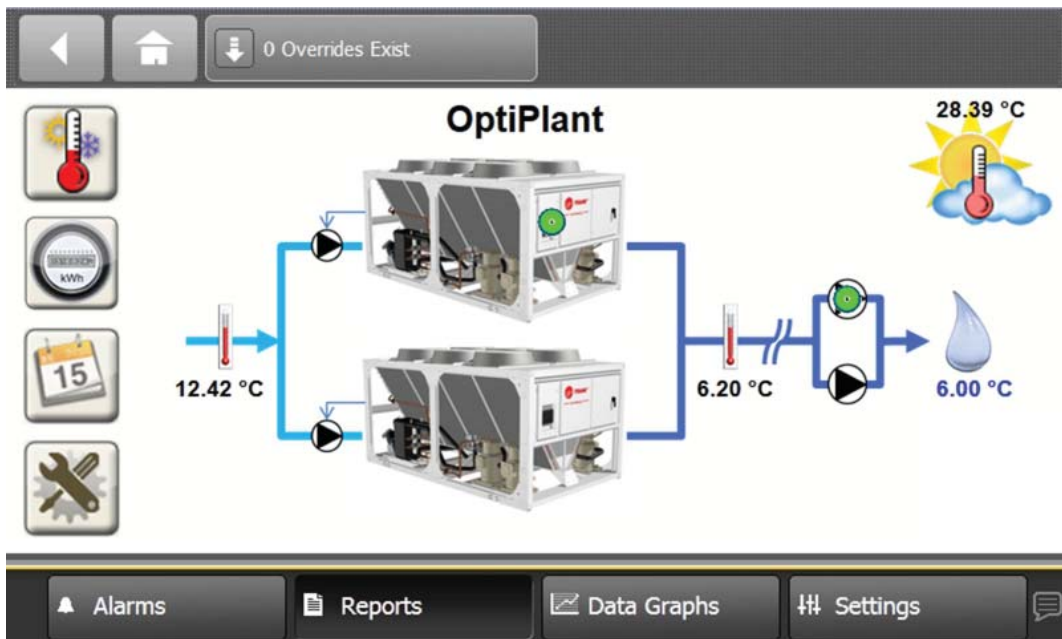




# Installation Manual

## OptiPlant: Trane Chiller Sequencer Kit (v2.00)





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# Introduction

## Foreword

These instructions are given as a guide to good practice in the installation of the Trane OptiPlant control panel. They do not contain the full service procedures necessary for the continued successful operation of this equipment. The services of a qualified service technician should be employed, through the medium of a maintenance contract with a reputable service company.

## Warranty

Warranty is based on the general terms and conditions of the constructor. The warranty is void if the equipment is modified or repaired without the written approval of the constructor, if the operating limits are exceeded, or if the control system or the electrical wiring is modified. Damage due to misuse, lack of maintenance, or failure to comply with the manufacturer's instructions, is not covered by the warranty obligation. If the user does not conform to the instructions given in this document, it may entail cancellation of warranty and liabilities by the constructor.

## Reception

On arrival, inspect the unit before signing the delivery note. Specify any damage on the delivery note, and send a registered letter of protest to the last carrier of the goods within 72 hours of delivery. Notify the local Trane sales office at the same time. The unit should be totally inspected within 7 days of delivery. If any concealed damage is discovered, send a registered letter of protest to the carrier within 7 days of delivery and notify the local Trane sales office.

Important notice: No shipping claims will be accepted by Trane if the above mentioned procedure is not respected.

Note: More stringent national rules may apply in some countries. For more information, refer to the general sales conditions of your local Trane sales office.

## Warnings, Cautions, and Notices

Warnings, cautions, and notices are provided in appropriate places throughout this document. They indicate a potentially hazardous situation which, if not avoided, could result in death or serious injury or in equipment or property-damage accidents. It could also be used to alert against unsafe practices.

Your personal safety and the proper operation of this machine require that you follow them carefully. The constructor assumes no liability for installations or servicing performed by unqualified personnel.

## Overview

Trane OptiPlant control panel has been designed to control plants including two Trane air cooled scroll chillers of equal capacity with the following features:

- Sequencing and timed rotation of chillers
- Control of system pump (if any). With timed rotation for two system pumps
- Chilled water reset, based on outside ambient temperature or system return water temperature (option)
- System ambient lockout
- Demand limiting
- Soft start
- Scheduling to enable/disable the OptiPlant operation (option)

These Trane chillers can be equipped with **CH530** or **CH532** or **UCM-CLD** or **UC800** unit controllers.

Interactions between the chillers and Trane OptiPlant control panel are hardwired connections that:

- Send a command to enable chiller operation (and system pump operation - if any)
- Receive a chiller (and system pump) failure (if any)
- Send an analog signal to change or reset the chiller chilled water setpoint

The **CH532** controller integrates all the functions for the above interactions.

The **CH530** controller requires **additional interface cards** to:

- Provide chiller failure information (Relay Card, ref X136508061) or
- Accept chilled water setpoint change and reset (Analog Card, ref X136507312).

The **UCM-CLD** controller requires one **additional module** to:

- Accept chilled water setpoint change and reset (Analog Card, ref X13650364040 or MOD014222).

The **UC800** controller requires one **additional interface card** to:

- Accept chilled water setpoint change and reset (Analog Card, ref X136507312).

***The availability of these cards or modules should be ensured prior to commissioning of the Trane OptiPlant panel.***

For chilled water setpoint change or reset, the OptiPlant application generates the following signals, for each chiller and on two different outputs:

- 0/2-10 VDC signals and
- 4-20 mA signals

**Ensure proper connections on OptiPlant panel and proper settings on the chiller controllers.**

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<sup>1</sup> Referred as 1A18 in the CGAM wiring diagram.

<sup>2</sup> Referred as 1A14 in the CGAM wiring diagram.



## Overview

### Packaged Contents

The Trane OptiPlant package includes:

- One electrical cabinet that houses all the components needed for the operation of the OptiPlant application:
  - One UC600 microprocessor control board, that integrates all the different -preprogrammed- functions of the OptiPlant application
  - One TD7 (or 7 inch) touchscreen color display allowing the user to interact with the system
  - Terminals to connect the required wires to external system components (chillers, sensors...)
- Two water pipe contact temperature sensors (NTC-10k $\Omega$  - Type II) to clamp on the system supply and return water pipes.

*These two contact sensors can be replaced with immersion sensors of same characteristics.*
- One outside air temperature sensor (NTC-10k $\Omega$  - Type II) to install in an adequate location. E.g. not in direct sunlight and away from heat source.

### Additional Local Supply

#### Cabling

##### 1. Electrical supply

The cable should be long enough to supply 220V/50Hz/1ph power to the OptiPlant cabinet.

**Caution! The cabinet power supply should be protected: cabinet requirement is 100VA.**

##### 2. Connection to devices

The cable length should allow the connection from the OptiPlant cabinet terminals to the following devices:

- For remote control
  - OptiPlant system run enabling remote command (if any required on site)
  - Demand Limiting command (if any)
  - Alarm report (if desired).
- Three sensors (temperature readings)
- Each chiller controller (two chillers)
  - Enabling command
  - Fault report
  - Chilled water setpoint change or reset signal (either VDC or mA)
- To each pump (if any)
  - Enabling command
  - Fault report

*Recommended wire: 18-22 AWG (1.00mm to 0.65mm diameter), stranded, tinned-copper, shielded, twisted-pair.*

*Wiring to the different chillers and pumps can be made with multiple pair cables.*

## Required Tools for Mounting and Wiring

A 1/8 inch, flat-bladed screwdriver is required to perform functions such as setting rotary addressing switches, tightening or loosening screw terminals, and removing or repositioning the different components on DIN rail.

## Commissioning

The preprogrammed functions integrated in the controller are:

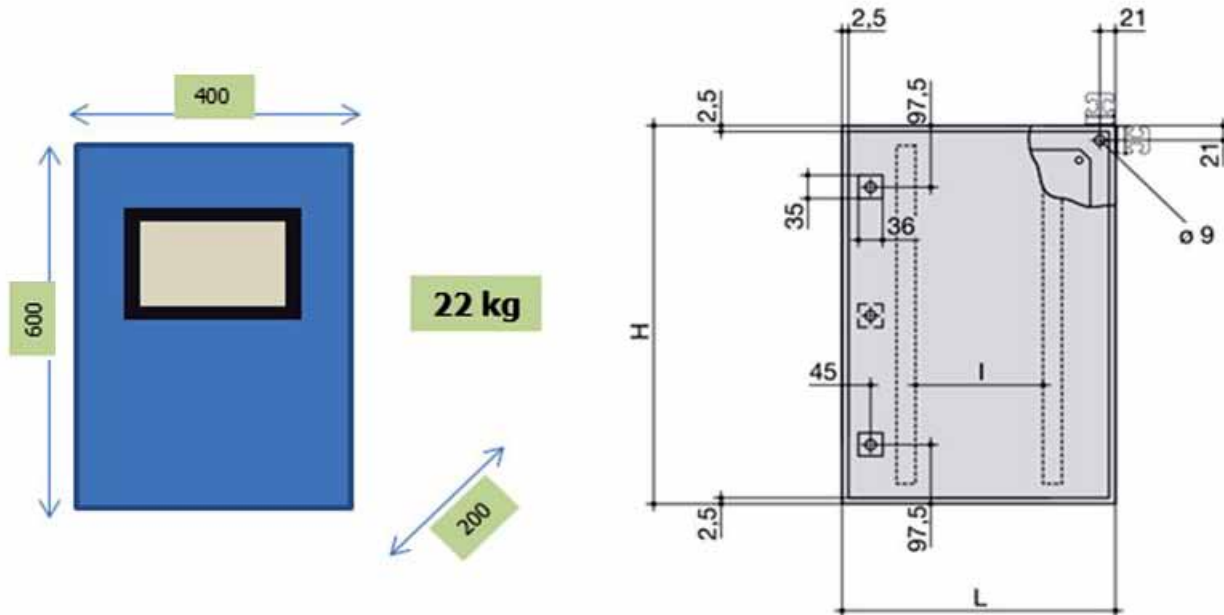
- Sequencing and timed rotation of chillers
  - With enabling command for system pumps (if any)
  - With enabling commands for sequencing and timed rotation of (two) system pumps (if any)
- System ambient lockout
- Demand limiting
- Soft start
- Chilled water reset, based on outside ambient temperature or system return water temperature (option)

These functions require some parameters to be set at startup to manage the specificities of the system -chiller plant- under control.

# Installation

1. Install the electrical cabinet in a convenient location.

*Figure 1- Panel dimensions*



The cabinet is supplied with wall mounting brackets.

Operating range: -18°C to 50°C

Cabinet is IP55 and can be installed outside. Shading device may be required.

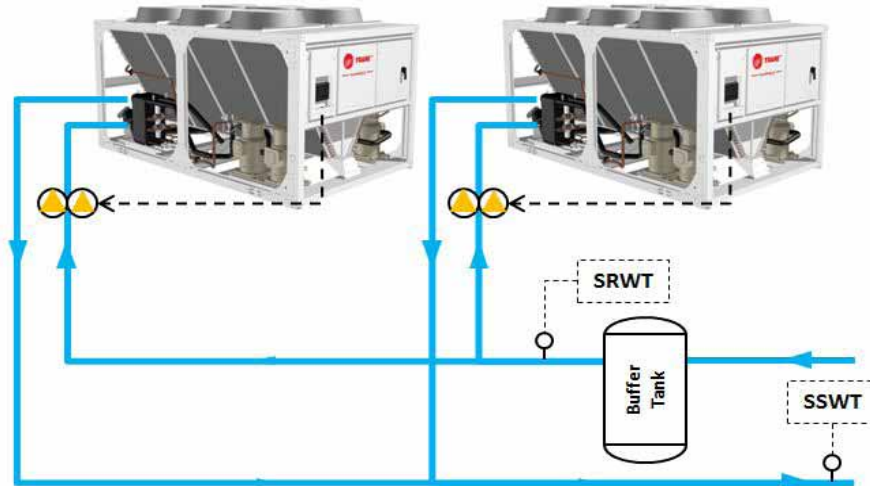
2. Run the number of needed wires:
- Between cabinet and sensors.
  - Between cabinet and chiller control panels.
  - Between cabinet and remote command (if any.)



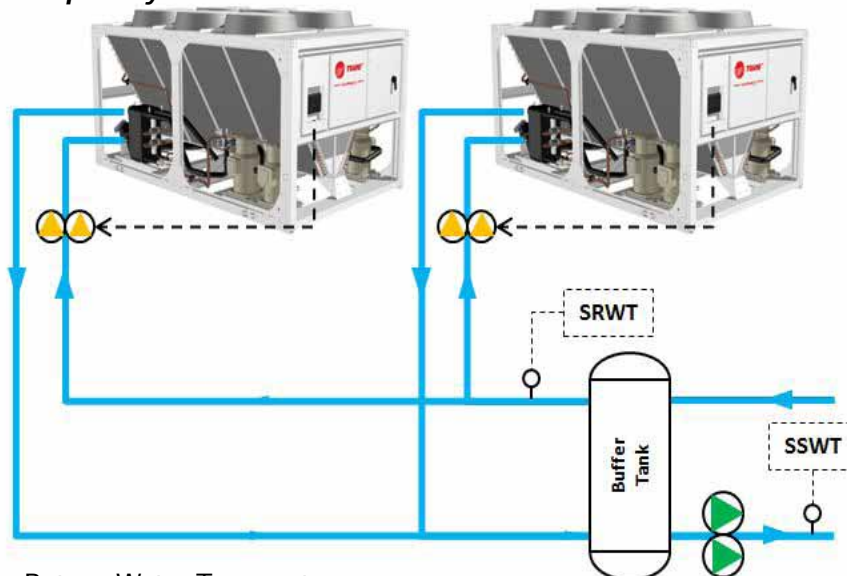
3. Install the two water temperature sensors in appropriate locations on the water piping, as shown below.

Two water pipe contact temperature sensors (NTC-10k $\Omega$  - Type II) are provided as standard supply.

**Figure 2 - Non decoupled system**



**Figure 3 - Decoupled system**



SRWT: System Return Water Temperature

SSWT: System Supply Water Temperature

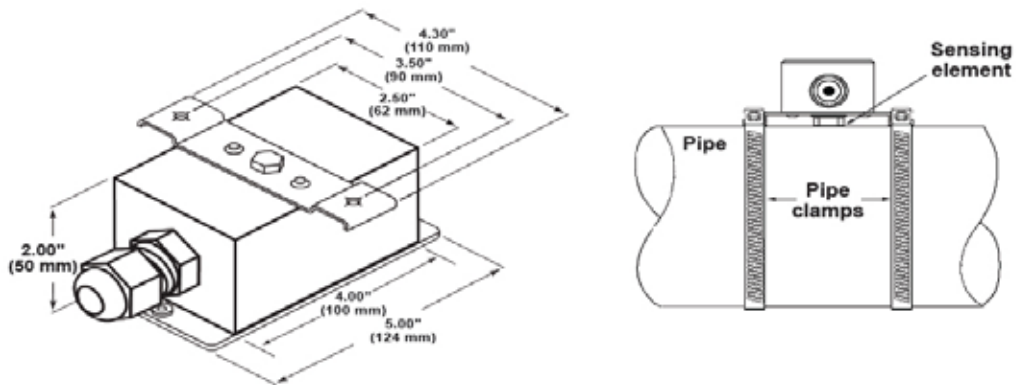
Note: Evaporator Pumps are not controlled by the OptiPlant application

Standard supply is water pipe contact temperature sensors.

If installed outside, protect these sensors from sun influence.

## Installation

*Figure 4 - Water Sensor*



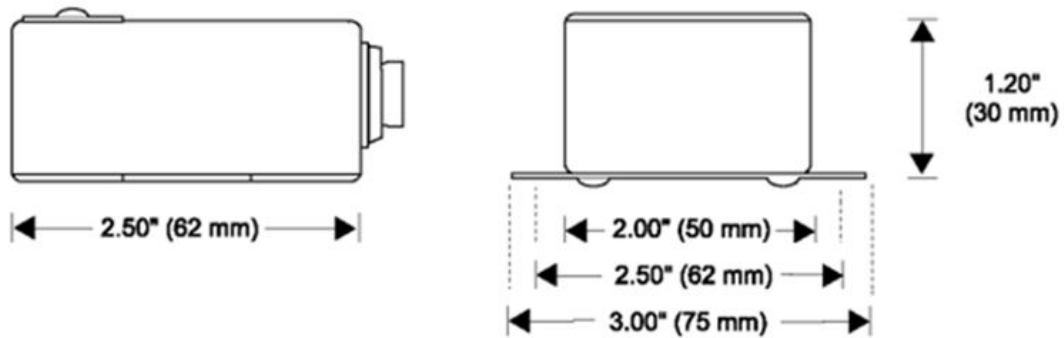
Refer to the installation instructions provided with the sensors or proceed as follows:

- Scrape any rust or scale off the pipe surface
- Apply a thin layer of thermal compound to the sensing element
- Position the sensor's sensing element so that it makes contact with the pipe and fasten with two pipe clamps (not provided)
- Loosen the cover screws and rotate the cover out of the way
- Make the wiring connections
- Rotate and screw the cover back into place

*If required, the contact sensors can be replaced with immersion sensors of the same type.*

4. Install the outside air temperature sensor in an appropriate location.  
Protect this sensor from sun influence.

**Figure 5 - Air Sensor**



Refer to the installation instructions provided with the sensor or proceed as follows:

- Hold the sensor against the supporting fixture where it will be installed and use the flange as a guide to mark and drill two holes.
- Remove the screw from the sensor cover and pull the cover off. Set the screw and cover aside.
- Connect the wires to the screw terminal block.
- Reattach the sensor cover and tighten the screw.
- Fasten the sensor to the outside wall using two screws.

5. Provide a protected 220V/50hz/1ph power supply to the cabinet, to terminals X1-X2 (+earth).

Note: Alternatively 400V/50Hz/1ph could be provided on the appropriate control transformer terminals.

# Connections

## Recommendations

- Use 18–22 AWG (1.00 mm to 0.65 mm diameter) stranded, tinned-copper, shielded, twisted-pair wire
- Connect the shield to the earth bar of the OptiPlant panel and tape it back at the input device (sensor, chiller controller terminals...).
- Limit wiring length to:

Type	Maximum Wire Lengths (m)			
	Input		Output	
Binary	<b>BI</b>	300m	<b>BO</b>	300m
0–20 mA	Not applicable		<b>AO</b>	300m
0–10 VDC	Not applicable		<b>AO</b>	100m
Thermistor/Resistive	<b>AI</b>	100m	Not applicable	

## OptiPlant cabinet Input/Output

All the connections are made on the terminal block.

### 1. System

ID	Terminals	Designation	IO type	See Notes
I-EN	X33 - X34	Run Enable (System)	BI	1
I-DLL	X35 - X36	Demand Limiting	BI	2
O-ALM	X37 - X38	Fault Synthesis	AO	3

#### Notes:

1) External command for enabling the OptiPlant application.  
*Closed contact enables the OptiPlant application.*

If no external command is installed for enabling the OptiPlant application, a jumper must be put on terminals X33-X34.

*Jumpers are provided with the OptiPlant panel.*

2) External command for demand limiting mode.  
*Closed contact enables the demand limiting mode.*

3) Alarm report is a 24VAC signal.

### 2. Sensors

ID	Terminals	Designation	IO type
S-WST	X27 - X28	Water Supply Temperature	AI
S-WRT	X29 - X30	Water Return Temperature	AI
S-OAT	X31 - X32	Outside Air Temperature	AI

### 3. Chillers

ID	Terminals	Designation	IO type	See Notes
<b>Chiller 1</b>				
O-EN1	X5 - X6	Chiller 1 - Enable	BO	4
I-AL1	X3 - X4	Chiller 1 - Fault	BI	5
O-RS1	X7 - X8	Chiller 1 - Reset Signal (VDC)	AO	6
O-RS2	X9 - X10	Chiller 1 - Reset Signal (mA)	AO	7
<b>Chiller 2</b>				
O-EN2	X11 - X12	Chiller 2 - Enable	BO	4
I-AL2	X13 - X14	Chiller 2 - Fault	BI	5
O-RS3	X19 - X20	Chiller 2 - Reset Signal (VDC)	AO	6
O-RS4	X21 - X22	Chiller 2 - Reset Signal (mA)	AO	7

Notes:

4) Enabling command for chiller 1, chiller 2.  
*Contacts should be closed to enable chillers.*

5) Fault of chiller 1, chiller 2.  
*A closed contact indicates a fault.*

6) Chilled water temperature change or reset signal (in VDC) to chiller1 (X8: ground) and to chiller 2 (X20: ground).  
*Use Parameters screen to set up the proper signal (VDC or mA) to send to the chillers.*

7) Chilled water temperature change or reset signal (in mA) to chiller1 (X10: ground) and to chiller 2 (X22: ground).  
*Use Parameters screen to set up the proper signal (VDC or mA) to send to the chillers.*

### 4. System pumps

ID	Terminals	Designation	IO type	See Notes
O-EN3	X17 - X18	System Pump 1 - Enable	BO	8
I-AL3	X15 - X16	System Pump 1 - Fault	BI	9
O-EN4	X23 - X24	System Pump 2 - Enable	BO	8
I-AL4	X25 - X26	System Pump 2 - Fault	BI	9

Notes:

8) Enabling command for pump 1 or pump 2.  
 Contacts should be closed to enable the pumps. Pumps are rotated at the same time intervals as the chillers.  
*Only one pump is enabled at a given time (with failure recovery).*  
*In one-pump installations, both outputs should be wired to this pump.*

9) Fault of pump 1 or pump 2.  
*An open contact indicates a fault.*  
 If no feedback is available for the pump operation, jumpers shall be placed on terminals X15-X16 and on terminals X25-X26.  
*Jumpers are provided with the OptiPlant panel.*



## Connections

### Chillers

Trane chillers can be equipped with **CH532** or **CH530** or **UCM-CLD** or **UC800** unit controllers.

#### CH532

The CH532 controller is installed on Air-Cooled scroll chillers with one or two refrigerant circuits. The CH532 controller natively integrates all the capabilities to accept external commands (setpoint change or reset, enabling).

#### Single circuit unit

Signal	Connect to	On
Chiller Enable	X1 - X7	Terminal block
Chiller Fault	C9 - NO9	CH532 - block J16
Chiller Reset Signal (VDC or mA)	GND – B8	CH532 - block J6

#### Dual circuit unit

Designation	Connect to	On	See Notes
Chiller Enable – Circuit 1	X1 - X7	Terminal block	
Chiller Enable – Circuit 2	X1 – X10	Terminal block	
Chiller Fault – Circuit 1	C9 - NO9	CH532 - block J16	1
Chiller Fault – Circuit 2	C9 – NO11	CH532 - block J16	1
Chiller Reset Signal (VDC or mA)	GND – B8	CH532 - block J6	

#### Notes:

1) NO contacts for Chiller Faults (Circuit 1 and Circuit 2) can be wired:

- In parallel: to report the fault of one of the two circuits or
- In series: to report a fault on each of the two circuits.

### CH530

This controller is installed on Air-Cooled scroll (or screw) chillers with one or two refrigerant circuits.

To accept external commands (setpoint change or reset) and report defaults, the CH530 controller needs to be equipped with **additional interface cards**:

- To report defaults (Relay Card, ref X13650806<sup>3</sup>). *Only one relay card X13650806 is needed whatever the number of the chiller circuits.*
- To accept external setpoint (Analog Card, ref X13650731<sup>4</sup>).

***The availability of these cards or modules should be ensured prior to commissioning of the Trane OptiPlant panel.***

If adding new interface cards, the CH530 Service Tool (TechView) is required to update the CH530 main processor with the new configuration.

Chiller enabling command comes on a card (ref X13650728<sup>5</sup>) that is supplied as standard.

Signal	Connect to	On Card	Designation	See Notes
Chiller Enable	1 -2	X13650728	AUTO STOP	
Chiller Fault	7 -9	X13650806	UNIT STATUS PROGRAMMABLE RELAY	
Chiller Reset Signal (VDC or mA)	2 - 3	X13650731	EXTERNAL CHILLED WATER SETPOINT	2, 3

Notes:

2) Terminal 3: ground.

3) The CH530 Service Tool (TechView) may be required to:

- Ensure the proper setting for the signal (VDC or mA) accepted by the Analog Card X13650731.
- Set the proper range of ECWS Minimum /Maximum Temperatures (respectively - 12.2°C and 18.3°C).

<sup>3</sup> Referred as 1A18 in the CGAM wiring diagram

<sup>4</sup> Referred as 1A14 in the CGAM wiring diagram

<sup>5</sup> Referred as 1A13 in the CGAM wiring diagram



## Connections

### UCM-CLD

The UCM-CLD controller is installed on Air-Cooled screw chillers with two refrigerant circuits. To accept external commands (setpoint change or reset), the UCM-CLD controller needs to be equipped with **one additional interface module** (ref X13650364040 or MOD01422<sup>6</sup>).

**The availability of this module should be ensured prior to commissioning of the Trane OptiPlant panel.**

Optional enabling command is available on a module (A1) that is supplied as standard. Chiller fault report comes on a module (A1) that is supplied as standard.

Signal	Connect to	On Card	Designation	Note
Chiller Enable	TB3-3 /-4	Module A1	AUTO STOP	
Chiller Fault	TB4-1 /-2	Module A1	UNIT ALARM, MANUAL AND AUTO RESET	4
Chiller Reset Signal (VDC or mA)	TB1-4 /-5	Module A9	EXTERNAL CHILLED WATER SETPOINT	5, 6

#### Notes:

- 4) To recover this level of alarm (Unit Alarm, Manual and Auto Reset) ensure that the setting of Programmable Relay Setup (Service Setting Menu) is 2 or 10.
- 5) Terminal 5: ground.
- 6) For VDC signal, set the dipswitch SW1-1 of the module A9 to "OFF."  
For mA signal, set the dipswitch SW1-1 of the module A9 to "ON."

### UC800

The UC800 controller is installed on Air-Cooled screw chillers with two refrigerant circuits. To accept external commands (setpoint change or reset), the UC800 controller needs to be equipped with **one additional interface card** (Analog Card, ref X13650731<sup>7</sup>).

**The availability of this card should be ensured prior to commissioning of the Trane OptiPlant panel.**

If adding a new interface card, the UC800 Service Tool (Tracer™ TU) is required to update the UC800 main processor with the new configuration. Chiller enabling command comes on a card (ref X13650728<sup>8</sup>) that is supplied as standard. Chiller fault report comes on a card (ref X13650806<sup>9</sup>) that is supplied as standard.

Signal	Connect to	On Card	Designation	Note
Chiller Enable	1 -2	X13650728	EXTERNAL AUTO STOP	
Chiller Fault	7 -9	X13650806	QUAD RELAY OUTPUT FAULT/STATE REPORT	
Chiller Reset Signal (VDC or mA)	2 - 3	X13650731	EXTERNAL CHILLED WATER SETPOINT	7, 8

#### Notes:

- 7) Terminal 3: ground.
- 8) The UC800 Service Tool (Tracer™ TU) may be required to:
  - Ensure the proper setting for the signal (VDC or mA) to be accepted by the Analog Card X13650731.
  - Set the proper range of ECWS Minimum / Maximum Temperatures (respectively -12.2°C and 18.3°C).

<sup>6</sup> Module CSR - External communication link and chiller water reset, referred as Module A9

<sup>7</sup> Referred as 1A19 in the RTAF wiring diagram

<sup>8</sup> Referred as 1A9 in the RATF wiring diagram

<sup>9</sup> Referred as 1A18 in the RTAF wiring diagram



# Settings

## Setting the OptiPlant application

The OptiPlant application provides several customized screens.

Refer to the User Guide for information on:

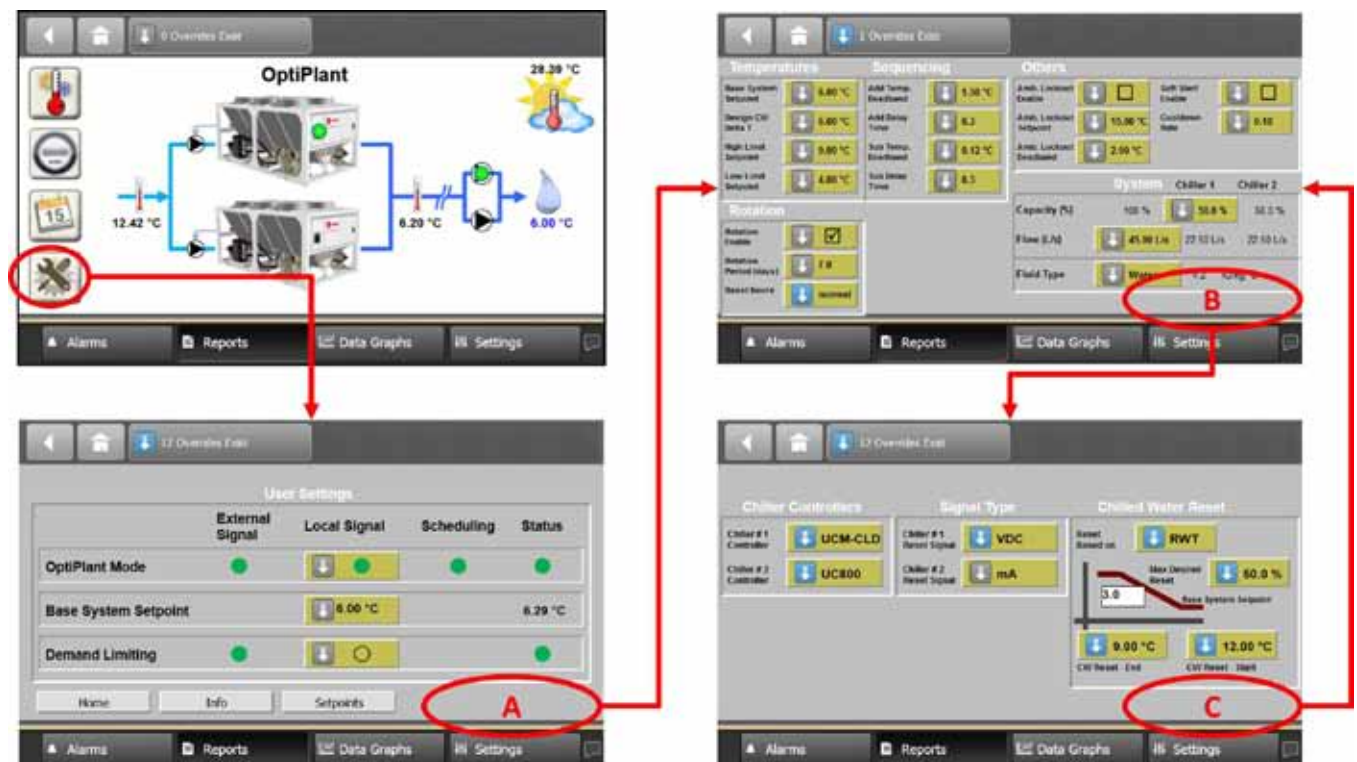
- How to navigate around the customized screens
- Getting used to the TD7 environment

Setting the OptiPlant application is done through the two **Parameters** screens accessible from the TD7 display.

To access these **Parameters** screen (see figure 6):

- Click on the **Settings** icon from the **Main** screen.
- From the **User Settings** screen, press the bottom right area of the screen (red framed area A) to navigate to the **Parameters** screen #1.
- To navigate to the **Parameters** screen #2, press the bottom right area of the screen (red framed area B).
- To navigate back to the **Parameters** screen #1, press the bottom right area of the screen (red framed area C).
- To exit the **Parameters** screen, press the icon.

Figure 6 - Accessing the Parameters screens



## Settings

### 1. Parameters Screen #1 Description:

Figure 7 - Parameters Screen #1



#### A. System Description

##### Chiller #1 Capacity (%)

Units of unequal sizes can be sequenced with OptiPlant.

Enter the relative size (percentage of the total installed capacity) of unit #1.

The unit #2 capacity will then be calculated (as a percentage of the total installed capacity)

##### System flow (l/s)

The system flow is needed when the Metering option is installed to estimate the actual cooling capacity delivered by the system.

Enter the total design flow delivered to the system.

The flow for each chiller will be recalculated based on their configured capacity percentage.

##### Fluid type

The fluid type is needed when the Metering option is installed to estimate the actual cooling capacity delivered by the system.

Select from the list the percentage of glycol in the system (0 and 40%).

The Cp (specific heat of fluid) will be displayed next.

**B. System Chilled Water Temperatures**Base System Setpoint (°C)

Temperature of chilled water desired in the system at design operating conditions.

This temperature is not always the temperature of the chilled water delivered in the system.

Temperature reset may apply.

Design Chilled Water Temperature Difference (K)

Actual design water temperature difference between the system chilled water return temperature and the system chilled water supply temperature, when the system is at max design load.

Setpoint - High Limit (°C)

Upper value that can be set for the base system setpoint, when overriding this value in the User Settings screen.

Setpoint - Low Limit (°C)

Lower value that can be set for the base system setpoint, when overriding this value in the User Settings screen.

*See also Chiller Controllers Settings/CH532.*

**C. Sequencing**

These parameters are set to fine-tune the sequencing application in some very specific conditions. In standard conditions, it is recommended to keep default values.

Add Temperature Deadband (K)

Value added to the System Chilled Water Setpoint before an Add request is generated.

Default: 0.6      Range: 0.1 >> 18.0

Add Delay Time (mn)

Length of time the Add request must be present before the second chiller is added.

Default: 10.0      Range: 0.0 >> 30.0

Subtract Temperature Deadband (K)

Value used in the subtraction logic to prevent an immediate Add request from occurring after subtracting the second chiller.

Default: 0.1      Range: 0.1 >> 18.0

Subtract Delay Time (mn)

Length of time the Subtract request must be present before the second chiller is subtracted.

Default: 20.0      Range: 0.0 >> 30.0

**D. Chiller Rotation**

*Function used to equalize operation hours on both chillers.*

Rotation Enable

Enables or disables this function

Rotation Period (days)

Number of (fixed) days between chiller rotations

Reset Counter

Resets the counter to zero.

**E. Ambient Lockout**

*Function that prevents the chiller plant to operate below a given outside air temperature.*

Ambient Lockout Enable

Enables or disables this function.

## Settings

### Ambient Lockout Setpoint (°C)

Outdoor air temperature below which the Ambient Lockout function will be active (if the function is enabled) preventing the chiller operation.

### Ambient Lockout Deadband (K)

Number of degrees above the Ambient Lockout Setpoint that the outdoor air temperature must reach before the ambient lockout function returns in standby mode.

### F. **Soft start**

*Function that prevents excess capacity from being brought online when the OptiPlant is enabled and the system chilled water supply temperature is not near its setpoint.*

### Soft Start Enable

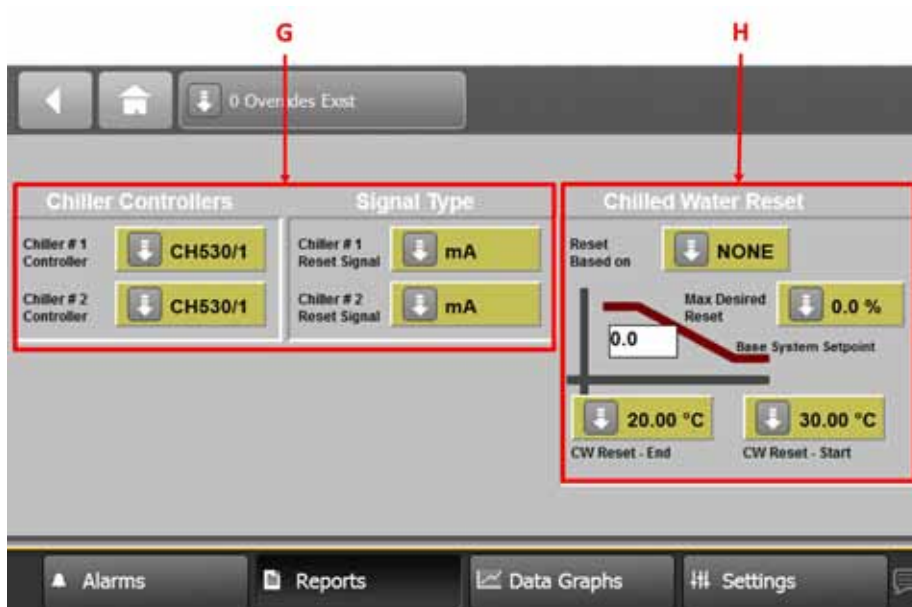
Enables or disables this function

### Soft Start Minimum Cooldown Rate (K/mn)

The minimum rate at which the System Chilled Water Supply Temperature must drop to prevent the OptiPlant application from adding the second chiller during soft start mode.

## 2. Parameters Screen #2 Description:

**Figure 8 - Parameters Screen #2**



### G. Chiller Controllers

*Required to correctly change and reset the chilled water setpoint of the chillers*

#### Chiller #1 // Chiller #2 Controller

Chiller controller to be selected: CH530 or CH532 or UCM-CLD or UC800.

*Chiller controllers to be checked on site.*

#### Chiller #1 // Chiller #2 Reset Signal

Type of signal set (or to be set) within the chiller controller for chilled water setpoint modification.

To be selected within two selections:

0/2-10 VDC or 4-20 mA

*See also Chiller Controllers Settings.*

### H. Chilled Water Reset

*Function which modifies (upward) the chilled water setpoint of the chillers, assuming a reduced non-sensitive cooling load can be satisfied with warmer chilled water temperature.*

*This function is used to improve the chiller efficiency.*

*In HVAC applications, the usual reference for cooling load reduction is the outside air temperature or the return chilled water temperature.*

#### Reset Based on

The reset base (or the variable used as reference to reflect the load reduction) can be selected within two choices: AOT (Outside Air Temperature) or RWT (system Return chilled Water Temperature).

A third choice, NONE, disables the function

Max Desired Reset: Max Desired Chilled Water Temperature Reset (%)

Percentage of the Design Chilled Water Temperature Difference. This percentage is converted in temperature on the graph. The temperature value will be the maximum reset increase. The Chilled Water Reset function will apply on the Base System Setpoint.

*Any value above 0% enables the Chilled Water Reset function.*

*A value of 0% disables the function.*

CW Reset Starting: Chilled Water Reset Starting Temperature (°C)

Outdoor air temperature or return chilled water temperature -depending of the reference used in the former selection (Reset Based on)- below which the Chilled Water Reset function starts modifying the setpoint.

*Above this temperature, no modification is made in the Base Setpoint.*

CW Reset Ending: Chilled Water Reset Ending Temperature (°C)

Outdoor air temperature or return chilled water temperature -depending of the reference used in the former selection (Reset Based on)- at which the Chilled Water Reset function has reached the maximum set point modification.

*Below this temperature, the setpoint remains at a fixed value.*

*Ending Temperature should be lower than the Starting Temperature.*



## Settings

### Setting Chiller Controllers

Setting the chiller controller is needed to apply Chilled Water Setpoint change or reset.

The change or reset signal issued to the chiller controller can be VDC or mA depending on the terminals connected in the OptiPlant panel.

*Ensure proper settings on the chiller controllers.*

#### CH530

*Refer to User Guide CG-SVU06B-E4, Tracer CH530 for Air-Cooled Scroll Chillers*

- Set the input signal type for the External Chilled Water Setpoint
- Ensure proper arbitration between various chilled water setpoint sources

#### CH532

*Refer to User Guide CG-SVU01C-E4, Tracer CH532 Chiller Controller*

- Set the input signal type for the External Chilled Water **Reset** Setpoint
- Set the Chiller Chilled Water Front Panel Setpoint at the minimum permitted value, defined at the Chilled Water Reset panel, for local Chilled Water Setpoint.  
*The Front Panel setpoint shall correspond to the value set in the Parameter screen (see A. above) for Setpoint - Low Limit, as CH532 applies reset as an offset on the Front Panel setpoint.*
- Ensure proper arbitration between various chilled water setpoint sources if applicable.

#### UCM-CLD

*Refer to Engineering Bulletin EB542E*

*UCM—CLD: Unit Control Module with Clear Language Display for Screw compressor*

Using the Clear Language Display

- Set “Programmable Relay Setup” (Service Setting Menu) to “2” or “10”.

And if needed,

- Set “External Chilled Water Setpoint” (Operator Settings Menu) to “E” using the Clear Language Display.

#### UC800

*Refer to User Guide RLC-SVU007A, Tracer™ TD7 with UC 800*

- Set the input signal type for the External Chilled Water Setpoint
- Ensure proper arbitration between various chilled water setpoint sources



# Notes



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