

# CoolLogic Touch

Installation, Operation & Maintenance Manual



**CLIMA**  **COOL**®

A **NIBE** GROUP MEMBER

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Rev: June 7, 2023

# Introduction

## General Description

The CoolLogic Touch Control System provides leaving chilled and hot water liquid temperature control algorithms which maintain precise temperature control for cooling, heating, heat recovery and simultaneous heating and cooling applications. A compressor run time equalization sequence is given to ensure even distribution of compressor run time throughout the entire chiller bank. Chiller power consumption is minimized by indexing the most efficient stages of cooling and/or heating, optimizing heat transfer surface.

The ClimaCool® Modular Chiller Systems Models, “UCW/H/R/A” series, modular chillers utilize the CoolLogic Touch Control System to incorporate one or more modules. The controls are divided into two separate sections - the CoolLogic Touch Control Panel and the module controller. The CoolLogic Touch Control Panel governs all significant events, timing and compressor staging, providing operator interface for all levels of setting and retrieving data.

The module controller resides at each module location which senses and analyzes all pertinent data specific to that module's compressor and water temperature operations.

## Safety

Throughout this manual warning, danger, caution and attention notices appear. Read these items carefully before attempting any installation, service or troubleshooting of the equipment. All labels on unit access panels must be observed.

**DANGER:** Immediate hazardous situation which, if not avoided, **will** result in death or serious injury.

**WARNING:** Potentially hazardous situation which, if not avoided, **could** result in death or serious injury.

**CAUTION:** Potentially hazardous situation or an unsafe practice which, if not avoided, **could** result in minor or moderate injury or product or property damage.

<b>⚠ WARNING/ADVERTISSEMENT</b>	
To avoid possible injury or death due to electrical shock, open the power supply disconnect switch and secure it in an open position during installation.	Pour éviter les blessures ou la mort par électrocution, ouvrir la interrupteur de sécurité et fixez-le en position ouverte lors de l'installation.

<b>⚠ WARNING/ADVERTISSEMENT</b>	
Disconnect power supply(ies) before servicing. Refer servicing to qualified service personnel. Electric shock hazard. May result in injury or death!	
<b>⚠ CAUTION/ATTENTION</b>	
Unit to be serviced by qualified personnel only. Refrigerant system under pressure. Relieve pressure before using torch. Recover refrigerant and store or dispose of properly.	 RECOVER REFRIGERANT
<b>⚠ CAUTION/ATTENTION</b>	
Use only copper conductors for field installed wiring. Unit terminals are not designed to accept other types of conductors.	Utilisez uniquement des conducteurs en cuivre pour le câblage. Bornes de l'unité ne sont pas conçus pour accepter d'autres types de conducteurs.
<b>⚠ WARNING/ADVERTISSEMENT</b>	
For field installation of Port 1 communication wiring, installer must use: <ul style="list-style-type: none"><li>• ARC-156 communication wire</li><li>• single-twisted pair</li><li>• shielded with drain</li><li>• low capacitance (12.5 pF/ft)</li><li>• 22AWG</li></ul> This conductor must be daisy chained from the CoolLogic Touch Controller to each chiller module.	Pour l'installation sur place du câblage de communication du port 1, l'installateur doit utiliser: <ul style="list-style-type: none"><li>• le câble de communication ARC-156</li><li>• Paire à simple torsion</li><li>• blindée avec drain</li><li>• faible capacité (12.5 pF/ft)</li><li>• 22AWG</li></ul> Ce conducteur doit être connecté en guirlande du contrôleur CoolLogic Touch à chaque module de refroidissement.
Maximum separation of low voltage communication and high voltage power wiring is required.	Le fil doit être installé dans son propre conduit. L'acheminement doit entrer et sortir de la section basse tension du boîtier de commande où se trouve le contrôleur et ne peut pas circuler à moins de 6 à 8 pouces de tout câblage de tension CA à l'intérieur ou à l'extérieur du compartiment des machines.

# Communications Wiring

## CoolLogic Touch Control System Wiring

A separate 115 volt power supply is required to power the CoolLogic Touch Control Panel. Communication between the CoolLogic Touch Control Panel and chiller modules requires a simple two-conductor 22 AWG shielded cable with drain rated at 60°C minimum, daisy chain connection. **Control wiring cannot be installed in the same conduit as line voltage wiring or with wires that switch highly inductive loads such as contactor and relay coils.** All wiring shall be in compliance with all local and national codes.

## Field Connections between CoolLogic Touch Control Panel and Module Controller

- ARC156, 22 gauge AWG, two conductor shielded cable with drain (under 50 feet) See page 3.
- Over 50 feet, contact factory

**NOTE:** Use the same polarity throughout the network segment.

## Field Connections to the CoolLogic Touch Control Panel

Field integration with CoolLogic Touch Control Panel is simplified by the use of the following minimum input devices:

- A remote start/stop input for scheduling
- Differential pressure flow sensors for heating, cooling and source (if applicable) water flows
- Voltage/phase monitor (phase loss/phase reversal, brown-out/black-out device) inputs
- Chilled water inlet and outlet temperature sensors and wells
- Heating water inlet and outlet temperature sensors and wells
- Source water inlet and outlet temperature sensors and wells if applicable

Field integration of the following output devices is standard:

- Alarm output closes when any active latching alarm condition occurs (parameter or compressor fault)
- Chiller status output is closed whenever there is a call for chiller operation and all flow, limit, phase, and interlock inputs deliver a closure signal indicating a present normal condition to allow for chiller operation

Figure 1: CoolLogic Touch Control Panel



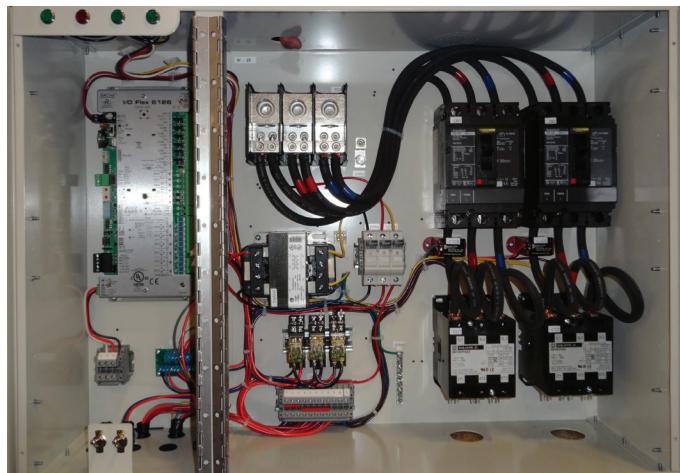
## Field Connections to the Modules

The CoolLogic Touch Control Panel (see Figure 1) connects to the modules using the embedded ARC156 networking technology. It is well suited for real-time control applications in both the industrial and commercial marketplaces. Field connections are made at LVTB1 terminals 21, 22, and 23 at the CoolLogic Touch controller and LVTC terminals 12, 13, and 14 at each chiller module.

## Module Controller

The module controller I/O Flex 6126 (see Figure 2) directly senses the control parameters that govern the specific module's operation, such as evaporator and condenser leaving temperatures, both compressor's winding temperatures, suction and discharge\* temperatures and pressures.

Figure 2: Module Control Panel



## Virtual Bacview Controller

If a single unit bank or the Fail to Run Option are being provided, a virtual Bacview Kit & Instructions will be provided. Please contact your local representative for further information.

# Communications Wiring

## Avoiding Noise\*

Avoid running communication wires or sensor input wires next to AC power wires or the controller's relay output wires. These can be sources of noise that can affect signal quality. Common sources of noise are:

Spark igniters	Induction heaters
Radio transmitters	Video display devices
Variable speed drives	Lamp dimmers
Electric motors (> 1hp)	Fluorescent lights
Generators	Parallel runs with power lines
Relays	Large contactors, (i.e., motor starters)
Transformers	
Other electronic modules	

## ARC156 Wiring Specifications

Below are the specifications for ARC156 wiring. The wire jacket and UL temperature rating specifications list two acceptable alternatives. Halar® has a higher temperature rating and a tougher outer jacket than SmokeGard®, and it is appropriate for use in applications where you are concerned about abrasion. Halar is also less likely to crack in extremely low temperatures.

### \*NOTES:

- If noise is a problem and you cannot move the wiring, use ferrite clamp-on chokes on the cabling to improve signal quality.
- Use the specified type of wire and cable for maximum signal integrity.

## ARC156 specifications

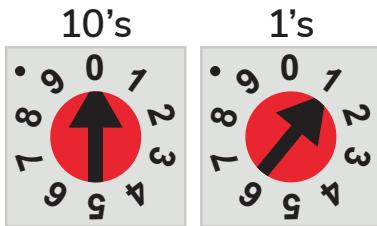
Description	Single twisted pair, low capacitance (12pF), CL2P, 22 AWG (7x30), TC foam FEP, plenum rated cable
Conductor	22 AWG (7x30) stranded copper (tin plated) 0.030 in. (0.762 mm) O.D. <b>NOTE:</b> 24 AWG can be used for segments <200 ft. (6.7 m).
Insulation	Foamed FEP 0.015 in. (0.381 mm) wall 0.060 in. (1.524 mm) O.D.
Color code	Black/white
Twist lay	2 in. (50.8 mm) lay on pair 6 twists/foot (20 twists/meter) nominal
Shielding	Aluminum/Mylar shield with 24 AWG (7x32) TC drain wire
Jacket	<b>SmokeGard®</b> (SmokeGard PVC) 0.021 in. (0.5334 mm) wall 0.175 in. (4.445 mm) O.D. <b>Halar®</b> (ECTFE) 0.010 in. (0.254 mm) wall 0.144 in. (3.6576 mm) O.D.
DC resistance	15.2 Ohms/1000 feet (50 Ohms/km) nominal
Capacitance	12.5 pF/ft (41 pF/meter) nominal conductor to conductor
Characteristic impedance	100 Ohms nominal
Weight	12 lbs./1000 feet (17.9 kg/km)
UL temperature rating	<b>SmokeGard®</b> 167°F (75°C) <b>Halar®</b> -40 to 302°F (-40 to 150°C)
Voltage	300 Vac, power limited
Listing	UL: NEC CL2P, or better

# Configuration – CoolLogic Touch Control System

## Configuring the CoolLogic Touch Controller

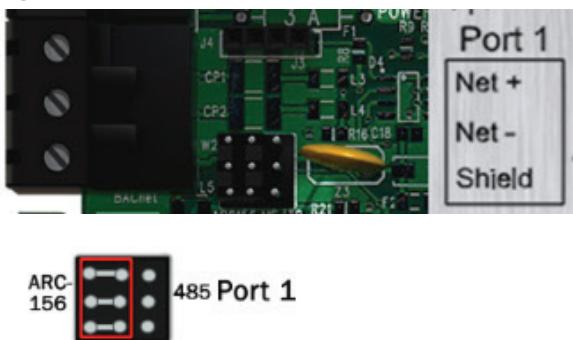
1. Turn off the CoolLogic Touch Controller's power
2. Using the rotary switches, set the CoolLogic Touch Controller's address. Set the Tens (10's) switch to the tens digit of the address, and the Ones (1's) switch to the ones digit.  
**If the CoolLogic Touch Controller's address is 01, point the arrow on the Tens (10's) switch to 0, and the arrow on the Ones (1's) switch to 1.**

Figure 3: Rotary Switches



3. Port S1 is the only port that speaks BACnet over ARC156. Connect the communications wiring to Port S1 in the screw terminals labeled Net+, Net-, and Shield (GND). The module controller references GND, and the CoolLogic Touch Controller references SHIELD (see Figure 4).

Figure 4



4. Set comm selector DIP Switches 1-8 to OFF. Set the Port 1 Mode Jumper to ARC156.
5. Turn on the CoolLogic Touch Controller's power.
6. Default for the CoolLogic Touch Board address will be 516800. Any variance from this device number cannot be used without ClimaCool Custom Programming. Consult the ClimaCool factory if Custom Programming is required.

## CoolLogic Touch Control System

### Operator Interface

The CoolLogic Touch Control System offers an easy-to-use operator interface touch screen (Figure 5) which includes a 1280 by 800 pixel, 10.1" widescreen display panel, which is easy to navigate using logically grouped menus. This enables the user to access important information concerning set points, active temperatures, pressures, operating modes, alarm conditions, chiller scheduling, servicing, diagnostics and more.

Figure 5: EQT2



If the touchscreen is left idle for 10 minutes, the default screen appears (Figure 6).

Figure 6: Default Screen



# Configuration – CoolLogic Touch Control System

## Starting the Chiller

When power is first applied to the CoolLogic Touch Control Panel, a 45 second initialization period will occur. The display will show the home screen (Figure 7). Once power has been applied to the CoolLogic Touch Control Panel various display screens are accessible by several methods. From the “Home” screen, the operator is easily guided to the main menu listings for the following categories by pressing one of the bottom four menu buttons:

Figure 7: Home Screen

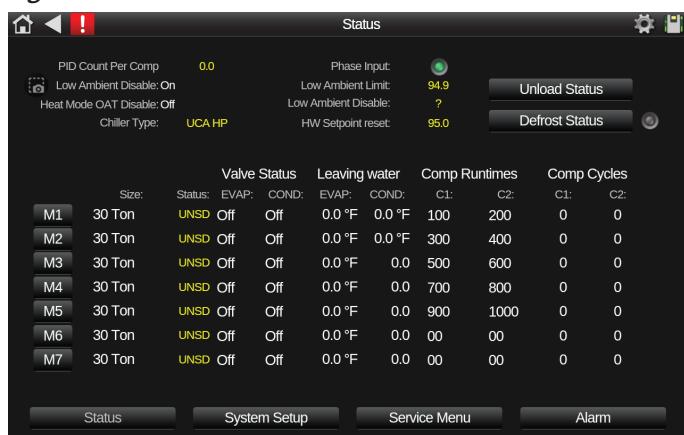


At the end of this delay, the module status will be shown, and after the screen timeout (settable), the display will change to the default screen (see Figure 6).

## Status Menu

Items in the status menu can be used to view operational status of various items as listed (Figure 8):

Figure 8: Status Menu



## Setup Menu

Chiller system operation is determined by the values assigned to the system variables, as predominantly found in the Setup menu (Figure 9). The Setup menu lists a series of sub-menus:

- General System Settings
- Heating and Cooling Set Point Menus
- Remote Reset and Demand Limiting Setup

These variables are initially assigned a default value. For most applications, these values will provide optimum results.

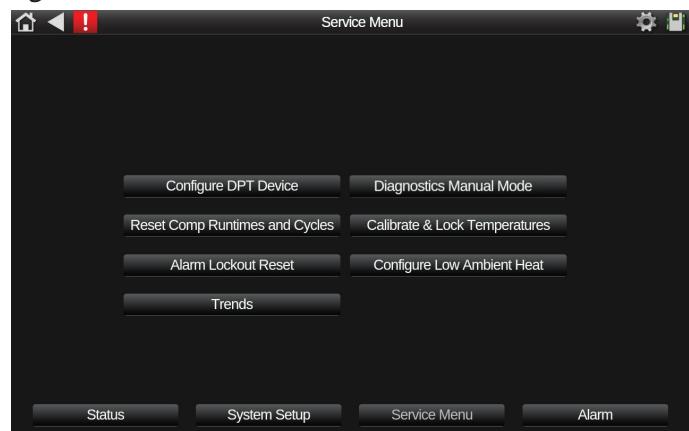
Figure 9: Setup Menu



## Service Menu

Items in the service menu can be used for diagnostic and calibration of various items (Figure 10).

Figure 10: Service Menu

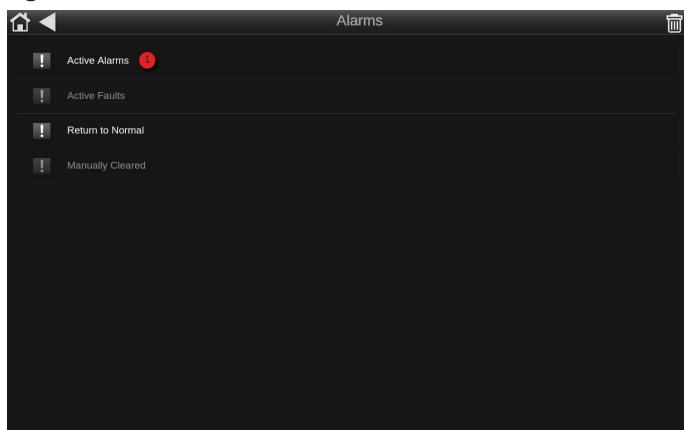


# Configuration – CoolLogic Touch Control System

## Alarm Menu

Up to 100 of the most recent occurrences stored with date and time. Access to this log is available through the keypad.

**Figure 12: Alarm Menu**



## LOCAL/OFF/REMOTE SWITCH

To Turn System On there are two options:

### LOCAL MODE

Set to “Digital Input”

OR

Set to “Keypad” and “Enable Chiller from Keypad”

Set to ON.

And if the chiller is a 4-pipe water source system OR 2-pipe air source system,

Cool Mode BAS set to ON

Or, Heat Mode BAS set to ON (if available)

Or, Heat Recovery Mode BAS set to ON (if available)

### NOTE: Heat Recovery not applicable to Air Source

Or, if the chiller is an SHC 6-pipe Water Source system OR 4-pipe Air Source system, one, two or all three modes above (if available) can be enabled for automatic mode control.

### REMOTE MODE

With jumper installed at terminals 40 and 39 of LVTB2 and Mode set to Digital IN.

OR

Mode set to BAS and the BAS is sending an ON command.

To use a remote relay (enable), insert the relay in place of the jumper. Set the switch to Remote Mode and the input mode to “Dig Input.”

## To Power Down Chiller Bank

1. Locate CoolLogic Touch Panel for the particular bank to be disabled.
2. Locate the bank of modules connected to this CoolLogic Touch Panel.
3. Go to the CoolLogic Touch Panel and turn the LOCAL-OFF-REMOTE switch to the off position.

If complete shut-down of main power to all equipment is desired, the additional steps can be taken (see Controller Memory section).

1. Inside the CoolLogic Touch Panel, locate the main transformer box in the top left corner. Slide the pivoting door to access the amber ON/OFF switch and switch to the OFF position.
2. Locate the main power disconnect or breaker panel that feeds each module and/or the entire bank of modules; place the line powered switch to the OFF position.
3. Lock out/Tag out Line voltage equipment as required.

**NOTE:** Do not leave the CoolLogic Touch controller or the Module controllers without power for an extended period of time as the battery power of the controller will be drained and program can be corrupted.

## To Power Up Chiller Bank

1. Remove the Lock out/Tag out devices from line powered disconnect switch.
2. Turn the main power disconnect(s) to the ON position.
3. Confirm the POWER ON indicator light is ON at each of the chiller modules.
4. Open the CoolLogic Touch Panel and turn the main transformer ON/OFF switch back to the ON position.
5. Close the CoolLogic Touch Panel door and set the LOCAL-OFF-REMOTE switch to the local or remote position.

**NOTE:** When re-applying power, the CoolLogic Touch Panel must be the last device turned on after the modules are energized to properly restore communication.

# Configuration – CoolLogic Touch Control System

## Recommended for Extended Bank Shutdown

1. Remove the command for “Remote Chiller Enable” using the BAS System or hard wire connection.
2. Turn off the switch on the front of the CoolLogic Touch Control Panel
3. Leave main power ON to the CoolLogic Touch Controller.

If this procedure is not followed for scheduled shutdowns, you may risk losing the software program and/or set points.

## Controller Memory

User data is archived to non-volatile Flash memory when parameters are changed, every 90 seconds, and when the firmware is deliberately restarted.

**NOTE:** When you change a parameter, you must wait 30 seconds before turning the power off, in order for the change to be saved.

# Standard Alarm Functions

## High Pressure Cutout

This requires resetting both the module's manual reset high pressure control switch. Default for R-410A is 560; for R-134a is 380.

## Compressor Thermal Protector Fault

This would occur if the motor protector sensed an overload trip in the compressor motor. The compressor thermal protector monitors a series of thermistor temperatures in the motor windings as an indication of overload. This requires resetting the CoolLogic Touch Control Panel. Tap on the "alarm" on-screen button.

## Low Suction Temperature

During operation, should this temperature drop to 32° F, the compressor will shut down. This requires resetting the CoolLogic Touch Control Panel after the temperature has risen above 33° F. Tap on the "alarm" on-screen button.

## High Discharge Temperature

During operation, should this temperature rise above 225°F, the compressor will shut down. This requires resetting the CoolLogic Touch Control Panel after the temperature has cooled to below 175° F. Tap on the "alarm" on-screen button.

## Low Leaving Chilled Water Temperature - Below 38° F

Evaporator freeze protection requires resetting the CoolLogic Touch Control Panel after the temperature has risen to 40° F. Tap on the "alarm" on-screen button.

## High Leaving Condenser Water Temperature - Above 138° F

The CoolLogic Touch Control Panel will auto reset after the temperature has fallen below 133° F. Tap on the "alarm" on-screen button.

## Communications Error

This signifies a loss of communication between any module controller and the CoolLogic Touch Control Panel.

## No Run - No Status

This alarm occurs when a compressor is commanded to run and the status is not sensed by the controller. The status circuit uses a contact closure by either an auxiliary contact mounted to the compressor contactor, or a current switch that senses a minimum compressor amperage to close its contact. This circuit closure includes resistors of specific values to provide an input to the controller confirming the ON status of either compressor.

## Motorized Valve Alarm

This alarm is similar to the NO RUN alarm, in that the end switch contact closure of the motorized valves (used for the current mode of operation) will complete a circuit (or circuits) through the resistor board and is then input to the controller to provide an OPEN VALVE status.

## Miscellaneous Alarm Functions of the CoolLogic Touch Control System

- Loss of flow through the evaporator
- Loss of flow through the condenser
- Electrical voltage/phase failure
- Temperature and pressure sensor "Out-of-Range" error detects when an open or shorted sensor condition exists.

# Standard Features

## Chilled Water Flow Sensor

The CoolLogic Touch Control Panel has an input for a differential pressure sensor, which measures and displays pressure drops across the chilled water main headers. If the differential pressure drops below a predetermined setting for a fixed period of time after the chiller receives a “RUN” input signal, the chiller will not be allowed to run and a chilled water flow alarm condition is displayed. The alarm condition must be resolved, flow re-established and a minimum pressure differential acknowledged by the differential pressure sensor. The alarm clears automatically which constitutes an “OK to RUN” status. The alarm condition is logged for retention in the most recent 100 alarms.

## Condenser Water Flow Sensor

The CoolLogic Touch Control Panel has an input for a differential pressure sensor, which measures and displays pressure drops across the condenser water main headers. If the differential pressure drops below a predetermined setting for a fixed period of time after the chiller receives a “RUN” input signal, the chiller will not be allowed to run and a condenser water flow alarm condition is displayed. This alarm condition must be resolved and flow re-established and a minimum pressure differential acknowledged by the differential pressure sensor. The alarm clears automatically and the alarm condition is logged for permanent retention of the most recent 100 alarms. This will constitute an “OK to RUN” status.

## Voltage/Phase Monitor

Voltage/phase monitors are factory supplied for field installation with the CoolLogic Touch Control Panel. The voltage/phase monitor helps guard the chiller bank against voltage fluctuations, phase failure or phase reversal conditions. The voltage phase monitor will be field installed and connected to the main three phase power panel that feeds all the installed modules. Two low voltage control wires are connected to the CoolLogic Touch Control Panel, terminals 25 and 26 of LVTB2, and must be field installed as well along with the power wiring. **Do not install control wiring in the same conduit as line voltage wiring or with wires that switch highly inductive loads such as contactor and relay coils.**

**Install one (1) monitor per bank at main power distribution panel to monitor voltage and phasing of power to the modules. See Wiring Diagram on page 30.**

## Chilled/Heating Water Reset

The CoolLogic Touch Control Panel can be programmed to reset the leaving water temperature set point using a hard wired input voltage or current signal, or the voltage input can be modified via a BAS command. The reset functions are optional and must be activated through the appropriate setup

menus. If the chiller is operating and it receives a chilled water reset command, the leaving chilled water temperature setting will be allowed to ramp toward the new setting at a rate of 2°F every seven minutes. When the chiller is not operating and it receives a chilled water reset command, the leaving chilled water temperature setting will be fully reset immediately.

## External Chilled Water Set Point Option

The CoolLogic Touch Control Panel provides an input that accepts either 2-10 VDC or 4-20 mA signals to set the leaving chilled water set point. This input defines the set point and is not a reset (or offset) function. This input is used with generic Building Automation System (BAS) installations. The 2-10 VDC and 4-20 mA ranges each correspond to a preset range from the minimum chilled water set point to the maximum chilled water set point.

## External Condenser Water Set Point Option

Associated with heat recovery chillers, the CoolLogic Touch Control Panel provides an input that accepts either 2-10 VDC and 4-20 mA signals to set the leaving condenser water set point. This input defines the set point and is not a reset (or offset) function. This input is used with generic BAS installations. The 2-10 VDC and 4-20 mA ranges each correspond to a preset range from the minimum condenser water set point to the maximum condenser water set point.

## Demand (or Load) Limiting

To limit the number of compressors that can be simultaneously energized, a demand limit control is available. The CoolLogic Touch Control Panel provides an input channel that accepts either 2-10 VDC and 4-20 mA signals to set the maximum number of compressor stages allowable at any one time. This input is typically used with generic BAS installations. The 2-10 VDC and 4-20 mA ranges each correspond to a range from 0% to 100% of the total available compressor stages.

## Alarm Output

The relay output contact is closed whenever there is an active latching or non-latching alarm condition present relative to a fault parameter.

## Chiller Status Output

The relay output contact is closed whenever all input signals to the chiller are present and normal, indicating the requirement for the chiller to operate when able.

# Standard Features

## Chilled Water Temperature Sensor Connections

Chilled water temperature monitoring (entering and leaving) is a standard feature of the CoolLogic Touch Control System. It is accomplished by using a factory supplied pair of sensors and sensor wells which are field installed into  $\frac{1}{2}$ " weld-o-lets (field supplied and installed onto the main water headers) within 60" of the entering and leaving chilled water locations. **NOTE: Sensors must be fully inserted into the well to obtain proper readings and must be  $2\frac{1}{2}$  pipe diameter minimum before or after an elbow.**

## Condenser Water Temperature Sensor Connections

Condenser water temperature monitoring (entering and leaving) is a standard feature of the CoolLogic Touch Control System. It is accomplished by using a factory supplied pair of sensors and sensor wells which are field installed into  $\frac{1}{2}$ " weld-o-lets (field supplied and installed onto the main water headers) within 60" of the entering and leaving chilled water locations. **NOTE: Sensors must be fully inserted into the well to obtain proper readings and must be  $2\frac{1}{2}$  pipe diameter minimum before or after an elbow.**

## Building Automation System (BAS) Interface

Internal operational information is available where the chiller is to be integrated into a building system and monitored by the equipment of a controls manufacturer. Available protocols built into the CoolLogic Touch Control System as standard are:

- BACnet
- LonWorks\*

\*N2 and LonWorks require special programming/points list. Limit point polling to a max of 50 points at not more than 20 second intervals.

## LonWorks LonTalk® Communications

### Interface Option

The CoolLogic Touch Control Panel provides an optional LonTalk® communication interface between the chiller and the BAS. Additional hardware is required (Echelon SLTA-10 communications card) to provide "gateway" functionality between a LonTalk compatible device and the CoolLogic Touch Control System.

## Compressor Unloading

Compressor unloading routines are programmed into each module controller. When any one of the module or compressor control parameters approaches a pre-limit condition, the CoolLogic Touch Control System executes appropriate compressor unloading commands to avoid compressor lockout, thus maximizing the chiller system on time. The module information screen can be accessed to view unload conditions when they are active.

## Compressor Minimum Off Delay

When a compressor is turned off, the compressor will remain off for this period of time. The default minimum off delay is 200 seconds.

## Compressor Minimum On Delay

When a compressor is turned on, the compressor will remain on for this period of time. This time can be cut short if an alarm condition is predicted. The default minimum on is 90 seconds.

# Startup and Warranty Form

## CoolLogic CoolLogic Touch Controller

Page 1 of 3

Project Name: \_\_\_\_\_

Start-Up Date: \_\_\_\_\_

Chiller # \_\_\_\_\_ Bank # \_\_\_\_\_

**System Setup**

**System Setup**

General System Settings:

Chiller Module Type:	UCH-HR	Cool & Heat Setpoints
Chiller Control Type:	Heat Recovery	Free Cooling Setup
Refrigerant Type:	R-410A	Remote Reset & DL Setup
Chiller Control Source:	Digital Input	Controller Configuration
Enable Chiller from Keypad?:	Off	
Use High Amb temp Limit?:	No	
Disable Heating Below:	10.0 °F	
Disable Cooling Below:	0.0 °F	
Module Freeze Target SP:	36.0 °F	
Freeze Target Retry:	3	
Low Water Temp Trip time:	30 sec	

Software Version: \_\_\_\_\_

**Status**    **System Setup**    **Service Menu**    **Alarm**

Chiller Control Type ..... \_\_\_\_\_

Chiller Control Source ..... \_\_\_\_\_

Enable Chiller from Keypad? ..... \_\_\_\_\_

Module Ref Type ..... \_\_\_\_\_

Chiller Model Type ..... \_\_\_\_\_

**Module Water Temp Limits**

**Module Water Temp Limits**

Delay Trip Time: 30.00 sec

Water Valve Open Below OAT: 30.0 °F

Mod Cool Water Out LO Limit: 36.0 °F

Mod Cool Water Out HI Limit: 90.0 °F

Mod Cool Water Retries: 3

MOD Cool Low OAT Operating point: 20.0

Hot Water LO Limit: 72.0 °F

Hot Water HI Limit: 135.0 °F

Hot Water HI Limit Retries: 3

MOD Heat Low OAT Operating point: 15.0

**Status**    **System Setup**    **Service Menu**    **Alarm**

Module Evap Water Out Low Limit ..... \_\_\_\_\_

Module Evap Water Out Hi Limit ..... \_\_\_\_\_

Module Cond Water Out Low Limit ..... \_\_\_\_\_

Module Cond Water Out Hi Limit ..... \_\_\_\_\_

**Module Size Selector**

**Module Selector**

Variable Capacity

Module Use Selector:

Module 1:	70 Ton	Comp 1:	70 Ton
Module 2:	70 Ton	Comp 2:	70 Ton
Module 3:	70 Ton		70 Ton
Module 4:	70 Ton		70 Ton
Module 5:	70 Ton		70 Ton
Module 6:	Not Used		Not Used
Module 7:	Not Used		Not Used

**Compressor Settings**

**Status**    **System Setup**    **Service Menu**    **Alarm**

Module 1 Size ..... \_\_\_\_\_

Module 2 Size ..... \_\_\_\_\_

Module 3 Size ..... \_\_\_\_\_

Module 4 Size ..... \_\_\_\_\_

Module 5 Size ..... \_\_\_\_\_

Module 6 Size ..... \_\_\_\_\_

**Main Water & Ambient Temps**

**Main Water & Ambient Temps**

Sensor Limits:

LO EVAP Water IN:	43.0 °F	LO Cond Water IN:	55.0 °F
HI EVAP Water IN:	120.0 °F	HI Cond Water IN:	135.0 °F
LO EVAP Water OUT:	38.0 °F	LO Cond Water OUT:	65.0 °F
HI EVAP Water OUT:	130.0 °F	HI Cond Water OUT:	110.0 °F

Ambient Temperature Limits:

Cooling Low Ambient Operation:	20
Heating Low Ambient Operation:	10 °F
Enable HP Operation below:	90 °F
Use HI Ambient Temperature?:	□
HI Outdoor Air Temp:	115.0 °F
Use Average Outside Air Temp:	□

**Status**    **System Setup**    **Service Menu**    **Alarm**

Evap Water In Low Limit ..... \_\_\_\_\_

Evap Water In Hi Limit ..... \_\_\_\_\_

Evap Water Out Low Limit ..... \_\_\_\_\_

Evap Water Out Hi Limit ..... \_\_\_\_\_

Cond Water In Low Limit ..... \_\_\_\_\_

Cond Water In Hi Limit ..... \_\_\_\_\_

Cond Water Out Low Limit ..... \_\_\_\_\_

Cond Water Out Hi Limit ..... \_\_\_\_\_

**NOTE:** For Reference Only. Each model will contain various menu items.

# Startup and Warranty Form

Page 2 of 3

Chiller # \_\_\_\_\_ Bank # \_\_\_\_\_

### Cool PID Setup

PID Setup			
Switching Differential (+ / -):	3.0	PID Output:	118
Maximum PID of Last Stage:	200.0	Maximum PID Limit:	220.0
Maximum PID Limit with VFD:	200.0	Maximum PID Limit with N+1:	205.0
Interval:	1	Interval:	1
P-Gain:	4.5	P-Gain:	4.0
I-Gain #1:	0.020	I-Gain #1:	0.030
I-Gain #2:	0.010	I-Gain #2:	0.000
PID Rise:	5.5	PID Rise:	5.5
PID Fall:	18.0	PID Fall:	18.0
Control Setpoint Offset:	0.0	Control Setpoint Offset:	0.0
Deadband # 1:	1.5	Deadband # 1:	2.0
Deadband # 2:	0.5	Deadband # 2:	0.5
Use Fixed PID Rise?:	No	Use Fixed PID Rise?:	No
Use Fixed PID Fall?:	No	Use Fixed PID Fall?:	No

<a href="#">Status</a>	<a href="#">System Setup</a>	<a href="#">Service Menu</a>	<a href="#">Alarm</a>
------------------------	------------------------------	------------------------------	-----------------------

Stage 1 Cool PID P-Gain .....	_____
Stage 1 Cool PID I-Gain .....	_____
Cooling PID Rise .....	_____
Cooling PID Fall.....	_____
Cool Central Setpoint Offset.....	_____
Stage 1 Heat PID P-Gain.....	_____
Stage 1 Heat PID I-Gain.....	_____
Heating PID Rise.....	_____
Heating PID Fall .....	_____
Heat Central Setpoint Offset .....	_____

### Flow Sensor Configuration

Flow Sensor Configuration	
Flow Sensor Setup:	*****
Use COND Flow Sensor:	No
Use Chn# 8 as Diff Pres Sensor:	Yes
COND Water Minimum Flow:	1.5 psi
EVAP Water Minimum Flow:	1.5 psi
COND Input Status:	
Input Offset:	0.0 psi
EVAP Input Status:	
Input Offset:	0.0 psi
Use Low Diff Press Filter:	No

<a href="#">Status</a>	<a href="#">System Setup</a>	<a href="#">Service Menu</a>	<a href="#">Alarm</a>
------------------------	------------------------------	------------------------------	-----------------------

Use Chn# 8 as Diff Press Sensors? .....	_____
Use Hi Range Diff Press Sensors? .....	_____
Cond Water Min Dif Pr Flow Setpoint ...	_____
Chill Water Min Dif Pr Flow Setpoint.....	_____

### Refrigeration Temp and Press

Refrigeration Sensors & Alarms			
Available Sensors:	*****	Alarms Available:	*****
Discharge Pressure:	<input checked="" type="checkbox"/>	Leaving COND Water Temp:	<input type="checkbox"/>
Discharge Temperature:	<input checked="" type="checkbox"/>	Enable CWR LO Alarm:	<input type="checkbox"/>
Suction Pressure:	<input checked="" type="checkbox"/>	Enable CHWS HI Alarm:	<input checked="" type="checkbox"/>
Suction Temperature:	<input checked="" type="checkbox"/>		
COND Water OUT Temp CWR:	<input type="checkbox"/>		
Alarms Trip Points:	410A		
HI Discharge Pressure:	550	High Discharge Pressure Retries:	3
HI Discharge Temp:	220.0	High Discharge Temp Retries:	3
Low Suction Pressure (Cool):	92	Low Suction Pressure Retries:	10
		Low-low Suction Pressure:	3
		Low Suction Temperature Retries:	3
Low Suction Temperature:	32.0	Low Discharge Superheat Setpoint:	30
	-5.0	Low Suction Superheat Setpoint:	2
Suction Pressure Time Delay:	30	High Suction Superheat Setpoint:	30

<a href="#">Status</a>	<a href="#">System Setup</a>	<a href="#">Service Menu</a>	<a href="#">Alarm</a>
------------------------	------------------------------	------------------------------	-----------------------

Discharge Pressure Available.....	_____
Suction Pressure Available.....	_____
Discharge Temp Available .....	_____
Suction Temp Available.....	_____
Leaving Cond Water Temp CWR Available..	_____
Enable CWR Lo Alarm .....	_____
Enable CHS Hi Alarm .....	_____
Lo Suction Pressure (Cool) .....	_____
Lo Suction Temperature (Cool) .....	_____

### Cool and Heat Setpoint Menus

Cool & Heat Setpoints			
Local	Local		
Chilled Water Setpoint:	44.0 °F	Local Cond Water Out:	130.0 °F
Chilled Water Offset:	0.00 °F	Hot Water Offset:	0.0 °F
Min Chilled Water Out:	44.0 °F	Min Cond Water Out:	75.0 °F
Max Chilled Water Out:	65.0 °F	Max Cond Water Out:	135.0 °F
Enable HP Below:	90 °F		
 Input 8 Settings	Remote	Input 10 Settings	Remote
Sensor Input Function :	<input type="button" value="None"/>	Sensor Input Function :	<input type="button" value="None"/>
Sensor Input Type:	<input type="button" value="None"/>	Sensor Input Type:	<input type="button" value="NONE"/>
Sensor Input Offset:	0.0	Sensor Input Offset:	0.0
Active CHW Setpoint:	44.0 °F	Active CW Setpoint:	135.0 °F

<a href="#">Status</a>	<a href="#">System Setup</a>	<a href="#">Service Menu</a>	<a href="#">Alarm</a>
------------------------	------------------------------	------------------------------	-----------------------

Local Evap Water Out Setpoint (Cool)...	_____
Min Evap Water Out Setpoint (Cool) ....	_____
Max Evap Water Out Setpoint (Cool)....	_____
Local Evap Water Out Setpoint (Heat)..	_____
Min Evap Water Out Setpoint (Heat)....	_____
Max Evap Water Out Setpoint (Heat)....	_____

**NOTE:** For Reference Only. Each model will contain various menu items.

# Startup and Warranty Form

Page 3 of 3

Chiller # \_\_\_\_\_ Bank # \_\_\_\_\_

**Router**      Controller Configuration

Port Settings  
Port S1: ARC156 Network #: 51680

Backup & Restore  
Backup Memory  1:22:33 PM 05/02/2022 Monday  
Note this overwrites factory settings

Restore Memory  12:00:00 AM 11/30/1899 Thursday  
Note this overwrites site settings

Device Links  
Device memory:  
Archive happens every 90 seconds or after a change.  
Backup and Restore features using Webserver.

MAC Address

MS/TP Network # ..... - - - - -  
Ethernet Network # ..... - - - - -  
Ethernet MAC Add ..... - - - - -

**IP**

IP Network: 2430  
Assigned IP Address: 192.168.17.100  
Assigned Subnet Mask: 255.255.255.0  
Assigned Gateway IP Address: 0.0.0.0  
Assigned UDP Port: 47808

Cancel Save

**NOTE:** For Reference Only. Each model will contain various menu items.

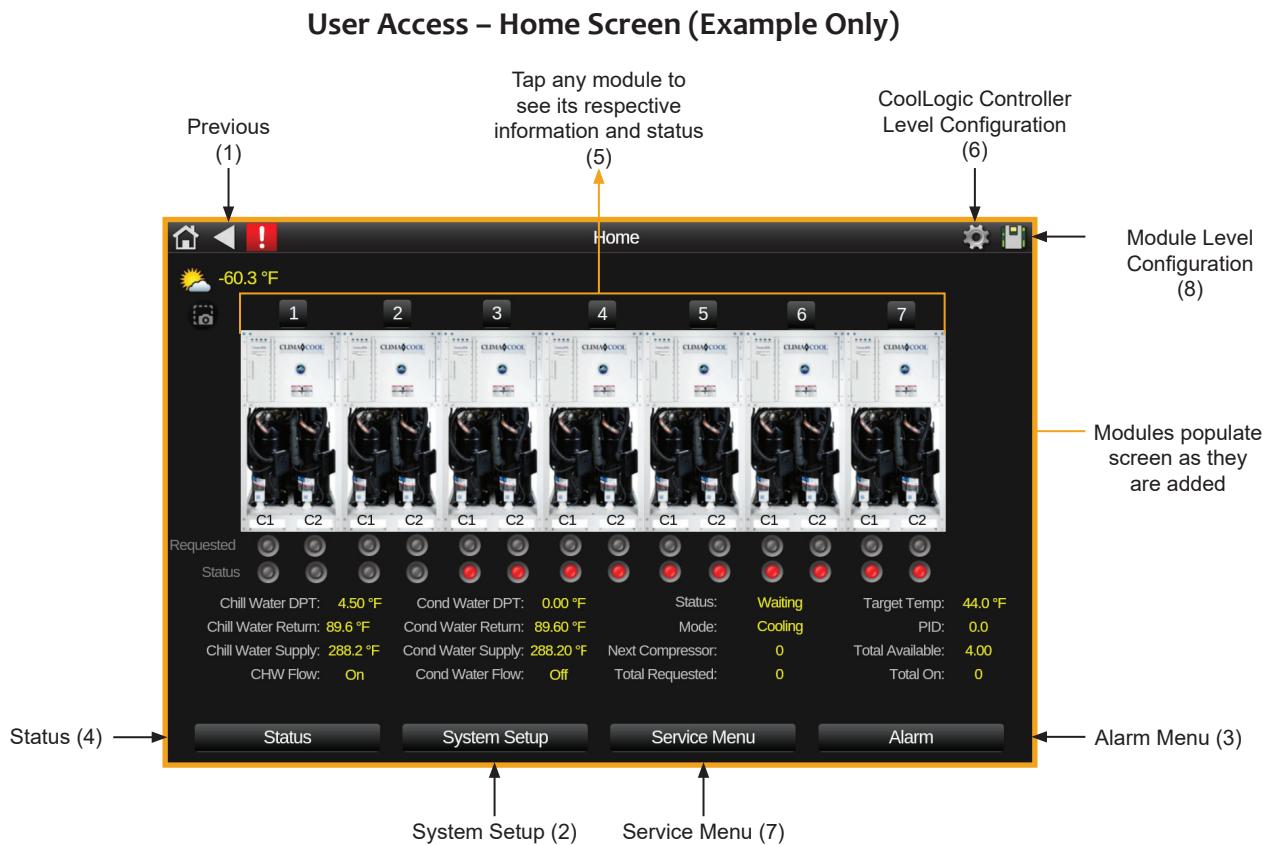
**Contractor Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_  
\_\_\_\_\_

**Phone:** \_\_\_\_\_

**(Authorized Signature):** \_\_\_\_\_

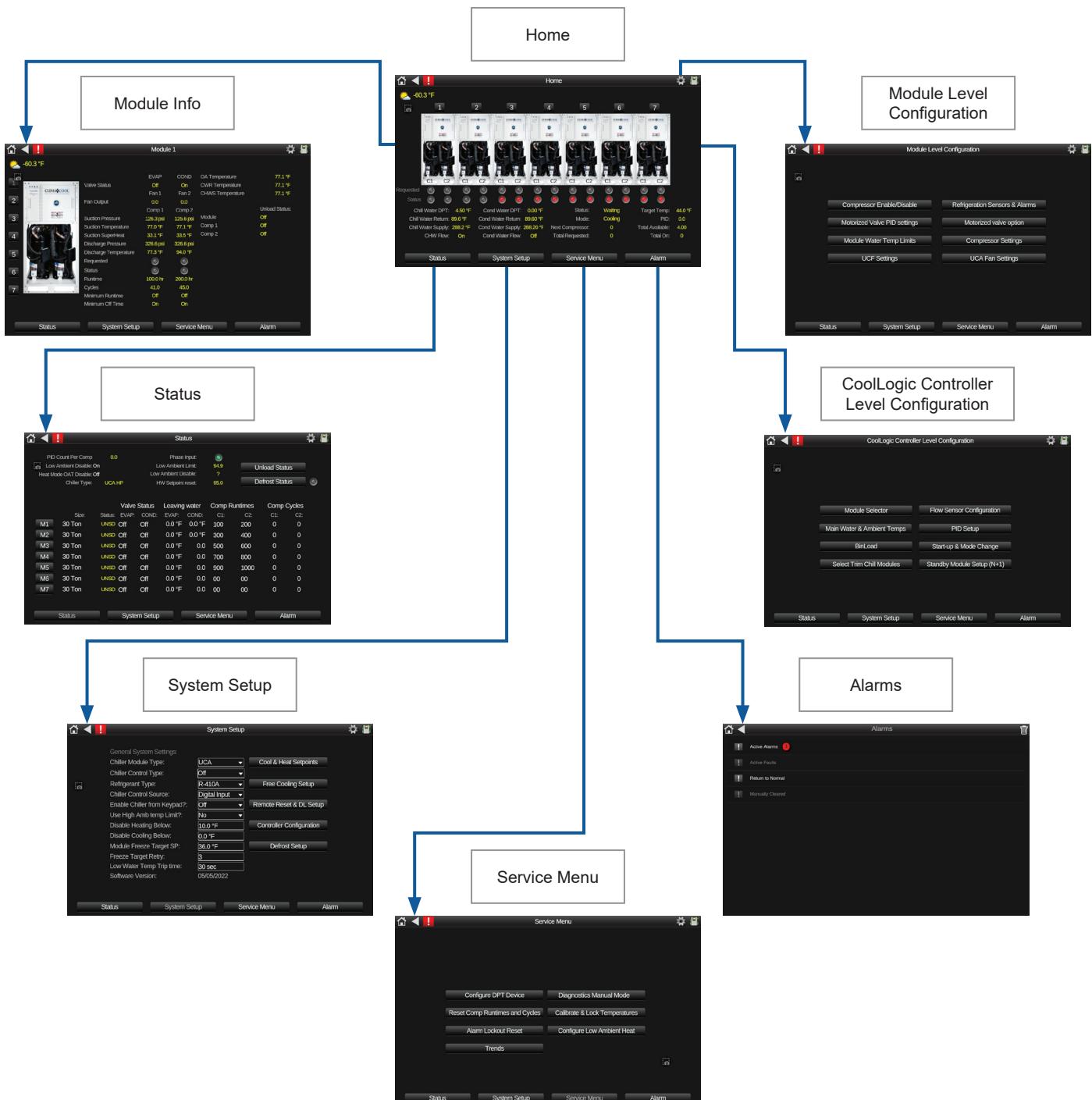
# CoolLogic Touch Screen Menu Hierarchy



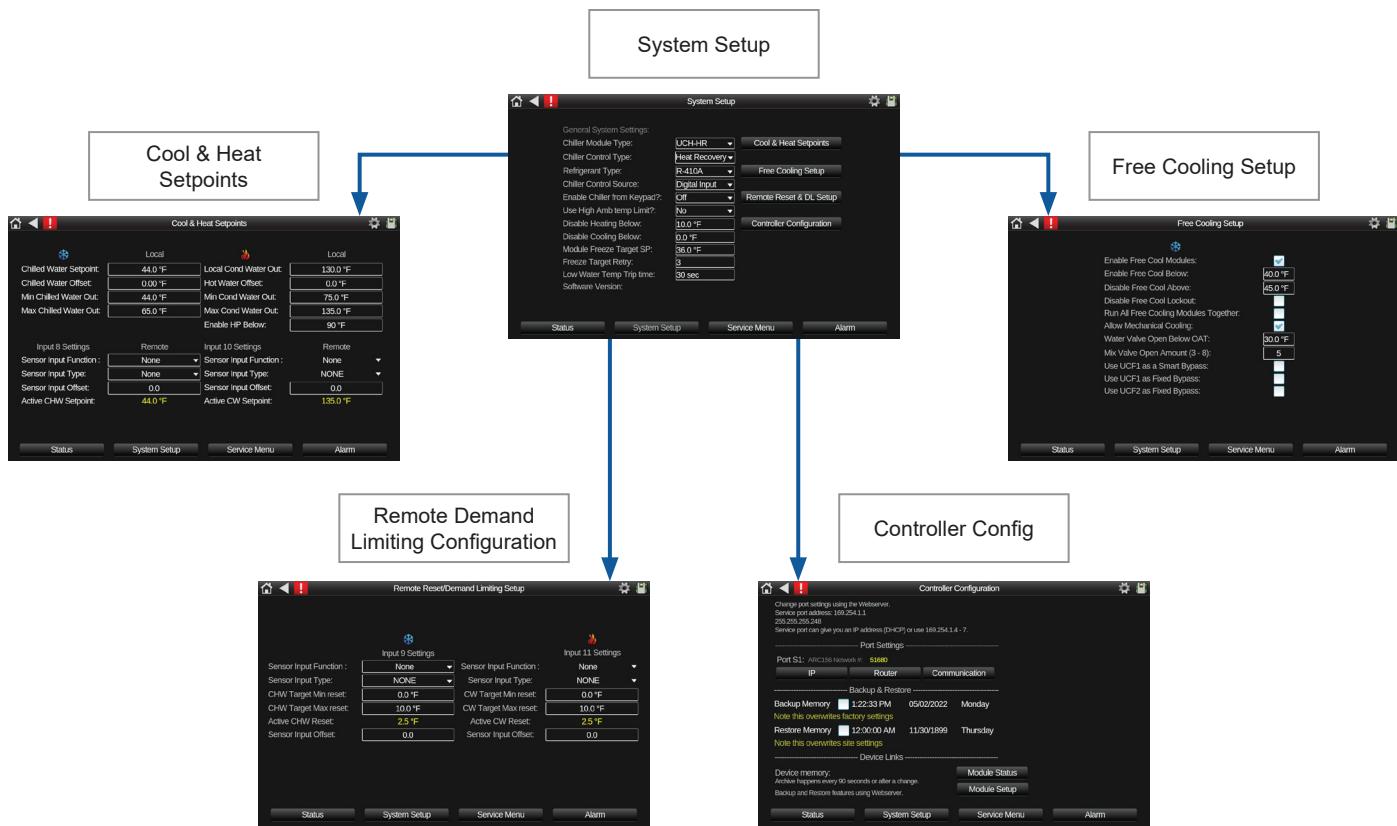
## CoolLogic Touch Menu

- 1 – PREV – Move back to last screen
- 2 – General System Settings
  - Heat and Cool Set Points
  - Module/Compressor Status
- 3 – Alarm Menu - Module and CoolLogic Touch  
Alarm Resets
- 4 – Status
  - All Module unload status
  - Module size & status
  - Compressor run times & cycles
- 5 – Module Status
  - Module refrigeration temps and pressures
- 6 – Module Level Configuration
  - Module Temperature and Pressure Set Points
  - Module Valve and Fan Configurations
- 7 – Service Menu
  - Manual Mode
  - Sensor Calibration
  - Module Water Temperature Limit
- 8 – CoolLogic Touch Level Configurations
  - Module Size Selector
  - PID – Cooling & Heating
  - Water Temperature Limits
  - External Input Configurations – Temp Resets, DPT

# Status User Access



# Setup User Access



# Service User Access



# CoolLogic Touch Control System Network Setup

## Connection Type

The default CONNECTION TYPE for the BACnet over ETHERNET to the WEB PORTAL is a CAT5 Cable via an RJ-45 connector. The connector plugs into the Ethernet 10BaseT port.

## Ethernet Network

The CoolLogic Touch Controller is equipped with an interface which may be connected directly to the Ethernet network using the 10BaseT port. To prevent circular routes, the CoolLogic Touch Panel will be configured only for BACnet/IP. The BACnet/IP Network Number will be defaulted to **2430**. The BACnet/Ethernet router configuration will be disabled and the Ethernet Network number set too. **NOTE:** If these settings need to be changed, please contact a ClimaCool Representative.

## IP Address

The following is the default settings for the IP Address for a typical CoolLogic Touch Controller:

IP ..... **192.168.17.100**

Subnet Mask..... **255.255.255.0**

Gateway..... **192.168.17.1**

**NOTE:** If these settings need to be changed, please contact a ClimaCool Representative.

## Device Instance of CoolLogic Touch Controller

The device instance number for the CoolLogic Touch Controller is **516800**. The “address” number of the CoolLogic Touch Controller is “01,” as identified by the two rotary switches on the CoolLogic PCB ; one rotary switch is for 10’s digit, and the other is for the 1’s digit), (see Figure 3). **NOTE:** If these settings need to be changed, please contact a ClimaCool Representative.

## Device Instance of Module Controller

The device instance number for the FIRST Module Controller is **243002**. The “address” number of the FIRST module controller is “02.” Similarly, the device instance number of the SECOND Module Controller is **243003**. The “address” number of the SECOND Module Controller is “03.” **NOTE:** If these settings need to be changed, please contact a ClimaCool Representative.

**NOTE:** Contact ClimaCool factory for network points list.

**NOTE:** The installation of two banks, with separate CoolLogic Touch Control Panels, utilizing the same BAS network must have different device instance numbers to negate any conflicts. Contact factory for special programming requirements.

# Appendix A

## Physical Hardwire Inputs and Outputs

### The CoolLogic Touch Control Panel with I/O Pro 8/12U - Quick Reference Guide

#### Input Points

Input #	Description	Input Type
1.	Bank Chilled Water Outlet Temperature	AI - Thermistor/RTD
2.	Bank Chilled Water Entering Temperature	AI - Thermistor/RTD
3.	Bank Condenser Water Outlet Temperature	AI - Thermistor/RTD
4.	Bank Condenser Water Entering Temperature	AI - Thermistor/RTD
5.	Outside Air Temperature	AI - Thermistor/RTD
6.	Remote Cool Target Set Point	AI - (2-10VDC/4-20Ma)
7.	Demand Limiting	AI - (2-10VDC/4-20Ma)
8.	Chilled Water Pressure Differential Flow Sensor	AI - (0-5 VDC)
8a.	Optional Chilled Water Flow Switch (Only When Using a Switch for a Flow Safety Device)	DI - (10 kohm = Chilled Water Flow Switch) (Open = Both Flow Switches Open)
8b.	Optional Condenser Water Flow Switch (Only When Using a Switch for a Flow Safety Device)	DI - (6.6 kohm = Both Flow Switches Closed) (20 kohm = Condenser Water Flow Switch Closed)
9.	Local-Off-Remote Selector Switch	DI - (Local and Remote Open – Chiller Off) (10 kohm = Local circuit closed) (20 kohm = remote circuit closed) NOTE: (for remote circuit closure, jumper must be installed between terminals 42 and 43 of LVTB1)
10.	Remote Heat Target Set Point	AI - (2-10VDC/4-20Ma)
11.	Condenser Water Pressure Differential Flow Sensor	AI - (0-5 VDC)
12.	Phase Loss Monitor (Open is Failed Condition)	DI - (Common to Normally Open Contact)

#### Output Points

Output #	Description	Output Type
1.	Cool Header Bypass Valve (Spare)	DO - Form C Contact
2.	Heat Header Bypass Valve (Spare)	DO - Form C Contact
3.	Control Relay 3 (Spare)	DO - Form C Contact
4.	Control Relay 4 (Spare)	DO - Form C Contact
5.	Chiller Status Output	DO - Form C Contact
6.	Common Alarm Output Contacts	DO - Form C Contact
7.	Source Header Bypass Valve	DO - Form C Contact

**Legend:** AI = Analog Input  
DI = Digital Input  
DO = Digital Output

# Appendix B

## The CoolLogic Touch Module Controller with I/O Flex 6126 - Quick Reference Guide

### Models UCW/H/R

#### Input Points

Input #	Description	Input Type
1.	Compressor 1 Suction Refrigerant Pressure	AI - Pressure Transducer (0-5VDC)
2.	Compressor 2 Suction Refrigerant Pressure	AI - Pressure Transducer (0-5VDC)
3.	Compressor 1 Discharge Refrigerant Pressure	AI - Pressure Transducer (0-5VDC)
4.	Compressor 2 Discharge Refrigerant Pressure	AI - Pressure Transducer (0-5VDC)
5.	Compressor 1 Suction Temperature	AI - Thermistor/RTD
6.	Compressor 2 Suction Temperature	AI - Thermistor/RTD
7.	Compressor 1 Discharge Temp	AI - Thermistor/RTD
8.	Compressor 2 Discharge Temp	AI - Thermistor/RTD
9.	Chilled Water Outlet Temp (If used)	AI - Thermistor/RTD
10.	Condenser Water Outlet Temp (If Used)	AI - Thermistor/RTD
11a.	Evaporator Motorized Valve Status (If Used)	DI - (10 kohm=EV MV OPEN - or - 3.3 VDC- J4- 18 & 20) (OPEN=BOTH MV's CLOSED -or- 5.0 VDC- J4- 18 & 20)
11b.	Condenser Motorized Valve Status (If Used)	DI - (20 kohm=CD MV OPEN or - 4.0 VDC- J4- 18 & 20) (6.6 kohm=BOTH MV's OPEN -or- 2.8 VDC- J4- 18 & 20)
12a.	Compressor 1 Status	DI - (10 kohm=C1 ON - or - 3.3 VDC- J4- 19 & 20) (OPEN=BOTH OFF - or - 5.0 VDC- J4- 19 & 20)
12b.	Compressor 2 Status	DI - (20 kohm=C2 ON - or - 4.0 VDC- J4- 19 & 20) (6.6 kohm=BOTH ON - or - 2.8 VDC- J4- 19 & 20)

#### Output Points

Output #	Description	Output Type
1.	Compressor 1 (Start/Stop)	DO - Form C Contact
2.	Compressor 2 (Start/Stop)	DO - Form C Contact
3.	Heat Pump Reversing Valve (Start/Stop) (If Used)	DO - Form C Contact
4.	Evaporator Motorized Valve (Start/Stop) (If Used)	DO - Form C Contact
5.	Module Alarm Light	DO - Form C Contact
6.	Spare	DO - Form C Contact

	Description	Output Type
1.	Condenser Motorized Proportional Valve (If Used)	AO - (2-10VDC)
2.	Spare	AO - (2-10VDC)
3.	VFD/Digital Compressor 1 control (if used)	AO - (0 - 10VDC)
4.	VFD/Digital Compressor 2 control (if used)	AO - (0 - 10VDC)

**Legend:**

- AI = Analog Input
- AO = Analog Output
- DI = Digital Input
- DO = Digital Output

# Appendix C

## The CoolLogic Touch Module Controller with I/O Flex 6126 - Quick Reference Sheet

### Model UCA

#### Input Points

Input #	Description	Input Type
1.	Compressor 1 Suction Refrigerant Pressure	AI - Pressure Transducer (0-5VDC)
2.	Compressor 2 Suction Refrigerant Pressure	AI - Pressure Transducer (0-5VDC)
3.	Compressor 1 Discharge Refrigerant Pressure	AI - Pressure Transducer (0-5VDC)
4.	Compressor 2 Discharge Refrigerant Pressure	AI - Pressure Transducer (0-5VDC)
5.	Compressor 1 Suction Temperature	AI - Thermistor/RTD
6.	Compressor 2 Suction Temperature	AI - Thermistor/RTD
7.	Compressor 1 Discharge Temp	AI - Thermistor/RTD
8.	Compressor 2 Discharge Temp	AI - Thermistor/RTD
9.	Chilled Water Outlet Temperature	AI - Thermistor/RTD
10.	Outside Air Temperature	AI - Thermistor/RTD
11a.	Evaporator Motorized Valve Status	DI - (10 kohm=EV MV Open) (OPEN=Both MV's Closed)
11b.	Condenser Motorized Valve Status	DI - (20 kohm=CD MV Open) (6.6 kohm=Both MV's Open)
12a.	Compressor Contactor 1 Status (If Used)	DI - (10 kohm=CC1 On) (Open=Both Off)
12b.	Compressor Contactor 2 Status (If Used)	DI - (20 kohm=CC2 On) (6.6 kohm=Both On)

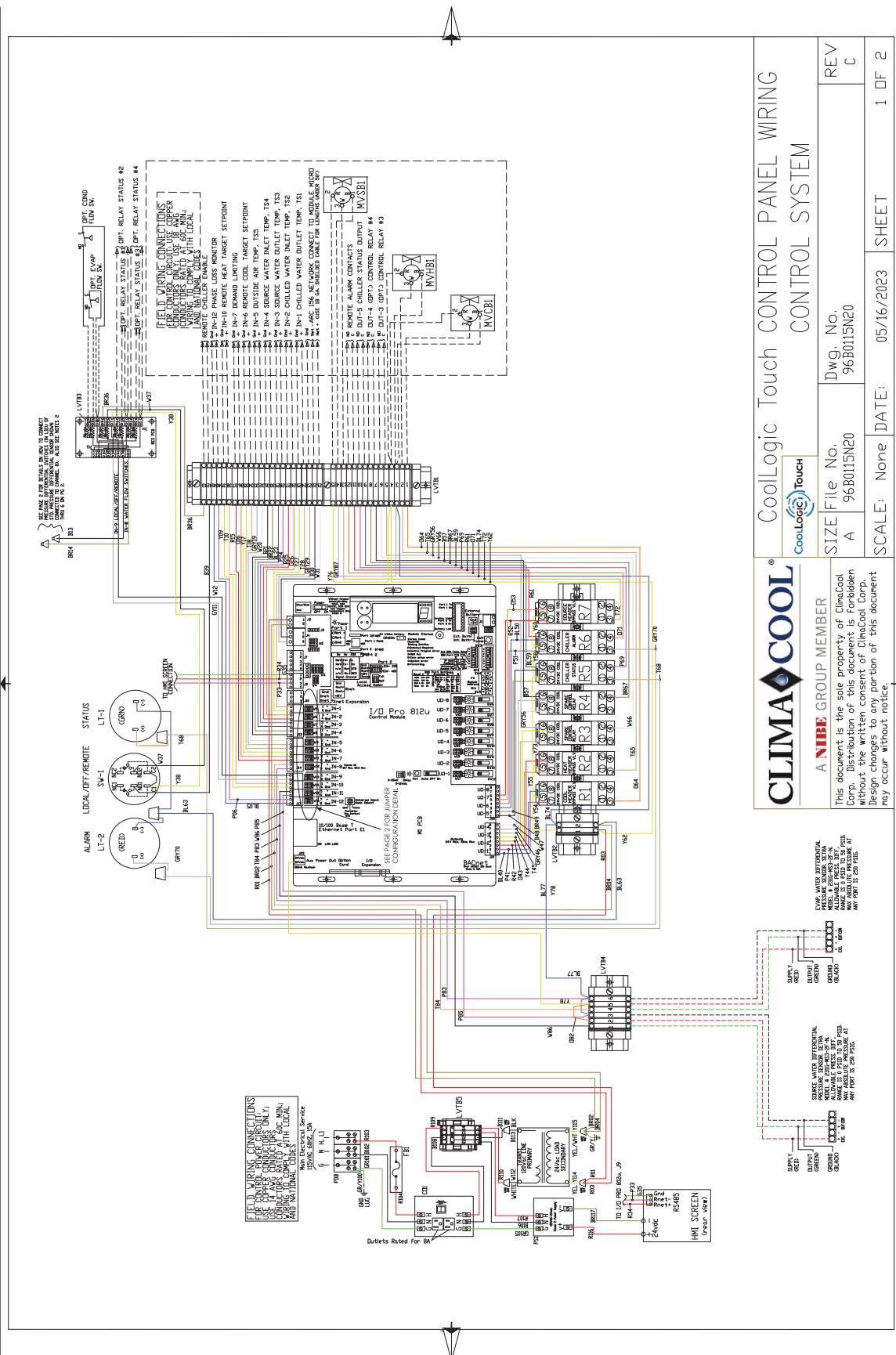
#### Output Points

Output #	Description	Output Type
1.	Compressor 1 (Start/Stop)	DO - Form C Contact
2.	Compressor 2 (Start/Stop)	DO - Form C Contact
4.	Evaporator Motorized Valve (Start/Stop)	DO - Form C Contact
5.	Module Alarm Light	DO - Form C Contact

	Description	Output Type
1.	ECM Fan 1 & 2 Control	AO - (2-10VDC)
2.	ECM Fan 3 & 4 Control (if used)	AO - (0-10VDC)
5.	Compressor VFD/Digital Control (if used)	AO - (0-10VDC)
6.	Compressor 2 Digital Control (if used)	AO - (0-10VDC)

**Legend:** AI = Analog Input  
AO = Analog Output  
DI = Digital Input  
DO = Digital Output  
VFD = Variable Frequency Drive

# Wiring Diagram – Outdoor Rated w/Setra 231 DPT



**CLIMA COOL®** CoolLogic Touch CONTROL PANEL WIRING

CONTROL SYSTEM

SCALE:	None	Dwg. No.	File No.	REV
		05/16/2023	96B0115N20	C

1 DF 2

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CLIMA COOL®  
CoolLogic Touch  
IOM

96B0115N20

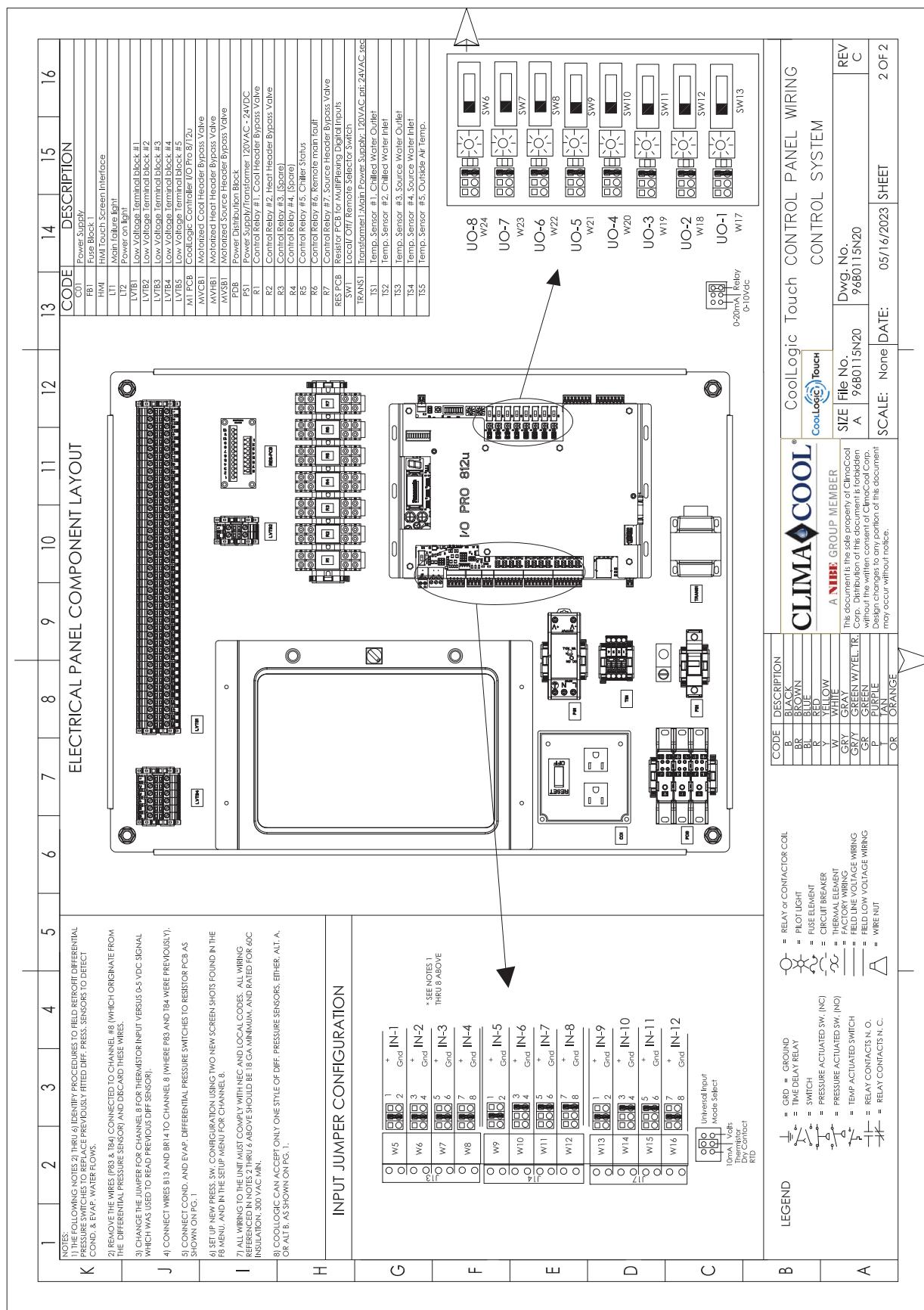
None

05/16/2023

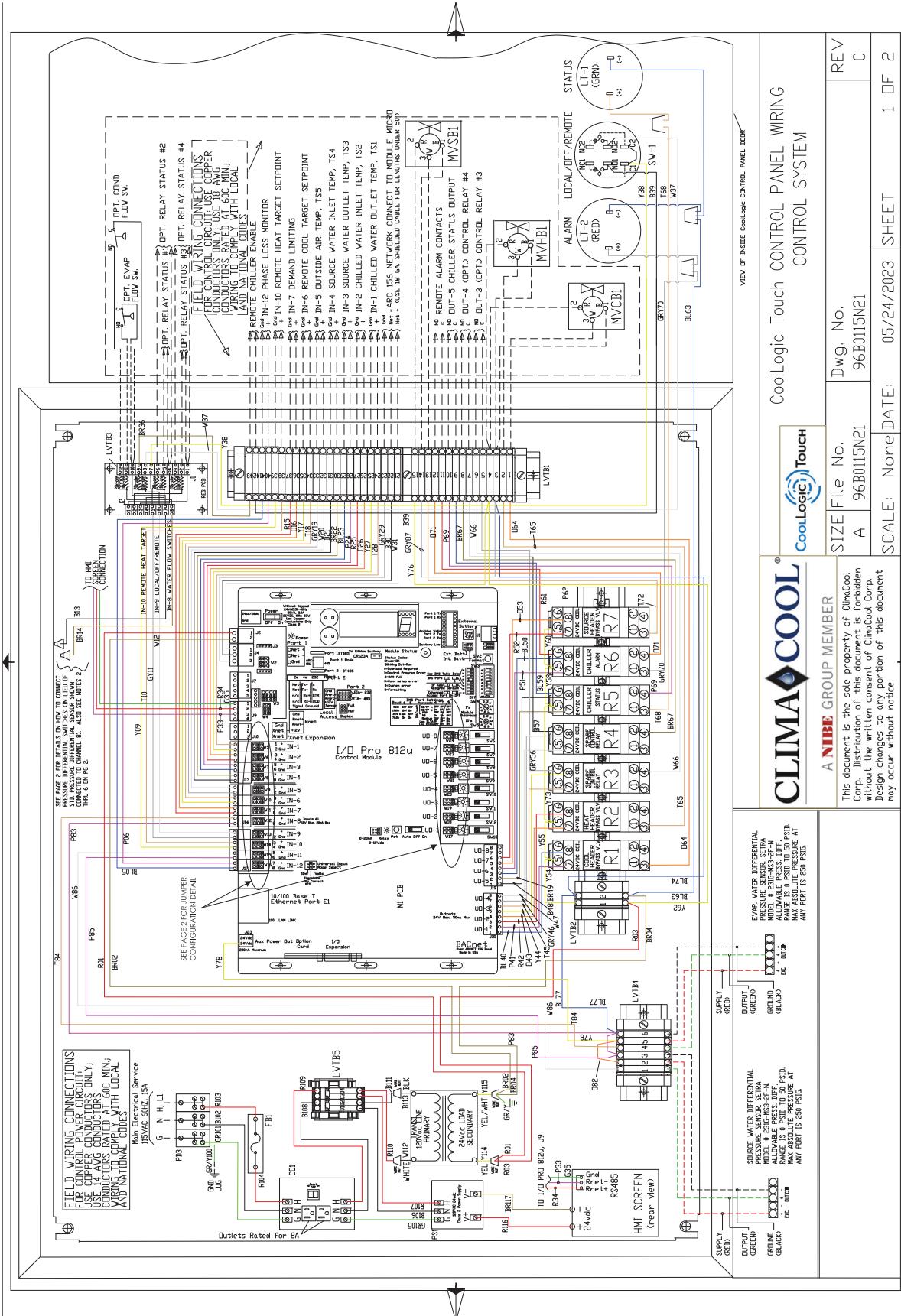
SHEET

1 DF 2

# Wiring Diagram – Outdoor Rated w/Setra 231 DPT



## Wiring Diagram – Indoor Rated w/ Setra 231 DPT



Rev: June 7, 2023



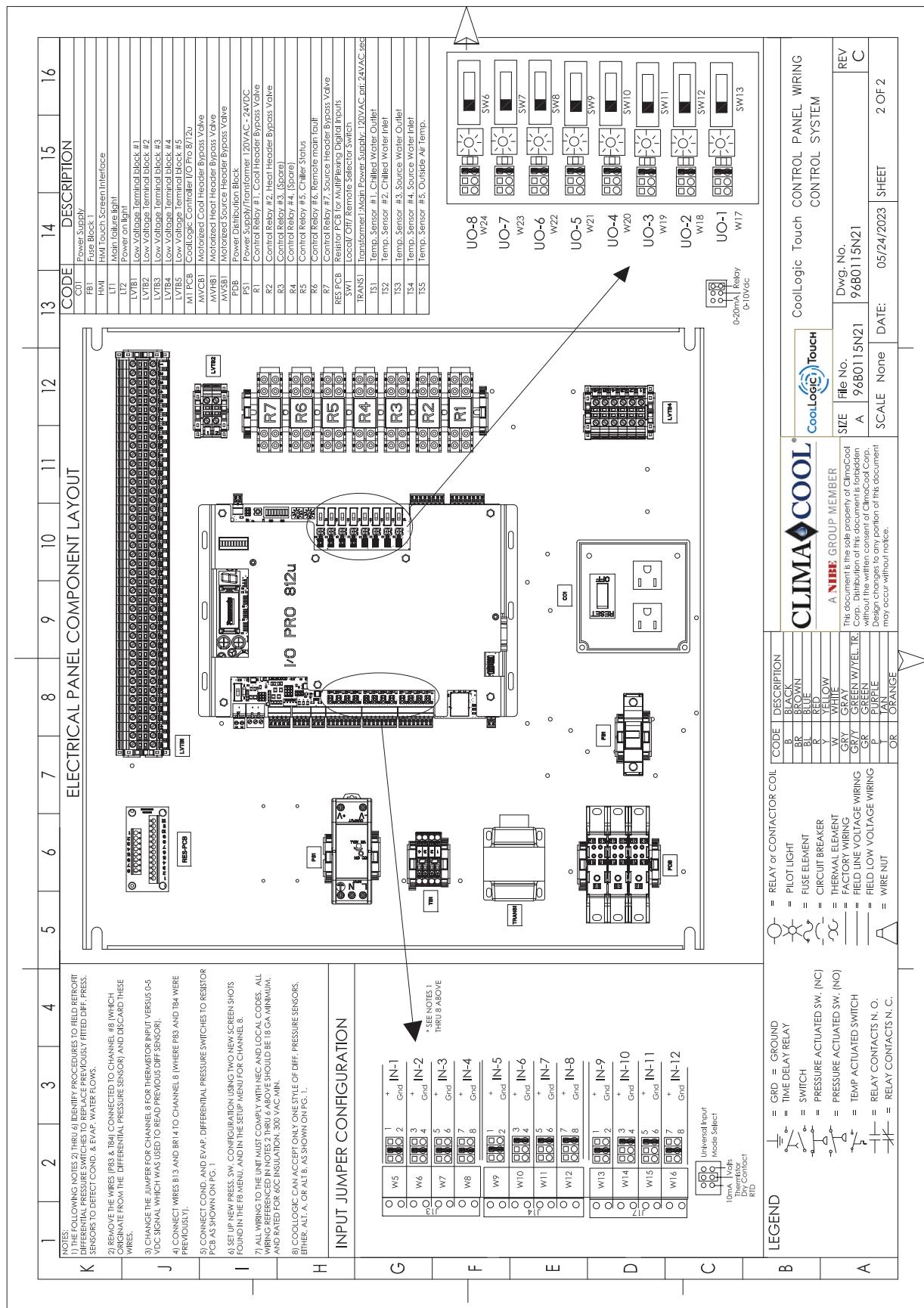
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[www.climacoolcorp.com](http://www.climacoolcorp.com)

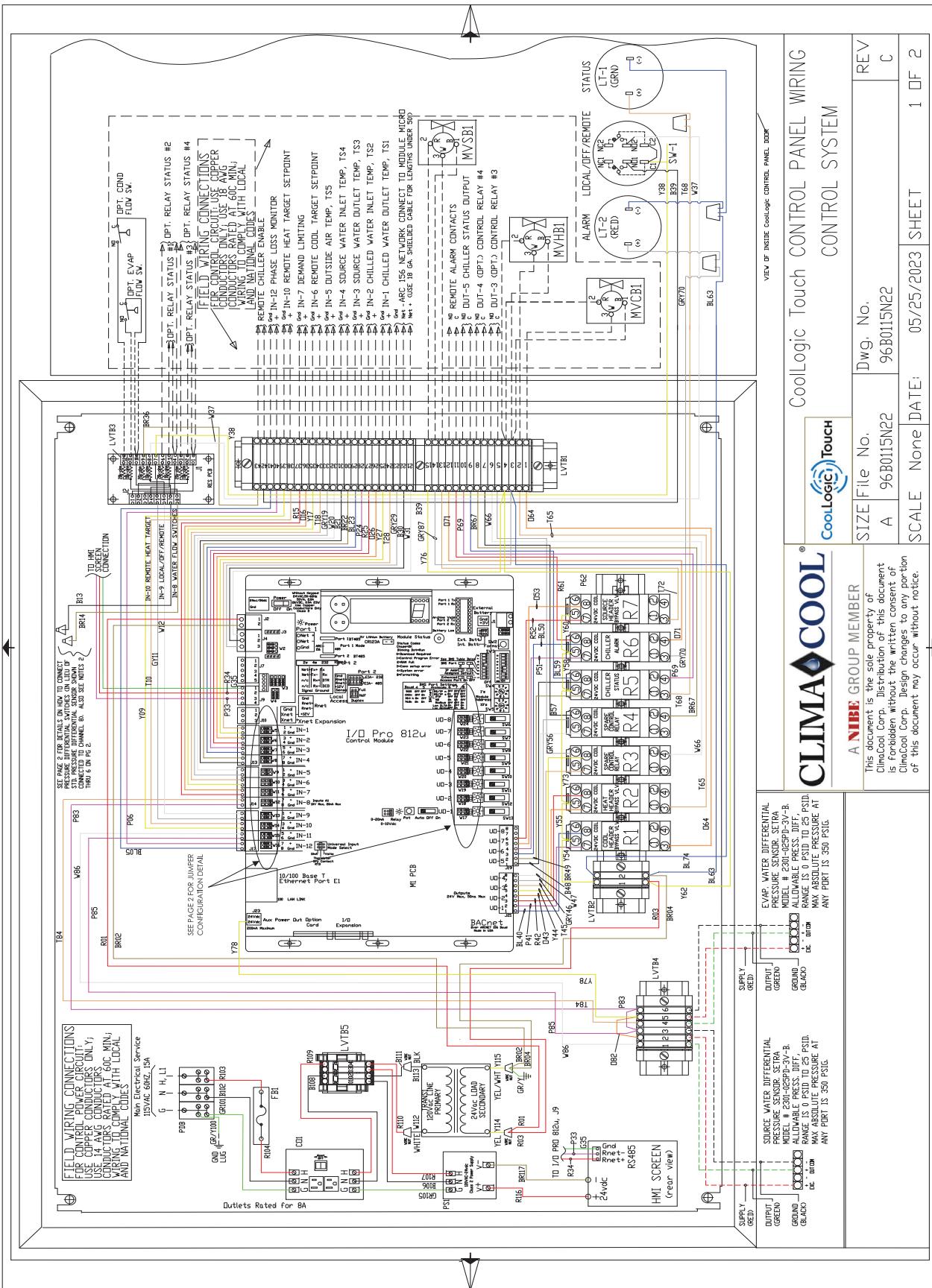
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CoolLogic Touch IOM

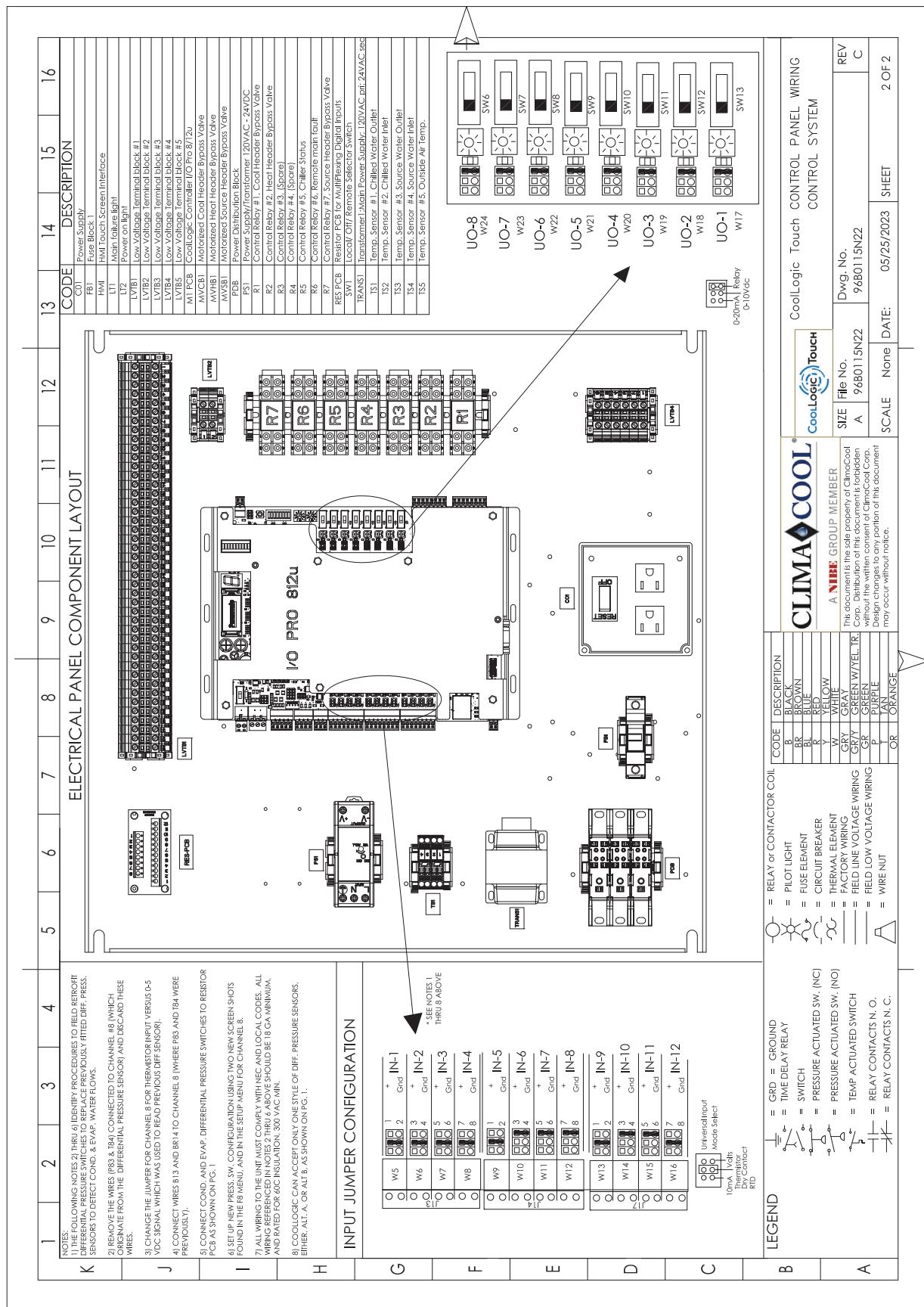
# Wiring Diagram – Indoor Rated w/Setra 231 DPT



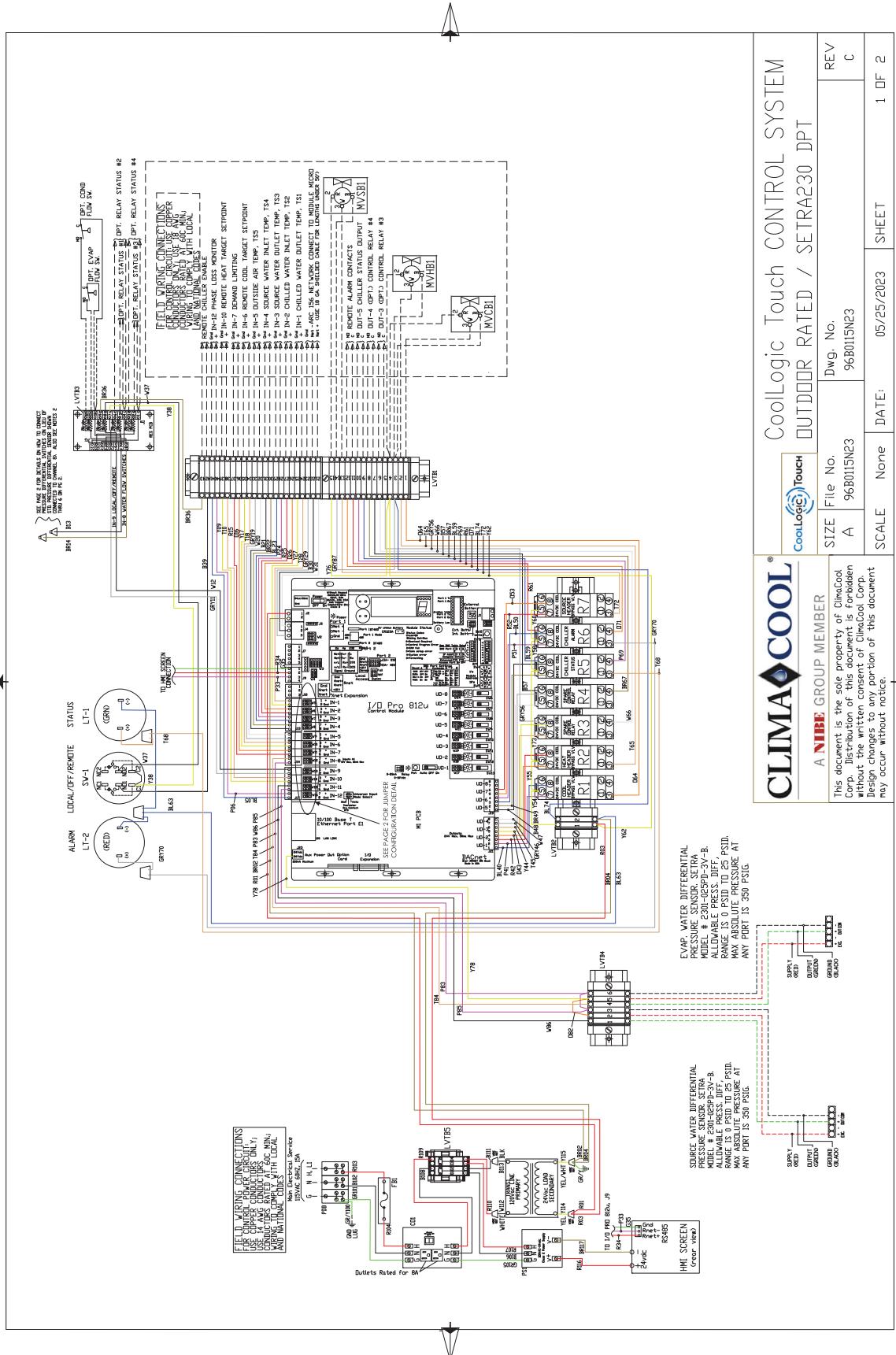
## **Wiring Diagram – Indoor Rated w/ Setra 230 DPT**



# Wiring Diagram – Indoor Rated w/Setra 230 DPT



## **Wiring Diagram – Outdoor Rated w/ Setra 230 DPT**



28

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Rev: June 7, 2023

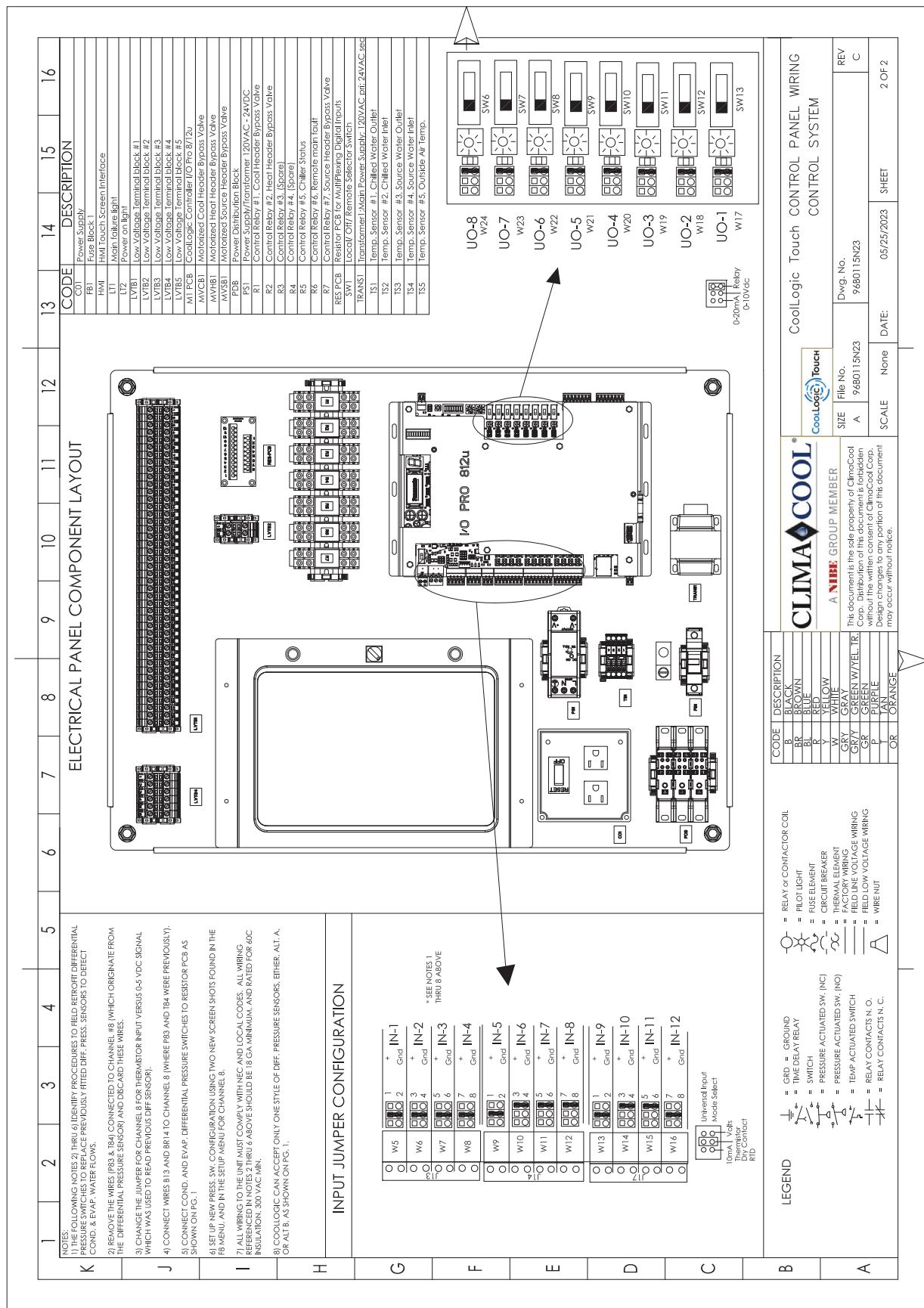
**CLIMA**  **COOL**

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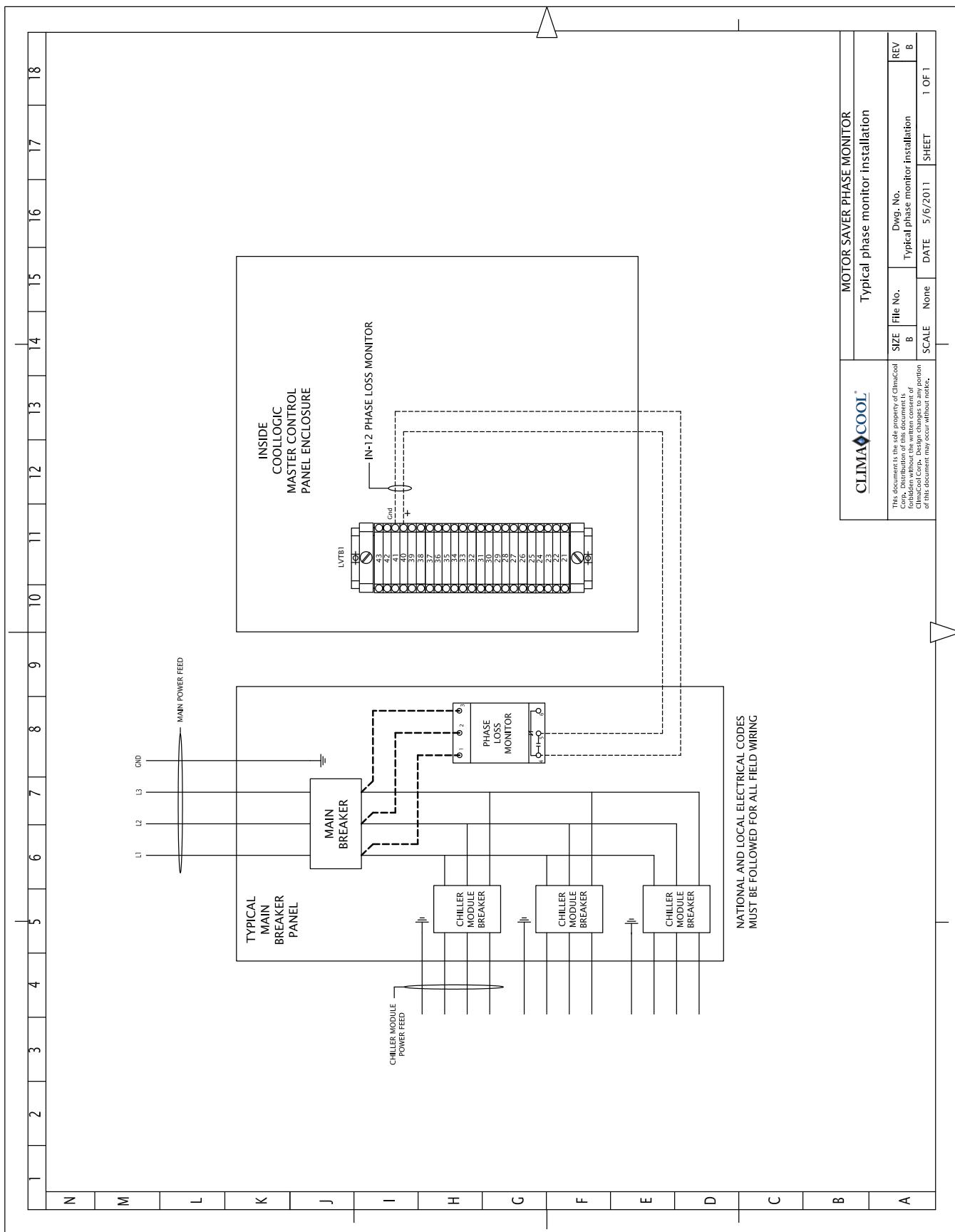
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CoolLogic Touch IOM

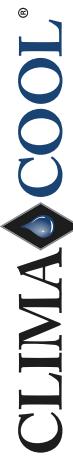
# Wiring Diagram – Outdoor Rated w/Setra 230 DPT



# Wiring Diagram – Voltage/Phase Monitor



# Warranty Certificate



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## CLIMACOOL CORPORATION LIMITED EXPRESS WARRANTY/LIMITATION OF REMEDIES AND LIABILITY WITH EXTENDED COMPRESSOR WARRANTY

### WARRANTY DISCLAIMER

It is expressly understood that unless a statement is specifically identified as a warranty, statements made by ClimaCool Corp., an Oklahoma corporation ("CC"), or its representatives, relating to CC's products, whether oral, written or contained in any quote, sales literature, catalog or my agreement, are not express warranties and do not form a part of the basis of the bargain, but are merely CC's opinion or commendation of CC's products. EXCEPT AS SPECIFICALLY SET FORTH HEREIN, THERE IS NO EXPRESS WARRANTY TO ANY OF CC'S PRODUCTS. CC MAKES NO WARRANTY AGAINST LATENT DEFECTS. CC MAKES NO WARRANTY OF MERCHANTABILITY OF THE GOODS OR OF THE FITNESS OF THE GOODS FOR ANY PARTICULAR PURPOSE.

### GRANT OF LIMITED EXPRESS WARRANTY

CC warrants CC's products purchased and retained in the United States of America and Canada to be free from defects in material and workmanship under normal use and maintenance only as follows:

#### **FOR MODULAR CHILLERS:** (a) All modular chillers built or sold by CC for twelve (12) months from the date of unit start-up or eighteen (18) months from date of shipment (from CC's warehouse), whichever comes first; and (b) Any repair and replacement parts, which are not supplied under warranty, for ninety (90) days from date of shipment (from CC's warehouse) and (c) If such extended warranty is purchased, the compressors in all modular chillers built or sold by CC shall extend for sixty (60) months from the date of shipment (from CC's warehouse).

All parts must be returned to CC's warehouse in Oklahoma City, Oklahoma, freight prepaid, no later than sixty (60) days after the date of the failure of the part. If CC determines the part to be defective and within CC's Limited Express Warranty, CC shall, when such part has been either replaced or repaired, return such to a CC recognized dealer, contractor or service organization, F.O.B. CC's warehouse, Oklahoma City, Oklahoma, freight prepaid. The warranty on any part repaired or replaced under warranty expires at the end of the original warranty period.

This warranty does not cover and does not apply to: (1) Fuses, refrigerant, fluids, oil; (2) Products relocated after initial installation; (3) Any portion or component of the system that is not supplied by CC, regardless of the cause of the failure of such portion or component; (4) Products on which the units identification tags or labels have been removed or defaced; (5) Products on which payment to CC is or has been in default; (6) Products which have defects or damage which result from improper installation, wiring, electrical imbalance characteristics or maintenance (including, without limitation, defects or damages caused by voltage surges, inadequate voltage conditions, phase imbalance, any form of electrical disturbances, inadequate or improper electrical circuit installation or protection, failure to perform common maintenance, etc.); or are caused by accident, misuse or abuse, fire, flood, alteration or misapplication of the product; (7) Products which have defects or damage which result from a contaminated or corrosive air or liquid supply, operation at abnormal temperatures, or unauthorized opening of refrigerant circuit; (8) Products subjected to corrosion or abrasion or chemicals; (9) Mold, fungus or bacteria damage; (10) Products manufactured or supplied by others; (11) Products which have been subjected to misuse, negligence or accidents; (12) Products which have been operated in a manner contrary to CC's printed instructions; (13) Products which have defects, damage or insufficient performance as a result of insufficient or incorrect system design or the improper application of CC's products; (14) Products which have defects or damages due to freezing of the water supply, an inadequate or interrupted water supply, corrosives or abrasives in the water supply, or improper or inadequate filtration or treatment of the water or air supply; (15) Products which are defects caused by overfilling, use of incorrect fuel, or improper burn or control adjustments; or (16) Products which have incomplete or inadequate combustion.

CC is not responsible for (1) The costs of any fluids, refrigerant or other system components, or the associated labor to repair or replace the same, which is incurred as a result of a defective part covered by CC's Limited Express Warranty; (2) The costs of labor, refrigerant, materials or service incurred in removal of the defective part, or in obtaining and replacing the new or repaired part; or (3) Transportation costs of the defective part from the installation site to CC or the return of any part not covered by CC's Limited Express Warranty.

### LIMITATION OF REMEDIES

In the event of a breach of this Limited Express Warranty, CC will only be obligated at CC's option to repair the failed part or module or to furnish a new or rebuilt part or module in exchange for the part or module which has failed. If, after written notice to CC's Head Office in Oklahoma City, Oklahoma of each defect, malfunction or other failure and a reasonable number of attempts by CC to correct the defect, malfunction or other failure and the remedy fails of its essential purpose, CC shall refund the purchase price paid to CC in exchange for the return of the solid goods. Said refund shall be the maximum liability of CC. **THIS REMEDY IS THE SOLE AND EXCLUSIVE REMEDY AGAINST CC FOR BREACH OF CONTRACT, FOR THE BREACH OF ANY WARRANTY OR FOR CC'S OWN NEGLIGENCE OR IN STRICT LIABILITY.**

### LIMITATION OF LIABILITY

CC shall have no liability for any damages if CC's performance is delayed for any reason or is prevented to any extent by any event such as, but not limited to any war, civil unrest, government restrictions or restraints, strikes, or work stoppages, fire, flood, accident, allocation, shortages of transportation, fuel, material or labor, acts of God or any other reason beyond the sole control of CC. CC EXPRESSLY DISCLAIMS AND EXCLUDES ANY LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGE IN CONTRACT, FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, OR IN TORT, WHETHER FOR CC'S OWN NEGLIGENCE OR AS STRICT LIABILITY.

### OBTAINING WARRANTY PERFORMANCE

Normally, the contractor or service organization who installed the products will provide warranty performance for the owner. Should the installer be unavailable, contact any CC recognized contractor or service organization. If assistance is required in obtaining warranty performance, write:

ClimaCool Corp. • 15 South Virginia Ave. • Oklahoma City, Oklahoma 73106 • (405) 815-3000 • e-mail: customersupport@climacoolcorp.com

NOTE: Some states or Canadian provinces do not allow limitations on how long an implied warranty lasts, or the limitation or exclusion of consequential or incidental damages, so the foregoing exclusion and limitations may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state and from Canadian province to Canadian province.

Please refer to the CC Installation, Operation and Maintenance Manual for operating and maintenance instructions.

Revised: 04-27-22

# Notes

# Notes

## Revision History

Date	Item	Action
06/07/23	Pgs. 22-30, All	Updated Logos on Wiring Diagrams "& deletions of references to CoolLogic that no longer apply to CoolLogic Touch



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