## Installation, Operation, and Maintenance

# Tracer<sup>™</sup>TD-5 Display

For ReliaTel™ Controller



### **A**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.

### Introduction

Read this manual thoroughly before operating or servicing this unit.

### 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:

### **AWARNING**

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury. Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It

**A**CAUTION

unsafe practices.
Indicates a situation that could result in equipment or property-damage only

could also be used to alert against

NOTICE

### **Important Environmental Concerns**

accidents.

Scientific research has shown that certain man-made chemicals can affect the earth's naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs). Not all refrigerants containing these compounds have the same potential impact to the environment. Trane advocates the responsible handling of all refrigerants-including industry replacements for CFCs such as HCFCs and HFCs.

## Important Responsible Refrigerant Practices

Trane believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified. The Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

### **AWARNING**

# 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.

### **AWARNING**

# 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 Safety Data Sheets (SDS) and OSHA guidelines for proper PPE.
- When working with or around hazardous chemicals, ALWAYS refer to the appropriate SDS and OSHA/GHS (Global Harmonized System of Classification and Labeling 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.

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### **Revision History**

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 Added, removed and updated various minor controls images and verbiage.

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### Introduction for TD-5 Installation Guide

The purpose of this guide is to assist you in installing, programming, and operating the Tracer™ TD-5 display, which operates with the ReliaTel™ Controller. This guide describes how to access the screens and the types of information that appear on the screens.

The Tracer™ TD-5 display allows you to view data and make operational changes on the following types of applications:

- Voyager™
- Precedent<sup>™</sup>

### **Hardware**

The Tracer™ TD-5 is a durable touchscreen display that is designed to operate in both indoor and outdoor environments. The TD-5 display utilizes a standard 75mm VESA mounting pattern for installation. Alternatively, it can be installed with a user-supplied VESA mount.

#### **Power**

The Tracer™ TD-5 display is powered by 24 VAC or 24 VDC and requires 21 VA power, which it receives through a power cable. The display is typically connected to J10 of the RTRM Module, but it can also be powered from an alternate power source.

### Communication

RS-485 communication is provided to the TD-5 through the RTRM J10 connector.

#### **Screen characteristics**

The 5-inch WVGA 800 x 480 resolution touch-sensitive color screen is LED backlit, which enables viewing in poor light conditions including outdoor usage (with the exception of direct sunlight).

#### NOTICE

#### TD-5 Damage!

TD-5 does NOT have a UV-resistant touchscreen and must be mounted out of direct sunlight. Failure to follow instructions could result in TD-5 damage.

### **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 TD-5 display. The power connector provides strain relief and

### **Specifications and Agency Compliance**

Specification	
Input power:	24 VAC ± 15%, 21 VA, 50/60Hz; 24VDC +/- 10%, 400mA.
Storage temperature:	-67°F to 203°F (-55°C to 95°C) Humidity: Between 5% to 100% (non- condensing)
Operating temperature:	Temperature: -40°F to 158°F (-40°C to 70°C) Humidity: Between 5% to 100% (non- condensing)
Mounting weight:	Mounting surface must support 0.93 lb (422 grams) Mounting Type: VESA (75 mm x 75 mm)
Environmental rating (enclosure):	IP55 (dust and strong water protection) (PN: X19070632020)
Display color	TFT LCD, 800 nits brightness, 16-bit color
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

### **Supported Languages**

The TD-5 display supports 26 built-in languages. For help on how to select a specific language for the display, see "Language," p. 36.

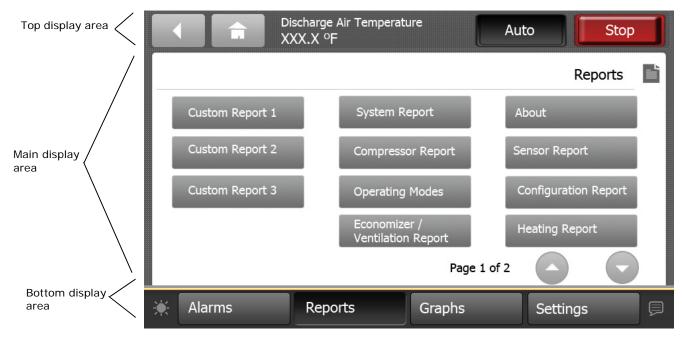
Arabic Portuguese (Brazil) Greek Chinese (Simplified) Hebrew Portuguese (Portugal) Chinese (Traditional) Hungarian Romanian Czech Indonesian Russian Spanish (Mexico) Dutch Italian English Japanese Spanish (Spain) Swedish French Korean French Canadian Norwegian Thai German Polish

### **Screen Overview**

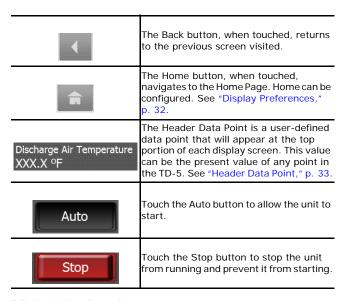
There are three distinct areas on the TD-5 screens:

Figure 1. Tracer™ TD-5 display screen

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



### **Top Display Area**



### Main Display Area

This area serves as the main task area in which you can view custom graphics, create reports, view and take action on alarms, and view or change display settings.

### **Bottom Display Area**

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

<del>-</del>	Screen brightness settings: Touch this icon to change the display's brightness.	
Alarms	Touch this button to open the Alarms screen. When an alarm is present, this button will flash red.	
Reports	Touch this button to navigate to the Reports screen.	
Graphs	Touch this button to open the Data Graphs screen to view Graphs.	
Settings	Touch this button to open the Settings screen, which contains options for controls and display settings.	
þ	Language selection: Touch this icon to select a language that will be displayed on all screens.	

### Installing the Tracer™ TD-5 Display

This section describes installation procedures when mounting the Tracer™ TD-5 display near the RTRM module or remotely mounted up to 328 ft (100 m) by using a field-supplied 75 mm VESA mounting bracket. Read and observe all warning and caution statements before you begin the installation procedure.

- may require the use of the four spacer washers to allow the M-4 screws to tighten properly.)
- Securely tighten the M-4 screws using a Phillips screwdriver.

### **AWARNING**

### Hazardous Voltage!

Failure to disconnect power before servicing could result in death or serious injury. Disconnect all electric power, including remote disconnects before servicing. Follow proper lockout/tagout procedures to ensure the power can not be inadvertently energized.

### **Packaged Contents**

- One (1) Tracer<sup>™</sup> TD-5 display with permanently attached 2.6 ft (0.8 m) power cable with male connector
- Four (4) M-4 screws
- Four (4) spacer washers

### **Additional Mounting Parts**

 TD-5 Display Low Profile Mounting Bracket (VESA 75mm) (PN: X05010511010)

# Installing the TD-5 Display onto a VESA Mounting Bracket

The Tracer™ TD-5 can be mounted near the RTRM module in the control panel, or remotely mounted up to 328 ft (100 m) by using a field-suppled 75 mm VESA mount.

Remote mounting requires the following additional fieldsupplied components:

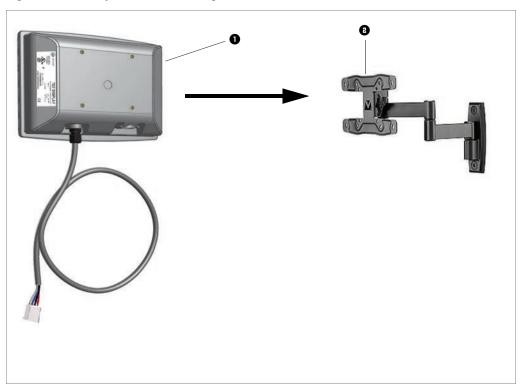
- A power source that will supply 24 VAC to the display
- Power cables

Many commercial 75mm VESA mounting brackets are available, which range from a simple wall mount to tilt-and-swivel mounts such as the one shown in Figure 2, p. 10, or the TD-5 Display Low Profile Mounting Bracket (VESA 75mm) (PN: X05010511010).

#### To install onto a VESA mounting bracket:

- Disconnect power at the circuit breaker and perform lockout/tagout procedures.
- Mount the VESA mounting bracket according to manufacturer's instructions.
- Position the TD-5 display ① onto the VESA mounting bracket ② and align the four mounting holes with the bracket while inserting and hand-tightening the four M-4 screws. (Some brands of VESA mounting brackets

Figure 2. Example VESA mounting



# Powering up the TD-5 Display for the First Time

After completing the installation instructions in "Installing the Tracer™ TD-5 Display," p. 9, The TD-5 display can be powered up.

The RTRM will be providing power for the TD5 in most cases. If the RTRM is not providing the power connection for TD5 it doesn't matter which one is powered first.

Upon successful power up, the TD-5 Display will default to the configured home screen. The System Report is the factory default.

On every power cycle, a touchscreen calibration screen is presented briefly. If no touches are registered, the calibration process does not start, and the TD5 continues to the home screen. Refer to the touchscreen calibration section for more details.

The initial calibration screen is useful in case a calibration problem occurs that makes the touchscreen unusable for pressing buttons.

### **Alarms**

Alarms appear on the Tracer<sup>™</sup> TD-5 display immediately upon detection. Touch the Alarms button in the bottom display area to view the Alarms screen.

### **Active Alarms**

Figure 3, p. 11 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

Figure 3. Active alarms screen

screen. 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.

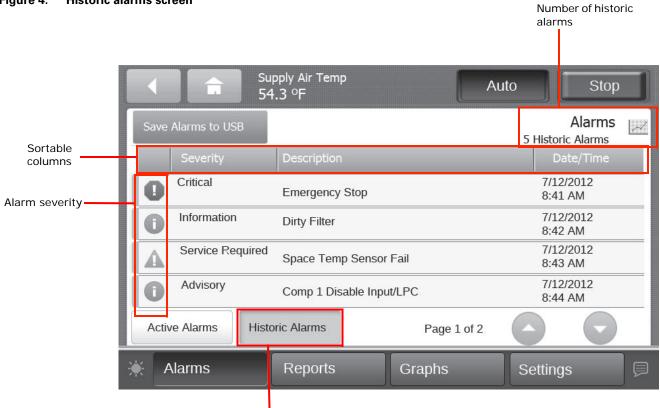
The Alarms screen defaults to Active Alarms. The **Active Alarms** button has a shaded appearance which indicates that you are viewing active alarms.



### **Historic Alarms**

On the Alarms screen, touch the **Historic Alarms** button to view all alarms, commonly referred to as the event log (see Figure 4, p. 12).

Figure 4. Historic alarms screen



Historic Alarms button

# **Viewing Active and Historic Alarms**

- Active alarms: These are alarms that require attention.
   All alarms that are currently active appear when you view this category. Some active alarms will clear automatically when the condition causing the alarm is removed. Others will latch and only clear if the condition causing the alarm is removed and the Reset Alarms is pressed.
- Historic alarms: These are alarms are no longer active.
   The alarm conditions have been corrected.

### **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. 13.

#### Sortable Alarms

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

### **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
<b>A</b>	Service Required
•	Advisory
(i)	Information

### **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: Alarms are sorted by there notification class shown in the table above in either descending or ascending order.
- Date and Time (the default sort): Alarms are sorted by timestamp in either descending or ascending order.
- Description: Alarms are sorted alphabetically by description in either descending or ascending order.

Table 2. List of alarms

Space Temp Sensor Failure	Outdoor Temp Sensor Fail
Compressor 1 HPC Lockout	Compressor 1 LPC Lockout
Comp 1 Disable Input/LPC	Compressor 2 HPC Lockout
Compressor 2 LPC Lockout	Comp 2 Disable Input/LPC
Smoke Detector	Heat Failure
Dirty Filter	Supply Fan Failure
Emergency Stop	Frostat™ Trip
Mixed Air Temp Sensor Fail	OA Humidity Sensor Failure
Return Air Temp Sensor Fail	Return Air RH Sensor Failure
Coil Temp Sensor #1 Fail	Demand Defrost Fault A
Demand Defrost Fault B	Demand Defrost Fault C
Demand Defrost Fault D	Defrost Default Mode
Local Cool Setpoint Fail	Local Heat Setpoint Fail
Vent Override – Purge	Vent Override – Exhaust
Vent Override – Pressurize	Drain Pan Overflow
Freezestat Tripped	Supply Air Temp Sensor Fail

Table 2. List of alarms (continued)

Space Humidity Sensor Fail  Space Pressure Setpoint Fail  Heating High Temp Limit Open  Inducer Proving Switch Fail  Flame Rollout Switch Open  Inducer Proving Switch Fail  Flame Sensed on heat call  Flame Sensed w/Gas Valve Off  Gas Heat Module Failure  Economizer Actuator Fault  SA Reset Amount Failure  SA Temp Cool Setpoint Fail  SA Pressure Deadband Fail  SA Pressure Deadband Failure  SA Pressure Deadband Fail  SA Pressure Deadband Fail  SUpply Air Press Sensor Fail  SA High Press Limit  SA Pressure PWM Fault  Comp 1 Disable Input/HPC  Comp 2 Disable Input/HPC  Comp 2 Disable Input/HPC  Exh/Ret Fan Proving Failure  RTOM Comm Fail  RTAM Comm Fail  RTAM Comm Fail  SA Reheat Setpoint Failure  RTDM Comm Fail  SA Reheat Setpoint Fail VSM Comm Fail  SA Reheat Setpoint Fail VSM Comm Fail  SA Reheat Setpoint Fail Wod Dehumid Config  Ent Evap Temp Sensor Fail  Coil Temp Sensor #2 Fail  SA Temp Heat Setpoint Fail  Demand Defrost Fault B Ckt 2  Demand Defrost Fault B Ckt 2  Demand Defrost Fault B Ckt 1  Demand Defrost Fault C Ckt 1  Exhaust Fan Setpoint Fail  GN1 Communications Timed out  DCV Min Position Setpoint Fail  Design Min Position Setpoint Fail  DCV Min Position at Minimum Fan Speed Fail  DCV Min Posi	CO. Sancar Failura	CO. Satnaint Failura	
Airflow Sensor Fail  Space Pressure Setpoint Fail  Space Pressure Setpoint Fail  Space Pressure Sensor Fail  Heating High Temp Limit Open  Inducer Proving Switch Fail  Flame Rollout Switch Open  Inducer Proving Switch Fail  Flame Sensed on heat call  Flame Sensed w/Gas Valve Off  Gas Heat Module Failure  Economizer Actuator Fault  Morning Warmup Setpoint Fail  SA Reset Amount Failure  SA Temp Cool Setpoint Fail  SA Temp Heat Setpoint Fail  SA Pressure Deadband Fail  Supply Air Press Sensor Fail  SA High Press Limit  SA Pressure PWM Fault  Comp 1 Disable Input/HPC  Comp 2 Disable Input/HPC  Comp 2 Disable Input/HPC  Exh/Ret Fan Proving Failure  RTOM Comm Fail  RTEM Comm Fail  RTYM Comm Fail  SA Reheat Setpoint Failure  RTDM Comm Fail  SA Reheat Setpoint Failure  Space Press Deadband Fail  Mod Dehumid Config  Ent Evap Temp Sensor Fail  Coil Temp Sensor #2 Fail  SA Temp Heat Setpoint Fail  Demand Defrost Fault A Ckt 2  Demand Defrost Fault B Ckt 2  Demand Defrost Fault B Ckt 2  Demand Defrost Fault B Ckt 1  Demand Defrost Fail B Ckt 1  Design Min Position Setpoint Fail  (@ Full Fan Speed)  Enthalpy Setpoint Fail  Design Min Position at Minimum Fan Speed Fail  DCV Min Position at Minimum Fan Speed Fail  Compressor 3 HPC Lockout  Compressor 3 HPC Lockout  Compressor 3 LPC Lockout  Comp 3 Disable Input/HPC  BAS Interface Comm Fail  Unit Not Economizing When It Should  Not Be  Excessive Outdoor Air	CO <sub>2</sub> Sensor Failure	CO <sub>2</sub> Setpoint Failure	
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Supply Air Press Sensor Fail  SA Pressure PWM Fault  Comp 1 Disable Input/HPC  Comp 2 Disable Input/HPC  Exh/Ret Fan Proving Failure  RTOM Comm Fail  RTAM Comm Fail  RTAM Comm Fail  RTVM Comm Fail  RTDM Comm Fail  SA Reheat Setpoint Failure  RTDM Comm Fail  SA Reheat Setpoint Failure  RTDM Comm Fail  SA Reheat Setpoint Failure  Space Press Deadband Fail  Ent Evap Temp Sensor Fail  SA Temp Heat Setpoint Fail  Demand Defrost Fault A Ckt 2  Demand Defrost Fault B Ckt 2  Demand Defrost Fault B Ckt 2  Demand Defrost Fault B Ckt 1  Demand Defrost Fault A Ckt 1  Defrost Default Mode Ckt 2  Demand Defrost Fault B Ckt 1  Defrost Default Mode Ckt 1  IGN1 Communications Timed out  DCV Min Position Setpoint Fail (@ Full Fan Speed)  Enthalpy Setpoint Fail  DCV Min Position at Minimum Fan Speed Fail  DA Cool Setpoint Fail  DA Cool Setpoint Fail  Compressor 3 HPC Lockout  Comp 3 Disable Input/LPC  BAS Interface Comm Fail  Unit Economizing When It Should Not Be  Excessive Outdoor Air  Mixed Air Low Limit Cycle Active	SA Temp Heat Setpoint Fail	SA Reset Setpoint Failure	
SA Pressure PWM Fault Comp 2 Disable Input/HPC Comp 2 Disable Input/HPC Exh/Ret Fan Proving Failure RTEM Comm Fail RTEM Comm Fail RTYM Comm Fail RTYM Comm Fail RTDM Comm Fail RTDM Comm Fail RTDM Comm Fail RTDM Comm Fail SA Reheat Setpoint Failure RTDM Comm Fail SA Reheat Setpoint Failure RTDM Comm Fail SA Reheat Setpoint Fail SA Temp Sensor Fail SA Temp Heat Setpoint Fail Demand Defrost Fault A Ckt 2 Demand Defrost Fault B Ckt 2 Demand Defrost Fault B Ckt 2 Demand Defrost Fault B Ckt 1 Demand Defrost Fault B Ckt 1 Defrost Default Mode Ckt 1 Exhaust Fan Setpoint Fail IGN1 Communications Timed out DCV Min Position Setpoint Fail (@ Full Fan Speed) Enthalpy Setpoint Fail DCV Min Position at Minimum Fan Speed Fail DCV Min Position at Minimum Fan Speed Fail DA Cool Setpoint Fail PWM Max Fan Spd Setpt Fail Compressor 3 HPC Lockout Comp 3 Disable Input/LPC BAS Interface Comm Fail Unit Economizing When It Should Not Be Excessive Outdoor Air Mixed Air Low Limit Cycle Active	SA Press Setpoint Fail	SA Pressure Deadband Fail	
Comp 2 Disable Input/HPC  Exh/Ret Fan Proving Failure  RTOM Comm Fail  RTEM Comm Fail  RTVM Comm Fail  RTVM Comm Fail  RTVM Comm Fail  RTDM Comm Fail  RTDM Comm Fail  RTDM Comm Fail  RTDM Comm Fail  SA Reheat Setpoint Failure  RTDM Comm Fail  SA Reheat Setpoint Fail  Ent Evap Temp Sensor Fail  SA Temp Heat Setpoint Fail  Demand Defrost Fault A Ckt 2  Demand Defrost Fault B Ckt 2  Demand Defrost Fault B Ckt 1  Demand Defrost Fault A Ckt 1  Demand Defrost Fault B Ckt 1  Demand Defrost Fault C Ckt 1  Exhaust Fan Setpoint Fail  IGN1 Communications Timed out  DCV Min Position Setpoint Fail (@ Full Fan Speed)  Enthalpy Setpoint Fail  Design Min Position At Minimum Fan Speed Fail  Desi	Supply Air Press Sensor Fail	SA High Press Limit	
Exh/Ret Fan Proving Failure  RTEM Comm Fail  RTEM Comm Fail  RTVM Comm Fail  RTVM Comm Fail  SA Reheat Setpoint Failure  Space Press Deadband Fail  Ent Evap Temp Sensor Fail  SA Temp Heat Setpoint Fail  Demand Defrost Fault A Ckt 2  Demand Defrost Fault B Ckt 2  Demand Defrost Fault B Ckt 1  Demand Defrost Fault C Ckt 1  Demand Defrost Fault B Ckt 1  Demand Defrost Fault C Ckt 1  Demand Defrost Fault B Ckt 1  Demand Defrost Fault C Ckt 1  Design Min Position Setpoint Fail  (@ Full Fan Speed)  Enthalpy Setpoint Fail  Design Min Position Setpoint Fail  Design Min Position at Minimum Fan Speed Fail  Design Min Position at Minimum Fan Speed Fail  Design Min Position at Midpoint Fan Speed Fail  Design Min Position at Midpoint Fan Speed Fail  Compressor 3 HPC Lockout  Compressor 3 LPC Lockout  Comp 3 Disable Input/LPC  BAS Interface Comm Fail  Unit Not Economizing When It Should Not Be  Excessive Outdoor Air  Mixed Air Low Limit Cycle Active	SA Pressure PWM Fault	Comp 1 Disable Input/HPC	
RTEM Comm Fail  RTVM Comm Fail  RTVM Comm Fail  RTVM Comm Fail  SA Reheat Setpoint Failure  RTDM Comm Fail  Space Press Deadband Fail  Mod Dehumid Config  Ent Evap Temp Sensor Fail  Coil Temp Sensor #2 Fail  SA Temp Heat Setpoint Fail  Demand Defrost Fault A Ckt 2  Demand Defrost Fault B Ckt 2  Defrost Default Mode Ckt 2  Demand Defrost Fault B Ckt 1  Demand Defrost Fault C Ckt 1  Defrost Default Mode Ckt 1  Exhaust Fan Setpoint Fail  IGN1 Communications Timed out  DCV Min Position Setpoint Fail (@ Full Fan Speed)  Enthalpy Setpoint Fail  DCV Min Position at Minimum Fan Speed Fail  DCV Min Position at Minimum Fan Speed Fail  DCV Min Position Setpoint Fail  DCV Min Position At Minimum Fan Speed Fail  DCV Min Position Setpoint Fail  DCV Min Position At Minimum Fan Speed Fail  DCV Min Position At Minimum F	Comp 2 Disable Input/HPC	CO2 Low Limit Setpoint Fault	
RTVM Comm Fail  SA Reheat Setpoint Failure  RTDM Comm Fail  Space Press Deadband Fail  Mod Dehumid Config  Ent Evap Temp Sensor Fail  Coil Temp Sensor #2 Fail  SA Temp Heat Setpoint Fail  Demand Defrost Fault A Ckt 2  Demand Defrost Fault B Ckt 2  Demand Defrost Fault B Ckt 1  Demand Defrost Fault C Ckt 1  Demand Defrost Fault B Ckt 1  Demand Defrost Fault C Ckt 1  Defrost Default Mode Ckt 1  Exhaust Fan Setpoint Fail  IGN1 Communications Timed out  DCV Min Position Setpoint Fail (@ Design Min Position Setpoint Fail  Full Fan Speed)  Enthalpy Setpoint Fail  DCV Min Position at Minimum Fan Speed Fail  DCV Min Position at Minimum Fan Speed Fail  DCV Min Position at Minimum Fan Speed Fail  DA Cool Setpoint Fail  PWM Max Fan Spd Setpt Fail  Compressor 3 HPC Lockout  Comp 3 Disable Input/LPC  BAS Interface Comm Fail  Unit Not Economizing When It Should Not Be  Excessive Outdoor Air  Mixed Air Low Limit Cycle Active	Exh/Ret Fan Proving Failure	RTOM Comm Fail	
SA Reheat Setpoint Failure  Space Press Deadband Fail  Ent Evap Temp Sensor Fail  SA Temp Heat Setpoint Fail  Demand Defrost Fault A Ckt 2  Demand Defrost Fault B Ckt 2  Demand Defrost Fault C Ckt 2  Defrost Default Mode Ckt 2  Demand Defrost Fault B Ckt 1  Demand Defrost Fault C Ckt 1  Demand Defrost Fault B Ckt 1  Demand Defrost Fault C Ckt 1  Defrost Default Mode Ckt 1  Exhaust Fan Setpoint Fail  IGN1 Communications Timed out  DCV Min Position Setpoint Fail (@ Full Fan Speed)  Enthalpy Setpoint Fail  DCV Min Position at Minimum Fan Speed Fail  DCV Min Position at Minimum Fan Speed Fail  DCV Min Position Teil  DCV Min Position At Minimum Fan Speed Fail  DCV Min Position Teil  DCV Min Position At Minimum Fan Speed Fail  DA Cool Setpoint Fail  DA Cool Setpoint Fail  Compressor 3 HPC Lockout  Comp 3 Disable Input/LPC  Comp 3 Disable Input/LPC  BAS Interface Comm Fail  Unit Not Economizing When It Should Not Be  Excessive Outdoor Air  Mixed Air Low Limit Cycle Active	RTEM Comm Fail	RTAM Comm Fail	
Space Press Deadband Fail  Ent Evap Temp Sensor Fail  SA Temp Heat Setpoint Fail  Demand Defrost Fault A Ckt 2  Demand Defrost Fault B Ckt 2  Demand Defrost Fault A Ckt 1  Demand Defrost Fault C Ckt 1  Demand Defrost Fault C Ckt 1  Demand Defrost Fault C Ckt 1  Defrost Default Mode Ckt 1  Exhaust Fan Setpoint Fail  IGN1 Communications Timed out IGN2 Communications Timed out DCV Min Position Setpoint Fail (@ Full Fan Speed)  Enthalpy Setpoint Fail  Design Min Position at Minimum Fan Speed Fail  DCV Min Position at Minimum Fan Speed Fail  DA Cool Setpoint Fail  DA Cool Setpoint Fail  PWM Max Fan Spd Setpt Fail  Compressor 3 HPC Lockout  Comp 3 Disable Input/LPC  Comp 3 Disable Input/LPC  BAS Interface Comm Fail  Unit Not Economizing When It Should Not Be  Excessive Outdoor Air  Mixed Air Low Limit Cycle Active	RTVM Comm Fail	VSM Comm Fail	
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SA Temp Heat Setpoint Fail  Demand Defrost Fault A Ckt 2  Demand Defrost Fault B Ckt 2  Defrost Default Mode Ckt 2  Demand Defrost Fault A Ckt 1  Demand Defrost Fault B Ckt 1  Demand Defrost Fault C Ckt 2  Demand Defrost Fault C Ckt 1  Demand Defrost Fault C Ckt 1  Demand Defrost Fault C Ckt 2  Demand Defrost Fault C Ckt 1  Demand Defrost Fault C Ckt 2  Demand Defrost Fault C Ckt 1  Demand Def	Space Press Deadband Fail	Mod Dehumid Config	
Demand Defrost Fault B Ckt 2 Defrost Default Mode Ckt 2 Demand Defrost Fault A Ckt 1 Demand Defrost Fault B Ckt 1 Demand Defrost Fault C Ckt 1 Defrost Default Mode Ckt 1 Demand Defrost Fault C Ckt 1 Defrost Default Mode Ckt 1 Demand Defrost Fault C Ckt 1 Defrost Default Mode Ckt 1 Defrost Fault C Ckt 1 Defort Fault C Ckt 1 Defort Fault C Ckt 1 Defrost Fault C Ckt 1 Defort F	Ent Evap Temp Sensor Fail		
Defrost Default Mode Ckt 2  Demand Defrost Fault A Ckt 1  Demand Defrost Fault B Ckt 1  Defrost Default Mode Ckt 1  Exhaust Fan Setpoint Fail  IGN1 Communications Timed out  DCV Min Position Setpoint Fail (@ Design Min Position Setpoint Fail  Full Fan Speed)  Enthalpy Setpoint Fail  DCV Min Position at Minimum Fan Speed Fail  DCV Min Position at Minimum Fan Speed Fail  DA Cool Setpoint Fail  DA Cool Setpoint Fail  DA Cool Setpoint Fail  DA Cool Setpoint Fail  Compressor 3 HPC Lockout  Comp 3 Disable Input/LPC  BAS Interface Comm Fail  Unit Not Economizing When It Should Not Be  Excessive Outdoor Air  Mixed Air Low Limit Cycle Active	SA Temp Heat Setpoint Fail	Demand Defrost Fault A Ckt 2	
Demand Defrost Fault B Ckt 1 Defrost Default Mode Ckt 1 Exhaust Fan Setpoint Fail IGN1 Communications Timed out DCV Min Position Setpoint Fail (@ Design Min Position Setpoint Fail Full Fan Speed) Enthalpy Setpoint Fail DCV Min Position at Minimum Fan Speed Fail DA Cool Setpoint Fail PWM Max Fan Spd Setpt Fail Compressor 3 HPC Lockout Comp 3 Disable Input/LPC DAS Interface Comm Fail Unit Not Economizing When It Should Not Be Excessive Outdoor Air Mixed Air Low Limit Cycle Active	Demand Defrost Fault B Ckt 2	Demand Defrost Fault C Ckt 2	
Defrost Default Mode Ckt 1  IGN1 Communications Timed out DCV Min Position Setpoint Fail (@ Full Fan Speed)  Enthalpy Setpoint Fail  DCV Min Position at Minimum Fan Speed Fail  DA Cool Setpoint Fail  PWM Max Fan Spd Setpt Fail  Compressor 3 HPC Lockout  Compressor 3 LPC Lockout  Comp 3 Disable Input/LPC  BAS Interface Comm Fail  Unit Not Economizing When It Should Not Be  Excessive Outdoor Air  Mixed Air Low Limit Cycle Active	Defrost Default Mode Ckt 2	Demand Defrost Fault A Ckt 1	
IGN1 Communications Timed out  DCV Min Position Setpoint Fail (@ Design Min Position Setpoint Fail (@ Full Fan Speed)  Enthalpy Setpoint Fail  DCV Min Position at Minimum Fan Speed Fail  DCV Min Position at Minimum Fan Speed Fail  DCV Min Position at Minimum Fan Speed Fail  DA Cool Setpoint Fail  DA Cool Setpoint Fail  Compressor 3 HPC Lockout  Compressor 3 LPC Lockout  Comp 3 Disable Input/LPC  BAS Interface Comm Fail  Unit Not Economizing When It Should Not Be  Unit Economizing When It Should Modulating  Excessive Outdoor Air  Mixed Air Low Limit Cycle Active	Demand Defrost Fault B Ckt 1	Demand Defrost Fault C Ckt 1	
DCV Min Position Setpoint Fail (@ Design Min Position Setpoint Fail (@ Full Fan Speed)  Enthalpy Setpoint Fail Design Min Position at Minimum Fan Speed Fail  DCV Min Position at Minimum Fan Speed Fail  DA Cool Setpoint Fail PWM Max Fan Spd Setpt Fail  Compressor 3 HPC Lockout Compressor 3 LPC Lockout  Comp 3 Disable Input/LPC Comp 3 Disable Input/HPC  BAS Interface Comm Fail Unit Not Economizing When It Should Be  Unit Economizing When It Should Not Be  Excessive Outdoor Air Minimum Fail Design Min Position at Minimum Fan Speed Fail  Design Min Position at Minimum Fan Speed Fail  Design Min Position at Minimum Fan Speed Fail  Design Min Position at Minimum Fan Speed Fail  Design Min Position at Minimum Fan Speed Fail  Design Min Position at Minimum Fan Speed Fail  Design Min Position at Minimum Fan Speed Fail  Design Min Position at Minimum Fan Speed Fail  Design Min Position at Minimum Fan Speed Fail  Design Min Position at Minimum Fan Speed Fail  Design Min Position at Minimum Fan Speed Fail  Design Min Position at Minimum Fan Speed Fail  Design Min Position at Minimum Fan Speed Fail  Design Min Position at Minimum Fan Speed Fail  Design Min Position at Minimum Fan Speed Fail  Design Min Position at Minimum Fan Speed Fail  Design Min Position at Minimum Fan Speed Fail	Defrost Default Mode Ckt 1	Exhaust Fan Setpoint Fail	
Full Fan Speed)  Enthalpy Setpoint Fail  DCV Min Position at Minimum Fan Speed Fail  DCV Min Position at Minimum Fan Speed Fail  DA Cool Setpoint Fail  DA Cool Setpoint Fail  Compressor 3 HPC Lockout  Comp 3 Disable Input/LPC  BAS Interface Comm Fail  Unit Not Economizing When It Should Not Be  Excessive Outdoor Air  Design Min Position at Midpoint Fan Speed Fail  Design Min Position at Minimum Fan Speed Fail  Design Min Position at Midpoint Fan Speed Fail  Design Min Posit	IGN1 Communications Timed out	IGN2 Communications Timed out	
Fan Speed Fail  DCV Min Position at Minimum Fan Speed Fail  DA Cool Setpoint Fail  DA Cool Setpoint Fail  DA Cool Setpoint Fail  Compressor 3 HPC Lockout  Compressor 3 LPC Lockout  Comp 3 Disable Input/LPC  BAS Interface Comm Fail  Unit Not Economizing When It Should Be  Unit Economizing When It Should Not Be  Excessive Outdoor Air  Mixed Air Low Limit Cycle Active			
Speed Fail  DA Cool Setpoint Fail  Compressor 3 HPC Lockout  Comp 3 Disable Input/LPC  BAS Interface Comm Fail  Unit Economizing When It Should Not Be  Excessive Outdoor Air  Fan Speed Fail  PWM Max Fan Spd Setpt Fail  Compressor 3 LPC Lockout  Comp 3 Disable Input/HPC  Unit Not Economizing When It Should Be  Outdoor Air Damper Not Modulating  Mixed Air Low Limit Cycle Active	Enthalpy Setpoint Fail		
Compressor 3 HPC Lockout  Comp 3 Disable Input/LPC  BAS Interface Comm Fail  Unit Not Economizing When It Should Be  Unit Economizing When It Should Outdoor Air Damper Not Modulating  Excessive Outdoor Air  Mixed Air Low Limit Cycle Active			
Comp 3 Disable Input/LPC  BAS Interface Comm Fail  Unit Not Economizing When It Should Be  Unit Economizing When It Should Outdoor Air Damper Not Modulating  Excessive Outdoor Air  Mixed Air Low Limit Cycle Active	DA Cool Setpoint Fail	PWM Max Fan Spd Setpt Fail	
BAS Interface Comm Fail  Unit Not Economizing When It Should Be  Unit Economizing When It Should Outdoor Air Damper Not Modulating  Excessive Outdoor Air  Mixed Air Low Limit Cycle Active	Compressor 3 HPC Lockout	Compressor 3 LPC Lockout	
Unit Economizing When It Should Be  Unit Economizing When It Should Outdoor Air Damper Not Modulating  Excessive Outdoor Air  Mixed Air Low Limit Cycle Active	Comp 3 Disable Input/LPC	Comp 3 Disable Input/HPC	
Not Be Modulating  Excessive Outdoor Air Mixed Air Low Limit Cycle Active	BAS Interface Comm Fail		
,			
VSPD Compressor Drive Fault VSPD Compressor Drive Lockout	Excessive Outdoor Air	Mixed Air Low Limit Cycle Active	
	VSPD Compressor Drive Fault	VSPD Compressor Drive Lockout	

### **Reports**

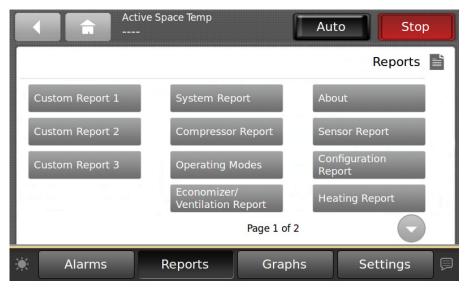
You can use the Tracer  $^{\text{TM}}$  TD-5 Display to view a variety of reports and create and edit custom reports.

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

Table 3. Representation of screen below

Custom Report 1	System Report	About
Custom Report 2	Compressor Report	Sensor Report
Custom Report 3	Operating Modes	Configuration Report
	Economizer/ Ventilation Report	Heating Report
Binary Input Report	Binary Output Report	

Figure 5. Reports screen



### **Custom Reports**

You can create up to three custom reports using the Tracer™ TD-5 Display

### **Creating a Custom Report**

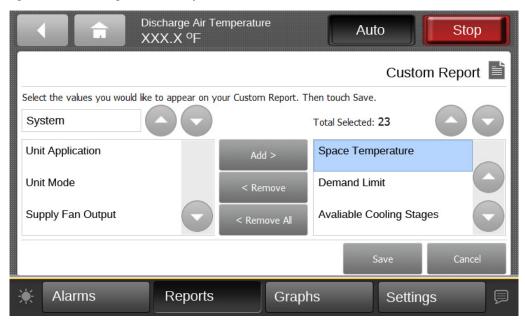
1. Navigate to the Reports screen, then touch one of the three custom report buttons.

The Custom Report (1, 2, or 3) screen appears.

2. Touch the Edit button.

The Edit Custom Report screen appears (Figure 6, p. 15).

Figure 6. Creating a custom report

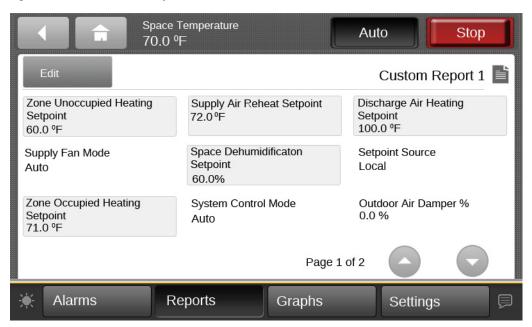


- Use the up and down arrow buttons to select a point. Add items by touching the item that is highlighted blue, then touch the Add button.
- Continue adding values to your report. When you are finished, touch the **Save** button.
   The Custom Report screen, populated with your

selected values, appears (Figure 7, p. 16).

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 7. New custom report screen

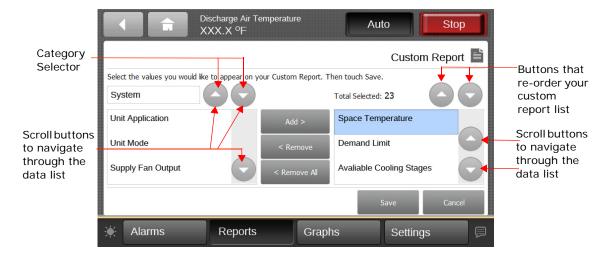


### **Editing a Custom Report**

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

Figure 8. Editing a custom report

Follow steps 2 through 4 in "Creating a Custom Report," p. 14. to complete your edits.



# **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 7, p. 16, 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:

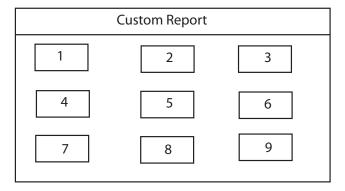
1. Touch the Edit button on the Custom Report screen.

- 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 8, p. 16).
- 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 TD-5 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. Up to nine items can appear on each Custom Report page. Each Custom Report can have up to seven pages for a total of 63 unique items.

The model in Figure 9, p. 17 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 9. Custom report (order of items)

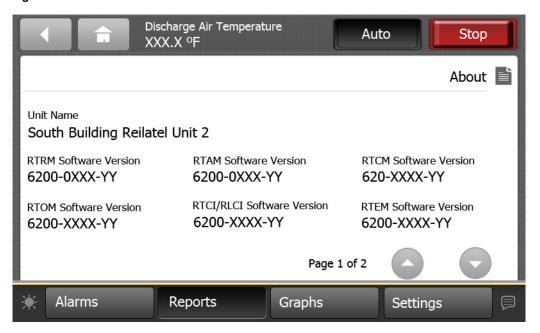


### **About**

to which it is connected. Touch the arrow button to scroll to the next screen.

Touch the **About** button to view the About screen. View information about the unit controller and the TD-5 display

Figure 10. About screen



### **Data Area**

Unit Name. This is the name that was entered.

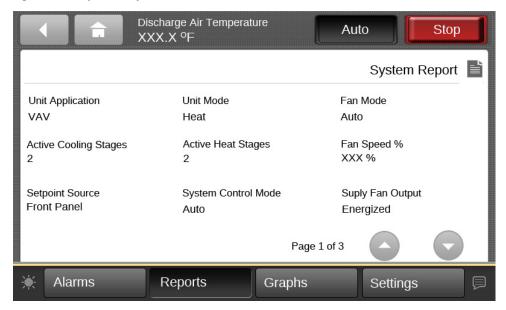
The following data are displayed on the About screen.

Unit Name ReliaTel™		
RTRM Software Version 6200-0123-1.00	RTVM Software Version 6200-0124-01.00	VSM Software Version 6200-0628-01.00
RTOM Software Version 6200-0124-01.00	RTAM Software Version 6200-0126-01.00	RTEM Software Version 6200-0134-01.00
RTDM Software Version 6200-0531-01.00	BAS Interface Software Version BAS-01.00	
Display User Interface Software Version 6200-0635-01.00	Display Firmware Version 6200-0631-01.00	Display Boot Code Version 6200-0629-01.00
Display Kernal 6200-0630-01.00		

### **System Report**

Touch the **System Report** button to view the System Report screen. Touch the arrow buttons to move between screens.

Figure 11. System report screen



#### **Data Area**

The following data appears in the System Report screen.

Unit Application	Active Unit Mode	Setpoint Source
VAV,CV,SZVAV	Heat, Cool, Off, Emergency Heat	Remote, Local
Supply Fan Output	Supply Fan Speed %	Supply Fan Mode
Off, On	XXX %	On, Auto
Occupancy	Active Cooling Stages	Active Heating Stages
Occupied, Unoccupied	X	X
Active Space Temp XXX.X F/C	Active Space Temp Setpoint XXX.X F/C	Outdoor Air Damper % XXX % Open
Supply Air Temp XXX.X F/C	Active Supply Air Temp Setpoint XXX.X F/C	System Control Mode Manual, Auto
Economizing Enabled, Disabled	Ventilation Control Fixed/DCV (*DCV = Demand Control Ventilation)	
Variable Speed Compressor Volts XXX V	Variable Speed Compressor Capacity% XXX.X%	Fresh Air Measurement Installed, Not Installed
Heating Type	Cooling Stages Configured	Available Heating Stages
None, Electric, Gas, Hydronic	X	X
Supply Fan Starts XXXXX	Supply Fan Running Time HHHHH: MM	
Space Pressure	Supply Air Pressure	Local Space Temp
X.XX iwc/mm(H <sub>2</sub> 0)	X.XX iwc/mm(H <sub>2</sub> 0)	X XX.X °F/C
Emergency Stop Input	RTOM Low Fan Speed Output	Alarm Indicator Output
Auto, Emergency Stop	Off, On	Off, On
VAV Box Output	Thermostat Y1 Input	Thermostat W1/O Input
Off, On	Open, Closed	Open, Closed
Thermostat G Input	Thermostat W2 Input	Thermostat Y2 Input
Open, Closed	Open, Closed	Open, Closed
Thermostat X2 Input	Supply Fan Proving Input	Condensate Drain Overflow Input
Open, Closed	Open, Closed	Open, Closed

### Reports

•	33 1	Smoke Detector Input Open, Closed
· ·	Changeover Switch Input Cooling, Heating	

### **Economizer/Ventilation Report**

#### Data Area

Touch the **Economizer/Ventilation Report** button to view the Economizer/Ventilation Report screen. Touch the arrow buttons to move between screens.

The following data appears in the Economizer/Ventilation Report screen.

Outdoor Air Damper % XXX% Open	Economizing Enabled, Disabled	Mixed Air Temp XXX.X F/C
Ventilation Control Fixed, DCV	Economizing Enable Type Dry Bulb, Reference Enthalpy, Comparative Enthalpy	Outdoor Air Temp XXX.X F/C
Active Min OA Damper Position Target XXX%	Manual Enthalpy Override Enabled, Disabled	Return Air Temp XXX.X F/C
Active Upper CO2 Limit Setpoint XXXX PPM	Active Lower CO <sub>2</sub> Limit Setpoint XXXX PPM	Space CO <sub>2</sub> XXXX PPM
Econ Dry Bulb Enable Setpoint XXX.X F/C	Econ Reference Enthalpy Setpoint XXX.X BTU/lb	Local Enthalpy Setpoint A, B, C, D, E
Return Air Humidity XXX%	Outdoor Air Humidity XXX%	
Design Min OA Damper Pos Setpoint 100% Far XXX%	Design Min OA Damper Pos Setpoint Mid Fan XXX%	Design Min OA Damper Pos Setpoint Min Fan XXX%
DCV Min OA Damper Pos Setpoint 100% Fan XXX%	DCV Min OA Damper Pos Setpoint Min Fan XXX%	Power Exhaust Fan Output De-energized, Energized
DCV Min OA Flow Setpoint XXXXX CFM / LPM		Outdoor Air Flow Adjustment Setpoint XX.X
Outdoor Air Flow XXXXX CFM/LPM	Active Min Outdoor Air Flow Target XXXXX CFM/LPM	Min Outdoor Air Flow Deadband XXXXX CFM/LPM
Exhaust Fan Starts XXXXXX	Exhaust Fan Running Time HHHHH:MM	Exhaust Damper Position% Open XXX%
		Outdoor Fan A Output
Space Pressure XX.XX IWC /cmWC	Active Space Pressure Setpoint XX.XX IWC /cmWC	Space Pressure Deadband XX.XX IWC/cmWC
Ventilation Override Pressurize Input Open, Closed	Ventilation Override Purge Input Open, Closed	Ventilation Override Exhaust Input Open, Closed
Power Exhaust Fan Output De-energized, Energized	Exhaust Fan Proving Input Open, Closed	

### **Compressor Report**

### **Data Area**

Touch the **Compressor Report** button to view the Compressor Report screen. Touch the arrow buttons to move between screens.

The following data appears in the Compressor Report screen.

Table 4. Compressor report - data area

Active Cooling Stages	Cooling Stages Configured	Number of Compressors Installed
X	X	X
Outdoor Fan A Output	Outdoor Fan B Output	Variable Speed Outdoor Fan %
Energized, De-energized	Energized, De-energized	XXX.X %
Dehumidification Status Inactive, Active Reheat, Active Enhanced	Variable Speed Compressor Volts XX.X V	Variable Speed Compressor Capacity % XXX.X %
Compressor 1 Disable Input	Compressor 2 Disable Input	Compressor 3 Disable Input
Enabled, Disabled	Enabled, Disabled	Enabled, Disabled
Compressor 1 Proving Input	Compressor 2 Proving Input	Compressor 3 Proving Input
Open, Closed	Open, Closed	Open, Closed

Table 4. Compressor report - data area (continued)

Reheat Entering Evap Temp	Reheat Valve Position%	Reheat LPC Input
XXX.X F/C	XXX%	Enabled, Disabled
Supply Air Temp XXX.X F/C	Active Space Temp XXX.X%	Active Space Cooling Setpoint XXX.X F/C
Defrost Status Ckt 1 Inactive, Defrosting	Defrost Status Ckt 2 Inactive, Defrosting	Active Supply Air Temp Cooling Setpoint XXX.X F/C
SOV 1 Output Heating, Cooling	SOV 2 Output Heating, Cooling	
Outdoor Coil Temp Ckt 1 XXX.X F/C	Outdoor Coil Temp Ckt 2 XXX.X F/C	
Compressor 1 Starts	Compressor 2 Starts	Compressor 3 Starts
XXXXX	XXXXX	XXXXX
Compressor 1 Running Time	Compressor 2 Running Time	Compressor 3 Running Time
HHHHHH: MM	HHHHHH:MM	HHHHHH: MM
Number of Compressors Installed	Variable Speed Compressor	Reheat Pumpout Relay
X	Not Installed, Installed	On/Off
Outdoor Fan A Starts	Outdoor Fan B Starts	Variable Speed Outdoor Fan Starts
XXXXXX	XXXXXX	XXXXXX
Outdoor Fan A Running Time	Outdoor Fan B Running Time	Variable Speed Outdoor Fan Running Time
HHHHHH:MM	HHHHHH:MM	HHHHHH: MM

### **Heating Report**

### **Data Area**

Touch the **Heating Report** button to view the Heating Report screen. Touch the arrow buttons to move between screens.

The following data appears in the Heating Report screen.

Table 5. Heating report - data area

Heating Type None, Electric, Gas, Hydronic *Config definition needed here for Dual Bank Mod staged heat.	Heating Configuration Staged /Modulating	
Available Heating Stages X	Active Heating Stages X	Active Space Temp XXX.X °F/C
Modulating Heat Output% XXX%	Gas Heating Status	Supply Air Temp XXX.X °F/C
Defrost Status Ckt 1 Inactive, Defrosting	Defrost Status Ckt 2 Inactive, Defrosting	Active Space Heating Setpoint XXX.X °F/C
Outdoor Coil Temp Ckt 1 XXX.X °F/C	Outdoor Coil Temp Ckt 2 XXX.X °F/C	Active Supply Air Temp Heating Setpoint XXX.X °F/C
Heating Stage 1 Output Active, Inactive	Heating Stage 2 Output Active, Inactive	Freezestat Input Open, Closed
Outdoor Air Temp XXX.X °F/C		Freeze Avoidance ACtive, Inactive
IGN Pressure Switch Input Open, Closed	IGN Temp Limit Input Open, Closed	IGN Flame Rollout Input Open, Closed
IGN Inducer High Output Off, On	IGN Inducer Low Output Off, On	

### **Configuration Report**

Touch the **Configuration Report** button to view the Configuration Report screen. Touch the arrow buttons to move between screens.

#### Table 6. Configuration report - data area

### **Data Area**

The following data appears in the Configuration Report screen.

Unit Application CV, VAV, SZVAV	Refrigeration Type Cooling Only, Heat Pump	Product Type Voyager™ 3, Commercial, Precedent™/ Voyager™ 2/Odyssey™, Precedent 17 Plus
Dehumidification None, Hot Gas Reheat, Enhanced	Supply Fan Control Type 1-Speed, 2-Speed, 3-Speed, IGV, Variable Speed, 4-Speed	Economizer Installed, Not Installed
Dehumidification Type	Heating Type	CV Control Type
Staged, Modulating	None, Electric, Gas, Hydronic	Zone, Thermostat
Cooling Stages Configured	Cooling Steps Input	Number of Compressors Installed
X	3 Step, 2 Step	X
Number of Refrigeration Circuits	Heating Stages Configured	Variable Speed Compressor
X	X	Installed, Not Installed
Economizer Enable Type Drybulb, Reference Enthalpy, Comparative Enthalpy	Supply Fan Motor Type Fixed, VFD, ECM, ERM	Supply Fan Motor Control 0 to 10VDC, PWM
Heat Pump Type	Windmill Prevention	Gas IGN Module #1
Single, Independent	Disable, Enable	Staged, Modulating
True Supply Air Reporting	Supply Air Tempering Input	Gas IGN Module #2
Disable, Enable	Disable, Enable	Installed, Not Installed
Manual Enthalpy Override	Lead Lag Configuration Input	Outdoor Air Flow Compensation
Disable, Enable	Disable, Enable	Disable, Enable
Outdoor Fan Cycling Input	Programmable Zone Sensor	Cabinet Type
Lower, Normal	Installed, Not Installed	Horizontal, Downflow
Outdoor Air Flow Compensation	Evaporator Defrost Control	RTRM Fan Proving Input
Disable, Enable	Disable, Enable	Closed, Open
Exhaust Air Control - StatiTrac™ Installed, Not Installed		

### **Sensor Report**

#### **Data Area**

Touch the **Sensor Report** button to view the Sensor Report screen. Touch the arrow buttons to move between screens.

The following data appears in the Sensor Report screen.

Table 7. Sensor report - data area

Active Space Temp	Local Space Temp	Supply Air Temp
XXX.X °F/C	XXX.X °F/C	XXX.X °F/C
Outdoor Air Temp XXX.X °F/C	Mixed Air Temp XXX.X °F/C	
Return Air Temp	Outdoor Air Humidity	Return Air Humidity
XXX.X °F/C	XXX.X%	XXX.X%
Space CO <sub>2</sub>	Outdoor Air Flow	Space Humidity
XXXX PPM	XXXXX CFM/LPM	XXX%
Outdoor Coil Temp Ckt 1 XXX.X °F/C	Outdoor Coil Temp Ckt 2 XXX.X °F/C	
Space Pressure	Reheat Entering Evap Temp	Supply Air Pressure
X.XX in(H <sub>2</sub> O)/mm(H <sub>2</sub> O)	XXX.X °F/C	X.XX in(H <sub>2</sub> O)/mm(H <sub>2</sub> O)

### **Binary Input Report**

The Binary Input report provides general Reliatel Unit operating information. Touch the **Binary Input Report** button to view the Binary Input Report screen.

#### Table 8. Binary input report - data area

### **Data Area**

The following data appear in the Configuration Report screen.

RTRM	Emergency Stop Input Auto, Emergency Stop	Occupancy Occupied, Unoccupied	RTRM Fan Proving Input Closed, Open
RTRM	Thermostat Y1 Input Open, Closed	Thermostat W1/O Input Open, Closed	Thermostat G Input Open, Closed
RTRM	Thermostat W2 Input Open, Closed	Thermostat Y2 Input Open, Closed	Thermostat X2 Input Open, Closed
RTRM	Compressor 1 Disable Input Enabled, Disabled	Compressor 1 Proving Input Open, Closed	
RTRM	Compressor 2 Disable Input Enabled, Disabled	Compressor 2 Proving Input Open, Closed	
RTOM	Supply Fan Proving Input Open, Closed	Condensate Drain Overflow Input Open, Closed	
RTOM	Ventilation Override Pressurize Input Open, Closed	Ventilation Override Purge Input Open, Closed	Ventilation Override Exhaust Input Open, Closed
RTOM	Frostat™ Input Open, Closed	Clogged Filter Input Open, Closed	
RTOM	Freezestat Input Open, Closed	Smoke Detector Input Open, Closed	
RTOM	Reheat Humidistat Input Open, Closed	Changeover Switch Input Cooling, Heating	
VSM	Compressor 3 Disable Input Enabled, Disabled	Compressor 3 Proving Input Open, Closed	
RTVM	Exhaust Fan Proving Input Open, Closed	Reheat LPC Input Enabled, Disabled	
IGN	IGN Pressure Switch Input Open, Closed	IGN Temp Limit Input Open, Closed	IGN Flame Rollout Input Open, Closed

### **Binary Output Report**

# The Binary Input report provides general Reliatel Unit operating information. Touch the **Binary Input Report** button to view the Binary Input Report screen.

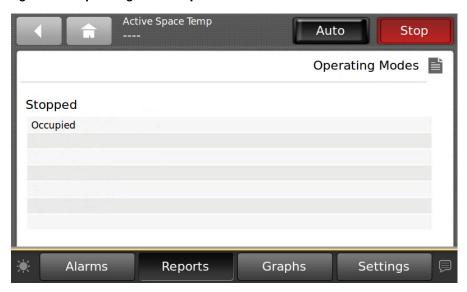
#### Table 9. Binary output report - data area

#### **Data Area**

The following data appears in the Configuration Report screen.

RTRM	Supply Fan Output Off, On	·	Compressor 2 Output Off, On
RTRM	Heat Stage 1 Output Active, Inactive	·	Outdoor Fan A Output Energized, De-energized
RTRM	Heat Stage 2 Output Active, Inactive	•	Outdoor Fan B Output Energized, De-Energized
RTOM/RTAM/RTVM/ RTEM/RTDM	RTOM Low Fan Speed Output Off, On	·	VAV Box Output Off, On
RTOM/RTAM/RTVM/ RTEM/RTDM	Power Exhaust Fan Output De-energized, Energized	Reheat Pumpout Relay Off, On	
IGN	IGN Inducer High Output Off, On	IGN Inducer Low Output Off, On	

Figure 12. Operating modes report details screen



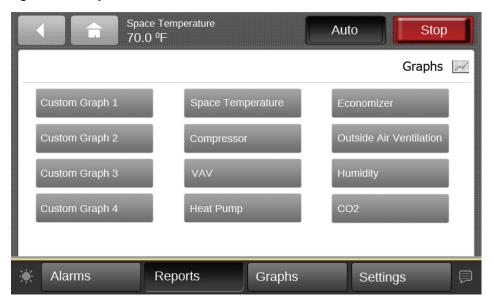
**Note:** Operating Modes: The operating Mode page shall show the user the general operation of the unit, and what modes it is operating in.

### **Graphs**

Graphs allow users to view data in graphical format on the Display. Four custom graphs and eight standard graphs are available. Graphs can be created with a maximum of four lines per graph. Custom 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 **Graphs** button in the bottom display area to view the Graphs screen (Figure 13, p. 25). The Graphs screen contains twelve buttons that allow you to view and edit a particular graph. There are four custom graphs and 8 standard graphs.

Figure 13. Graphs screen



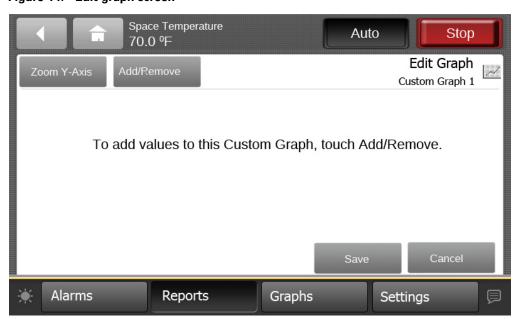
### **Creating a Custom Graph**

1. Navigate to the Graphs screen, then touch an available data graph button.

The Custom Graph screen appears.

Figure 14. Edit graph screen

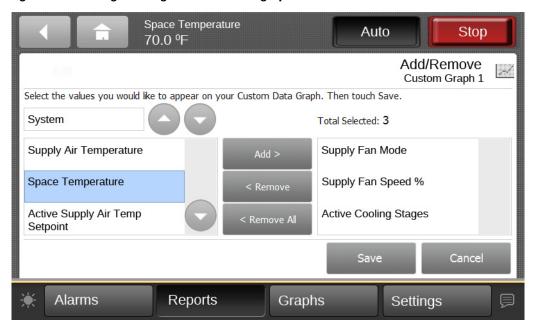
Touch the Edit Graph button.
 The Edit Graph screen appears (Figure 14, p. 25).



#### **Graphs**

- 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 value.
- Select the values, then touch the Add button (up to four selections are allowed).
- Touch the Save button. The Edit Graph screen appears, which reflects the selected values.

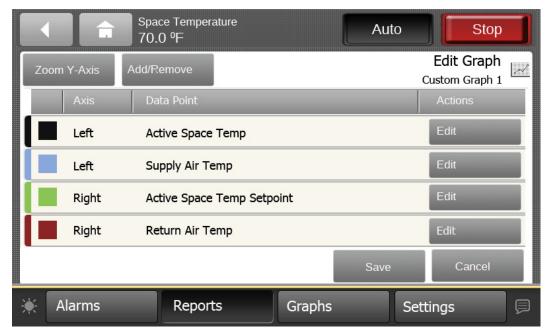
Figure 15. Adding data logs to the custom graph



7. Use the Edit Graph screen to modify the graph. Touch the **Edit** button that corresponds with the value that

you want to change. Only one value can be edited at a time.

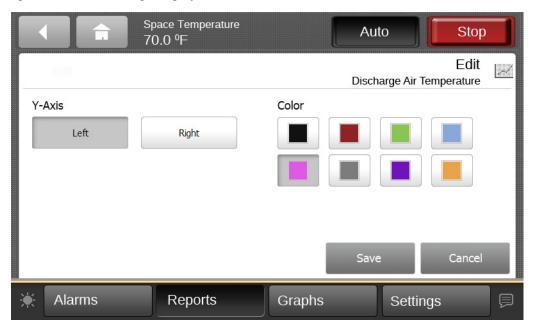
Figure 16. Edit graph screen (after values have been added)



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 17. Customizing the graph

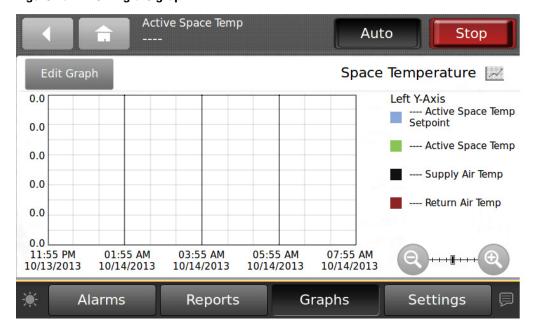


9. Touch the **Save** button to display the new graph (Figure 18, p. 27).

**Note:** Depending on the sampling rate, the custom 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 18. Viewing the graph



### **Editing the Y-Axis**

The default values on the right and left Y-axes can be

changed according to your specifications.

10. Touch the **Edit Y-Axis** button located on the top portion of the Custom Data Graph screen.

The Edit Y-Axis screen appears (Figure 19, p. 28).

- Touch the Manually Select Range box for either the left or right Y-axis.
- 12. Touch the **edit** button next to one of the two value ranges.

Figure 19. Editing the Y-Axis

The Keypad screen appears.

- 13. Select a new value and then touch Enter to save.
- 14. Repeat steps 2 through 4 until all preferred changes have been made.



**Standard Graphs** 

There shall be 8 standard graphs. The standard graphs are below:

Table 10. Standard graphs

Space Temperature	Economizer
Compressor	Outside Air Ventilation
VAV	Humidity
Heat Pump	CO <sub>2</sub>

### **Space Temperature:**

The table below describes the data in the System Status graph:

Data Point	Line Color	Axis
Active Space Temp Setpoint	Blue	Left
Active Space Temp	Green	Left
Supply Air Temp	Black	Left
Return Air Temperature	Red	Left

### **Compressor Graph:**

The table below describes the data in the graph:

Data Point	Line Color	Axis
Active Supply Air Temp Setpoint	Pink	Left
Variable Compressor Speed %	Green	Left
Supply Air Temp	Black	Left

Active Cooling Stages	Blue	Right

### **VAV System:**

The table below describes the data in the System Status graph:

Data Point	Line Color	Axis
Active Supply Air Temp Setpoint	Pink	Left
Active Space Temp	Green	Left
Supply Air Temp	Black	Left
Return Air Temp	Red	Left

### **Economizer Graph:**

The table below describes the data in the graph:

Data Point	Line Color	Axis
Outdoor Air Temp	Purple	Left
Mixed Air Temp	Grey	Left
Active Min OA Damper Position Target	Pink	Right
Outdoor Air Damper %	Yellow	Right

### **Outside Air Ventilation:**

The table below describes the data in the graph:

Data Point	Line Color	Axis
Min Outdoor Air Flow Target	Black	Left
Outdoor Air Flow	Pink	Left
Outdoor Air Damper %	Yellow	Right
Outdoor Air Temp	Purple	Right

### CO<sub>2</sub> Graph:

The table below describes the data in the graph:

Data Point	Line Color	Axis
Active Upper CO <sub>2</sub> Limit Setpoint	Red	Left
Active Lower CO <sub>2</sub> Limit Setpoint	Black	Left
Space CO <sub>2</sub>	Green	Left
Outdoor Air Damper %	Yellow	Right

### **Humidity Graph:**

The table below describes the data in the graph:

Data Point	Line Color	Axis
Space Dehumidification Setpoint	Yellow	Left
Outdoor Air Humidity	Red	Left
Return Air Humidity	Black	Left
Space Humidity	Green	Left

### **Heat Pump Graph:**

The table below describes the data in the graph:

Data Point	Line Color	Axis
Outdoor Coil Temp Ckt 1	Green	Left
Outdoor Coil Temp Ckt 2	Blue	Left
Outdoor Air Temp	Purple	Left
Discharge Air Temperature	Grey	Left

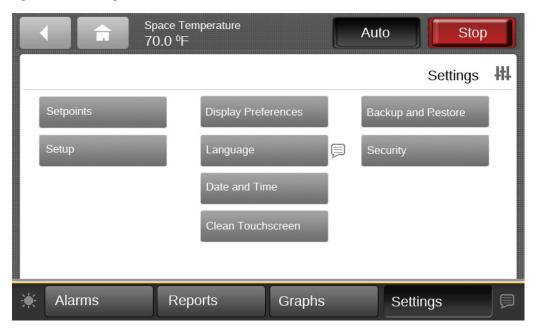
### **Settings**

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.

- Control Settings
- Display Settings
- Security Settings

Three categories for settings appear on the screen:

Figure 20. Settings screen

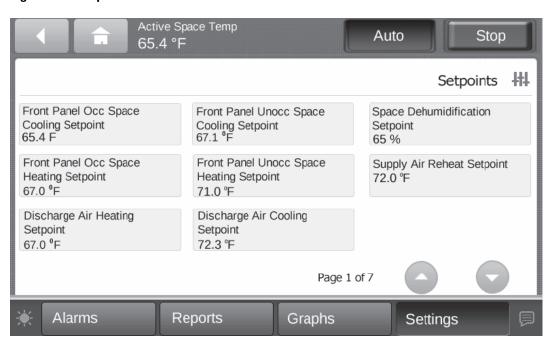


### **Setpoints**

Touch the **Setpoints** button to view the Setpoints screen.

Touch the arrow buttons to move between screens.

Figure 21. Setpoints screen



### **Data Area**

The following data appears in the Setpoints screen.

Front Panel Occupied Space Cooling Setpoint XXX.X °F/C	Front Panel Unoccupied Space Cooling Setpoint XXX.X °F/C	Space Dehumidification Setpoint XX%
Front Panel Occupied Space Heating Setpoint XXX.X °F/C	Front Panel Unoccupied Space Heating Setpoint XXX.X °F/C	Supply Air Reheat Setpoint XXX.X °F/C
Discharge Air Heating Setpoint XXX.X °F/C	Discharge Air Cooling Setpoint XXX.X °F/C	
Duct Static Pressure Setpoint	Duct Static Pressure Deadband	Morning Warm up Setpoint
XXX.X °F/C	X.XX iwc	XXX.X °F/C
Supply Air Cooling Setpoint XXX.X °F/C	Supply Air Heating Setpoint XXX.X °F/C	Daytime Warm-Up Initiate Setpoint XXX.X °F/C
Space Pressure Setpoint	Space Pressure Deadband	Daytime Warm up Terminate Setpoint
X.XX iwc	XXX.X °F/C	XXX.X °F/C
CO <sub>2</sub> Upper Limit Setpoint	CO <sub>2</sub> Lower Limit Setpoint	Outdoor Air Flow Adjustment Setpoint
XXXX PPM	XXXX PPM	X.XX
Supply Air Reset Setpoint	Supply Air Reset Amount	Supply Fan Adjustment Setpoint
XXX.X °F/C	XXX.X °F/C	XX%
Econ Reference Enthalpy Setpoint	Econ Dry Bulb Enable Setpoint	Exhaust Fan Enable Setpoint
XX.X BTU/lb	XXX.X °F/C	XX%
Design Min OA flow Setpoint	DCV Min OA Flow Setpoint	Min OA Flow Deadband
XXXXX cfm	XXXX cfm	XXXXX cfm
Design Min OA Damper Pos Setpoint 100% Fan XX%	Design Min OA Damper Pos Setpoint Mid Fan XX%	Design Min OA Damper Pos Setpoint Min Fan XX%
DCV Min OA Damper Pos Setpoint 100% Fan XX%	DCV Min OA Damper Pos Setpoint Min Fan XX%	
Front Panel Dehumid Override Cool Setpoint XXX.X °F/C	Front Panel Dehumid OVerride Heat Setpoint XXX.X °F/C	
Compressor 1 Starts	Compressor 2 Starts	Compressor 3 Starts
XXXXXX	XXXXXX	XXXXXX
Compressor 1 Starts Running Time	Compressor 2 Starts Running Time	Compressor 3 Starts Running Time
HHHHHH:MM	HHHHHH:MM	HHHHHH: MM
Outdoor Fan A Starts	Outdoor Fan B Starts	Variable Speed Outdoor Fan Starts
XXXXXX	XXXXXX	XXXXXX
Outdoor Fan A Running Time	Outdoor Fan B Running Time	Variable Speed Outdoor Fan Running Time
HHHHHH:MM	HHHHHH:MM	HHHHHH: MM
Supply Fan Starts XXXXX	Supply Fan Running Time HHHHH:MM	
Exhaust Fan Starts XXXXXX	Exhaust Fan Running Time HHHHH:MM	

### Setup

Touch the **Setup** button to view the Setpoints screen.

Touch the arrow buttons to move between screens.

Figure 22. Setup screen



This Setup screen shows a list of the setup items in button format. The available setup items are listed below:

		Emergency Heat Mode Request Auto, Emergency Heat
	Display Read Only Mode Read, Write	
Supply Air Reset Type Heat, Cool, Auto		

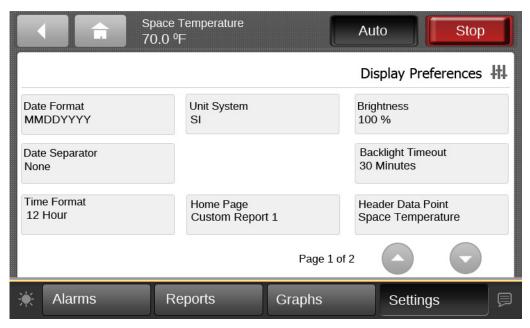
### **Display Settings Screen**

The selections in this category contain settings that affect the way in which information is displayed on all of the TD-5 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 23, p. 33). On this screen, all available options to display information on the TD-5 screens are available. There are two pages on this screen, accessed by using the arrow button at the bottom of the screen.

Figure 23. 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).

#### **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 Time-out**

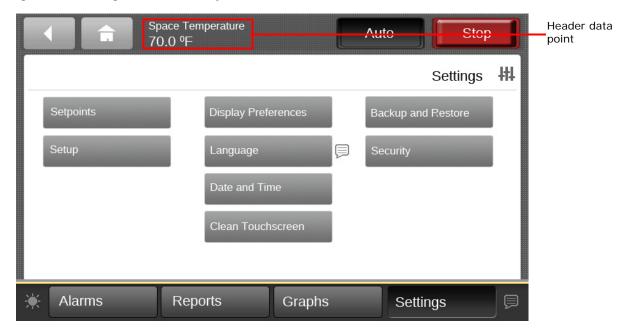
Touch the **Backlight Time-out** button to open the associated screen. This value is measured in minutes, with 30 being the maximum limit. Use the keypad to enter a backlight time-out value. This value is the amount of time that the display will remain lit without activity. When the

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 24, p. 34). Click **Save**.

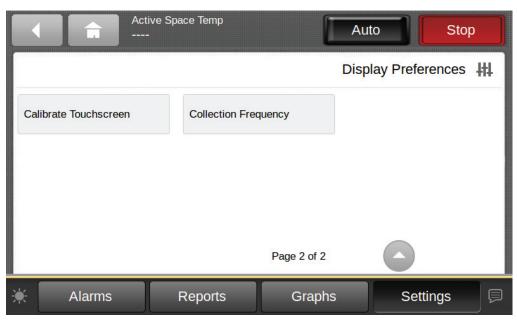
Figure 24. Setting the header data point



#### **Touchscreen Calibration**

- Touch the "Calibrate Touchscreen" button to calibrate the touchscreen only if there if there is a problem with the TD5 recognizing button touches (See Figure 25, p. 35).
- Note that after every reboot or power cycle, a touchscreen calibration screen is presented briefly right before the home screen appears. The initial calibration screen is useful in case a calibration problem occurs that makes the touchscreen unusable for touching buttons.
- To calibrate the touchscreen, carefully touch each of the 5 targets presented. It is important that the targets are touched accurately, or this will cause problems touching buttons after calibration. It is recommended (but not required) to use a pencil eraser to do this since it's easier to control the exact location of the touch.
  - Do not use anything hard to press on the touchscreen since this can damage it.
  - If the calibration touches are reasonably accurate, the TD5 will accept the calibration and reboot. If not, it will run through the process again. The TD5 will exit calibration mode if the user doesn't press the screen in a reasonable amount of time to begin the calibration.

Figure 25. Touchscreen Calibration

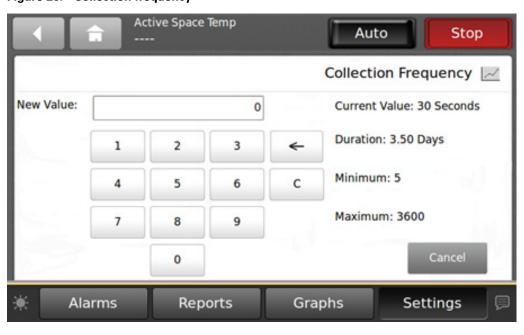


### **Collection Frequency**

Collection frequency sets the time interval that the Graph Data is saved, and displayed on the graph. The faster the

sample rate, the lower the duration. The default of 30 seconds shall provide 3.5 days of data collection.

Figure 26. Collection frequency



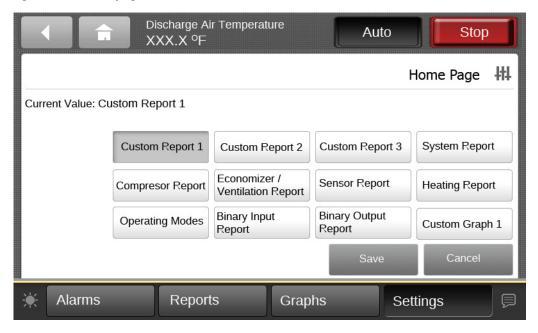
### **Settings**

### **Home Page**

Use the arrow button on the Display Preferences screen to advance to page 2. Touch the **Home Page** button to open

Figure 27. Home page screen

the associated screen. This function allows you to choose what will display when the home button is touched.



### Language

Touch the **Language button**, or the language icon ( ) located at the bottom right of each screen, to open the open the Language screen. Twenty-six languages are

available and represented on the selection buttons. Select a language that you want displayed on each TD-5 screen and then touch **Save**. See "Language," p. 36.

Figure 28. Language screen

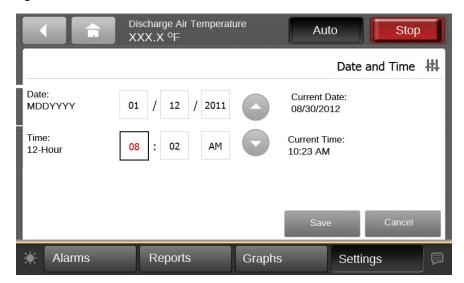


### **Date and Time**

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 appeared with a black border. when finished, touch **Apply** or **Save**. Or,

Figure 29. Date and time screen

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**.



#### Clean Touchscreen

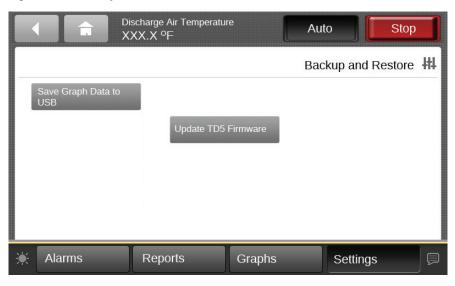
Touch the **Clean Touchscreen** button to safely clean the TD-5 touchscreen using any brand of common household glass cleaner. When this button is touched, the screen background color becomes black, allowing dirt and fingerprints to become more visible. It also displays a countdown timer (five to zero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

anytime within the 5-second countdown to begin cleaning the screen (each touch resets the 5-second countdown).

### **Backup and Restore**

Graph data can be saved to a USB. Click on the Save Graph Data to USB button. Display firmware can be updated by touching the Update TD Firmware button.

Figure 30. Backup and restore screen



## **Troubleshooting**

This section describes the possible error messages and other issues that you may encounter while using the  $\mathsf{Tracer}^\mathsf{TM}$  TD-5 display.

Important:

There are no serviceable parts within the TD-5 display enclosure. Opening the enclosure will void the product warranty.

### **Identifying and Diagnosing Issues**

Problem	Possible Cause	Possible Solution
Blank display (TD-5 does not respond to touch).	No power.	Verify that the TD-5 is connected to a power source, and that the power source is in working condition.
After powering up, the TD-5 displays a message that it is not communicating.	Controller not powered up.	Replace cable if necessary. Power up the controller if necessary.
No data available in custom report.	Data has not yet been defined for the report.	Add data to report. See "Creating a Custom Report," p. 14.
Blank display	TD-5 has gone into a low power mode and shut off backlight.	Touch the TD-5 screen to wake up the display.
Button presses don't work properly.	Touchscreen calibration issue.	Run through a touchscreen calibration by cycling power to the module. See Touchscreen Calibration sections for more information.

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