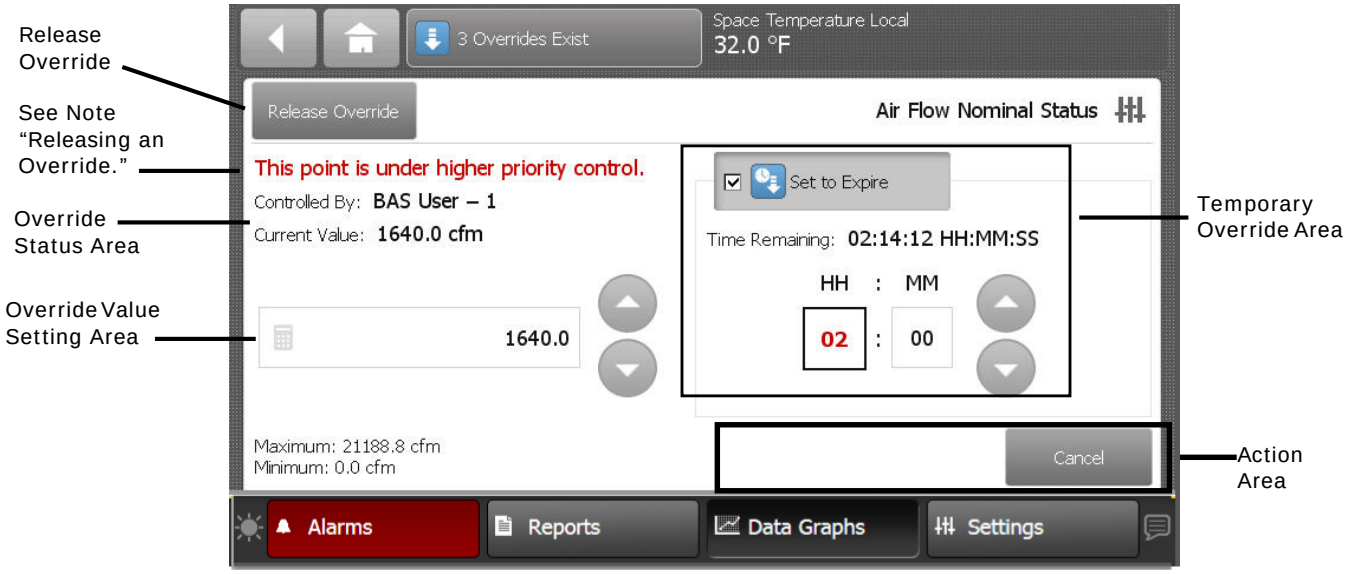


Points Overrides

Point Overrides are used to allow control of values, such as setpoints used for the operation of the equipment. These can be time based or persist until they are released.

From the Point Override screen you can perform overrides, set them to expire in a user-defined interval, or release a point that is currently overridden. All Point Override screens, (analog, binary, or multistate), are comprised of the same basic components.

Figure 15. Point Override screen components



Override Status Area

This area shows who is controlling the point, followed by the active priority level and the current value of the point. If security is enabled, the name of the user that performed the override will be shown in the Controlled By field. If security is disabled, “Front Panel” is displayed for all overrides performed by the TD7 display.

Override Value Setting Area

This area contains buttons that when pressed, change the override status. The button that is active has a shaded appearance in color. The exception is analog points, which require manually entering a value.

Temporary Override Area

This area allows you to set up a temporary override.

Action Area

This area allows you to apply, save, or cancel edits made to the point override.

Releasing an Override

Touch the Release Override button to release the current override. This action returns you to the Override Summary screen.

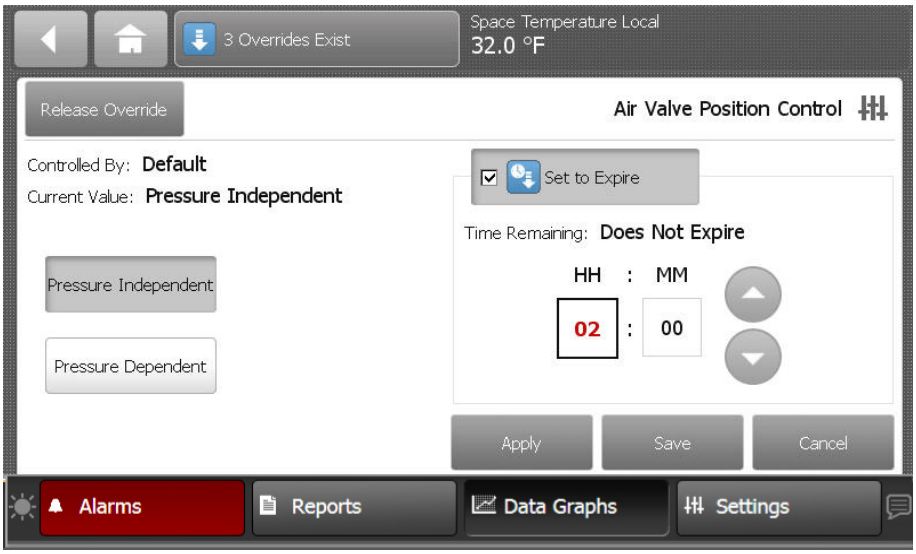
Note: *If a point is under a higher priority control , you can still proceed with releasing the override. However, it will not take effect until the higher priority level is removed in Tracer TU, Tracer SC, or Tracer ES.*

Binary Overrides

The Binary Override screen provides buttons with point state text that is used to set the current value. Multistate overrides with four or fewer states have similar screen functions as the binary override screen.

Touch a button in the override setting area to select a state. Touch the **Apply** or **Save** button to retain your changes.

Figure 16. Binary Override screen

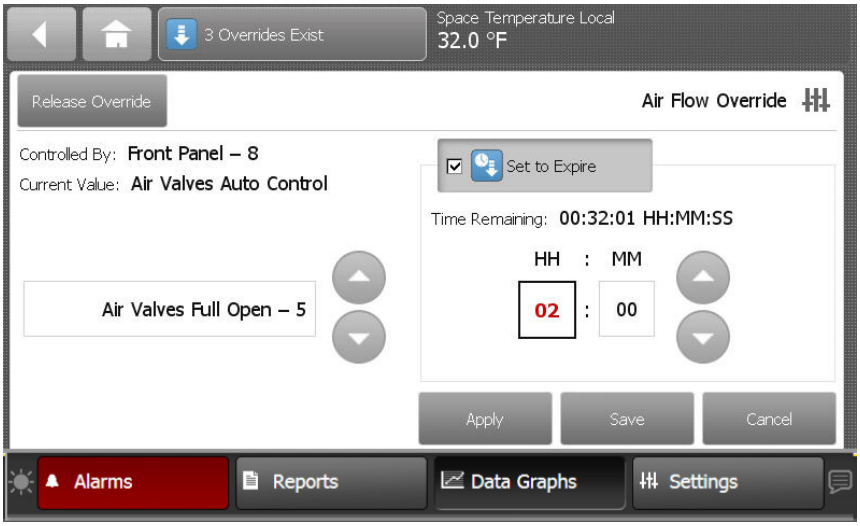


Multistate Overrides

Multistate override screens that contain five or more items will contain up and down arrow buttons in the Override setting area.

Use the up and down arrow buttons to select a state. Touch the **Apply** or **Save** button to retain your changes.

Figure 17. Multistate override screen (five or more states)



Analog Overrides

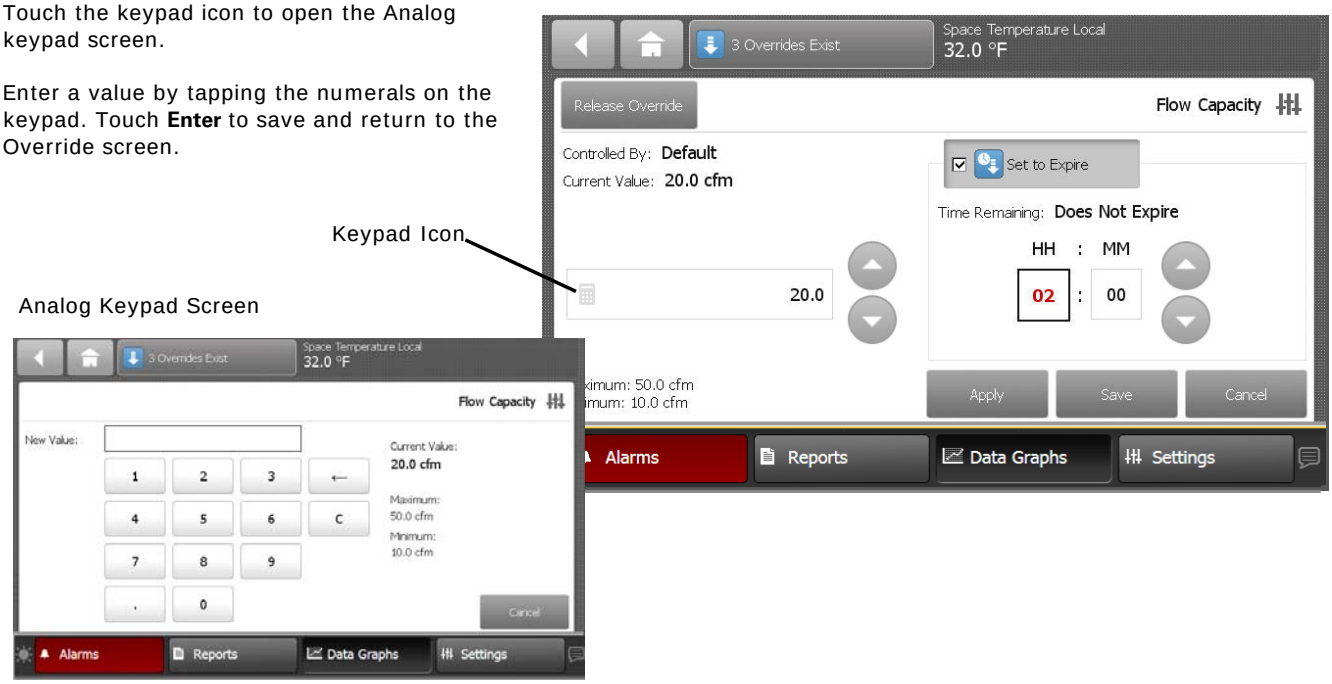
The Analog Override screen contains up and down arrows in the Override setting area, as well as a keypad icon that when touched, opens the Analog Keypad.

Use the up and down arrow buttons to select a value. Touch the **Apply** or **Save** button to retain your changes. To manually enter a value, touch the keypad icon.

Figure 18. Displaying the analog keypad screen

Touch the keypad icon to open the Analog keypad screen.

Enter a value by tapping the numerals on the keypad. Touch **Enter** to save and return to the Override screen.



Setting Up a Temporary Override

You can set up a temporary override by using the buttons in the Temporary Override area. The default for temporary overrides is 2 hours 0 minutes. The maximum duration for a temporary override is 99 hours 59 minutes. If more time is needed, consider setting up a permanent override.

1. Touch the **Set to Expire** button.

   A check mark appears in the check box, the override icon becomes blue, and the Time Remaining area appears.

2. Touch either the hours (**HH**) or minutes (**MM**) button, then use the up and down arrows to set the override.

   The HH and MM buttons, when pressed change by one increment. Press down on the buttons to accelerate. A second touch of the (HH) or (MM) buttons will open the Analog keypad screen.

Touch the **Apply** or **Save** button to set the temporary override.

Override Summary

The TD7 has a built in override summary report that can be accessed in one of two ways:

The preferred method is to access the report by touching the Override Summary button located in the top display area of each TD7 screen.

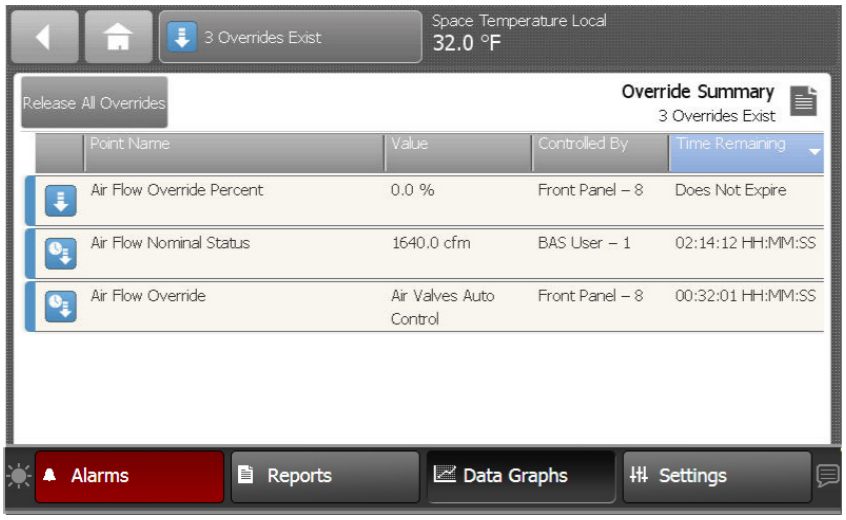
An alternate method is to touch the Override Summary button on the Reports screen.

The Override Summary screen contains all active overrides. Columns are sortable and automatically default to Time Remaining.

The override icon ( ) indicates that a point override is in effect indefinitely. The temporary override icon ( ) indicates that an override will expire after a specified duration.

To release all overrides in the list, touch the **Release All Overrides** button (only points that are controlled at priority level 8 will be released). Touch anywhere in a point row to navigate to the corresponding Point Override screen.

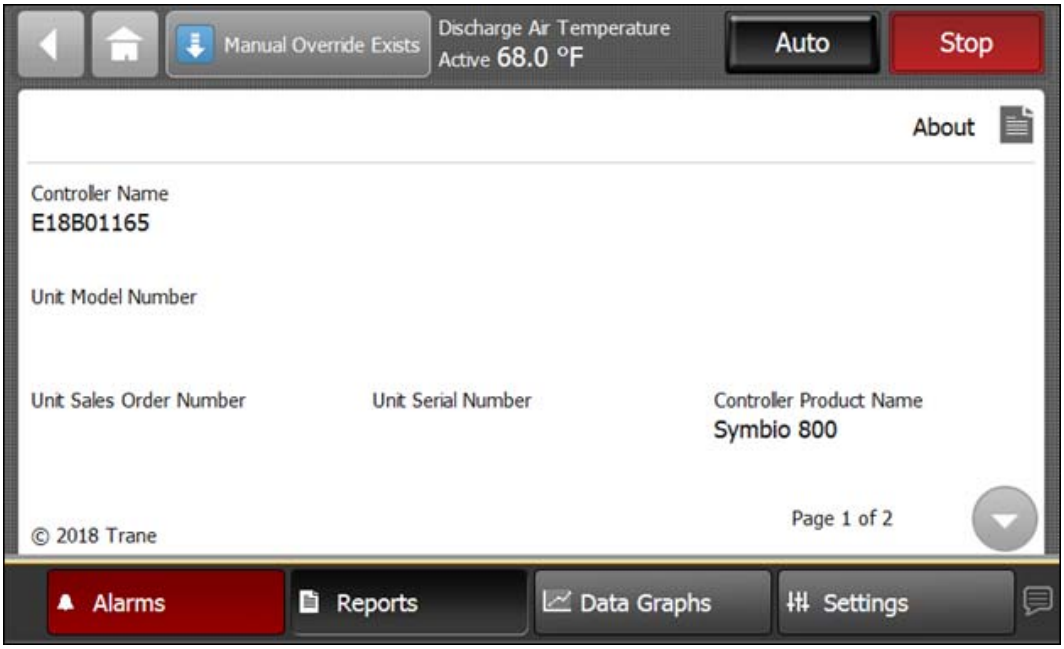
Figure 19. Override summary screen



About

Touch the **About** button to view the About screen. View information about the unit controller and the TD7 display to which it is connected. Touch the arrow button to scroll to the next screen.

Figure 20. About screen



Controller Name

This is the name that was assigned to the Symbio 800.

Unit Model Number

This is the model number of the IntelliPak/equipment on which the Symbio 800controller is installed. This value is typically entered in the factory, but can be entered in the controller.

Unit Sales Order Number

This is the order number for the equipment that the Symbio800 controller is controlling. This number is typically entered at the factory, but can be entered in the controller.

Unit Serial Number

This number applies to the piece of equipment that the Symbio 800 controller is controlling. This number is typically entered at the factory, but can be entered in the controller.

Controller Product Name

The controller product name will always be Symbio 800.

Controller Hardware Part Number

This is the part number for the Symbio 800 controller.

Figure 21. Web UI Resource Usage

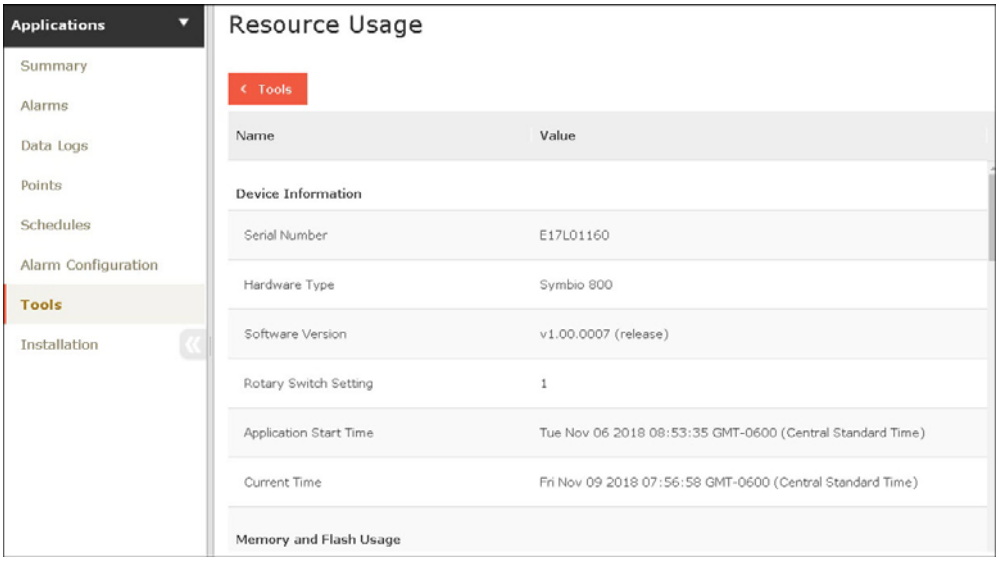
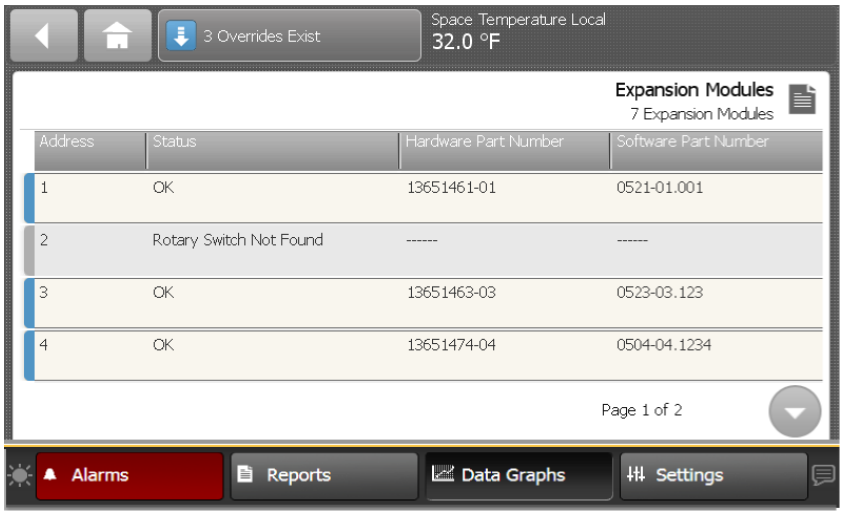


Figure 22. Web UI Identification and Communications

Expansion Modules

Touch the **Expansion Module** button to view the Expansion Modules screen. If expansion modules have been installed, they will appear in Expansion Modules screen (Figure 23).

Figure 23. Expansion modules screen



Expansion module screen columns:

Address — This is the rotary address of the defined or discovered expansion module.

Status — Under normal conditions, OK will display in this column. If not refer to *"Tracer XM30, XM32, XM70, and XM90 Expansion Modules IOM," BAS SVX46-EN.*

Hardware part number — This is the part number for the expansion module.

Software part number — This is the version number of the software running in the expansion module.

TGP2 Programs

Touch the **TGP2 Programs** button to view the TGP2 Programs screen. All TGP2 programs that have been installed on the controller appear here. The program name, status, run type, and interval for each program is provided. Interval is the scheduled run interval for the program and is displayed in HH:MM:SS. If the run type is Startup or Event, the interval field will display all zeros.

Figure 24. TGP2 Programs screen

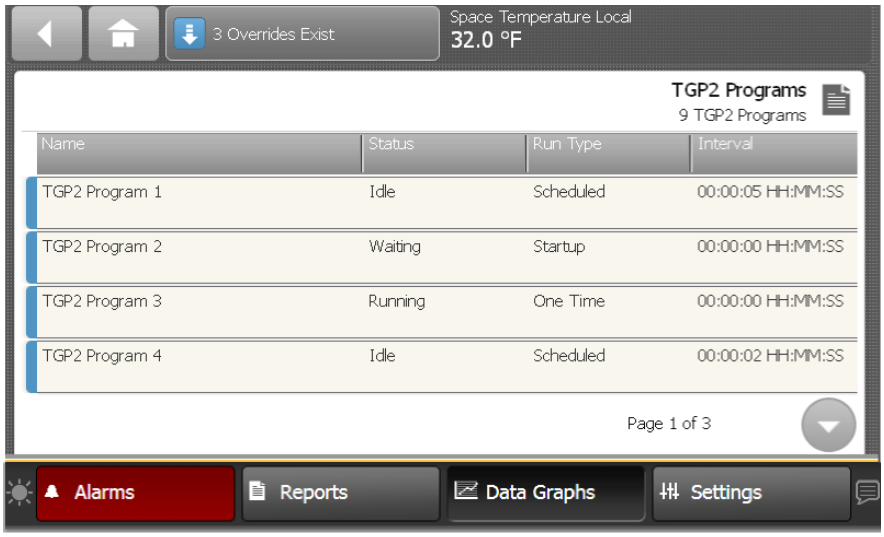


Figure 25. Web UI TGP2 Programs

Data Logs

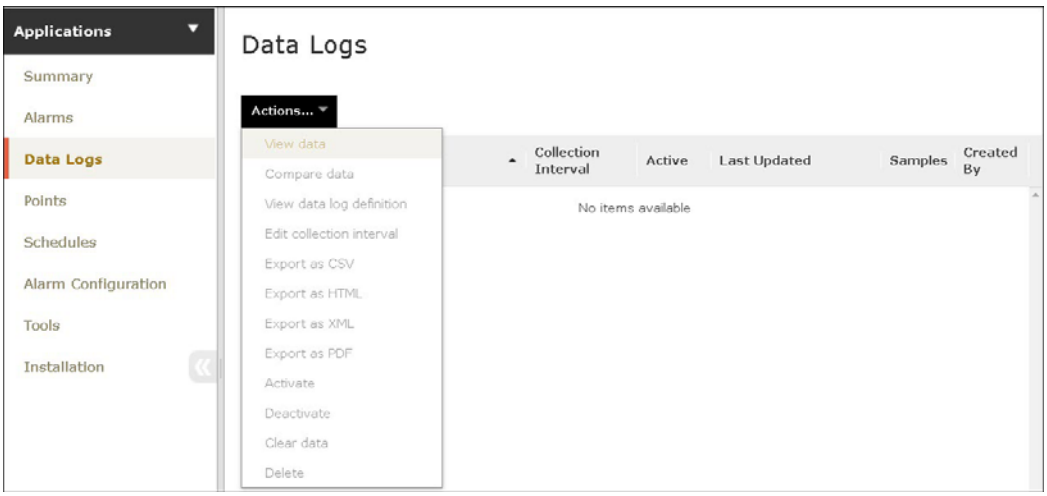
Data Logging, also referred to as trending, records in real-time the value of a data point in the system and the time at which the value was recorded.

By default, Symbio 800 automatically generates system-created data logs (for equipment and standard applications) on a 15-minute interval and then stores that data for seven days. Data storage is a continuous window where only the most recent seven days of data are stored. Data older than seven days is discarded in

order to make room for the newest data.

A list of data logs can be accessed by clicking **Data Logs** from the left navigation menu. From this page you can take action on a data log, such as comparing or exporting, by selecting one or more data logs and then clicking the **Actions** button.

Figure 26. Web UI Data Logs



Using the Trend Viewer

The trend viewer displays trend data in a chart. The trend viewer supports a time comparison mode that allows you to compare trend data at different points in time (day-to-day, month-to-month, year-to-year). A maximum of six data logs are supported (up to two data logs when time comparison mode is enabled). A maximum of two types of dimensionality are supported on the left and right y axis. Samples are plotted on a date/time scale on the x axis. Samples in fault (due to communication loss) are not plotted and will result in an interpolation gap within the plotted line. If all samples are in fault, no line will be displayed.

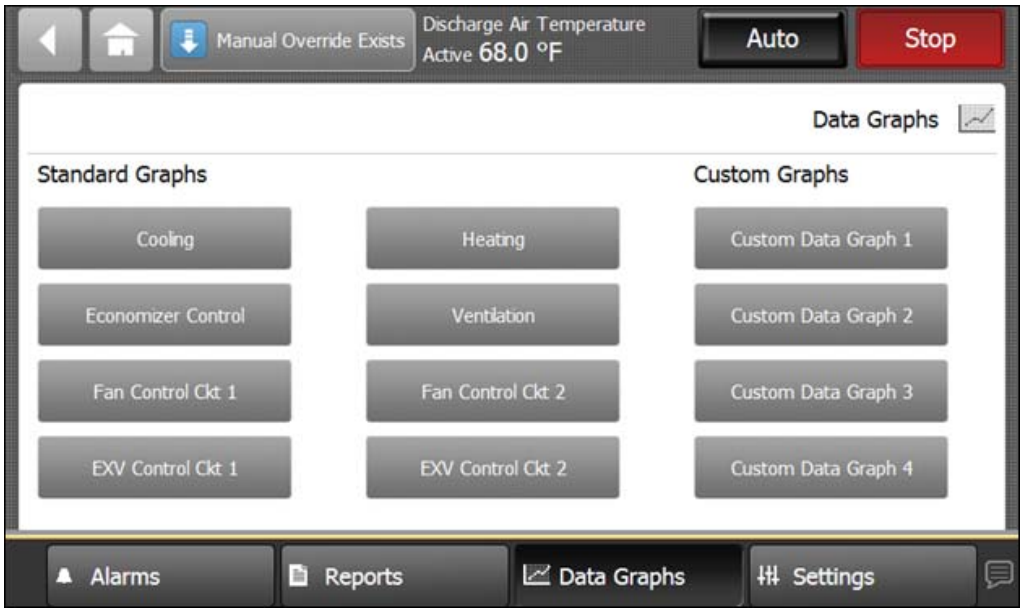
The trend viewer is available on the data logs tab of status pages for equipment and systems. To view trends graphically, select up to six data logs from the Data logs page and then select **View data**from the **Actions** button.

Data Graphs

Data graphs allow users to view trend logs from the controller in graphical format on the TD7 Display. Up to eight data graphs can be created with a maximum of four data logs per graph. Data graphs are user-defined and can be edited by changing the scale on the left and right Y-axis and choosing the line color.

Touch the **Data Graphs** button in the bottom display area to view the Data Graphs screen (Figure 27). The Data Graphs screen contains eight buttons that allow you to view and edit a particular configuration.

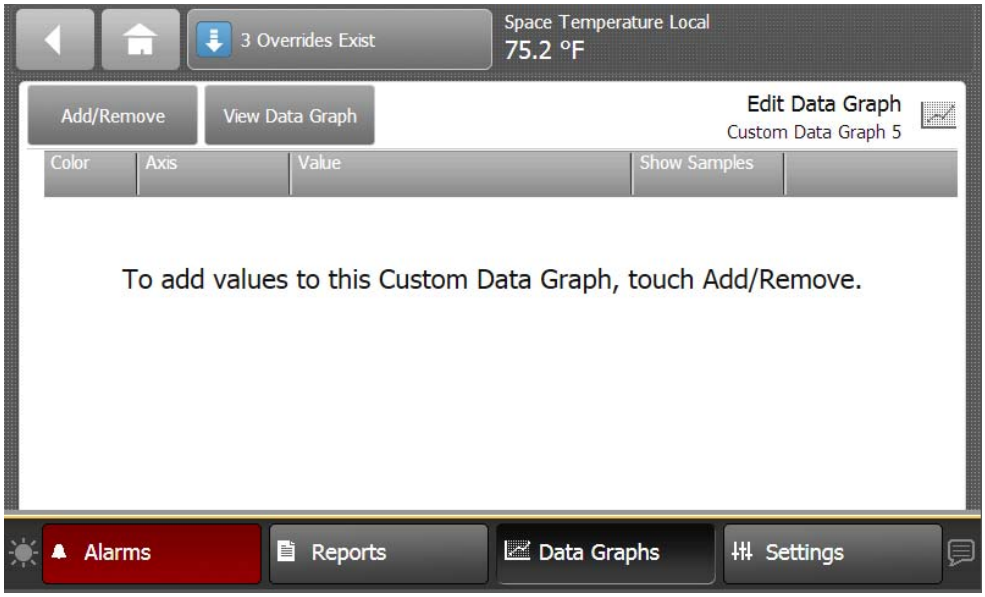
Figure 27. Data Graphs screen



Creating a Data Graph

1. Navigate to the Data Graphs screen, then touch an available data graph button.
   The Custom Data Graph screen appears.
2. Touch the **Edit Data Graph** button.
   The Edit Data Graph screen appears (Figure 28, p. 32).

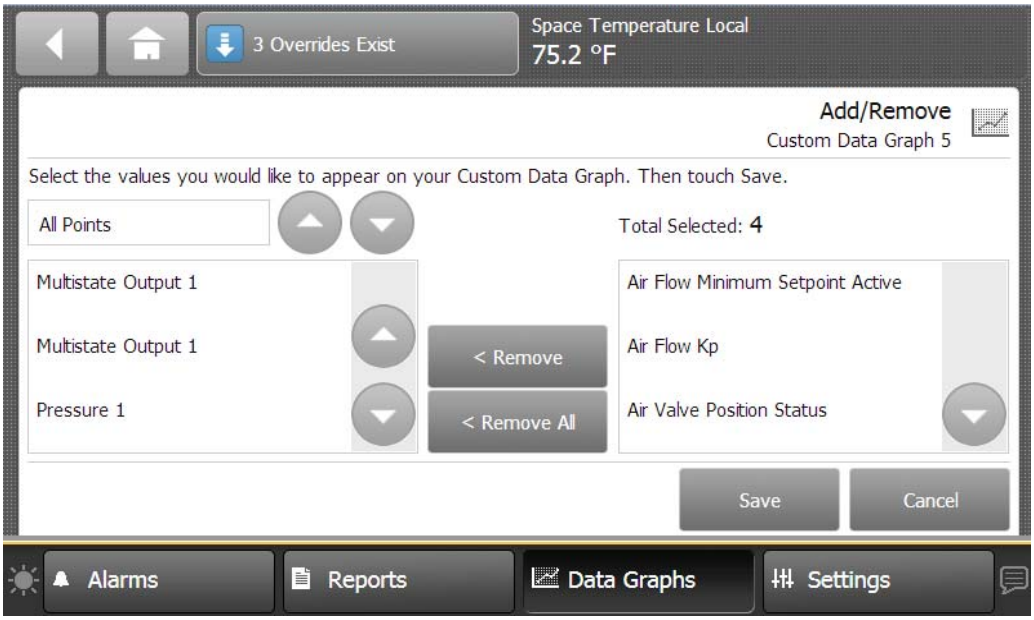
Figure 28. Edit Data Graph screen



3. Touch the **Add/Remove** button to add values to the custom data graph.

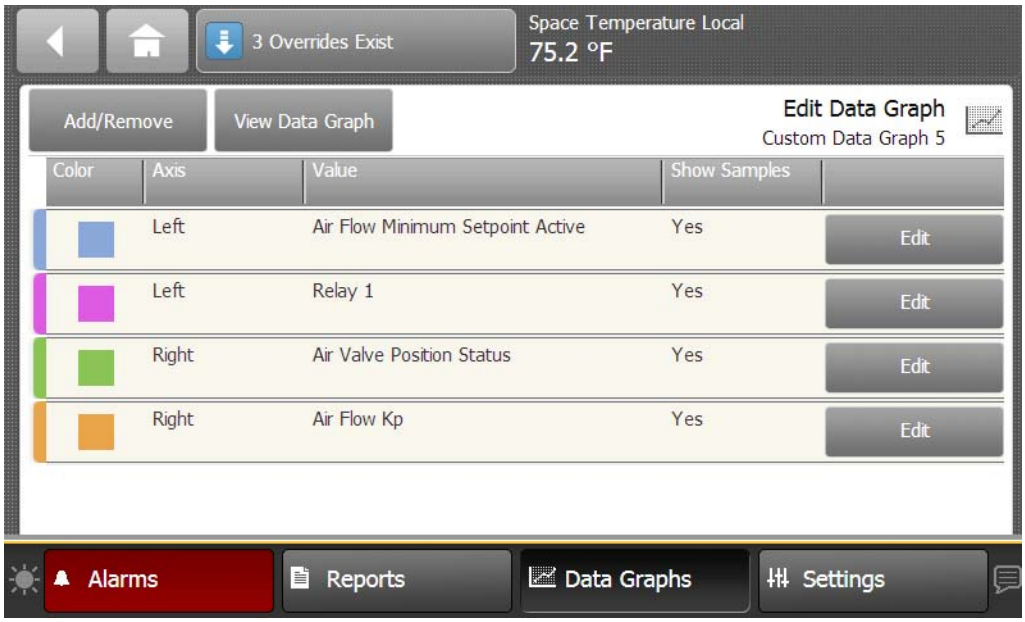
   The Add/Remove screen appears.
4. Use the arrow buttons to select a datalog type: analog, binary, or multistate, which then populates the box directly below.
5. Select the values, then touch the **Add** button (up to four selections are allowed).
6. Touch the **Save** button. The Edit Data Graph screen appears, which reflects the selected values.

Figure 29. Adding data logs to the custom graph



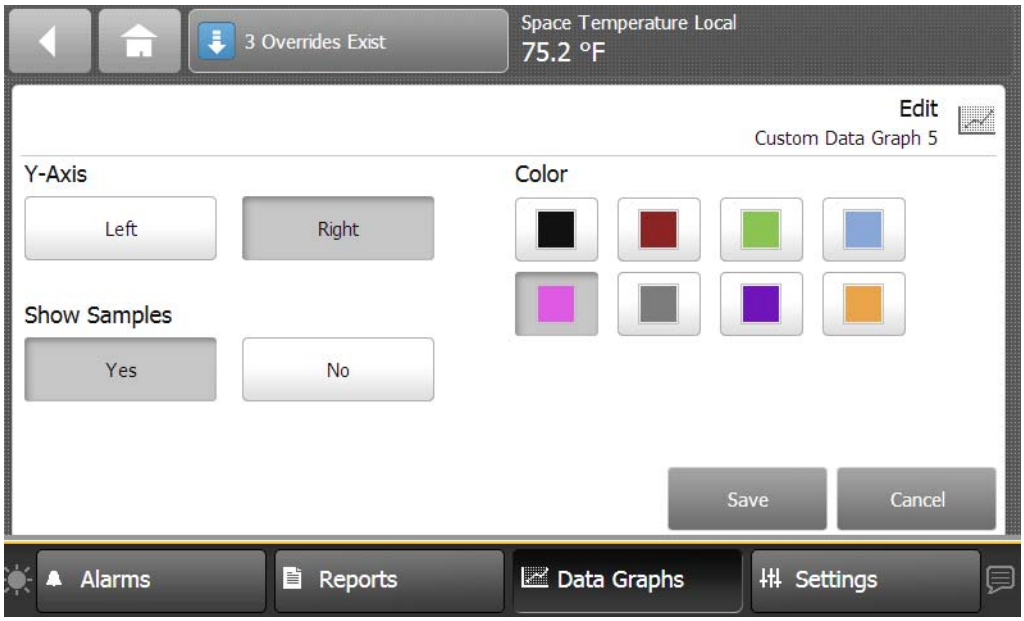
7. Use the Edit Data Graph screen to modify the data graph. Touch the **Edit** button that corresponds with the value that you want to change. Only one value can be edited at a time.

Figure 30. Edit Data Graph screen (after values have been added)



8. From the Edit screen you can choose which Y-axis to display the value, a color, and whether or not to show data samples. Touch the **Save** button when finished. Repeat the process with remaining values.

Figure 31. Customizing the data graph

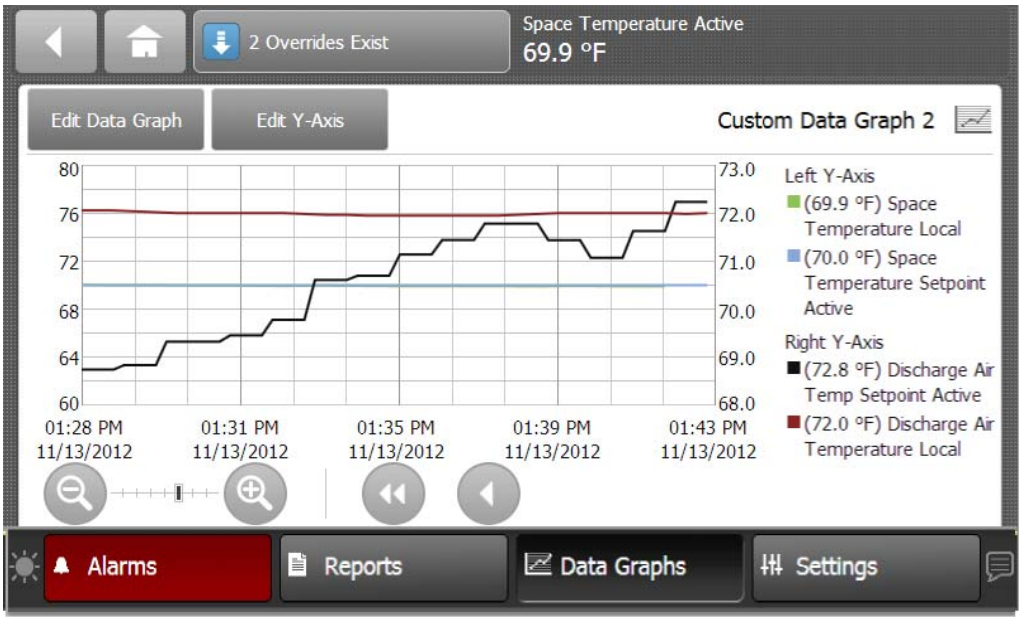


9. Touch the **View Data Graph** button to display the new graph (Figure 32).

Note: *Depending on the sampling rate, the custom data graph may be empty for several hours.*

You can make changes to the way data is presented on the graph at anytime. Touch the zoom-in icon and zoom-out icon to either increase or decrease the viewable time frame. This action also enables back and forward arrows that allow you to view data at various times of the day.

Figure 32. Viewing the data graph

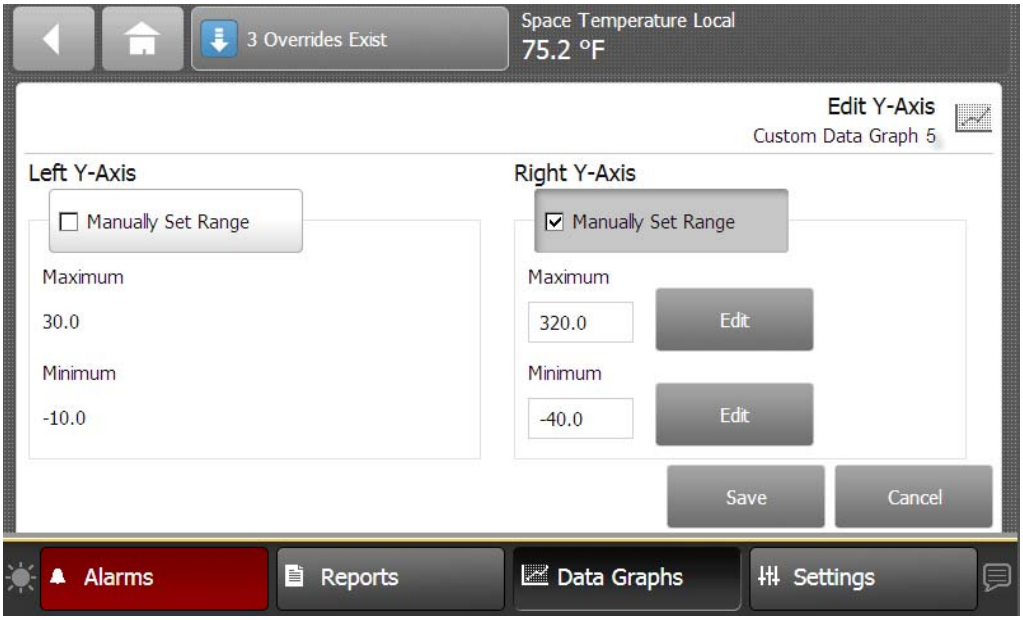


Editing the Y-Axis

The default values on the right and left Y-axes can be changed according to your specifications.

1. Touch the **Edit Y-Axis** button located on the top portion of the Custom Data Graph screen.
   The Edit Y-Axis screen appears.
2. Touch the **Manually Select Range** box for either the left or right Y-axis.
3. Touch the **edit** button next to one of the two value ranges.
   The Keypad screen appears.
4. Select a new value and then touch **Enter** to save.

Figure 33. Repeat steps 2 through 4 until all preferred changes have been made. **Editing the Y-Axis**



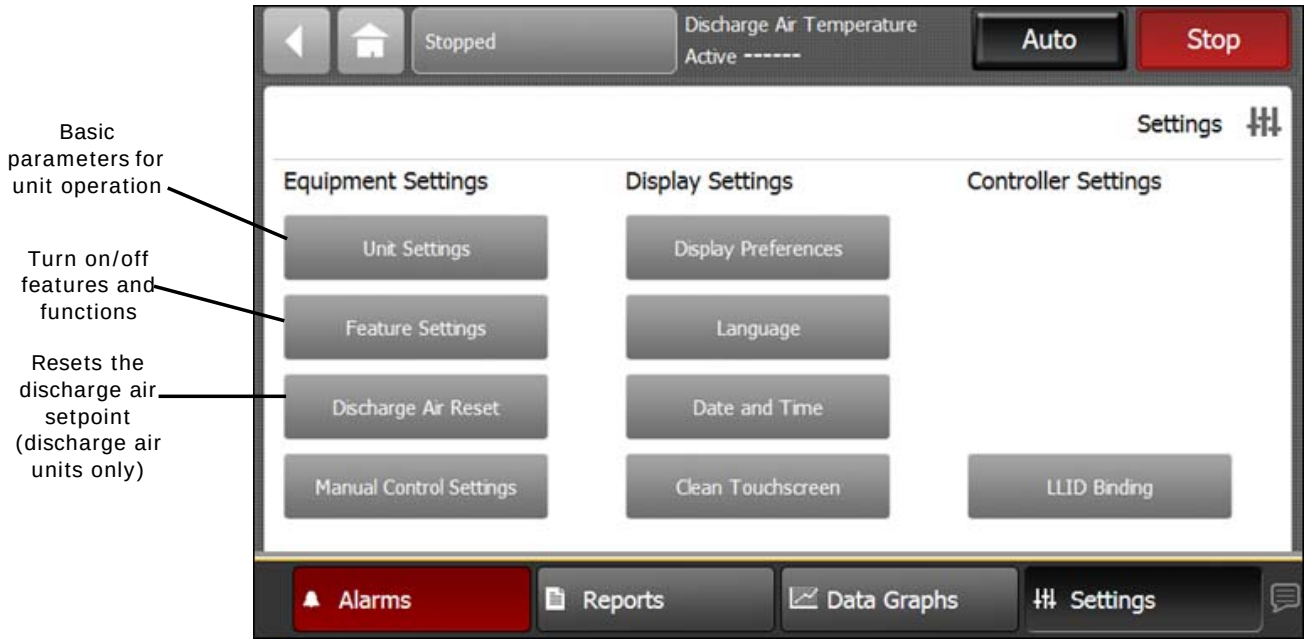
Settings

The Settings screen provides options for display settings, language, overrides and security.Touch the **Settings** button in the bottom display area to view the Settings screen.

Three categories for settings appear on the screen:

- Control Settings
- Equipment Settings
- Display Settings

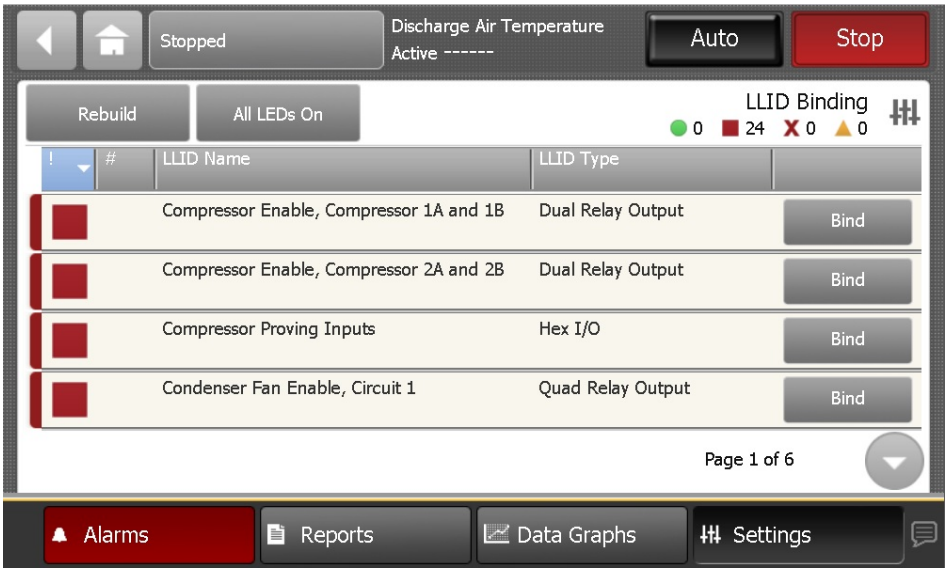
Figure 34. Settings screen



Control Settings

This category contains the LLID Binding.

Figure 35. LLID Binding



Equipment Settings

Unit Settings

Unit Settings are the basic parameters for unit operation.

Feature Settings

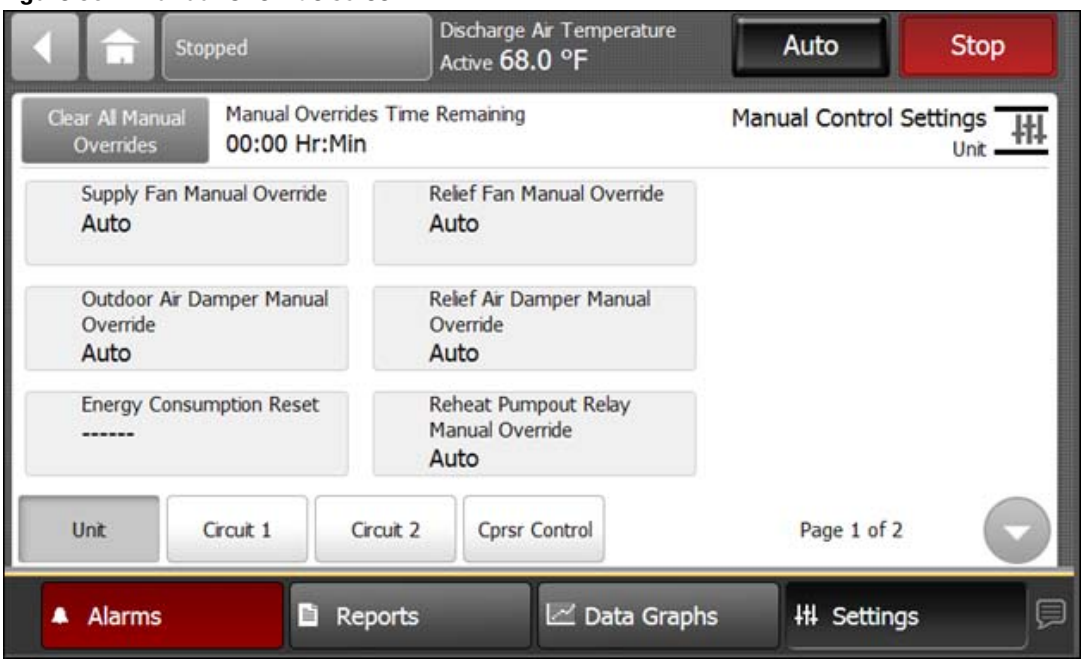
Features Settings allows you to enable or disable features and functions.

Manual Overrides

Manual Overrides are temporary overrides that can be used to test equipment and features. The override time is adjustable from 1 - 78 hours.

Navigate to the Manual Override screen by touching the Settings button, then the Manual Control Settings button. From there select the appropriate unit or circuit level button.

Figure 36. Manual Override screen



Override Status Area

This area shows who is controlling the point, followed by the active priority level and the current value of the point. If security is enabled, the name of the user that performed the override will be shown in the Controlled By field. If security is disabled, "Front Panel" is displayed for all overrides performed by the TD7 display.

Override Value Setting Area

This area contains buttons that when pressed, change the override status. The button that is active has a shaded appearance in color. The exception is analog points, which require manually entering a value.

Display Settings

The selections in this category contain settings that affect the way in which information is displayed on all of the TD7 display screens. From each screen, the current settings can be viewed. To change a setting, touch the preferred value.

Display Preferences

Touch the **Display Preferences** button to open the associated screen (Figure 38). On this screen, all available options to display information on the TD7 screens are available. There are two pages on this screen, accessed by using the arrow button at the bottom of the screen.

Figure 37. Web UI User Preferences

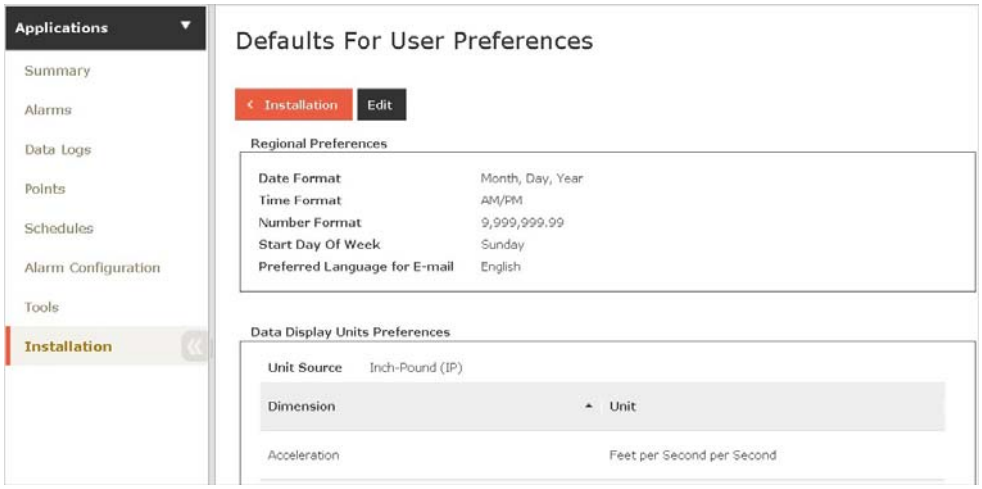
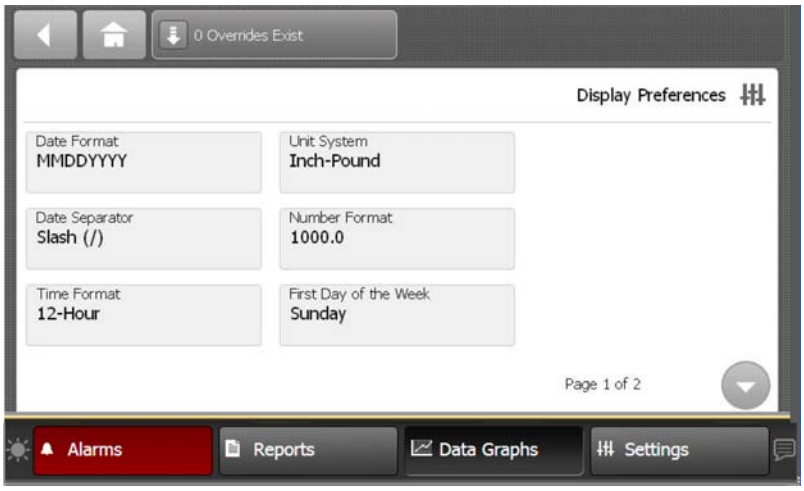


Figure 38. Display Preferences screen



Date Format

Touch the **Date Format** button to open the associated screen. Three options are available to display the current date: MMDDYYYY, DDMMYYYY, and YYYYMMDD.

Date Separator

Touch the **Date Separator** button to open the associated screen. Three options are available to display separators in the date format: None, Hyphen (-), or Slash (/).

Time Format

Touch the **Time Format** button to open the associated screen. Two options are available: 12-Hour format and 24-Hour format (also referred to as “military time”).

Unit System

Touch the **Unit System** button to open the associated screen. Two options are available: SI (system international) or IP (Inch-Pound).

Number Format

Touch the **Number Format** button to open the associated screen. Two options are available: period format (1000.0) or comma format (1000,0).

First Day of the Week

Touch the **First Day of the Week** button to open the associated screen. Specify the starting day for the week when viewing schedules and adding events. Options available: Saturday, Sunday, or Monday.

Brightness

Touch the **Brightness** button, or the brightness icon ( )located at the bottom left of each screen, to open the associated screen. Screen brightness is measured in percentage. Use the keypad to enter a new brightness number.

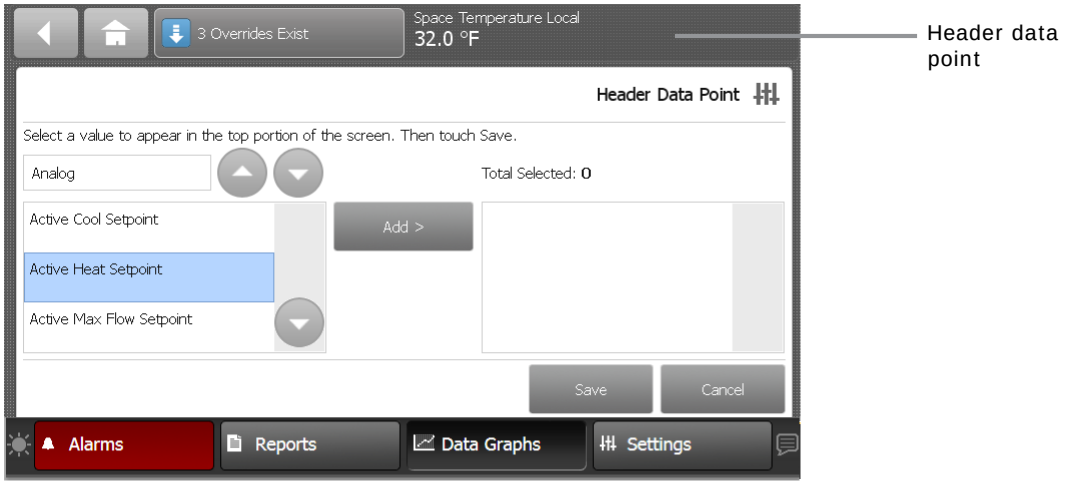
Backlight Timeout

Touch the **Backlight Timeout** button to open the associated screen. This value is measured in minutes, with 30 being the maximum limit. Use the keypad to enter a backlight timeout value. This value is the amount of time that the display will remain lit without activity. When the backlight times out, users will be automatically logged off due to inactivity.

Header Data Point

Use the arrow button on the Display Preferences screen to advance to page 2. Touch the **Header Data Point** button to open the associated screen. The Header Data Point appears in the top right display area on all screens. Use the arrow buttons to scroll through the points. Click **Add** to move the highlighted point to the right side of the screen(Figure 39, p. 40). Click **Save**.

Figure 39. Setting the header data point



Home Page

Use the arrow button on the Display Preferences screen to advance to page 2. Touch the **Home Page** button to open the associated screen. This function allows you to choose what will display when the home button is touched. Available options are: the All Points report, the Override Summary Report, Active Alarms, any of the three Custom Reports, or any custom graphic.

Figure 40. Home Page screen

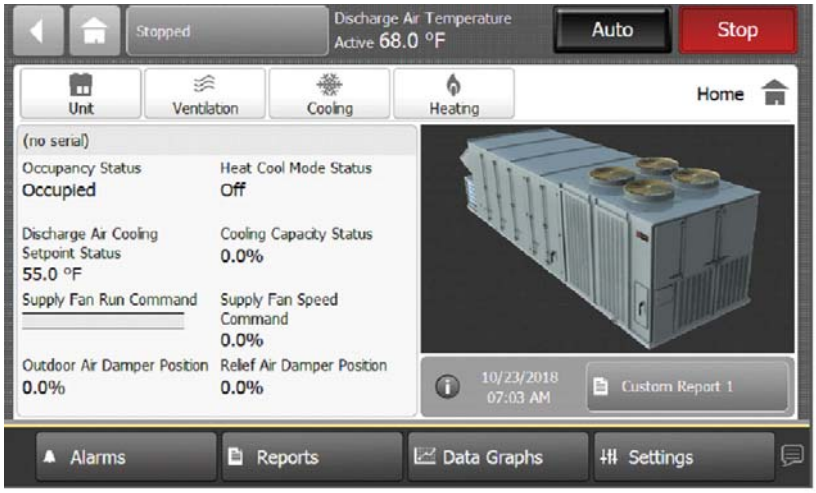
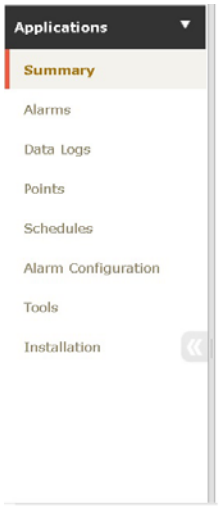


Figure 41. Web UI Home Page



Language

Touch the **Language button**, or the language icon ( ) located at the bottom right of each screen, to open the open the Language screen. Three languages are available and represented on the selection buttons. Select a language that you want displayed on each TD7 screen and then touch **Save**.

Figure 42. Language screen

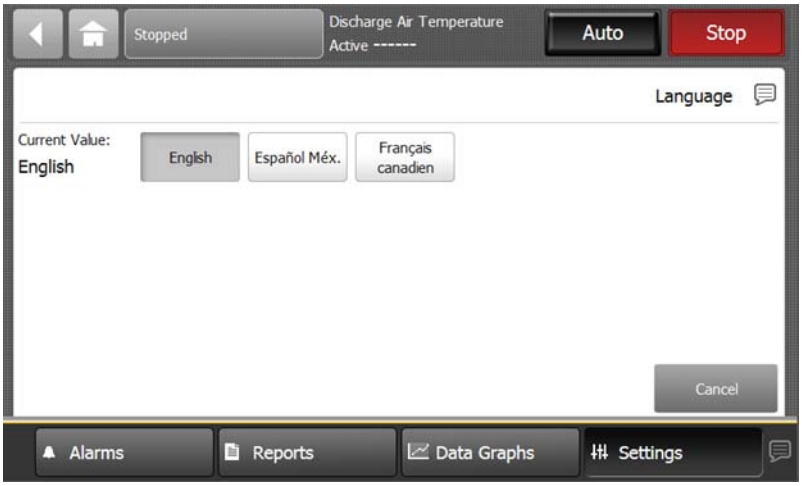
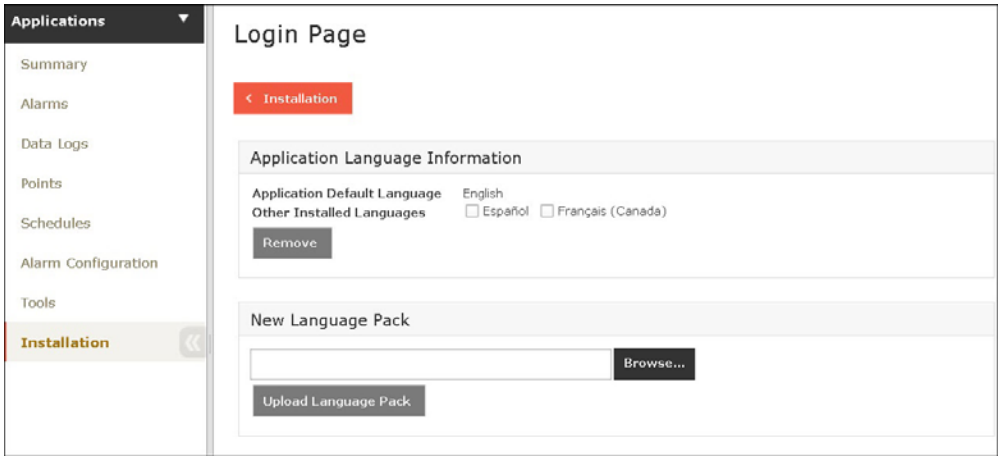


Figure 43. Web UI Login screen

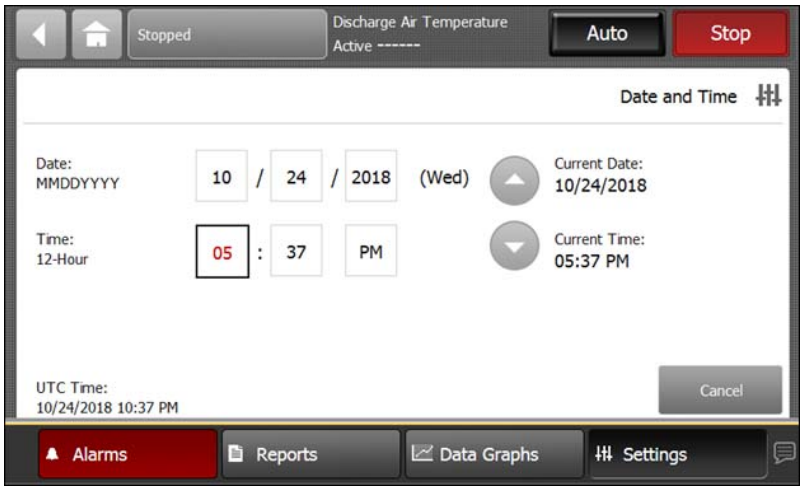


Date and Time

Touch the **Date and Time** button to open the associated screen. To enter a new date or time, touch the digit you want to change. When enabled for editing, the digit will appear red with a black border. when finished, touch **Apply** or **Save**. Or,

tap the digit twice which opens the keypad screen where you can make date and time entries. When finished, touch **Enter**; you will be returned to the Date and Time screen. Touch **Apply** or **Save**.

Figure 44. Date and Time screen



Clean Touchscreen

Touch the **Clean Touchscreen** button to safely clean the TD7 touchscreen using any brand of common household glass cleaner. When this button is touched, the screen background color becomes black, allowing dirt and fingerprints to become more visible. It also displays a countdown timer (five to zero seconds).Touch the screen anytime within the 5-second countdown to begin cleaning the screen (each touch resets the 5-second countdown).

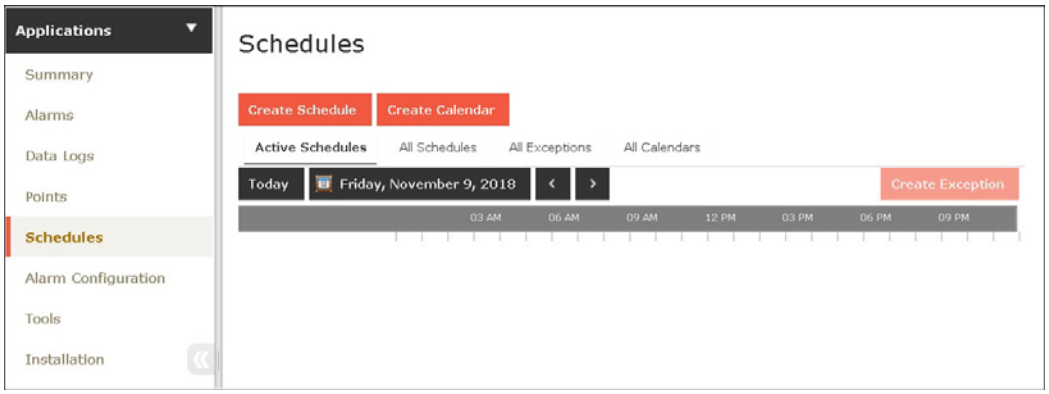
Schedules

Scheduling is based on the BACnet schedule object implementation. Scheduling is one of a facility's most important energy-saving strategies. It ensures that equipment runs only when needed. Scheduling facilitates the following tasks:

- Creating, editing, and deleting schedules
- Creating, editing, and deleting calendars and exception schedules
- Viewing all effective schedules in a facility

The Schedules page contains four tabs: Active Schedules, All Schedules, All Exceptions, and All Calendars.

Figure 45. Web UI Schedules



Optimal Start/Stop

Optimal start and stop times can be defined for HVAC schedules. HVAC refers to both Area and equipment.

The schedule coordinates with the Area application or equipment to calculate when the optimal start and stop occurs. Optimal start/stop times are based on outside air conditions, space temperature, and occupied setpoints.

Exceptions and Calendars

Exceptions are temporary modifications to a schedule. Exceptionscontain one set of dates or one repeating pattern of dates. If a schedule has an exception applied, a red box outline will appear.

Calendars

For multiple dates and repeating patterns a calendar can be created, which is then applied to the exception.

Calendars are used to group dates, which can then have exceptions applied to these dates on a schedule. For example, a school might create a calendar to group the days that require extended operating hours for after-school meetings.

Release Function

The release function is a predetermined time in which the present schedule or the event releases control over to the next event based on priority. Conceptually, a scheduled release is very similar to a timed override. For example, after the daily schedule ends at 12:00 am (midnight), the schedule releases control over to the next event.

Creating a Schedule

The system controller leads you through the process of creating a schedule for your facility by navigating through a series of steps and pages, often referred to as a "wizard." If you need help completing the steps, click the help icon located on each page. You can create a schedule to control the following points and applications based on time and date:

- Binary outputs and values
- Analog outputs and values
- Multistate outputs and values
- Equipment, spaces, and system applications (typically referred to as HVAC schedules)

Points and applications are referred to as members when they are assigned to a schedule. Members can be assigned to only one schedule during the same effective period. Members must be the correct type; that is, a binary point cannot be included in an analog schedule.

To create a schedule:

1. Click the **create schedule** button. The **Create Schedule—Schedule Information** page appears.
2. Enter a name for the schedule, and select the schedule type and effective dates.
3. Click **next** to continue. The **Create Schedule—Select Members** page appears.
4. From the **selection tree**, select members (spaces and areas) for the schedule, then click **Add** to move to **selected items**.
5. Click **next** to continue. The **Create Schedule – Schedule Times** page appears.
6. Select a schedule default. Each day is independent of the others and always begins with the **schedule default** value. The schedule default value is applied to each day of the week and is the value that the schedule defaults to at 12:00 a.m. for any given day. Select Release (see below), Occupied, or Unoccupied.

Note: *A **Release** is a predetermined time in which the present schedule or the event releases control over to the next event based on priority. A scheduled Release is very similar to a timed point override.*

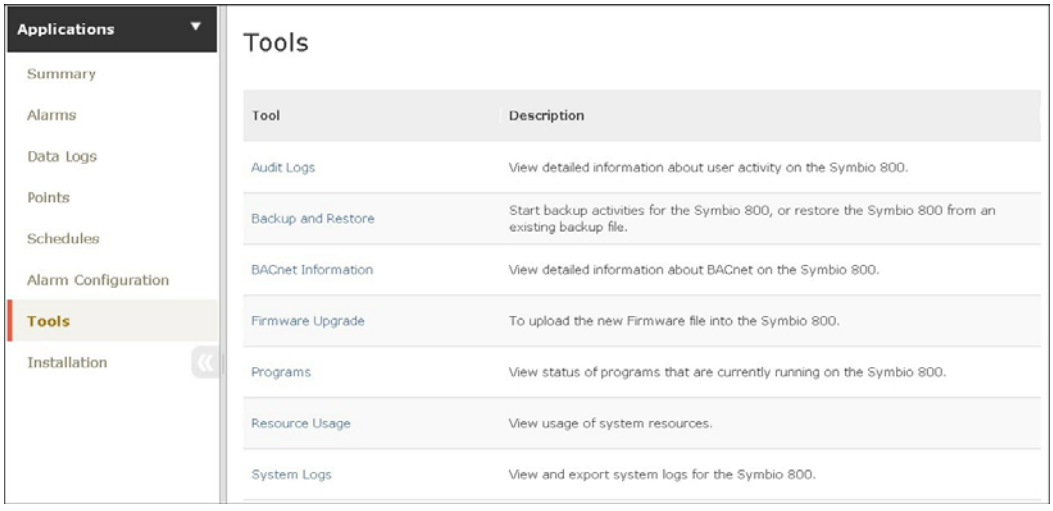
7. Add events to the schedule: click **add event**, which opens the event dialog box.
8. Enter a time for when the event will start and select a value.
9. Enter a time for when the event will stop (this is optional).
10. Select the days of the week to which the event will be applied.
11. Click **Add**. The event appears in the schedule viewer. (To edit or delete an event, click on the event in the schedule viewer.)
12. Click **next** to continue. The **Create Schedule – Summary** page appears.
13. Review the schedule. Click **finish** to save the new scheduled as summarized.

The Tools Menu

To effectively manage Symbio 800, a selection of task-based tools are available. The following tools described in this section are accessible from the Tools page:

- Backup and Restore
- Programs
- System Logs
- Resource Usage
- BACnet Information

Figure 46. Tools menu



Backup and Restore

From the left navigation menu click **Tools > Backup and Restore**. Backup and Restore is a process that involves creating an exact duplication of a Symbio 800, exporting (saving) the duplicated copy, and then restoring that copy at a later time. Use the Restore tool to restore the Symbio 800 configuration file that was produced by the backup tool.

It is important to back up Symbio 800 controllers in the event that a system failure occurs. Backups should also be performed prior to upgrading software, adding devices, or adding new applications.

Follow best practices when implementing a backup and restore procedure plan for your system. Backups do not include license files.

Important: *If a microSD card has been installed in the Symbio 800, it will store up to ten backups (FIFO).*

Programs

Tracer Graphical Programming (TGP2) programs are created and downloaded to Symbio 800 by using the Tracer TU service tool. To view the status of programs after they have been downloaded to Symbio 800, select **Tools > Programs** from the left navigation menu. The **Programs** list page shows the how often programs in Symbio 800 run and the most recent run time.

Custom TGP2 routines for installed equipment can now be viewed in real-time. Data points in the routine will reflect present value and gets updated for every 15 seconds.

Note: *See the Tracer TU Service Tool Getting Started Guide (TTU-SVN01).*

System Logs

System logs that are currently on the system are available for viewing or exporting. System logs can be the standard "hydra" log files (hydra.log, hydra.log.0, hydra.log.1, hydra.log.2, hydra. log.3, hydra.log.4), any stack dump log files (stackdump.log.x), or any additional log files that may be generated by a Symbio 800 application and/or process.

From the left navigation menu click **Tools > System Logs**.

Recent Usage

Resource Usage displays system usage among applications, memory, and points. This is primarily used by Trane Technical support.

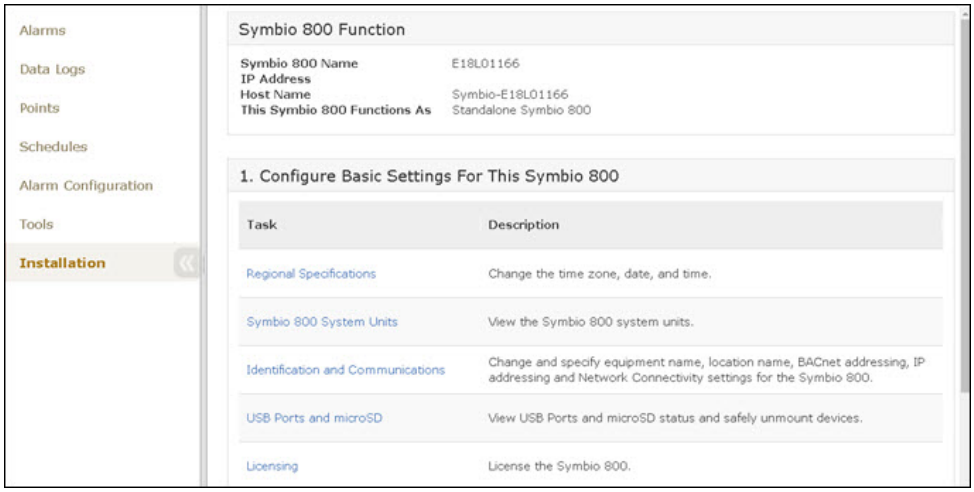
BACnet Information

Information about BACnet configurations is shown on this page. This information is typically used by Trane Technical Support.

Configuring Basic Settings for the Symbio 800

These settings are for regional specifications, system units, communications, and licensing. These settings were configured during initial configuration at the factory. Some of these settings can be edited.

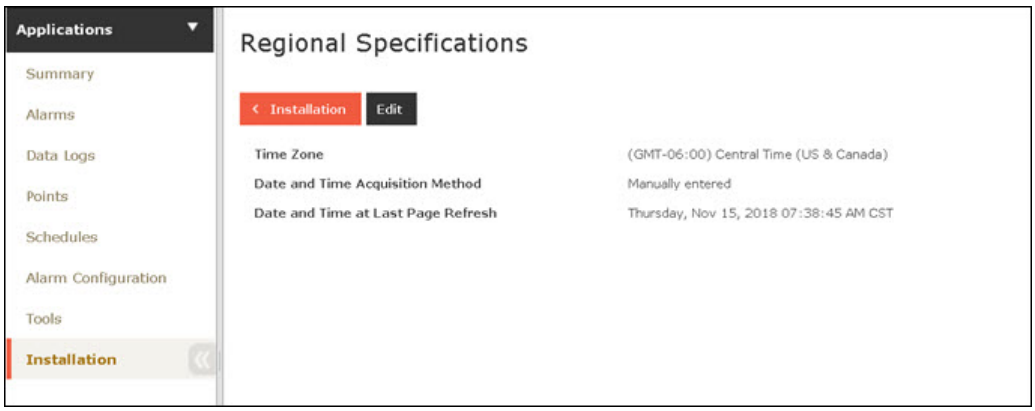
Figure 47. Basic Settings



Regional Specifications

This link contains time zone, and date and time selections that were made during initial configuration.

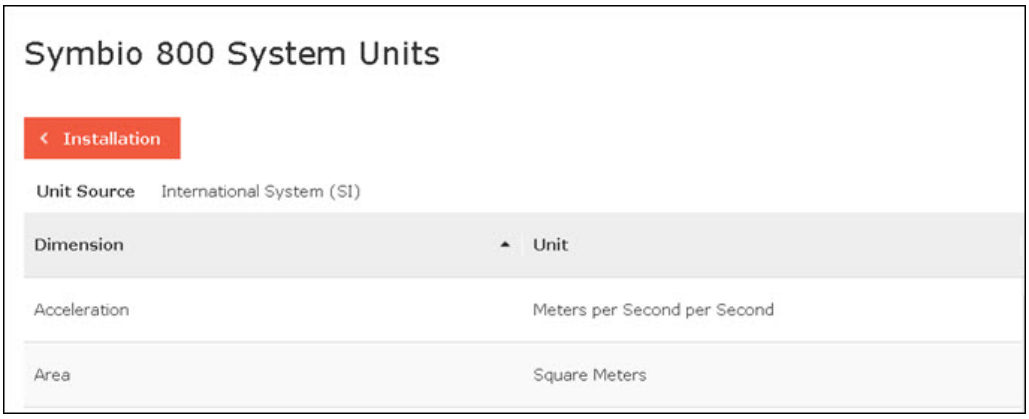
Figure 48. Regional Specifications



Symbio 800 System Units

This link enables you to view the system units that were selected for the Symbio 800 during initial installation. They cannot be edited.

Figure 49. Symbio 800 System Units



Identification and Communication

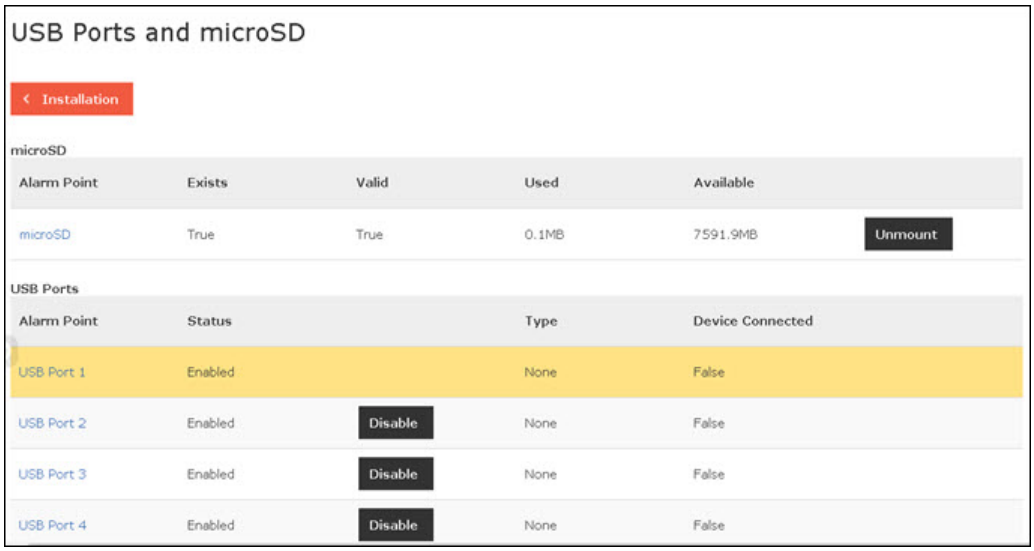
The Identification and Communications page allows you to view and edit configurations for the equipment name, location name, Protocol, IP and network address settings, Air-Fi configuration, Trane Intelligent Services, and network connectivity. It is divided into seven tabs.

Figure 50. Identification and Communications

USB Ports and microSD

On this page, you can view the USB ports and microSD for your Symbio 800. In addition, you can enable and disable individual USB ports and safely unmount mass storage devices from the USB ports and microSD.

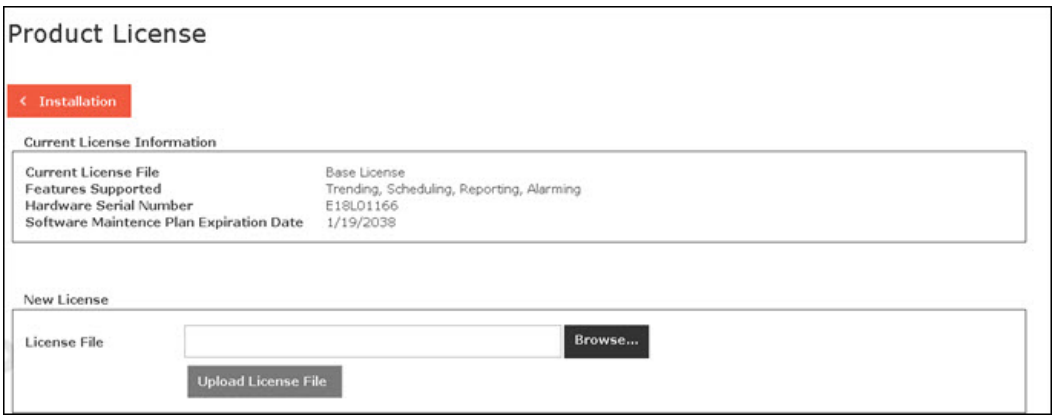
Figure 51. USB Ports and microSD



Licensing

This link opens the Product License page, which allows you to browse for and install a Symbio 800 license.

Figure 52. Product License



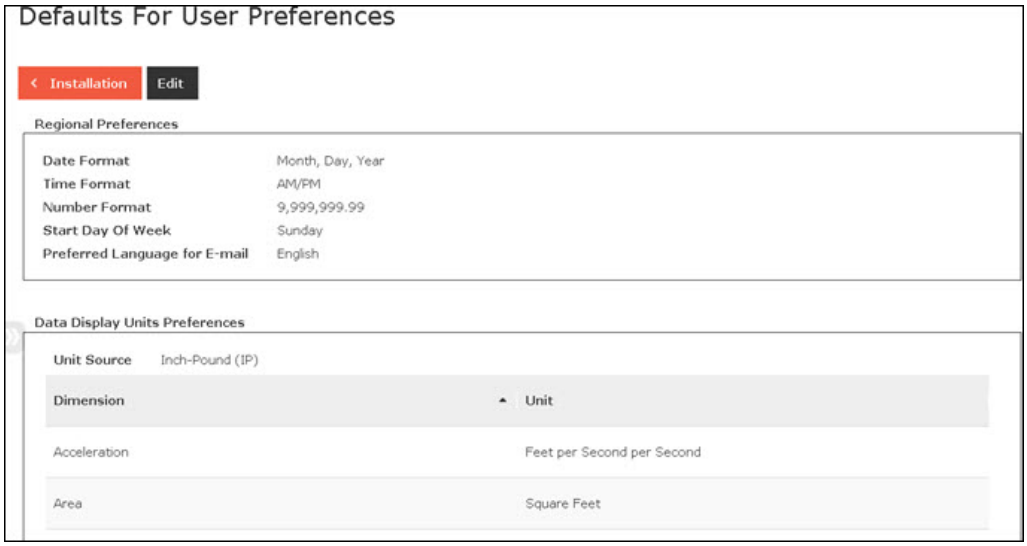
Configuring Additional Settings

Additional settings such as user preferences, application defaults, SMTP settings, languages, and background may be modified here.

Defaults for User Preferences

The Defaults page shows the formats in which the system displays data. This page is divided into two sections: Regional Preferences and Data Display Units.

Figure 53. Defaults for User Preferences



Application Defaults

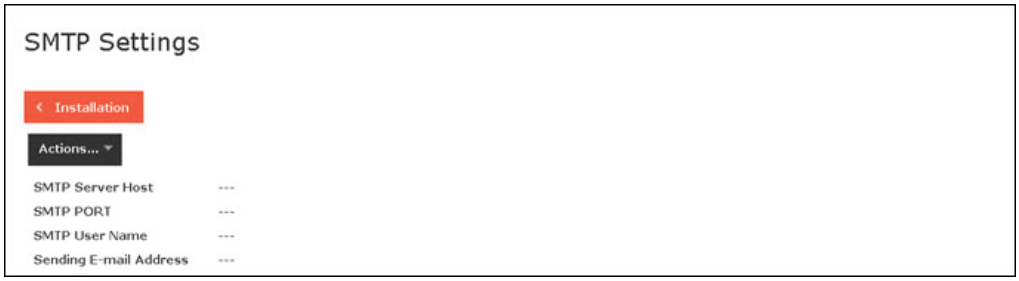
For setting the alarm capacity for Symbio 800 and hardware alarms priority. Valid range is from 100 to 500 events. Default hardware alarms priority is 250: Information.

Figure 54. Application Defaults

SMTP Settings

Use to set up your Simple Mail Transfer Protocol (SMTP) so that events can be routed to users by e-mail.

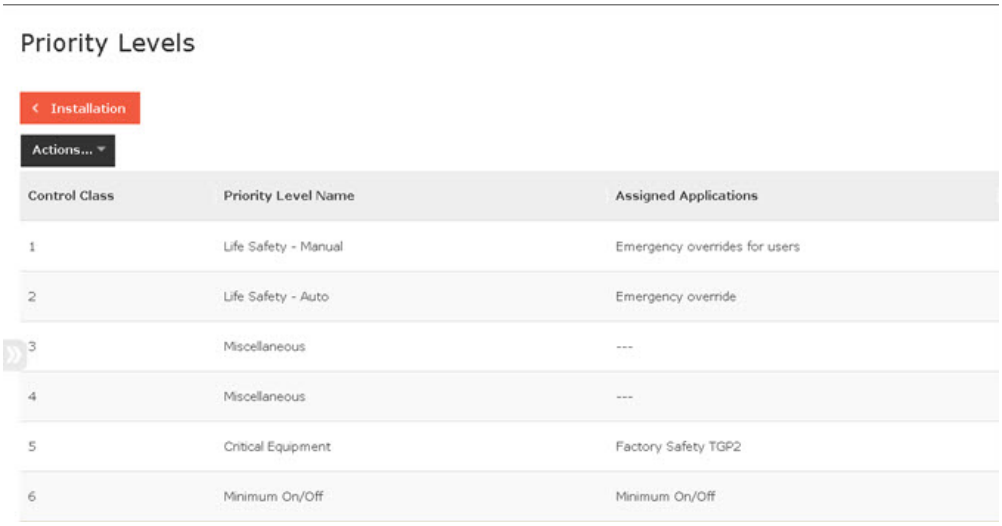
Figure 55. SMTP Settings



Priority Levels

Priority levels establish a strategy used by the system to avoid conflicting control by giving precedence to applications with a higher level of priority. Priority levels are set up in user administration. They are numbered 1 through 16, with 1 being the highest and 16 lowest.

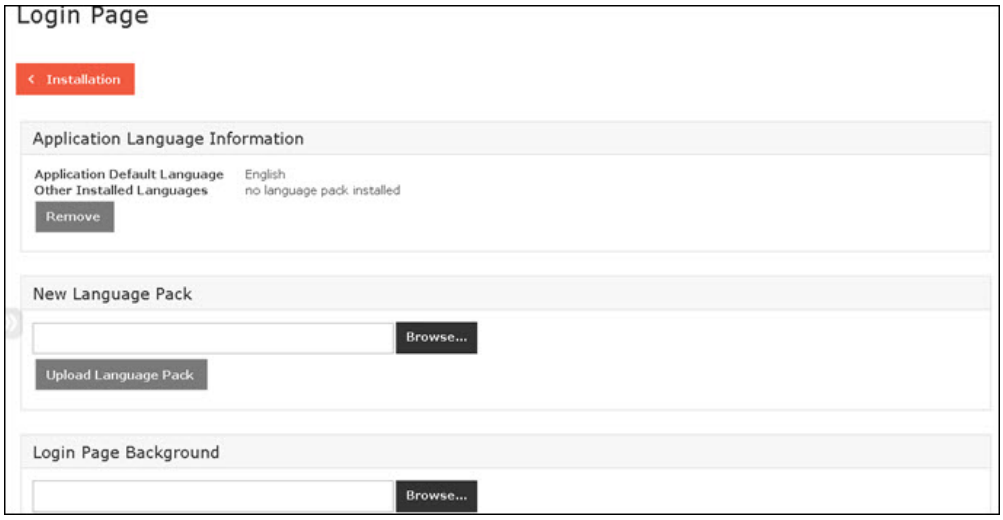
Figure 56. Priority Levels



Login Page

On the Login page you can upload language packs and personalize your login page by adding background images.

Figure 57. Login Page



Troubleshooting

This section describes the possible error messages and other issues that you may encounter while using the Tracer TD7 display.

Identifying and Diagnosing Issues

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
VFD Fault Supply Fan - 1 VFD Fault Supply Fan - 1 VFD Fault Supply Fan - 1	Unit	Warning with Special Action	Latching	All	VFD Fault. Numerous drive faults can cause this general fault. Reference the TR150 Installation and Operating manual for a list of fault codes and descriptions. Failure with Supply Fan 2 available: Generate Supply Fan 1 Proving Failure Diagnostic and Lockout all heating operation. Failure with Supply Fan 2 NOT available: Generate Supply Fan 1 Proving Failure and Shutdown the unit The Latching behavior for this diagnostic is latched in the drive. When the drive diagnostics are reset this diagnostic will be cleared in the Symbio 800 controller.	Local
VFD Fault Supply Fan - 2 VFD Fault Supply Fan - 2 VFD Fault Supply Fan - 2	Unit	Warning with Special Action	Latching	All	VFD Fault. Numerous drive faults can cause this general fault. Reference the TR150 Installation and Operating manual for a list of fault codes and descriptions. Failure with Supply Fan 1 available: Generate Supply Fan 2 Proving Failure Diagnostic and Lockout all heating operation. Failure with Supply Fan 1 NOT available: Generate Supply Fan 2 Proving Failure And Shutdown the unit The Latching behavior for this diagnostic is latched in the drive. When the drive diagnostics are reset this diagnostic will be cleared in the Symbio 800 controller.	Local

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
VFD Supply Fan Motor Current Overload - 1 VFD Supply Fan Motor Current Overload - 1 VFD SF Motor Current Ovld	Unit	Warning with Special Action	Latching	All	The inverter peak current of approximately 200% of rated current was exceeded for 1.5 seconds. This is a drive enforced lockout. Failure with Supply Fan 2 available: Generate Supply Fan 1 Proving Failure Diagnostic and Lockout all heating operation. Failure with Supply Fan 2 NOT available: Generate Supply Fan 1 Proving Failure and Shutdown the unit The Latching behavior for this diagnostic is latched in the drive. When the drive diagnostics are reset this diagnostic will be cleared in the Symbio 800 controller. This drive alarm may be Trip Locked at the TR150 drive. If the drive determines that the condition could cause damage the drive protects itself by generating a Trip Lock that can only be cleared by cycling power.	Local
VFD Supply Fan Motor Current Overload - 2 VFD Supply Fan Motor Current Overload - 2 VFD SF Motor Current Ovld	Unit	Warning with Special Action	Latching	All	The inverter peak current of approximately 200% of rated current was exceeded for 1.5 seconds. This is a drive enforced lockout. Failure with Supply Fan 1 available: Generate Supply Fan 2 Proving Failure Diagnostic and Lockout all heating operation. Failure with Supply Fan 1 NOT available: Generate Supply Fan 2 Proving Failure And Shutdown the unit The Latching behavior for this diagnostic is latched in the drive. When the drive diagnostics are reset this diagnostic will be cleared in the Symbio 800 controller. This drive alarm may be Trip Locked at the TR150 drive. If the drive determines that the condition could cause damage to the drive, the drive protects itself by generating a Trip Lock that can only be cleared by cycling power.	Local

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
VFD Supply Fan Ground Fault – 1 VFD Supply Fan Ground Fault – 1 VFD Supply Fan Ground Fault	Unit	Warning with Special Action	Latching	All	An earth ground fault has resulted in a discharge from the output phases to ground, either in the cable between the adjustable frequency drive and the motor or in the motor itself. Further fan operation is not recommended until measurements to ground can be taken from the motor leads and the ground fault removed. Failure with Supply Fan 2 available: Generate Supply Fan 1 Proving Failure Diagnostic and Lockout all heating operation. Failure with Supply Fan 2 NOT available: Generate Supply Fan 1 Proving Failure and Shutdown the unit The Latching behavior for this diagnostic is latched in the drive. When the drive diagnostics are reset this diagnostic will be cleared in the Symbio 800 controller. This drive alarm may be Trip Locked at the TR150 drive. If the drive determines that the condition could cause damage to the drive, the drive protects itself by generating a Trip Lock that can only be cleared by cycling power.	Local
VFD Supply Fan Ground Fault – 2 VFD Supply Fan Ground Fault – 2 VFD Supply Fan Ground Fault	Unit	Warning with Special Action	Latching	All	An earth ground fault has resulted in a discharge from the output phases to ground, either in the cable between the adjustable frequency drive and the motor or in the motor itself. Further fan operation is not recommended until measurements to ground can be taken from the motor leads and the ground fault removed. Failure with Supply Fan 1 available: Generate Supply Fan 2 Proving Failure Diagnostic and Lockout all heating operation. Failure with Supply Fan 1 NOT available: Generate Supply Fan 2 Proving Failure And Shutdown the unit The Latching behavior for this diagnostic is latched in the drive. When the drive diagnostics are reset this diagnostic will be cleared in the Symbio 800 controller. This drive alarm may be Trip Locked at the TR150 drive. If the drive determines that the condition could cause damage to the drive, the drive protects itself by generating a Trip Lock that can only be cleared by cycling power.	Local

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
VFD Supply Fan Short Circuit – 1 VFD Supply Fan Short Circuit – 2 VFD Supply Fan Short Circuit	Unit	Warning with Special Action	Latching	All	A short circuit in the motor windings or the motor terminals was detected. Fan operation is not recommended until the short circuit is removed. Failure with Supply Fan 2 available: Generate Supply Fan 1 Proving Failure Diagnostic and Lockout all heating operation. Failure with Supply Fan 2 NOT available: Generate Supply Fan 1 Proving Failure and Shutdown the unit The Latching behavior for this diagnostic is latched in the drive. When the drive diagnostics are reset this diagnostic will be cleared in the Symbio 800 controller. This drive alarm may be Trip Locked at the TR150 drive. If the drive determines that the condition could cause damage to the drive, the drive protects itself by generating a Trip Lock that can only be cleared by cycling power.	Local
VFD Supply Fan Short Circuit – 2 VFD Supply Fan Short Circuit – 2 VFD Supply Fan Short Circuit	Unit	Warning with Special Action	Latching	All	A short circuit in the motor windings or the motor terminals was detected. Fan operation is not recommended until the short circuit is removed. Failure with Supply Fan 1 available: Generate Supply Fan 2 Proving Failure Diagnostic and Lockout all heating operation. Failure with Supply Fan 1 NOT available: Generate Supply Fan 2 Proving Failure And Shutdown the unit The Latching behavior for this diagnostic is latched in the drive. When the drive diagnostics are reset this diagnostic will be cleared in the Symbio 800 controller. This drive alarm may be Trip Locked at the TR150 drive. If the drive determines that the condition could cause damage to the drive, the drive protects itself by generating a Trip Lock that can only be cleared by cycling power.	Local
VFD Supply Fan In Hand Mode – x VFD Supply Fan In Hand Mode – x VFD SF In Hand Mode	Unit	Warning	Non-Latching	All	The drive has been put into hand mode at the drive interface. This will cause issues for normal startup and running	Local

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
VFD Fault Relief Fan - x VFD Fault Relief Fan - x VFD Fault Relief Fan - x	Unit	Normal Shutdown with Special Action	Latching	All	VFD Fault. Numerous drive faults can cause this general fault. Reference the EBM-PAPST Installation and Operating manual for a list of fault codes and descriptions. (Clears on Reset) Other fans available: Warning only. No fans available: Relief damper is closed, relief fan commanded off and the Economizing will be disable and the outside air damper will be driven to the active minimum position. The Latching behavior for this diagnostic is latched in the drive. When the drive diagnostics are reset this diagnostic will be cleared in the Symbio 800 controller.	Local
VFD Relief Fan Locked Motor - x VFD Relief Fan Locked Motor - x VFD Relief Fan Lock Motor - x	Unit	Normal Shutdown with Special Action	Latching	All	Something has blocked the rotor from turning. Ice is a common one in some applications. (Motor Auto Reset) Other fans available: Warning only. No fans available: Relief damper is closed, relief fan commanded off and the Economizing will be disable and the outside air damper will be driven to the active minimum position. The Latching behavior for this diagnostic is latched in the drive. When the drive diagnostics are reset this diagnostic will be cleared in the Symbio 800 controller.	Local
VFD Relief Fan Motor Overheated – x VFD Relief Fan Motor Overheated – x VFD Relief Fan Motor Overheat – x	Unit	Normal Shutdown with Special Action	Latching	All	The motor thermocouples have reached a too-high temperature. Typically caused by excessively high ambient temp. (Motor Manual Reset) Other fans available: Warning only. No fans available: Relief damper is closed, relief fan commanded off and the Economizing will be disable and the outside air damper will be driven to the active minimum position. The Latching behavior for this diagnostic is latched in the drive. When the drive diagnostics are reset this diagnostic will be cleared in the Symbio 800 controller.	Local
VFD Relief Fan Power Mod Overheated – x VFD Relief Fan Power Mod Overheated – x VFD PM Overheat Relief Fan – x	Unit	Normal Shutdown with Special Action	Latching	All	The Rectifier thermocouple has reached a too-high temperature. Typically caused by excessively high ambient temp. (Motor Manual Reset) Other fans available: Warning only. No fans available: Relief damper is closed, relief fan commanded off and the Economizing will be disable and the outside air damper will be driven to the active minimum position. The Latching behavior for this diagnostic is latched in the drive. When the drive diagnostics are reset this diagnostic will be cleared in the Symbio 800 controller.	Local
VFD Relief Fan Speed Parameter Failure – x VFD Relief Fan Speed Parameter Failure – x VFD Relief Fan Speed Param Fail – x	Unit	Normal Shutdown with Special Action	Latching	All	The motors Maximum Speed parameter does not match the Maximum Permissible Speed parameter. (EC-Clone Required) Other fans available: Warning only. No fans available: Relief damper is closed, relief fan commanded off and the Economizing will be disable and the outside air damper will be driven to the active minimum position. The Latching behavior for this diagnostic is latched in the drive. When the drive diagnostics are reset this diagnostic will be cleared in the Symbio 800 controller.	Local

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
VFD Fault Condenser Fan - Cktx VFD Fault Condenser Fan - Cktx VFD Fault Condenser Fan	Circuit	Warning with Special Action	Latching	All	VFD Fault. Numerous drive faults can cause this general fault. Reference the TR170 Installation and Operating manual for a list of fault codes and descriptions. Condenser fan control will revert to fixed-speed fan algorithm using remaining fans. The Latching behavior for this diagnostic is latched in the drive. When the drive diagnostics are reset this diagnostic will be cleared in the Symbio 800 controller.	Local
VFD Condenser Fan Motor Current Overload – Cktx VFD Condenser Fan Motor Current Overload - Cktx VFD Cond Fan Current Ovld	Circuit	Warning with Special Action	Latching	All	The inverter peak current of approximately 200% of rated current was exceeded for 1.5 seconds. Condenser fan control will revert to fixed-speed fan algorithm using remaining fans. The Latching behavior for this diagnostic is latched in the drive. When the drive diagnostics are reset this diagnostic will be cleared in the Symbio 800 controller. This drive alarm may be Trip Locked at the TR170 drive. If the drive determines that the condition could cause damage to the drive, the drive protects itself by generating a Trip Lock that can only be cleared by cycling power.	Local
VFD Condenser Fan Ground Fault - **Cktx** VFD Condenser Fan Ground Fault - **Cktx** VFD Cond Fan Ground Fault	Circuit	Warning with Special Action	Latching	All	An earth ground fault has resulted in a discharge from the output phases to ground, either in the cable between the adjustable frequency drive and the motor or in the motor itself. Condenser fan control will revert to fixed-speed fan algorithm using remaining fans. Further operation of the failed fan is not recommended until measurements to ground can be taken from the motor leads and the ground fault removed. The Latching behavior for this diagnostic is latched in the drive. When the drive diagnostics are reset this diagnostic will be cleared in the Symbio 800 controller. This drive alarm may be Trip Locked at the TR170 drive. If the drive determines that the condition could cause damage to the drive, the drive protects itself by generating a Trip Lock that can only be cleared by cycling power.	Local
VFD Condenser Fan Short Circuit - **Cktx** VFD Condenser Fan Short Circuit - **Cktx** VFD Cond Fan Short Circuit	Circuit	Warning with Special Action	Latching	All	A short circuit in the motor windings or the motor terminals was detected. Condenser fan control will revert to fixed-speed fan algorithm using remaining fans. Further operation of the failed fan is not recommended until the short circuit is removed. The Latching behavior for this diagnostic is latched in the drive. When the drive diagnostics are reset this diagnostic will be cleared in the Symbio 800 controller. This drive alarm may be Trip Locked at the TR170 drive. If the drive determines that the condition could cause damage to the drive, the drive protects itself by generating a Trip Lock that can only be cleared by cycling power.	Local

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
VFD Condenser Fan In Hand Mode – Cktx VFD Condenser Fan In Hand Mode – Cktx VFD Cond In Hand Mode	Unit	Warning	Non-latching	All	The drive has been put into hand mode at the drive interface. This will cause issues for normal sequences and operation	Local
VFD Fault Compressor – Cprsr1A VFD Fault Compressor - Cprsr1A VFD Fault – Cprsr1A	Cprsr	Immediate Shutdown	Latching	Cprsr Energized	VFD Fault. Numerous drive faults can cause this general fault including High Pressure Cutout for VFD compressors. See Service Literature xxxx for a list of fault codes and description. The Latching behavior for this diagnostic is latched in the drive. When the drive diagnostics are reset this diagnostic will be cleared in the Symbio 800 controller.	Local
VFD Compressor Current Overload – Cprsr1A VFD Comp Current Overload – Cprsr1A VFD Comp Current Ovld	Cprsr	Immediate Shutdown	Latching	Cprsr Energized	The inverter peak current of approximately 200% of rated current was exceeded for 1.5 seconds. This is a drive enforced lockout. NOTE: There is Drive behavior that results from a Drive Overcurrent where the drive continues to operate at reduced RPM The Latching behavior for this diagnostic is latched in the drive. When the drive diagnostics are reset this diagnostic will be cleared in the Symbio 800 controller. This drive alarm may be Trip Locked at the TR200 drive. If the drive determines that the condition could cause damage to the drive, the drive protects itself by generating a Trip Lock that can only be cleared by cycling power.	Local
VFD Compressor Ground Fault– Cprsr1A VFD Compressor Ground Fault– Cprsr1A VFD Comp Ground Fault	Circuit	Immediate Shutdown	Latching	Cprsr Energized	An earth ground fault has resulted in a discharge from the output phases to ground, either in the cable between the adjustable frequency drive and the motor or in the motor itself. Further compressor operation is not recommended until measurements to ground can be taken from the motor leads and the ground fault removed. The Latching behavior for this diagnostic is latched in the drive. When the drive diagnostics are reset this diagnostic will be cleared in the Symbio 800 controller. This drive alarm may be Trip Locked at the TR200 drive. If the drive determines that the condition could cause damage to the drive, the drive protects itself by generating a Trip Lock that can only be cleared by cycling power.	Local

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
VFD Compressor Short Circuit– Cprsr1A VFD Compressor Short Circuit – Cprsr1A VFD Compressor Short Circuit	Circuit	Immediate Shutdown	Latching	Cprsr Energized	A short circuit in the motor windings or the motor terminals was detected. Compressor operation is not recommended until the short circuit is removed. The Latching behavior for this diagnostic is latched in the drive. When the drive diagnostics are reset this diagnostic will be cleared in the Symbio 800 controller. This drive alarm may be Trip Locked at the TR200 drive. If the drive determines that the condition could cause damage to the drive, the drive protects itself by generating a Trip Lock that can only be cleared by cycling power.	Local
VFD Compressor High Pressure Trip – Cprsr1A VFD Compressor High Press Trip – Cprsr1A VFD Compressor High Press	Circuit	Immediate Shutdown	Latching	Cprsr Energized	The drive safe stop input was activated. This trip is the result of a high pressure cutout. The high pressure switch must reset once the pressure has dropped and a manual reset must be commanded at the user interface before the circuit will be allowed to restart. This diagnostic may require a power cycle to reset the TR200 drive (Safe Stop) alarm. The Latching behavior for this diagnostic is latched in the drive. When the drive diagnostics are reset this diagnostic will be cleared in the Symbio 800 controller. This diagnostic may require a power cycle to reset the TR200 drive (Safe Stop) alarm.	Local
VFD Torque Limit Exceeded– Cprsr1A VFD Torque Limit Exceeded – Cprsr1A VFD Comp Torque Limit	Cprsr	Warning	Non-Latching	Cprsr Energized	Motor torque is higher than expected The Latching behavior for this diagnostic is latched in the drive. When the drive diagnostics are reset this diagnostic will be cleared in the Symbio 800 controller.	Local
VFD Compressor In Hand Mode – Cprsr1A VFD Compressor In Hand Mode – Cprsr1A VFD Comp In Hand Mode	Unit	Warning	Non-Latching	All	The drive has been put into hand mode at the drive interface. This will cause issues for normal sequences and operation.	Local
MP: Reset Has Occurred MP: Reset Has Occurred MP: Reset Has Occurred	Platform	Warning	Non-Latching	All	The main processor has successfully come out of a reset and built its application. A reset may have been due to a power up, installing new software or configuration. This diagnostic is immediately and automatically cleared and thus can only be seen in the Historic Diagnostic List in Tracer TU.	Remote
Software High Pressure Detection Cktx Software High Pressure Detection Cktx Software High Press Cktx	Circuit	Immediate Shutdown	Latching	All	The discharge pressure, as measured discharge pressure sensor, has exceeded 630 PSIA. This warning is generated to give additional information that could be used to determine why all compressors on the circuit shut down due to an *Unexpected Compressor Shutdown* diagnostic or why a *Compressor Failed to Start* diagnostic is generated. Even if the pressure has dropped below 630 PSIA the historic diagnostics will still indicate that a high pressure was detected.	Local

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
Unexpected Compressor Shutdown Cprsrxy Unexpected Compressor Shutdown Cprsrxy Unexpected Cprsr Shutdown	Circuit	Immediate Shutdown	Latching	All	A non-command shutdown of the fixed speed compressor occurred. The controller detected that the input was not proven. This could be a result from the following: High pressure cutout or any fault from the compressor protection module.	Local
Compressor Failed to Start Cprsrxy Compressor Failed to Start Cprsrxy Compressor Failed to Start	Circuit	Normal Shutdown	Latching	All	The fixed speed compressor failed to start when commanded. The controller detected that the input was not proven. This is could be the result of a compressor protection module fault.	Local
Compressor Contactor Failure Cprsrxy Compressor Contactor Failure Cprsrxy Compressor Contactor Fail	Circuit	Immediate Shutdown Special Action (see Note)	Latching	All	The fixed speed compressor failed to prove off when commanded to shut down or the compressor proving input was proven when the compressor was not commanded to run. If a compressor proving input is reporting that the compressor is still running 6 seconds after the Symbio800 has *Commanded it Off;* then, this warning diagnostic shall be active and the circuit will be shutdown. If the compressor proves, but the Symbio800 has not *Commanded it On,* then it is assumed that a compressor has started un-commanded. When the compressor proving input is proven for more than 6 seconds the diagnostic will be generated and the circuit will be shutdown. **Note:** Possible future enhancement not included in Release 1. If implemented the severity will have to go to Warning. The following Special action will also be performed: • The effected compressor will be continually commanded off and a normal stop shall be commanded to the Unit • All other compressors on the effected circuit remain off or will be shutdown • If there is another circuit it will remain off or be will be shutdown • Heating will not be allowed to run • The controller shall continue to run Head Pressure and Superheat control and the supply fan shall continue to run	Local
Emergency Stop Emergency Stop Emergency Stop	Unit	Immediate Shutdown	Latching	All	Emergency stop feedback input has Opened. Time to trip from input opening to unit stop shall be 0.1 to 1.0 seconds.	Local

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
Low Suction Pressure Cktx Low Suction Pressure Cktx Low Suction Pressure	Circuit	Immediate Shutdown	Latching	All	The suction pressure dropped below a pressure threshold as described below: 1. When the circuit is not running, or for Reduced Threshold Time seconds immediately after the circuit starts running, the effective pressure threshold shall be based on a reduced pressure threshold value, equal to 60% of the configured Low Compressor Suction Pressure Cutout setting. The reduced pressure threshold value is above atmospheric pressure, so a release of refrigerant due to service procedures or a serious leak will prevent circuit operation. See the Low Suction Pressure Protection specification for further details. 2. While running, beyond the Reduced Threshold Time, the trip point will be the configured Low Compressor Suction Pressure Cutout setting.	Local
Supply Air Temperature Sensor Failure Supply Air Temperature Sensor Supply Air Temp Sensor	Unit	Warning	Non-Latching	All	The Supply Air Temperature sensor failed.	Remote
Condensate Overflow Condensate Overflow Condensate Overflow	Unit	Immediate Shutdown with Special Action	Non-Latching	All	A High condensate level was detected. Will be generated if a high condensate level is detected for the first two times within a 72 hour period. The diagnostic will reset and the unit will be allowed to start if the condensate level drops below the trip point. This diagnostic indicates a problem with the mechanical float valve or the water drain however it is assumed that this is a temporary problem and does not require service. If a third high condensate level is detected within 72 a period a *Condensate Overflow Lockout* is generated. See *Condensate Overflow Lockout* diagnostic. VOM Behavior: During VOM this diagnostic changes behavior to a latching warning diagnostic. See the Condensate Overflow Protection specification for more information.	Remote
Condensate Overflow Lockout Condensate Overflow Lockout Condensate Overflow Lockout	Unit	Immediate Shutdown with Special Action	Latching	All	A High condensate level was detected. The lockout Will be generated if a high condensate level is detected a third time within a 72 hour period. This is indicating a recurring problem with the mechanical float valve or the water drain and may require service. VOM Behavior: During VOM this diagnostic is not generated. See the Condensate Overflow Protection specification for more information.	Remote
Supply Air High Static Pressure Supply Air High Static Pressure SA High Static Pressure	Unit	Immediate Shutdown with Special Action	Non-Latching	All	The supply air static pressure exceeded the Supply Air Static Pressure High Limit Setpoint for at least one second continuously. VOM Behavior: During VOM this diagnostic changes behavior to a latching warning diagnostic. See Supply Fan Control specification for more information.	Remote

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
Supply Air High Static Pressure Lockout Supply Air High Static Pressure Lockout SA High Static Press Lock	Unit	Immediate Shutdown with Special Action	Latching	All	The supply air pressure has exceeded the Supply Air Pressure High Limit Setpoint the 3rd consecutive time while the unit is operating in any mode. VOM Behavior: During VOM this diagnostic is not generated. See Supply Fan Control specification for more information.	Remote
Discharge Air High Temperature Detected Discharge Air High Temperature Detected Discharge Air High Temp	Unit	Immediate Shutdown	Latching	All	If the Discharge air temperature exceeds 200F then an Immediate Stop will be generated. This is intended to shut the unit down the unit if high duct temperatures exist. This must be from a Local Discharge Air Temperature sensor (not an arbitrated value)	Local
Return Air High Temperature Detected Return Air High Temperature Detected Return Air High Temp	Unit	Immediate Shutdown	Latching	All	If the Return air temperature exceeds 135F then an Immediate Stop will be generated. This is intended to shut the unit down the unit if high duct temperatures exist. This Diagnostic is only available if Comparative Enthalpy is Installed in configuration and the Return Air Temperature is operating normally.	Local
Ventilation Override Mode A Ventilation Override Mode A Ventilation Override Mode A	Unit	Warning	Non-Latching	All	The unit is following VOM mode A. This diagnostic is generated to notify BAS integrators as to the presence of VOM mode.	Local
Ventilation Override Mode B Ventilation Override Mode B Ventilation Override Mode B	Unit	Warning	Non-Latching	All	The unit is following VOM mode B. This diagnostic is generated to notify BAS integrators as to the presence of VOM mode.	Local
Ventilation Override Mode C Ventilation Override Mode C Ventilation Override Mode C	Unit	Warning	Non-Latching	All	The unit is following VOM mode C. This diagnostic is generated to notify BAS integrators as to the presence of VOM mode.	Local
Ventilation Override Mode D Ventilation Override Mode D Ventilation Override Mode D	Unit	Warning	Non-Latching	All	The unit is following VOM mode D. This diagnostic is generated to notify BAS integrators as to the presence of VOM mode.	Local
Ventilation Override Mode E Ventilation Override Mode E Ventilation Override Mode E	Unit	Warning	Non-Latching	All	The unit is following VOM mode E. This diagnostic is generated to notify BAS integrators as to the presence of VOM mode.	Local

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
Emergency Override Mode Pressurize Emergency Override Mode Pressurize Emergency Override Mode Pressurize	Unit	Warning	Non-Latching	All	The unit is following Emergency Override Pressurize.	Local
Emergency Override Mode Depressurize Emergency Override Mode Depressurize Emergency Override Mode Depressurize	Unit	Warning	Non-Latching	All	The unit is following Emergency Override Depressurize.	Local
Emergency Override Mode Purge Emergency Override Mode Purge Emergency Override Mode Purge	Unit	Warning	Non-Latching	All	The unit is following Emergency Override Purge.	Local
Emergency Override Mode Shutdown Emergency Override Mode Shutdown Emergency Override Mode Shutdown	Unit	Warning	Non-Latching	All	The unit is following Emergency Override Shutdown.	Local
Emergency Override Mode Fire Emergency Override Mode Fire Emergency Override Mode Fire	Unit	Warning	Non-Latching	All	The unit is following Emergency Override Fire.	Local
Supply Fan Bypass Enabled Supply Fan Bypass Enabled Supply Fan Bypass Enabled	Unit	Warning	Non-Latching	All	This diagnostic is generated to notify BAS integrators as to the presence of Supply Fan VFD Bypass mode.	Local
Supply Fan Bypass Proving Failure Supply Fan Bypass Proving Failure Supply Fan Bypass Proving	Unit	Immediate Shutdown	Latching	All	Any time the Supply Fan is expected to be running in Bypass Mode, this diagnostic will be generated when a No Flow condition exists for 40 continuous seconds.	Remote

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
Discharge Air Iso Damper Failed to Open Discharge Air Iso Damper Failed to Open DA Iso Damper Closed	Unit	Immediate Shutdown	Latching	All	The Discharge Air Isolation Damper operation was less than 80% open after 5 minutes.	Remote
Return Air Iso Damper Failed to Open Return Air Iso Damper Failed to Open RA Iso Damper Closed	Unit	Immediate Shutdown	Latching	All	The Return Air Isolation Damper operation was less than 80% open after 5 minutes.	Remote
Discharge Air Iso Damper Failed to Close Discharge Air Iso Damper Failed to Close DA Iso Damper Open	Unit	Warning	Non-Latching	All	The Discharge Air Isolation is more than 20% opened when it should be closed after 5 minutes.	Remote
Return Air Iso Damper Failed to Close Return Air Iso Damper Failed to Close RA Iso Damper Open	Unit	Warning	Non-Latching	All	The Return Air Isolation Damper is more than 20% opened when it should be closed after 5 minutes.	Remote
Discharge Air Iso Damper Closed Discharge Air Iso Damper Closed DA Iso Damper Closed	Unit	Immediate Shutdown	Latching	All	The Discharge Air Isolation Damper was less than 80% open any time the unit is running.	Remote
Return Air Iso Damper Closed Return Air Iso Damper Closed RA Iso Damper Closed	Unit	Immediate Shutdown	Latching	All	The Return Air Isolation Damper was less than 80% open any time the unit is running.	Remote
Discharge Air Iso Damper Input Discharge Air Iso Damper Input DA Iso Damper Input	Unit	Immediate Shutdown	Latching	All	The Discharge Air Isolation Damper Voltage Input has failed out of range. This voltage is an indication of actual damper position.	Remote
Return Air Iso Damper Input Return Air Iso Damper Input RA Iso Damper Input	Unit	Immediate Shutdown	Latching	All	The Return Air Isolation Damper Voltage Input has failed out of range. This voltage is an indication of actual damper position.	Remote

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
Supply Fan 1 Proving Failure Supply Fan 1 Proving Failure Supply Fan 1 Proving	Unit	Warning with Special Action	Latching	All	Any time the Supply Fan is expected to be running in Non Bypass Mode, this diagnostic will be generated when a No Flow condition exists for 40 continuous seconds. Failure with Supply Fan 2 available: Generate Supply Fan 1 Proving Failure Diagnostic and Lockout all heating operation. Failure with Supply Fan 2 NOT available: Generate Supply Fan 1 Proving Failure Shutdown the unit	Remote
Supply Fan 2 Proving Failure Supply Fan 2 Proving Failure Supply Fan 2 Proving	Unit	Warning with Special Action	Latching	All	Any time the Supply Fan 2 is expected to be running in Non Bypass Mode, this diagnostic will be generated when a No Flow condition exists for 40 continuous seconds. Failure with Supply Fan 2 available: Generate Supply Fan 1 Proving Failure Diagnostic and Lockout all heating operation. Failure with Supply Fan 2 NOT available: Generate Supply Fan 1 Proving Failure Shutdown the unit	Remote
Relief Fan x Proving Failure Relief Fan x Proving Failure Relief Fan x Proving	Unit	Warning with Special Action	Non-Latching	All	Relief Fan x is expected to be running, this diagnostic will be generated when a No Flow condition exists for 40 continuous seconds. Failure w/ other relief fans available: Generate RF x diagnostic. Take no other action. Failure w/ no other relief fans available: The relief damper will be closed, the relief fan will be commanded off, economizing will be disabled and the outside air damper will be driven to the active minimum position.	Remote
Space Pressure Low Space Pressure Low Space Pressure Low	Unit	Warning with Special Action	Non-Latching	All	The space pressure was low Incomplete: Will re-visit when doing Return Fan	Remote
Space Pressure Low Space Pressure Low Space Pressure Low	Unit	Warning with Special Action	Non-Latching	All	The space pressure was low Incomplete: Will re-visit when doing Return Fan	Remote
Suction Temperature 1 Cktx Suction Temperature 1 Cktx Suction Temp Sensor	Circuit	Immediate Shutdown	Latching	All	The suction temperature sensor has failed out of range.	Remote

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
Suction Temperature 2 Cktx Suction Temperature 2 Cktx Suction Temp Sensor	Circuit	Immediate Shutdown	Latching	All	The suction temperature sensor has failed out of range.	Remote
Suction Pressure Sensor Cktx Suction Pressure Sensor Cktx Suction Press Sensor	Circuit	Immediate Shutdown	Latching	All	The suction pressure sensor has failed out of range.	Remote
Discharge Pressure Sensor Cktx Discharge Pressure Sensor Cktx Discharge Press Sensor	Circuit	Immediate Shutdown	Latching	All	The discharge pressure sensor has failed out of range.	Remote
Mixed Air Temperature Sensor Evapy Mixed Air Temperature Sensor Evapy Mixed Air Temp Sensor	DX Cooling	Normal Shutdown	Latching	All	Temperature sensor has failed out of range.	Remote
Evap Leaving Air Coil Temp X Sensor Evap Leaving Air Coil Temp X Sensor Evap Lvg Air Temp Sensor	Unit	Warning with Special Action	Latching	All	Temperature sensor has failed out of range. The DX cooling continues to run but reheat for dehumidification is stopped.	Remote
Outdoor Air Temperature Sensor Outdoor Air Temperature Sensor Outdoor Air Temp Sensor	DX Cooling	Warning	Non-Latching	All	Temperature sensor has failed out of range.	Remote
MP: Invalid Configuration MP: Invalid Configuration MP: Invalid Configuration	N/A	N/A	Latching	All	MP has an invalid configuration based on the current software installed.	Remote

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
Starts/Hours Modified - Cprsrxy Starts/Hours Modified - Cprsrxy Starts/Hours Modified - Cprsrxy	Cprsr	Warning	Non-Latching	All	The current value for the cumulative compressor starts and or hours for the given compressor have been modified by a write override from TU.	Remote
High Compressor Press Differential Cktx High Compressor Press Differential Ckt1 High Cprsr Press Diff x	Circuit	Immediate Shutdown	Non -Latching	Ckt Energized	Compressor involute pressure differential exceeded allowable limits.	Remote
High Compressor Press Diff Lockout Cktx High Compressor Press Diff Lockout Cktx High Cprsr Press Diff Lock x	Circuit	Immediate Shutdown	Latching	Ckt Energized	Compressor involute pressure differential exceeded allowable limits.	Remote
Unit Not Economizing When It Should Unit Not Economizing When It Should Unit Not Econ When It Should	Unit	Warning	Non- Latching	Cooling w/ Economizer Enabled	The unit is in active economizer cooling. The economizer (OAD) command has been greater than the economizer position by 10% for 5 continuous minutes.	Remote
Unit Economizing When It Should Not Unit Economizing When It Should Not Unit Econ When It Should Not	Unit	Warning	Non- Latching	Cooling w/ Economizer Enabled	The unit is in active economizer cooling. The economizer (OAD) command has been lower than the economizer position by 10% for 5 continuous minutes.	Remote
Outdoor Air Damper Not Modulating Outdoor Air Damper Not Modulating OA Damper Not Modulating	Unit	Warning	Non- Latching	All w/o 'Cooling w/ Economizer Enabled'	The unit is in any mode that is not active economizer cooling. The OAD position has been lower than the minimum ventilation command by 10% for 5 continuous minutes.	Remote
Excessive Outdoor Air Excessive Outdoor Air Excessive Outdoor Air	Unit	Warning	Non- Latching	All w/o 'Cooling w/ Economizer Enabled'	The unit is in any mode that is not active economizer cooling. The OAD position has been greater than the minimum ventilation command by 10% for 5 continuous minutes.	Remote

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
Relief Air Damper Failed Closed Relief Air Damper Failed Closed Rlf ir Damper Fail Closed	Unit	Warning	Non- Latching	All	The relief air damper position has been lower than the damper command by 10% for 5 continuous minutes.	Remote
Relief Air Damper Failed Open Relief Air Damper Failed Open Rlf Air Damper Fail Open	Unit	Warning	Non- Latching	All	The relief air damper position has been greater than the damper command by 10% for 5 continuous minutes.	Remote
OA Bypass Damper Failed Closed OA Bypass Damper Failed Closed OA Bypass Dmp Fail Closed	Unit	Warning	Non- Latching	All	The outdoor air bypass damper position has been lower than the damper command by 10% for 5 continuous minutes.	Remote
OA Bypass Damper Failed Open OA Bypass Damper Failed Open OA Bypass Dmp Fail Open	Unit	Warning	Non- Latching	All	The outdoor air bypass damper position has been greater than the damper command by 10% for 5 continuous minutes.	Remote
RA Bypass Damper Failed Closed RA Bypass Damper Failed Closed RA Bypass Dmp Fail Closed	Unit	Warning	Non- Latching	All	The return air bypass damper position has been lower than the damper command by 10% for 5 continuous minutes.	Remote
RA Bypass Damper Failed Open RA Bypass Damper Failed Open RA Bypass Dmp Fail Open	Unit	Warning	Non- Latching	All	The return air bypass damper position has been greater than the damper command by 10% for 5 continuous minutes.	Remote
Hydronic Heat Actuator Failed Closed Hydronic Heat Actuator Failed Closed HH Actuator Fail Closed	Unit	Warning	Non- Latching	All	The hydronic heat actuator position has been lower than the actuator command by 10% for 5 continuous minutes.	Remote

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
Hydronic Heat Actuator Failed Open Hydronic Heat Actuator Failed Open HH Actuator Fail Closed	Unit	Warning	Non- Latching	All	The hydronic heat actuator position has been greater than the actuator command by 10% for 5 continuous minutes.	Remote
Chilled Water Actuator Failed Closed Chilled Water Actuator Failed Closed CW Actuator Fail Closed	Unit	Warning	Non- Latching	All	The chilled water actuator position has been lower than the actuator command by 10% for 5 continuous minutes.	Remote
Chilled Water Actuator Failed Open Chilled Water Actuator Failed Open CW Actuator Fail Closed	Unit	Warning	Non- Latching	All	The chilled water actuator position has been greater than the actuator command by 10% for 5 continuous minutes.	Remote
Outdoor Air Damper Input Outdoor Air Damper Input OA Damper Input	Unit	Warning	Non- Latching	All	The Outdoor Air Damper Input has failed out of range. This voltage is an indication of actual damper position.	Remote
Relief Air Damper Input Relief Air Damper Input Rel Air Damper Input	Unit	Warning	Non- Latching	All	The Relief Air Damper Input has failed out of range. This voltage is an indication of actual damper position.	Remote
Return Air Humidity Sensor Return Air Humidity Sensor RA Humidity Sensor	Unit	Warning with Special Action	Non-Latching	All	The Return Air Humidity sensor has failed out of range. This drives a ‘fall back’ response to Enthalpy Economizer and Energy Wheel decisions.	Remote
Return Air Temperature Sensor Return Air Temperature Sensor RA Temperature Sensor	Unit	Warning with Special Action	Non-Latching	All	The Return Air Temperature sensor has failed out of range. This drives a ‘fall back’ response to Enthalpy Economizer, Energy Wheel, and possibly Rapid Restart decisions.	Remote
Outdoor Air Humidity Sensor Outdoor Air Humidity Sensor OA Humidity Sensor	Unit	Warning	Non-Latching	All	The Outdoor Air Humidity sensor has failed out of range. No action is taken for this sensor failure only the Outdoor Air Humidity Sensor Active has special action.	Remote

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
Outdoor Air Humidity Sensor Active Outdoor Air Humidity Sensor Active OA Humidity Sensor Active	Unit	Warning with Special Action	Non-Latching	All	The Active Outdoor Air Humidity sensor has failed out of range. This drives a 'fall back' response to Dry Bulb Economizer and Energy Wheel decisions.	
Space Humidity Sensor Space Humidity Sensor Space Humidity Sensor	Unit	Warning	Non-Latching	All	The Space Humidity sensor has failed out of range. No action is taken for this sensor failure only the Outdoor Air Humidity Sensor Active has special action.	Remote
Space Humidity Sensor Active Space Humidity Sensor Active Space Humidity Sensor Active	Unit	Warning with Special Action	Non-Latching	All	The Space Humidity sensor value not available. Dehumidification and humidification will be disabled. Enthalpy based economizer decision will effectively be disabled,	Remote
Outdoor Airflow Pressure Sensor Outdoor Airflow Pressure Sensor Outdoor Airflow Press Sensor	Unit	Warning	Latching	All	Outdoor Airflow pressure sensor has failed out of range	Remote
Space CO2 Sensor Space CO2 Sensor Space CO2 Sensor	Unit	Warning	Non-Latching	All	Space CO2 sensor has failed out of range	Remote
Loss of Charge Lockout Cktx Loss of Charge Lockout Cktx Loss of Charge Lockout Cktx	Circuit	Immediate Shutdown	Latching	All	Loss of Charge is detected on the circuit, severe enough to shut down the circuit.	Local
Loss of Charge Detected Cktx Loss of Charge Detected Cktx Loss of Charge Detected Cktx	Circuit	Warning	Latching	All	Loss of Charge is detected on the circuit, severe enough to warn a technician, but not severe enough to shut down the circuit.	Local
Space Pressure Sensor Space Pressure Sensor Space Press Sensor	Unit	Warning w/ Special Action	Latching	All	Space Pressure sensor has failed out of range. Statitrac control will be terminated and the Relief Fan Speed and Relief Damper command will fall back to OA Damper Tracking.	Remote
Airflow Assembly Failure Airflow Assembly Failure Airflow Assembly Failure	Unit	Warning	Latching	All	If the OA Damper > 50% and the Measured Airflow <= Design Air Flow * .02 & >= -Design AirFlow * .02 for 10 consecutive seconds a latching, remote resettable, 'Airflow_Assembly_Failure' diagnostic will be generated.	

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
Heat Unexpected Flame Manf X Burner Y Heat Unexpected Flame Manf X Burner Y Unex Flame Manf X Burner Y	Heat	Warning	Non-Latching	All	Flame is detected outside of normal operations by the flame rod. All burners on the manifold are unavailable. Modulating manifolds will allow another retry 10-300 seconds after the error condition is created (depends on the duration of the flame), and the error condition is cleared. Fixed capacity manifolds will allow another retry 10 minutes after the error condition is created, and the error condition is cleared. Possible causes: Gas valve may be stuck open or malfunctioning. Flame rod may be malfunctioning.	Remote
Heat Invalid ID Chip Manf X Heat Invalid ID Chip Manf X Invalid ID Chip Manf X	Heat	Warning	Non-Latching	All	ID chip contains invalid data, or contains a different heating configuration than what is installed on the Trane controller. All burners on the manifold are unavailable until the condition is corrected.	Remote
Heat Weak Flame Signal Manf X Burner Y Heat Weak Flame Signal Manf X Burner Y Weak Flame Manf X Burner Y	Heat	Warning	Non-Latching	All	A low current flame rod measurement indicates an aged flame rod. This diagnostic may be an indication that flame detect sensor is weak. Possible causes: Dirty flame rod. Improper flame rod installation/position. Improper gas valve pressure.	Remote
Heat Primary Limit Open Manf X Heat Primary Limit Open Manf X Primary Limit Open Manf X	Heat	Warning	Non-Latching	All	Created due to either the Roll out switch or the Tstat. This diagnostic is triggered when the cool down timer has expired, therefore indicates longer term failures, likely the roll out switch. Verify Primary Limit input. All burners on the manifold are temporarily unavailable.	Remote
Heat Open Fuse Manf X Heat Open Fuse Manf X Open Fuse Manf X	Heat	Warning	Non-Latching	All	Fuse is open. All burners on the manifold are unavailable until the condition is corrected. Modulating manifolds will allow another retry 10-30 seconds after the error condition is created, and the error condition is cleared. Fixed capacity manifolds will allow another retry 10 minutes after the error condition is created, and the error condition is cleared.	Remote
Heat Failed Ignition Lockout Manf X Heat Failed Ignition Lockout Manf X Failed Ignition Lock Manf X	Heat	Warning	Latching (special action)	All	Manifold 1 or 2 has tried unsuccessfully to start 12 times in a row with no ignition. The Heat Failed Ignition Delay Manf X Burner Y diagnostic has occurred 3 times in a row with no ignition. All burners on the manifold are unavailable. If this diagnostic occurred on manifold 2, it will not inhibit manifold 1 from running. A manual reset is required.	Remote
Heat Gas Valve Failure Manf X Burner Y Heat Gas Valve Failure Manf X Burner Y Gas Valve Manf X Burner Y	Heat	Warning	Non-Latching	All	Possible causes: Faulty wiring. Faulty control. Mod Gas control boards: The Valve Actuator did not reach a Park or Full On position. All burners on the manifold are unavailable until the condition is corrected. Will allow another retry 10-30 seconds after the error condition is created, and the error condition is cleared. Staged Gas Control Boards: The gas valve state is lo when it must be hi, or hi when it must be lo. All burners on the manifold are unavailable until the condition is corrected. Will allow another retry 10 minutes after the error condition is created, and the error condition is cleared.	Remote

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
Heat Control Board Failure Manf X Heat Control Board Failure Manf X Control Board Failure Manf X	Heat	Warning	Non-Latching	All	Gas heat control detects an internal failure. All burners on the manifold are unavailable until the condition is corrected. Possible causes: Temporary issue, such as noise. Other issues which require a board replacement. Mod Gas control boards: Verify 24 VAC signal input. Will allow another retry 10-30 seconds after the error condition is created, and the error condition is cleared. Staged Gas Control Boards: Verify gas valve relays, safety relays, etc. Will allow another retry 10 minutes after the error condition is created, and the error condition is cleared.	Remote
Heat Supply Air Flow Proving Manf X Heat Supply Air Flow Proving Manf X Supply Air Proving Manf X	Heat	Warning	Non-Latching	All	For the first or second consecutive occurrence, the Air Flow Proving switch is open while a Firing Rate Demand is requested. For modulating gas, this corresponds to the R/W enable switch. For staged gas, this corresponds to the W1 switch. All burners on the manifold are unavailable. This could be open on the board connector. Will allow another call for heat once the proving switch is closed.	Remote
Heat Supply Air Flow Proving Lockout Manf X Heat Supply Air Flow Proving Lockout Manf X Supply Air Lockout Manf X	Heat	Warning	Latching	All	For the third consecutive occurrence, the Air Flow Proving switch is open while a Firing Rate Demand is requested. For modulating gas, this corresponds to the R/W enable switch. For staged gas, this corresponds to the W1 switch. All burners on the manifold are unavailable. This could be open on the board connector. Will allow another call for heat once the diagnostic has been manually reset.	Remote
Heat Inducer Low Press Manf X Heat Inducer Low Press Manf X Inducer Low Press Manf X	Heat	Warning	Non-Latching	All	Staged Gas Heat control boards only. Low air pressure switch is closed when inducer is off, or low air pressure switch is open when it is expected to be closed. All burners on the manifold are unavailable until the condition is corrected. Will allow another retry 10 minutes after the error condition is created, and the error condition is cleared. Possible causes: Improper inducer wiring. Air pressure switch failure. Faulty air pressure wiring or hose connections.	Remote
Heat Inducer High Press Manf X Heat Inducer High Press Manf X Inducer High Press Manf X	Heat	Warning	Non-Latching	All	Staged Gas Heat control boards only. High air pressure switch is closed when inducer is off, or high air pressure switch is open when it is expected to be closed. All burners on the manifold are unavailable until the condition is corrected. Will allow another retry 10 minutes after the error condition is created, and the error condition is cleared. Possible causes: Faulty air pressure wiring or hose connections. Faulty inducer connections. Improper air inlet and outlet conditions. Faulty air pressure switch.	Remote
Heat Gas Valve Short Manf X Burner Y Heat Gas Valve Short Manf X Burner Y Gas Valve Manf X Burner Y	Heat	Warning	Non-Latching	All	Staged Gas Heat control boards only. The burner gas valve is shorted to 24VAC. All burners on the manifold are unavailable until the condition is corrected. Will allow another retry 10 minutes after the error condition is created, and the error condition is cleared. Possible causes: Control needs to be replaced. Faulty wiring.	Remote

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
Heat Inducer Low Press Manf X Slave Heat Inducer Low Press Manf X Slave Inducer Press Manf X Slave	Heat	Warning	Non-Latching	All	Staged Gas Heat control boards only. A 'Heat Inducer Low Press Manf X' condition has occurred on the 1285's own MODBUS slave control board on the first manifold. Does not lock out any burners associated with the first heat control board on the manifold.	Remote
Heat Inducer High Press Manf X Slave Heat Inducer High Press Manf X Slave Inducer Press Manf X Slave	Heat	Warning	Non-Latching	All	Staged Gas Heat control boards only. A 'Heat Inducer High Press Manf X' condition has occurred on the 1285's own MODBUS slave control board on the first manifold. Does not lock out any burners associated with the first heat control board on the manifold.	Remote
Heat Open Fuse Manf X Slave Heat Open Fuse Manf X Slave Open Fuse Manf X Slave	Heat	Warning	Non-Latching	All	Staged Gas Heat control boards only. An open fuse condition has condition has occurred on the 1285's own MODBUS slave control board on the first manifold. Does not lock out any burners associated with the first heat control board on the manifold.	Remote
Heat Primary Limit Open Manf 1 Slave Heat Primary Limit Open Manf 1 Slave Primary Limit Manf X Slave	Heat	Warning	Non-Latching	All	Staged Gas Heat control boards only. A primary limit condition has condition has occurred for an extended duration on the 1285's own MODBUS slave control board on the first manifold. Does not lock out any burners associated with the first heat control board on the manifold.	Remote
Heat Invalid ID Chip Manf 1 Slave Heat Invalid ID Chip Manf 1 Slave Invalid ID Chip Manf 1 Slave	Heat	Warning	Non-Latching	All	Staged Gas Heat control boards only. An invalid id chip condition has condition has occurred on the 1285's own MODBUS slave control board on the first manifold. Does not lock out any burners associated with the first heat control board on the manifold. Note that if the incorrect ID chip is inserted into the board simply based off of the current configuration, the first heat control board will display this as a comm loss coming from its slave board.	Remote
Heat Control Board Failure Manf X Slave Heat Control Board Failure Manf X Slave Board Failure Manf X Slave	Heat	Warning	Non-Latching	All	Staged Gas Heat control boards only. A control board failure condition has condition has occurred on the 1285's own MODBUS slave control board on the first manifold. Does not lock out any burners associated with the first heat control board on the manifold.	Remote
Precool Mode Exceeded 120 Minutes	Unit	Warning	Non-Latching	Pre Cool	The unit has been operating in "Pre Cool" for 120 minutes. This is an occupied mode that stops ventilation. If Pre Cool command is removed after the diagnostic has been activated it will be cleared.	Remote
Morning Warmup Mode Exceeded 120 Minutes	Unit	Warning	Non-Latching	Morning Warmup	The unit has been operating in "Morning Warmup" for 120 minutes. This is an occupied mode that stops ventilation. If Morning Warmup command is removed after the diagnostic has been activated it will be cleared.	Remote

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
Space Temperature Space Temperature Space Temperature	Unit	Warning	VVZT/CVZT: Latching VVDA/	VVZT/CVZT: All VVDA/ CVDA: All Unoccupied modes, Daytime Warmup, Morning Warmup Pre Cool	VVZT/CVZT: Unit Shutdown VVDA/CVDA: Unit continues to operate and disables the following functions. All Unoccupied modes (heat, cool, DH), Daytime Warmup, Morning Warmup Pre Cool	
Duct Static Pressure Active is Invalid	Unit	Warning w/ Special Action	Non-Latching	All	VVDA units only. The active supply air pressure is out of range. See 'Duct Static Pressure Local is Invalid' below for VVDA units.	Remote
Duct Static Pressure Local is Invalid	Unit	Warning w/ Speciall Action	Latching	All	All units, the active supply air pressure is out of range. For VVDA units: The supply fan speed is overriden to minimum speed. DX Cooling is allowed All heating is disabled For CVDA, CVZT and VVZT units The supply fan operation is normal High Duct Static Limit Protection, High Duct Static Limit Trip, and Full Airflow Limit Control is disabled.	Remote
Invalid Active Occupancy Input	Unit	Warning	Non-Latching	All		Remote
Space Temp Cooling Setpoint Wired	Unit	Warning	Non-Latching	All		Remote
Space Temp Heating Setpoint Wired	Unit	Warning	Non-Latching	All		Remote
Space Temperature Sensor	Unit	Warning	Non-Latching	All		Remote
Outdoor Air Enthalpy Active is Invalid	Unit	Warning	Non-Latching	All	Loss of outdoor air enthalpy will result in a economizer control mode of dry bulb	Remote
Final Filter Pressure Sensor	Unit	Warning	Non-Latching	All	Loss of input from Pre Evaporator Filter pressure transducer.	Remote
Pre Evaporator Filter Pressure Sensor	Unit	Warning	Non-Latching	All	Loss of input from Pre Evaporator Filter pressure transducer.	Remote
Comm Loss: Return Air Humidity Comm Loss: Return Air Humidity Comm: Return Air Humidity	Unit	Warning with Special Action	Non-Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 - 35 second period. This drives a 'fall back' response to Enthalpy Economizer and Energy Wheel decisions.	Remote

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
Comm Loss: Return Air Temperature Comm Loss: Return Air Temperature Comm: Return Air Temp	Unit	Warning with Special Action	Non-Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 - 35 second period. This drives a 'fall back' response to Enthalpy Economizer, Energy Wheel, and possibly Rapid Restart decisions.	Remote
Comm Loss: Outdoor Air Humidity Comm Loss: Outdoor Air Humidity Comm: Outdoor Air Humidity	Unit	Warning	Non-Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Comm Loss: Space Humidity Comm Loss: Space Humidity Comm Loss: Space Humidity	Unit	Warning with Special Action	Non-Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period. Dehumidification and humidification will be disabled. Enthalpy based economizer decision will effectively be disabled,	Remote
Comm Loss: Ventilation Override Input Comm Loss: Ventilation Override Input Comm Loss: Vent Ovrd Input	Unit	Normal Shutdown	Non-Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Comm Loss: VFD Supply Fan - 1 Comm Loss: VFD Supply Fan - 1 Comm Loss: VFD Supply Fan	Unit	Normal	Latching	All	Continual loss of communication between the MP and the VFD has occurred for a 30 second period. Failure with Supply Fan 2 available: Generate Supply Fan 1 Proving Failure Diagnostic and Lockout heat operation. Failure with Supply Fan 2 NOT available: Generate Supply Fan 1 Proving Failure Shutdown the unit	Remote
Comm Loss: VFD Supply Fan - 2 Comm Loss: VFD Supply Fan - 2 Comm Loss: VFD Supply Fan	Unit	Normal	Latching	All	Continual loss of communication between the MP and the VFD has occurred for a 30 second period. Failure with Supply Fan 2 available: Generate Supply Fan 1 Proving Failure Diagnostic and Lockout heat operation. Failure with Supply Fan 2 NOT available: Generate Supply Fan 1 Proving Failure Shutdown the unit	Remote
Comm Loss: VFD Return Fan- x Comm Loss: VFD Return Fan- x Comm Loss: VFD Return Fan	Unit	Normal	Latching	All	Continual loss of communication between the MP and the VFD has occurred for a 30 second period.	Remote

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
Comm Loss: VFD Relief Fan – x Comm Loss: VFD Relief Fan – x Comm Loss: VFD Relief Fan	Unit	Normal	Latching	All	Continual loss of communication between the MP and the VFD has occurred for a 30 second period.	Remote
Comm Loss: VFD Compressor Cprsr1A Comm Loss: VFD Compressor Cprsr1A Comm Loss: VFD Compressor	Cprsr	Normal	Latching	All	Continual loss of communication between the MP and the VFD has occurred for a 30 second period.	Remote
Comm Loss: Compressor Proving Cprsrxy Comm Loss: Compressor Proving Cprsrxy Comm Loss: Cprsr Proving	Circuit	Immediate Shutdown	Latching	All	Continual loss of communication between the MP and the VFD has occurred for a 30 second period.	Remote
Comm Loss: Compressor Relay Compressor xy Comm Loss: Compressor Relay Cprsrxy Comm Loss: Cprsr Relay	Circuit	Immediate Shutdown	Latching	All	Continual loss of communication between the MP and the VFD has occurred for a 30 second period.	Remote
Comm Loss: VFD Condenser Fan - x Comm Loss: VFD Condenser Fan - x Comm Loss: VFD Condenser Fan	Circuit	Warning With Special Action	Latching	All	Continual loss of communication between the MP and the VFD has occurred for a 30 second period. Condenser fan control will revert to fixed-speed fan algorithm using remaining fans.	Remote
Comm Loss: Supply Fan VFD Bypass Comm Loss: Supply Fan VFD Bypass Comm Loss: SF VFD Bypass	Unit	Warning	Latching	All	Continual loss of communication between the MP and the VFD has occurred for a 30 second period.	Remote
Comm Loss: Supply Fan Bypass Proving Pressure Comm Loss: SF Bypass Proving Pressure Comm Loss: SF Bypass Press	Unit	Warning	Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
Comm Loss: Suction Temperature 1 Cktx Comm Loss: Suction Temperature 1 Cktx Comm Loss: Suction Temp	Circuit	Immediate Shutdown	Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Comm Loss: Suction Temperature 2 Cktx Comm Loss: Suction Temperature 2 Cktx Comm Loss: Suction Temp	Circuit	Immediate Shutdown	Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Comm Loss: Suction Pressure Cktx Comm Loss: Suction Pressure Cktx Comm Loss: Suction Press	Circuit	Immediate Shutdown	Non-Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Comm Loss : Discharge Pressure Cktx Comm Loss : Discharge Pressure Cktx Comm Loss : Disch Press Cktx	Circuit	Immediate Shutdown	Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Comm Loss: Condenser Fan Relay 1 Cktx Comm Loss: Cond Fan Relay 1 Cktx Comm Loss: Fan Relay	Circuit	Immediate Shutdown	Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Comm Loss: Condenser Fan Relay 2 Cktx Comm Loss: Cond Fan Relay 2 Cktx Comm Loss: Fan Relay	Circuit	Immediate Shutdown	Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Comm Loss: Condenser Fan Relay 3 Cktx Comm Loss: Cond Fan Relay 3 Cktx Comm Loss: Fan Relay	Circuit	Immediate Shutdown	Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
Comm Loss: Condenser Fan Relay 4 Cktx Comm Loss: Cond Fan Relay 4 Cktx Comm Loss: Fan Relay	Circuit	Immediate Shutdown	Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Comm Loss: Outdoor Air Temperature Comm Loss: Outdoor Air Temperature Comm Loss: Outdoor Air Temp	DX Cooling	Warning	Non-Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Outdoor Air Temp Active is Invalid Outdoor Air Temp Active is Invalid Outdoor Air Temp Invalid	DX Cooling	Normal Shutdown	Latching	All	No Valid Input from BAS or Unit	Remote
Comm Loss: Mixed Air Temperature Evapy Comm Loss: Mixed Air Temperature Evapy Comm Loss: Mixed Air Temp	DX Cooling	Normal Shutdown	Non-Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Comm Loss: Evaporator Leaving Air Coil Temperature Comm Loss: Evap Leaving Air Coil Temp Comm Loss: Evap Lvg Air Temp	Unit	Warning With Special **Action**	Non-Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period. The DX cooling continues to run but reheat for dehumidification is stopped.	Remote
Comm Loss: Emergency Stop Comm Loss: Emergency Stop Comm Loss: Emergency Stop	Unit	Immediate Shutdown	Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Local
Comm Loss: External Auto Stop Comm Loss: External Auto Stop Comm Loss: External Auto Stop	Unit	Immediate Shutdown	Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
Comm Loss: EXV 1 Cktx Comm Loss: EXV 1 Cktx Comm Loss: EXV 1	Circuit	Immediate Shutdown	Latching	All	Continual loss of communication between the MP and the EXV Step Status has occurred for a 30 second period, OR EXV Steps Maximum Position has not been received. If EXV Steps Maximum Position has not been received, MP will periodically request EXV Steps Maximum Position, since it is only transmitted upon request.	Remote
Comm Loss: EXV 2 Cktx Comm Loss: EXV 2 Cktx Comm Loss: EXV 2	Circuit	Immediate Shutdown	Latching	All	Continual loss of communication between the MP and the EXV Step Status has occurred for a 30 second period, OR EXV Steps Maximum Position has not been received. If EXV Steps Maximum Position has not been received, MP will periodically request EXV Steps Maximum Position, since it is only transmitted upon request.	Remote
Comm Loss: Local BAS Interface Comm Loss: Local BAS Interface Comm: Local BAS Interface	Chiller	Warning	Non-Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period. Use last valid BAS setpoints. Diagnostic is cleared when successful communication is established with the LonTalk LLID (LCIC) or BacNet LLID (BCIC).	Remote
Comm Loss: Condenser Cooling Valve CktX Comm Loss: Condenser Cooling Valve CktX Comm: Cond Cooling Valve	Circuit	Immediate Shutdown	Latching	All	Continual loss of communication between the MP and the Condenser Reheat Cooling Status has occurred for a 30 second period.	Remote
Comm Loss: Condenser Reheat Valve Cktx Comm Loss: Condenser Reheat Valve Cktx Comm: Cond Reheat Valve	Circuit	Immediate Shutdown	Latching	All	Continual loss of communication between the MP and the Condenser Reheat Heating Status has occurred for a 30 second period.	Remote
Comm Loss: Hot Gas Bypass Valve Ckt1 Comm Loss: Hot Gas Bypass Valve Ckt1 Comm Loss: Hot Gas Bypass Valve	Circuit	Immediate Shutdown	Latching	All	Continual loss of communication between the MP and the Hot Gas Bypass Valve Step Status has occurred for a 30 second period, OR Hot Gas Bypass Valve Steps Maximum Position has not been received. If Hot Gas Bypass Valve Steps Maximum Position has not been received, MP will periodically request Hot Gas Bypass Valve Steps Maximum Position, since it is only transmitted upon request.	Remote
Comm Loss: Supply Air Isolation Damper Comm Loss: Supply Air Isolation Damper Comm: SA Iso Damper	Unit	Immediate Shutdown	Latching	All	Continual loss of communication between the MP and the Supply Air Isolation Damper has occurred for a 30 second period.	Remote

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
Comm Loss: Return Air Isolation Damper Comm Loss: Return Air Isolation Damper Comm: RA Iso Damper	Unit	Immediate Shutdown	Latching	All	Continual loss of communication between the MP and the Return Air Isolation Damper has occurred for a 30 second period.	Remote
Comm Loss: Condensate Overflow Comm Loss: Condensate Overflow Comm: Condensate Overflow	Unit	Immediate Shutdown with Special Action	Latching	All	Continual loss of communication between the MP and the Condensate Overflow status has occurred for a 30 second period. VOM Behavior: During VOM this diagnostic changes behavior to a latching warning diagnostic. See the Condensate Overflow Protection specification for more information.	Remote
Comm Loss: Outdoor Air Damper Comm Loss: Outdoor Air Damper Comm: OA Damper	Unit	Warning with Special Action	Non- Latching	All	Continual loss of communication between the MP and the Outdoor Air Damper has occurred for a 30 second period. Disable Economizer function.	Remote
Comm Loss: Outdoor Air Damper Feedback Comm Loss: Outdoor Air Damper Feedback Comm: OA Damper Feedback	Unit	Warning with Special Action	Non- Latching	All	Continual loss of communication between the MP and the Outdoor Air Damper Feedback has occurred for a 30 second period. Disable Economizer function.	Remote
Comm Loss: Relief Air Damper Comm Loss: Relief Air Damper Comm: Relief Damper	Unit	Warning with Special Action	Non- Latching	All	Continual loss of communication between the MP and the Relief Air Damper has occurred for a 30 second period. Disable Space Pressure Control.	Unit
Comm Loss: Relief Air Damper Feedback Comm Loss: Relief Air Damper Feedback Comm: Relief Damper Feedback	Unit	Warning	Non- Latching	All	Continual loss of communication between the MP and the Relief Air Damper Feedback has occurred for a 30 second period.	Unit
Comm Loss: Staged Electric Heat Relay 1 Comm Loss: Staged Electric Heat Relay 1 Comm: Staged Elec Heat Relay	Unit	Normal Shutdown	Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
Comm Loss: Staged Electric Heat Relay 2 Comm Loss: Staged Electric Heat Relay 2 Comm: Staged Elec Heat Relay	Unit	Normal Shutdown	Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Comm Loss: Staged Electric Heat Relay 3 Comm Loss: Staged Electric Heat Relay 3 Comm: Staged Elec Heat Relay	Unit	Normal Shutdown	Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Comm Loss: Staged Electric Heat Relay 4 Comm Loss: Staged Electric Heat Relay 4 Comm: Staged Elec Heat Relay	Unit	Normal Shutdown	Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Comm Loss: Wired Supply Air Cooling Stpt Comm Loss: Wired Supply Air Cooling Stpt Comm: Wired SA Cool Stpt	Unit	Warning	Non- Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Comm Loss: Wired Supply Air Heating Stpt Comm Loss: Wired Supply Air Heating Stpt Comm: Wired SA Heat Stpt	Unit	Warning	Non- Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Comm Loss: Outdoor Airflow Pressure Comm Loss: Outdoor Airflow Pressure Comm: Outdoor Airflow	Unit	Warning	Non-Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Comm Loss: Space CO2 Comm Loss: Space CO2 Comm: Space CO2	Unit	Warning	Non-Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
Invalid Active Outdoor Airflow Invalid Active Outdoor Airflow Invalid Active OA Flow	Unit	Warning	Non-Latching	All	No Valid Input from BAS or Unit. Disables Traq	Remote
Invalid Active Space CO2 Invalid Active Space CO2 Invalid Active Space CO2	Unit	Warning	Non-Latching	All	No Valid Input from BAS or Unit. Disables DCV	Remote
Comm Loss: Supply Air Temperature Comm Loss: Supply Air Temperature Comm Loss: Supply Air Temp Sensor	Unit	Warning	Non-Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period. Note: only if the arbitrated Active sensor has failed will the unit shut down	Remote
Invalid Active Supply Air Temperature Invalid Active Supply Air Temperature Invalid Active SA Temp	Unit	Warning with Special Action	Non-Latching	All	The Supply Air Temperature sensor failed. The mechanical cooling, heating and economizer control will be disabled; however, the supply fan will continue to run.	Remote
Comm Loss: Space Pressure Comm Loss: Space Pressure Comm: Space Pressure	Unit	Warning with Special Action	Non-Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Invalid Active Space Pressure Invalid Active Space Pressure Invalid Active Space Press	Unit	Warning with Special Action	Non-Latching	All	No Valid Input from BAS or Unit. Statitrac control will be terminated and the Relief Fan Speed and Relief Damper command will fall back to OA Damper Tracking.	Remote
Comm Loss: Heat Control Board Manf X Comm Loss: Heat Control Board Manf X Comm: Heat Board Manf X	Heat	Warning	Non-Latching	All	Continual loss of communication between the MP and the Modbus Slave (heat control board) has occurred for a 30 second period. All burners on the manifold are locked out.	Remote
Comm Loss: Heat Ctrl Board Manf 1 Slave Comm Loss: Heat Ctrl Board Manf 1 Slave Comm: Heat Brd Manf 1 Slave	Heat	Warning	Non-Latching	All	Staged Gas Heat control boards only. No serial communication with the 1285's own MODBUS slave control board the manifold. Any subsequent burners on that manifold are also locked out. Any prior burners that exist on that manifold are allowed to continue running.	Remote

Diagnostic Name and Source	Affects Target	Severity	Persistence	Active Modes [Inactive Modes]	Criteria	Reset Level
Comm Loss: Power Meter Comm Loss: Power Meter Comm: Power Meter	Unit	Warning	Non-Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Comm Loss: Space Temperature	Unit	Warning	Non-Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Comm Loss: Changeover Wired	Unit	Warning	Non-Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Comm Loss: Duct Static Pressure Local	Unit	Warning	Non-Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Comm Loss: Space Temp Cooling Stpt Wired	Unit	Warning	Non-Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Comm Loss: Space Temp Heating Stpt Wired	Unit	Warning	Non-Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Comm Loss: System Mode Wired	Unit	Warning	Non-Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Comm Loss: System Mode Wired	Unit	Warning	Non-Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Comm Loss: Final Filter Pressure Sensor Comm Loss: Final Filter Pressure Sensor Invalid Final Filter Press	Unit	Warning	Non-Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote
Comm Loss: Pre Filter Pressure Sensor Comm Loss: Pre Filter Pressure Sensor Invalid Pre Filter Pressure	Unit	Warning	Non-Latching	All	Continual loss of communication between the MP and the Functional ID has occurred for a 30 second period.	Remote

TD7 Automatic Rediscover and Automatic Hardware Reboot

When performing one or more of the following actions listed below, a message will appear on the screen that the TD7 is updating data (Figure 58, p. 84).

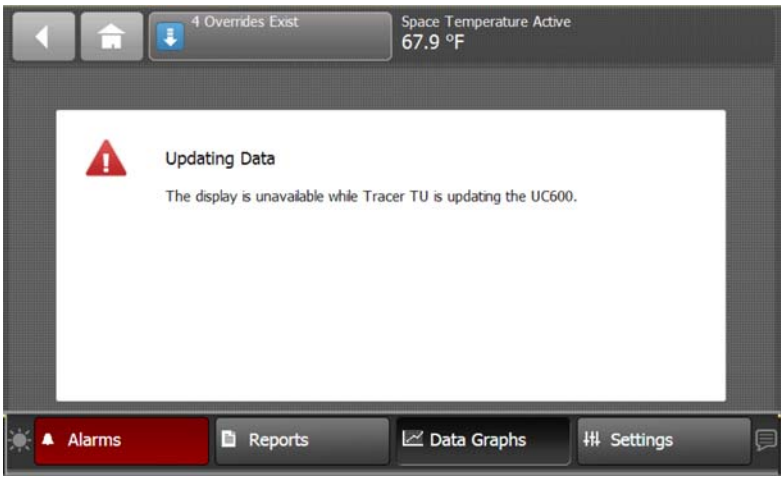
Automatic rediscovery (Updating data):

- Add a new point
- Remove a point
- Rename a point
- Modify Display Preferences or Language (from TU)
- Modify Custom Report or Header Data Point (from TU)

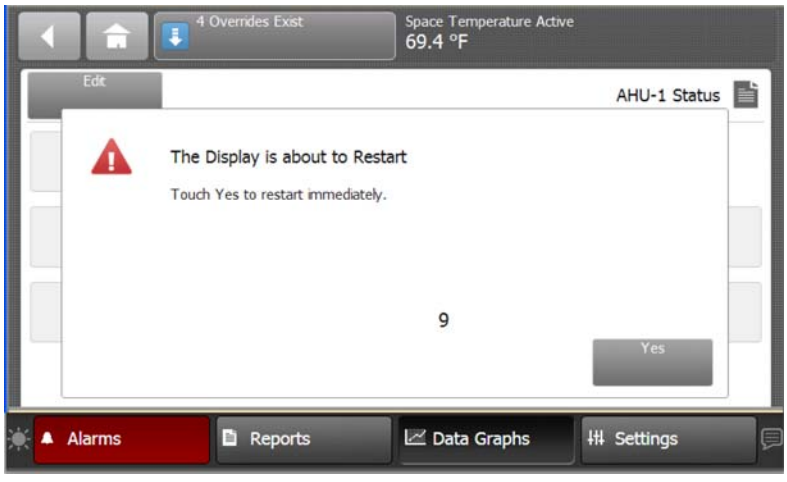
Automatic restart of TD7:

This will occur when modifying security settings: when a first and last user is added and deleted (enables, disables security), or when the restarts.

Figure 58. Automatic rediscover and automatic restart messages



Automatic rediscover: This message appears when data is being updated.



Automatic restart: This message appears whenever a user is added or deleted.

Notes

Notes

Ingersoll Rand (NYSE:IR) advances the quality of life by creating comfortable, sustainable and efficient environments. Our people and our family of brands—including Club Car®, Ingersoll Rand®, Thermo King® and Trane®—work together to enhance the quality and comfort of air in homes and buildings; transport and protect food and perishables; and increase industrial productivity and efficiency. We are a global business committed to a world of sustainable progress and enduring results.

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