Control Manual

CM

Group: Chiller
Part Number: CM DW2W-360
Date: August 2022

DW2W-360 Series
Water Cooling Unit

Model

30 TR to 300 TR

Refrigerant HFC-410A

50/60 Hz

Table of Contents

Manufactured in an ISO 9001 certified facility

Safety Warnings

This manual provides information on the control data of the Daikin DW2W-360 series..

NOTES: Installation and maintenance must be performed only by qualified personnel who are familiar with local codes and regulations and who have experience with this type of equipment.

⚠ DANGER ⚠

LOCK OUT/LABEL all power sources before starting, pressurizing, depressurizing or shutting down the chiller.

Disconnect electrical power before servicing equipment. More than one disconnection may be required to deenergize the unit. Failure to follow this warning to the letter can result in serious injury or death. Be sure to read and understand the installation, operating and service instructions in this manual.

⚠ WARNING ⚠

Electric shock danger. Improper handling of this equipment can cause personal injury or equipment damage. This equipment must be properly grounded. Control panel connections and maintenance should be performed only by personnel knowledgeable in the operation of the equipment being controlled. Disconnect electrical power before servicing equipment.

⚠ CAUTION ⚠

Static sensitive components. Static discharge during handling of the electronic circuit board can cause damage to components. Use a static strap before performing any service work. Never unplug any cables, circuit board terminal blocks, or power plugs while power is applied to the panel.

⚠ CAUTION ⚠

When moving refrigerant to/from the cooler using an auxiliary tank, a grounding strap should be used. An electrical charge builds up when halo-carbon refrigerant travels in a rubber hose. A grounding strap should be used between the auxiliary refrigerant tank and the cooler end sheet (ground to ground), which will safely carry the charge to ground. Failure to follow this procedure may result in damage to sensitive electronic components.

⚠ WARNING ⚠

If refrigerant leaks from the unit, there is a potential choking danger as the refrigerant will displace air in the immediate area. Be sure to follow all applicable published industry-related standards and local, state, and federal statutes, regulations, and codes if refrigerant is produced. Avoid exposing refrigerant to an open flame or other ignition source.

⚠ WARNING ⚠

Polyolester oil, commonly referred to as POE oil, is a synthetic oil used in many refrigeration systems and may be present in this Daikin product. POE oil, if it ever comes in contact with PCV/CPVC, will coat the inside wall of the PVC/CPVC pipe and cause environmental stress fractures. Although there is no PCV/CPCV pipe in this product, keep this in mind when selecting piping materials for your application, as system failure and property damage could occur. Consult the pipe manufacturer's recommendations to determine appropriate pipe applications.

DANGER IDENTIFICATION INFORMATION

⚠ DANGER ⚠

Danger indicates a dangerous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING ⚠

Warning indicates a potentially dangerous situation which may result in property damage, personal injury or death if not avoided

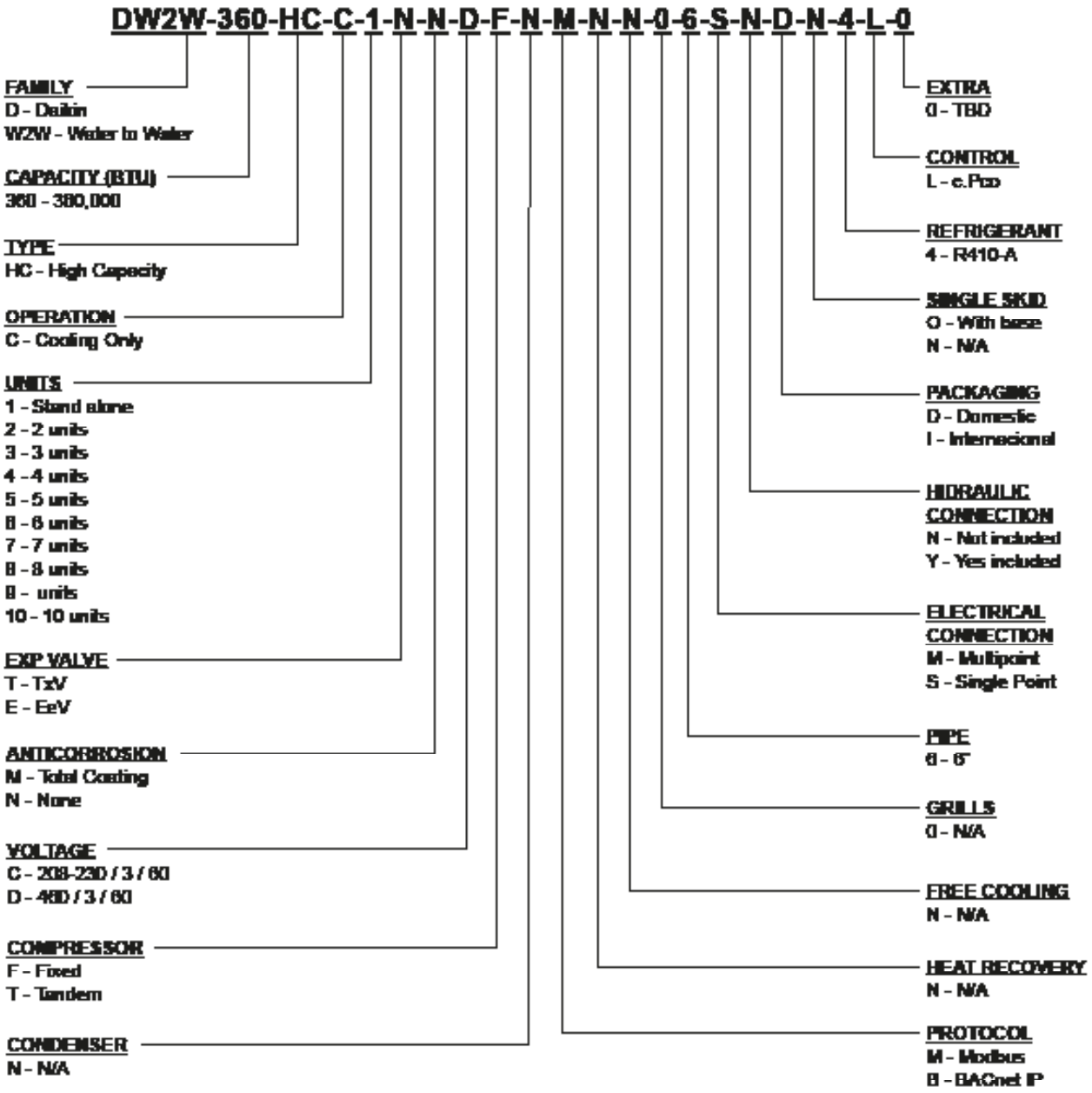
⚠ CAUTION ⚠

Caution indicates a potentially dangerous situation which may result in minor injury or equipment damage if not avoided.

Notes: Indicate important details or clarifying statements for the information presented.

Our units are designed to efficiently meet the air conditioning needs of any project. Our units have controls, logic routines and digital sensors that continuously monitor the system to adapt its operation to the level necessary to maintain optimal system conditions at all times, thus achieving maximum performance and energy savings in a system that is simple to operate and maintain.

NOMENCLATURE



FEATURES / BENEFITS

EFFICIENCY

Our units are designed to efficiently meet the air conditioning needs of any project. Our units have controls, logic routines and digital sensors that continuously monitor the system to adapt its operation to the level necessary to maintain optimal system conditions at all times, thus achieving maximum performance and energy savings in a system that is simple to operate and maintain.

All temperature sensors are calibrated and adjusted at the factory prior to shipment.

The start-up of the equipment must be carried out by a qualified technician, during the initial start-up the unit will be adjusted to the local conditions and all operating points will be checked.

Once the unit has been properly installed, the operation is a matter of pressing the digital start and stop button, until making sure that the unit works properly, after this the unit will operate automatically, turning on by itself according to the demand of the system and local conditions.

FLEXIBILITY

Through intelligent processors and digital sensors, our equipment automatically modulates the operation of the system to maintain the water temperature at optimal operating conditions.

Our equipment was designed to be coupled with each other and to be combined to satisfy different load variations (Tandem Installation). Up to 8 modules can be combined in a single installation; these combinations can be made with Water Chiller Units of different capacities ranging from 3 to 30 tons of refrigeration.

The system capacity will then vary depending on the number and type of units installed in it.

SAFETY

The structures of our units are made of galvanized steel sheet, coated with baked electrostatic powder paint (meets the ASTM-B117 1500 hour salt spray test) to ensure long durability and absence of corrosion under any weather conditions, such as direct solar light, rain and wind.

All our units are designed to fit into a reduced installation space, thus eliminating large installation areas. We only use high-quality components to ensure durability and safety, even in harsh environmental conditions.

NOTE: For applications in highly corrosive climates our units can be coated inside and out with extra protection against corrosion. Ask your sales agent for more information.

Our units have AHRI performance and efficiency certifications, and ETL safety certifications, in addition to complying with all industry safety standards.

We are members of the American Society of Air Conditioning, Refrigeration and Heating Engineers (ASHRAE).

To show our commitment to our clients and stakeholders; our equipment has a 1-year warranty after commissioning and start up.

Our units use R410A refrigerant, which is harmless to the ozone layer and the most eco-friendly option possible.

All of our units are designed and manufactured with a focus on safety, performance and quality.

DESIGN

The work carried out by our Engineering and Development department has resulted in equipment with high design efficiency and optimum performance during operation.

The selection of high quality main components, our quality processes and the control system during manufacturing, guarantee a high performance and safe unit.

All main components are rigorously tested and validated before being installed. Each designed unit has undergone long hours of rigorous testing to ensure the efficiency, safety, durability and quality of the entire system.

All external paint is baked and meets the strictest quality standards (1500 hour salt spray test ASTM-B117).

The selection of high-end compressors and heat exchangers ensure the capacity and high efficiency of the unit.

Optional water pumps* are specially designed to function properly with minimal vibration and noise.

All our units have a reduced footprint, which facilitates installation and maintenance maneuvers, by being able to use stairs, doors and service elevators to move them.

* Ask your sales rep about factory integrated pump options.

COMMUNICATION

The units can be controlled independently (Individual Mode) or they may be connected to a central control unit (Tandem mode).

The operation and user access will be done through a color touch screen *

Our units can be connected / integrated through different communication protocols; such as TCP / IP, ModBUS and BacNet **, the most common protocols used in the Air Conditioning industry.

Our units keep track of all programmable variables in real time, such as load monitoring in the system, specific alarms of the refrigeration cycle, water cycle and the electrical system. As well as detection of external factors such as fire or flood (optional sensors).

The control system ensures the correct operation of the equipment by monitoring in real time the condition of the major components (high or low pressure of the refrigerant, conditions of the compressor and fan motors, etc.).

In case of failure, the event alarm will be recorded for later analysis, facilitating the location of a possible failure and its solution.

* Depends on the type of control.

** The communication protocols available depend on the type of control.

INSTALLATION

The units have been designed for easy and simple installation. Victaulic type (grooved) fittings provide a simple and safe way to make water the pipe connections. These connections are located on both sides of the equipment, which provides great flexibility for water connections.

The individual assembly of the equipment reduces the cost of installation, the units have a rigid base that balances the weight of the unit and allows easy installation.

MAINTENANCE

The simplicity in the design of the unit allows maximum ease when performing preventive / corrective maintenance on them. All major components are available to the maintenance personnel by simply opening the service panels. If an emergency stop occurs, the digital control of the unit will indicate in detail the cause of the alarm, helping to facilitate and speed up its solution.

TESTING

Before leaving the factory, our units are tested multiple times. Pressure and vacuum tests are performed to detect possible leaks. Once the unit is verified to be leak free, the refrigerant is charged accurately for proper operation based on customer installation conditions.

All units are evaluated and tested at full load operation, with water flow, thermal load and line voltage under the current conditions in which the equipment operates in the field.

Finally, the operation of the equipment is tested and verified according to AHRI's operating standards.

NOTE: The warranty policy requires that the commissioning be carried out by qualified personnel authorized by the company.

INSITUM ® CORROSION PROTECTION

Spray for coating hvac/r products

Coating is a flexible, water-based, water-reducible, synthetic polymer corrosion coating designed specifically for the protection of HVAC/R coils and components. Insitu® Spray Applied Coating contains ES2 (embedded stainless steel pigment) technology, an anti-corrosion coating specifically designed for the protection of coils mounted in corrosive areas.

HVAC/R coils, components and enclosures will have a permanent water-based synthetic coating with ES2 pigment applied to all areas of the coating surface with no bridging of material between fins. Therefore, ES2 pigments are suitable for even the most corrosive environments and will maintain their appearance after many years of exposure. UV degradation ES2 pigments form a multilayer structure throughout the paint film.

This creates a barrier layer that reflects sunlight away from the paint film preventing UV rays from penetrating. As a result, UV degradation of individual polymer molecules is eliminated, film integrity is maintained and the pigment particles remain well anchored to the substrate.

The resulting smooth, hard finish prevents dirt build-up. The multilayer structure of ES2 pigments delays the passage of water molecules into the film and acts as an effective moisture barrier.

Ideal applications for Insitu® spray-applied coatings.

- Mini-splits
- Packaged enclosures
- Condensing units
- Modular air handlers
- Air-cooled chillers
- Indoor and outdoor HVAC cabinets and copper tubing
- Heat exchange coils (water, condenser, evaporator, DX)

CONTROL PANEL

BUTTON	DESCRIPTION	BACKGROUND LIGHT	MEANING
	Alarm	White / Red	Pressed together with Enter, accesses the screens managed by the operating system.
	Prg	White / Yellow	_
	Esc	White	Up one level
	Up	White	Increase value
	Enter	White	Confirm value
	Down	White	Decrease value

CONTROL PANEL INSPECTION

Check the control panel for foreign objects.

After completing the inspection of the installation points, and making sure that all elements of the unit are correct, the unit can be turned on.

- Energize the unit with electric power.
- Phase balance should be less than 2% on average.
- Turn on the water pump (if applicable), to make sure it is properly energized.

Note: Before powering up the unit, make sure that the control switches on each module are in the correct pre-start positions

MOTHER UNIT	
Switch	Correct pre-start position
24 VAC	OFF (-)
System	ON (O)
Compressor 1	ON (O)
Compressor 2	ON (O)

CHILD UNITS	
Switch	Correct pre-start position
24 VAC	ON (O)
Compressor 1	ON (O)
Compressor 2	ON (O)

START-UP

After turning the unit on, wait 5 minutes for the unit to be ready for operation.

The operating sequence will begin by checking all pre-programmed safety points on the unit. If all required conditions are correct, the unit is ready to start operations.

24vac On / Control Bus Start:
To start operations, place the 24 VAC switch (FIG. 1) on the Mother Unit in the ON (-) position.
This will turn on the unit's digital control (control display). After a few seconds the unit can be turned on from the control screen.

Power On/Off:
Use the digital on/off control in the lower right corner of the control screen to turn the unit on and off (FIG.1).

COMPRESSORS

The COMPRESSOR 1 and COMPRESSOR 2 switches (FIG.1) allow the compressors to be switched on and off independently. If for any reason (maintenance, diagnostics, etc.) you wish to safely disable the operation of a compressor, you can do so using these switches.

SYSTEM

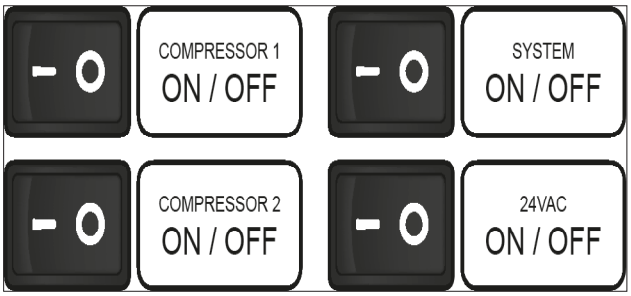
The SYSTEM switch enables the operation of the system logic. If you wish to return the equipment to its initial operating state, set the SYSTEM switch to the OFF position for 5 seconds and return it to the ON position.

OPERATION

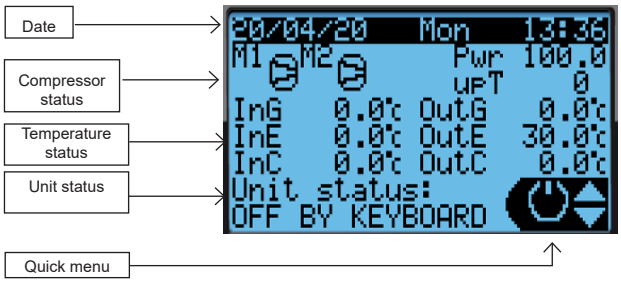
If your unit is a Heat Pump, the OPERATION switch will allow you to set the operating mode between COOLING (cooling only mode) and HEATPUMP (heat pump mode), select the desired operating mode.

Note: If your equipment is not a Heat Pump, the OPERATION switch will not be present on your equipment.

Figure 1. Cold only mode



Start-up



Date

Current date set.

Compressor status

Displays the current status of each compressor in the unit.

Temperature status

Displays the unit temperatures located in the unit.

InG= General Input (header)
OutG= General outlet (header)
InE= Evaporator inlet side (exchanger)
OutE= Evaporator outlet side (exchanger)
InC= Inlet side of condenser (exchanger)
OutC= Outlet condenser side (exchanger)

Unit status

Displays the current status of the unit (Off, On, etc.)

Quick menu

It is the quick access to a menu with essential information without password, to display the system configuration, information and current values for different types of units describing and configuring the system control.

QUICK MENU

On the home page this menu allows different submenus to configure and monitor the unit To select one by using ↑↓ then pressing ↵.

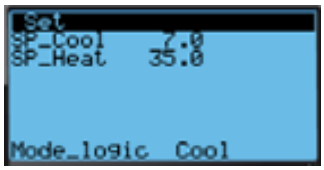
On / Off		Activate or deactivate the unit to start
Configuration		Configure the cooling and heating set point of the unit
Information		Display software information
Review		Show the value of the entries

On / Off

By ↑↓ selecting an ON or OFF option, then back ↩

Configuration

Press ↵ to move through the different options to change the set point, do not change the mode logic, this part is a critical setting.

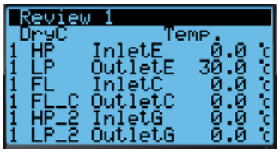
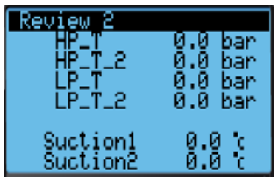
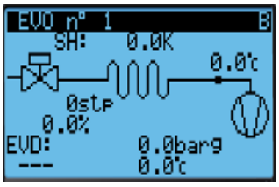
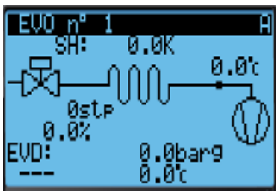
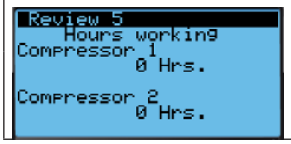


Information

Display the information about the software movement in the menu with ↑↓

Review

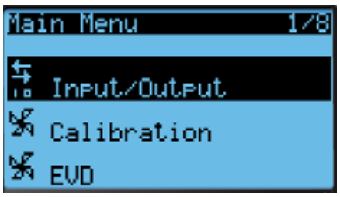
Display the status of some variables on the functionality and operation, move in the menu with ↑↓

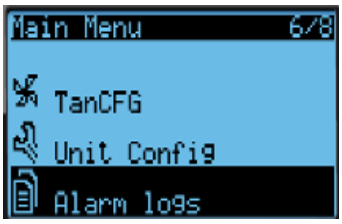
	**INPUTS**
	HP= High pressure switch status circuit 1
	LP= Low pressure switch 1 status circuit
	FL= Evaporator water flow switch FL_C= Condenser water flow switch
	FL_C= Condenser water flow switch
	HP_2= High pressure switch status circuit 2
	LP_2= Low pressure switch 2 status circuit
	InG= General inlet (header)
	OutG= General outlet (header)
	InE= Evaporator side inlet (exchanger)
	OutE= Evaporator side outlet (exchanger)
	InC= Inlet Condenser side (exchanger)
	OutC= Outlet condenser side (exchanger)
	**ELECTRONIC VALVE A (CIRCUIT 1)**
	Show valve information
	SH= superheat
	Suction temperature Opening percentage Suction pressure
	**ELECTRONIC VALVE B (CIRCUIT 2)**
	Display information about the valve
	SH= superheat
	Suction temperature Opening percentage Suction pressure
	**WORKING HOURS**
	Displays the working hours of each compressor

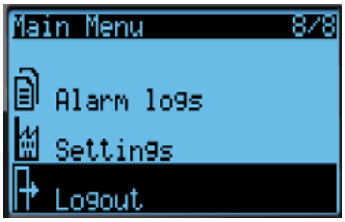
MENU

On the home page press ⊙ to go to the menu, and enter the correct password, change the value using ↑↓ and then press ↵ o go to the next value until all digits are completed.

If you are successful move in the menu using ↑↓





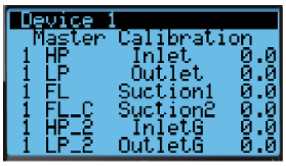


Input / Output

Any information to show at this point (under construction)

Calibration

In this part you can change the status of the inputs and calibrate the probes. ⇅ To move in the menu use to change any value press to ↵ insert the correct value and press again to confirm. To exit press ↩



DIGITAL CALIBRATION INPUTS
0= NO (normally open) 1=NC (normally closed)
HP= High pressure switch status circuit 1
LP= Low pressure switch status circuit 1
FL= Evaporator water flow rate status
FL_C= Condenser water flow rate status
HP_2= High pressure switch status circuit 2
LP_2= Low pressure switch status circuit 2
MS= Electrical protection switch status
Flood= Flood detector status

ANALOG CALIBRATION INPUTS PLUS ONE ANALOG VALUE +/- (0,0)
InG= General Input (header)
OutG= General output (header)
InE= Input Evaporator side (exchanger)
OutE= Output Evaporator side (exchanger)
InC= Inlet Condenser side (exchanger)
OutC= Outlet condenser side (exchanger)

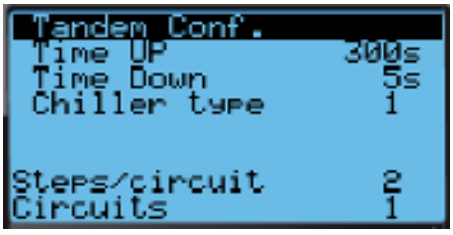
DIGITAL CALIBRATION OUTPUT 0=NO (NORMALLY OPEN) 1=NC (NORMALLY CLOSED)
4WV=four-way valve

EVD

Displays all the information and variables to configure and calibrate the EVD (electronic expansion valve) controller to work efficiently for the unit, this is a critical configuration that could change the functionality of the unit. To move through the menu use ⇅

TANDEM CONFIGURATION

Set the rise time between steps, the down time before stopping any compressor, the type of chiller (heat or cold), the circuits and the steps, these settings cannot be changed by the user.



UNIT CONFIGURATION

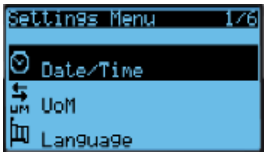
Allows the option of exporting the import configuration and exporting the alarm logs.

ALARM LOGS

Displays the entire alarm log at current time.

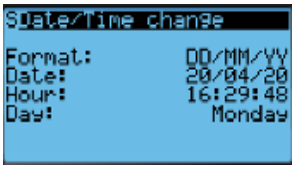
SETTINGS

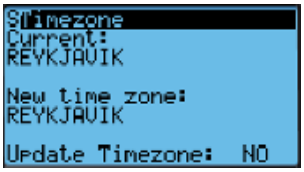
Allows the option to configure date and time, units of measurement, language, serial ports, password and controller initialization.



Date / Time

To change the current date, time and time zone





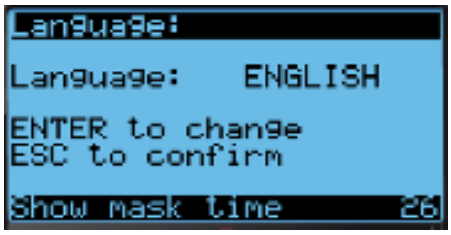
Unit of measure

Allows the option to change the type of unit of measure, American, International, and Press ↵ to select and press again ↵ to confirm. To exit press ↩

Language

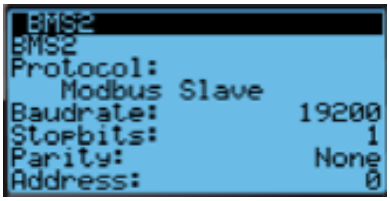
Allows the option to change the language, English, Spanish, Italian, etc.

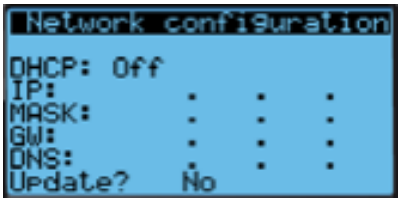
Press ↵ to select and press again ↵ pto confirm. To exit press ↩



Serial ports

Allows the option to change the configuration of the ports, Modbus RTU, controller IP and Pgdx if required.

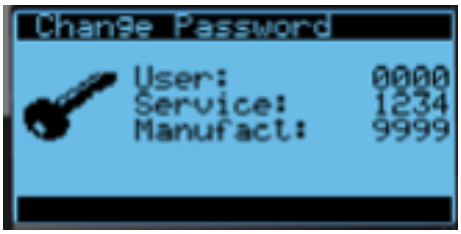




Password change

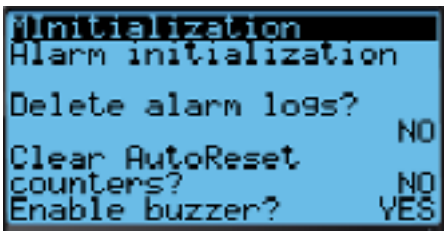
Allows the option to change the current passwords.

Press ↵ to select and press again ↵ to confirm. To exit press ↩



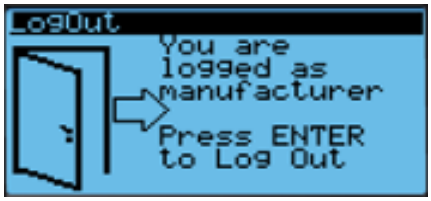
Initialization

It allows the option to change to the default configuration the register, the counters, enable or disable the buzzer and clear the memories. This configuration cannot be modified by the user.



Logging out

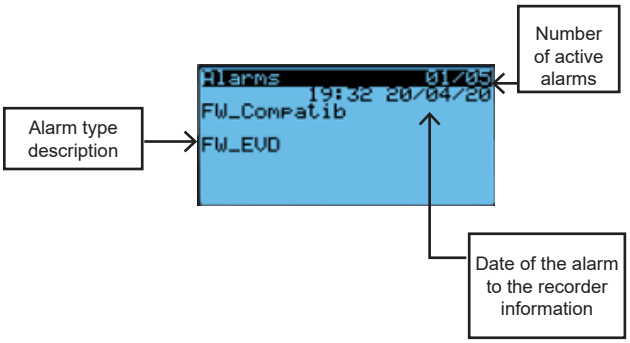
Exit to the home page.



ALARMS

If there is an alarm, the following screen will appear when you press !⚠

At the moment of an alarm. The controller displays a red indicator on the alarm button. In this case it is necessary to press ! to see the present/current alarms activated.



To reset one or all alarms, go to the end of the list on the next screen and press ⚠ for 3 seconds.

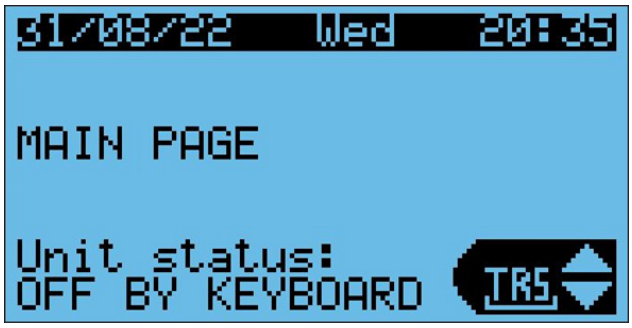
Note: If the event that triggered the alarm is still present, it cannot be reset.

USER'S MANUAL FOR OPERATION OF CPCO EXPANSION CONTROL UNIT.

This manual is intended to explain the operation of the expansion control unit for DW2W-360 equipment in this brief manual will explain the screens and menus that the control has, this unit was added to include high pressure transducers and to display the values by modbus communication and through the control display.

As shown in Figure 2 the display of the control expansion unit has similar to the same features as the master control unit however this control expansion unit is only intended to display the values that has the high pressure transducers and display the values of the saturation temperature of the coolant.

Figure 2. Display CPCO



To select the display of the pressure transducers, simply access the menu at the bottom of the screen using the navigation buttons and select the option with the description TRS as shown in the following image.

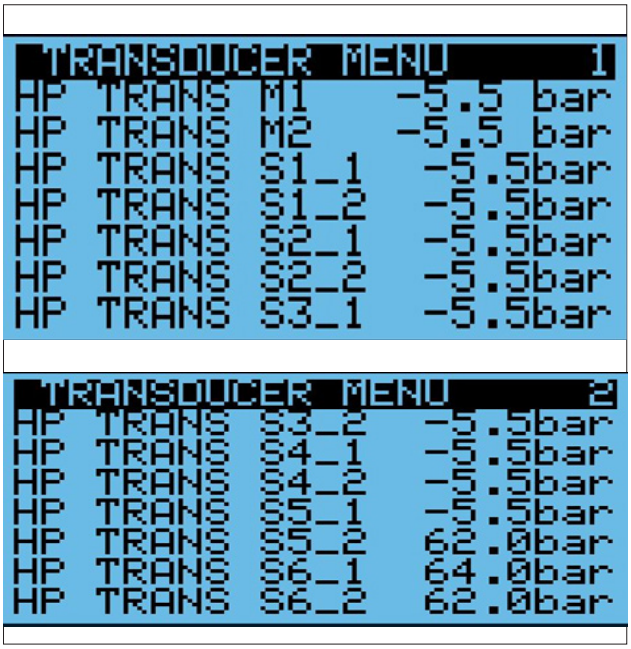
Once the above menu has been selected, the legend corresponding to the description of the transducers will appear at the top, as shown below, along with the corresponding page number.

At the bottom of the menu you can see the transducer to which it is referenced and the unit from which the transducer is obtaining the reading as shown in figure 8; the nomenclature to which each transducer corresponds will be described below.

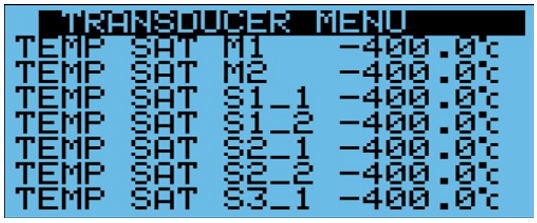
- **HP TRANS M1:** master circuit 1 high pressure transducer.
- **HP TRANS M2:** high pressure transducer of circuit 2 master.
- **HP TRANS S1_1:** high pressure transducer of circuit 1 slave 1.
- **HP TRANS S1_2:** high pressure transducer of circuit 2 slave 1.
- **HP TRANS S2_1:** high pressure transducer of circuit 1 slave 2.
- **HP TRANS S2_2:** high pressure transducer of circuit 2 slave 2.
- **HP TRANS S3_1:** high pressure transducer of circuit 1 slave 3.
- **HP TRANS S3_2:** high pressure transducer of circuit 2 slave 3.
- **HP TRANS S4_1:** high pressure transducer of circuit 1 slave 4.
- **HP TRANS S4_2:** high pressure transducer of circuit 2 slave 4.

- **HP TRANS S5_1:** high pressure transducer of circuit 1 slave 5.
- **HP TRANS S5_2:** high pressure transducer of circuit 2 slave 5.

Figure 3. Transducers



By continuing the navigation to the next page you will be able to access the coolant saturation temperature reading for each circuit.

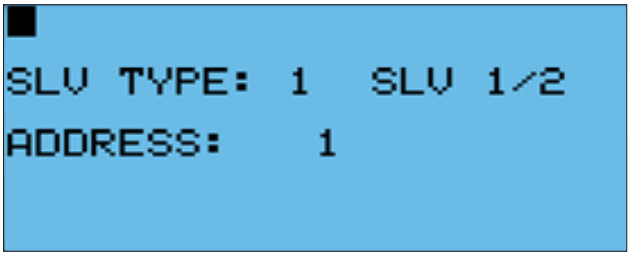


PROCEDURE FOR CONFIGURING upC3 CONTROLLERS FOR CLII

The upc3 controllers that replace the c.pCOe expansion modules must each be configured via a PGD1 screen.

The controller type and serial address must be configured.

Two programs are available for this project, one exclusively for the main c.pCOmini controller and one for the upC3s. Once the program is installed on the upC3, the following screen will appear:



There are 3 types of configuration (upC3):

- SLV TYPE 1: (SLV 1/2) - Sets the controller as expansion module 1. (Ex. expansion 1 of Module 1).
- SLV TYPE 2: (SLV 2/2) - Sets the controller as expansion module 2. (e.g. expansion 2 of Module 1)
- SLV TYPE 3: (Main) - Sets the controller as expansion module of the main controller (c.pCOmini).
-

Depending on the selected slave type, the inputs and outputs will be configured.

Once the control type has been configured, the controller must be restarted for the changes to take effect correctly.

The address of the controllers should be as follows:

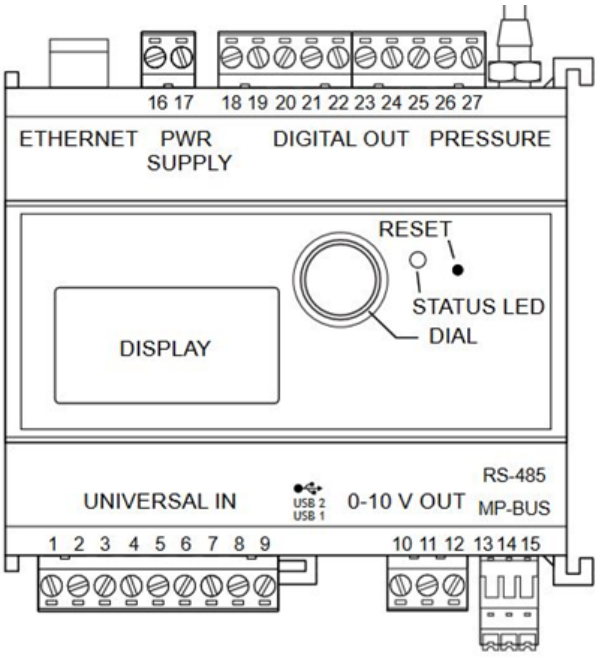
Module	Slave	Address
1	SLV 1	1
	SLV 2	2
2	SLV 3	3
	SLV 4	4
3	SLV 5	5
	SLV 6	6
4	SLV 7	7
	SLV 8	8
5	SLV 9	9
	SLV 10	10
6	SLV 11	11
	SLV 12	12
7	SLV 13	13
	SLV 14	14
8	SLV 15	15
	SLV 16	16
9	SLV 17	17
	SLV 18	18
Master	SLV M	20
	c.pCOmini	---

LOYTEC CONTROLLER

This manual is intended to explain the operation and use of the LOYTEC controller for thermostatic DW2W-360 equipment this controller is a communication extension to monitor temperatures, compressor status and pressure switch status through Modbus communication taking information from the two CPCO controllers that are enabled in the DW2W-360 equipment.

As shown in the following figure 4 loytec controller contains a display interface but which also contains a web interface, from the 2 interfaces can control the equipment depending on the current configuration and the parameters it contains according to the operating equipment.

Figure 4. Loytec controller



As shown below in the following image the display shows the current status of the controller in this case it can show a serial number of the controller, the current communication configuration, percentage of memory usage, current internal voltage of the controller.

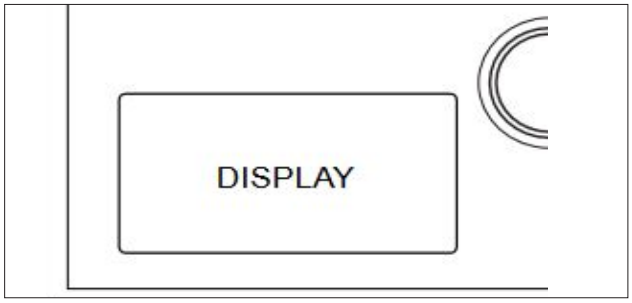
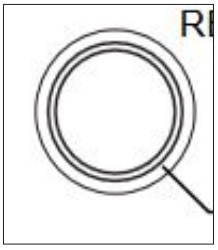


Figure 5. Dial



As shown in Figure 5, the dial has the purpose of being able to enter and exit menus, in this case as a practical example the dial can be manipulated by turning the knob to the right or to the left; to enter a menu simply press the dial as a simple button and in this way the desired menu can be accessed.

As shown below in the image, the status led is intended to send a status in which the controller is currently this led many of the times does not mean that there is an error within the controller however it has 2 states:

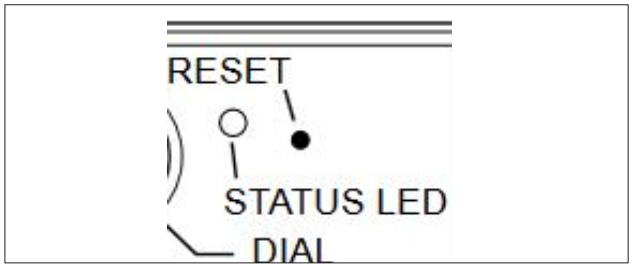
- Color the color green:

It means that the controller is in a healthy state according to the correct settings that have been programmed.

- Red LED:

It will indicate if there is a failure in terms of settings or hardware problem in many cases this led does not imply a failure as such but this red led indicates a warning which has to be reviewed thoroughly in the controller portal.

Next to this LED there is a reset button which has the purpose of erasing the configuration of the controller to perform this procedure will require a thin pointed object and pressing the button for 3 seconds the controller will be completely erased this in turn results in the loss of data and loss of communication settings of the controller.



Next, we will describe an example of navigation inside the controller which is intended to make more sensitive the handling of the dial for the selection of menus within the control.

- Step number 1: depending on the menu where you are, take the knob with your index finger and thumb and turn it to the right or to the left at that moment you will see that the icons or the menu to which the day is pointing will take a black background.

Example:
As shown in figure 6 this is the main menu of the controller screen, for this practical example we are going to.
As you can see, currently the folder icon is with a white background, in this case it has not been selected and therefore the dial for the selection of the folder icon has not been moved.

Figure 6. Main menu

- Step 2: Once the folder icon is selected, press the dial and you will be able to access the content of that icon and the content of the menus inside it.

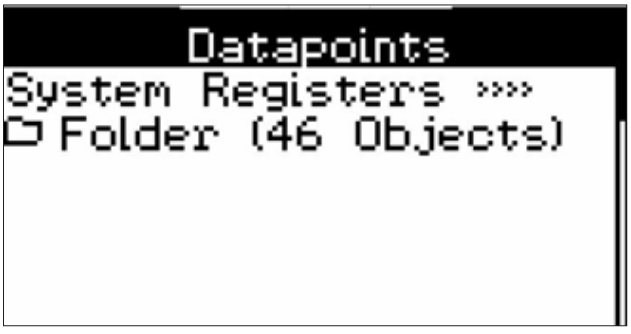
For the other steps or to access other configurations, simply repeat steps 1 and 2 in order to navigate between icons or menus.

Accessing folder icon menus.

In this section we will take the menus contained in the folder icon and at the same time we will explain how to access these icons to be able to modify the equipment's operating parameters.

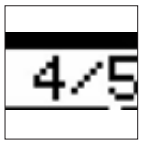
To access these parameters, first select the folder icon as shown in the following image and once this icon is selected, press the dial to access the parameters it contains.

After pressing the dial the Datapoints menu can be accessed as shown below and as can be seen, the Datapoint menu is shaded black which means that the dial is currently pointing to that menu.



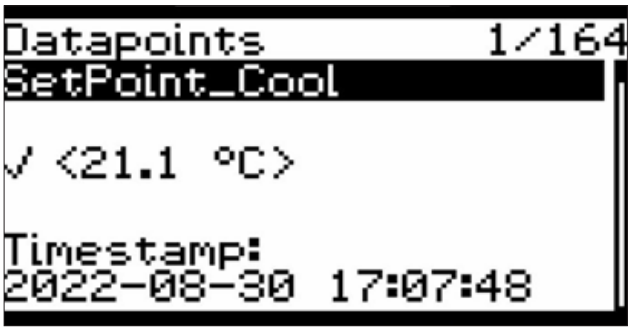
By moving the dial to the right or to the left, the pointer can be moved either to the top of the menu or to the menu to be selected as shown in the following image; in this case, in order to access the time or shutdown configuration parameters for the equipment, it is necessary to move to the Modbus menu. Once this menu is selected by the pointer, press the dial and you will be able to access the menu that will guide you to the parameters.

Each menu has a number at the top of the screen, this number indicates the current position of the menu to which you want to access, in this case the parameters to which you want to access is number 4 .



After having pressed the dial as mentioned in the previous step and as shown in the following image, you can access the Modbus parameters menu within this menu it is necessary to turn the dial and select the Dapoints folder once the datapoints folder is selected it is necessary to press the dial to access it.

After pressing the dial as shown below and as discussed in the previous step, you will be able to access and observe the values to which the Modbus points are referenced to the communication with the CPCO control.



Web connection for parameter display.

The DW2W-360 device has a web interface that allows a more detailed view of the parameters for manipulation and visualization, and a brief introduction to configure this interface and visualize it, if necessary, through a PC.

To be able to make a connection to an Ethernet network can be done in two ways either by connecting the device to a local network or connecting it to an network for either of the two cases you have to enter the parameters menu to access the address of the device, the steps to perform this procedure are shown below.

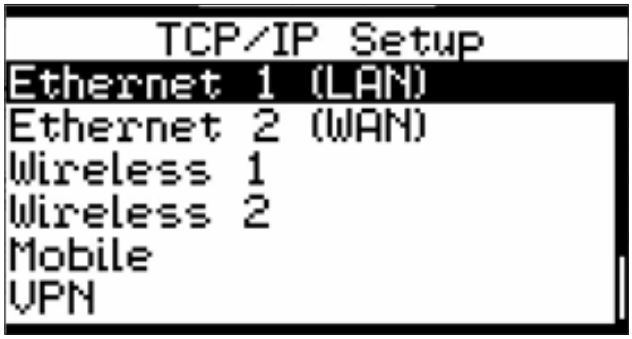
In the main screen you have to select the configuration menu as shown in figure 7.

Figure 7. Setup Menu

After the previous step a screen like the one shown below will appear, turn the dial until the Device Management option is selected.

After selecting this option, press the dial to access the communications setup sub menu and select the TCP/IP Setup option and then press the dial to access the sub menu option.

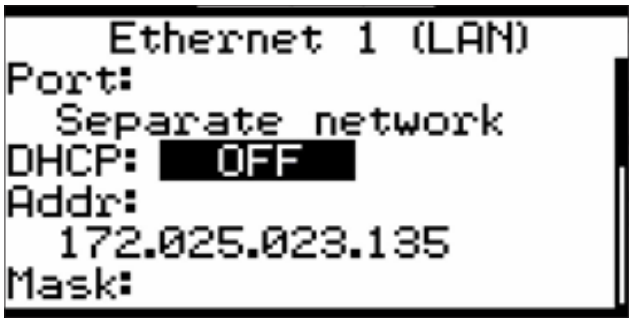
After having performed the previous step, select the Ethernet 1 menu selection option as shown in the following image.



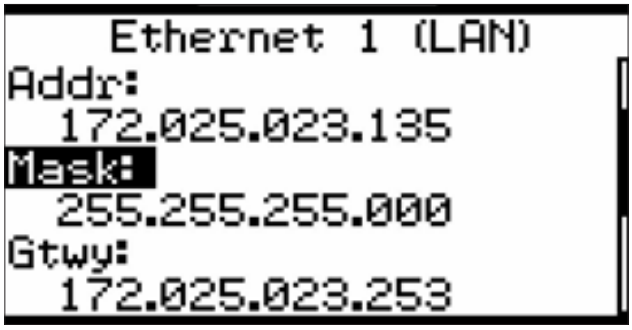
Once the previous menu is selected, the network address of the device can be accessed, as can be seen in the following image, there are different options to which the device has to be adapted depending on the network installation needs or remote monitoring requirements of either the device itself or a third party device such as PC'S, Tablets, or mobile devices.

The following is a brief explanation of the options offered by this menu for quick configuration of viewing through the device.

In the following image you can see that selecting the **DHCP** option in **ON** mode means that the device can connect to a router that can provide an automatic IP address, depending on whether this router has an Internet connection the device acquires the IP that the router or the Internet connection provides.



Once the previous steps are completed and depending on the desired selection to be able to connect the device to the needs of the network to which it is required to connect, the following options will be verified; these options are found by turning the dial to select them as shown in the image below.



- **ADDR:** This is the IP address of the device to which the address is assigned depending on the automatic or manual selection.
- **MASK:** This is the network mask assigned to the device depending on the automatic or manual selection.
- **GTWY:** This is the subnet mask that is assigned to the device and the selection can be automatic or manual.

Once the above steps have been completed and the above information has been verified, the device information will be saved by selecting the following menu.

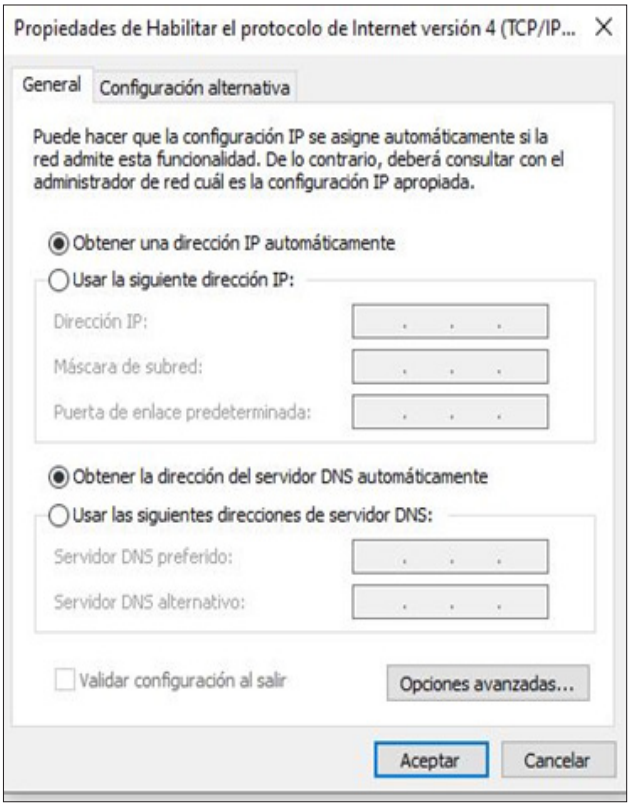
Once this step is completed, the device will restart showing the device's network address on the main screen.

Once the previous steps have been taken and the IP address has been verified, the connection will be made through a PC web application, so that the device data can be monitored through a browser and the necessary parameters can be manipulated depending on the adaptation that needs to be made to the equipment.

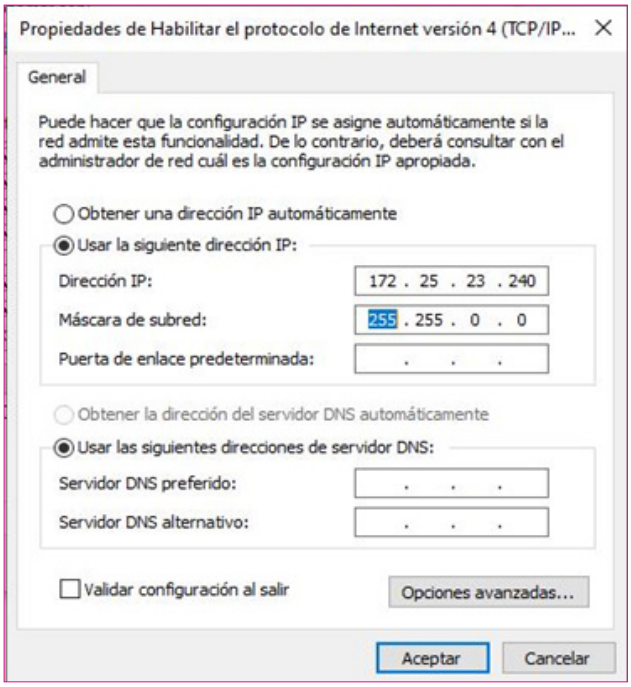
Connection to the loytec device when a manual address is assigned.

This example will show how to make a local connection to the loytec controller. This in order to make a direct connection to the controller through an ethernet port.

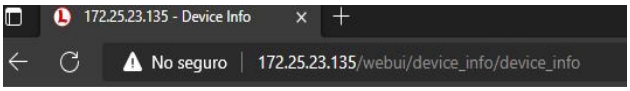
The first thing to do is to verify the address that contains the controller this address can be seen in the main screen, after verifying this address we proceed to configure the IP address of the computer or device to which you want to connect to the controller for this you have to go to the start menu and then to the control panel and access the network settings of the device as shown in the following image.



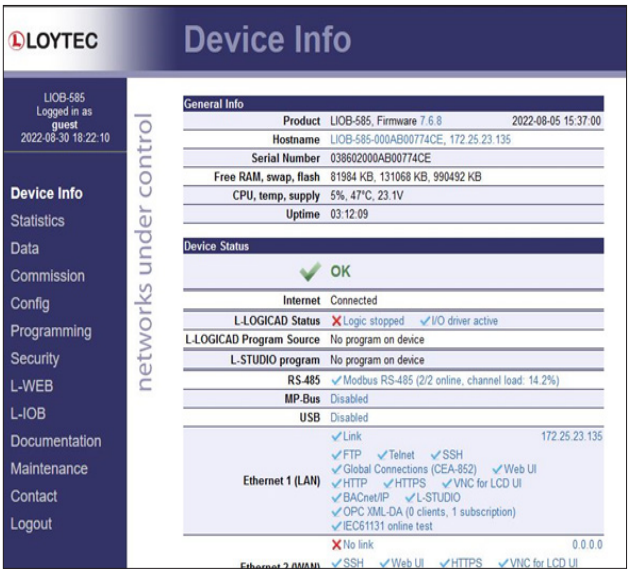
You have to change the IP address as shown in the image below and once this procedure is done you will be able to open a web browser either Firefox, Internet Explorer or another favorite search engine.



Once the web browser is open, type the address containing the controller in the address bar.
To do this, simply look at the main screen.

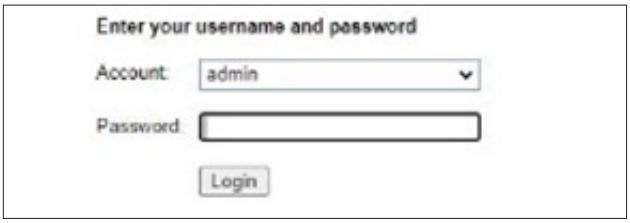


Once the previous step has been completed, a page with the following menus will appear in the web browser:

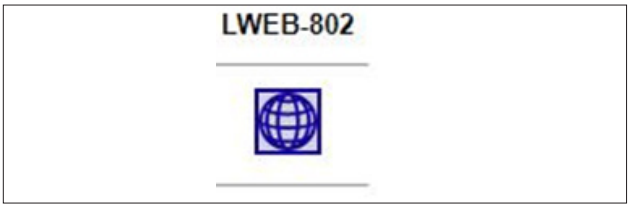


Viewing the page we access the LWEB menu.

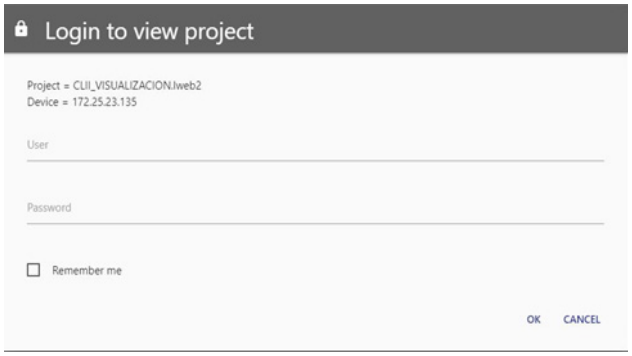
After clicking on the LWEB option a user and password selection menu will appear, to access this sub menu the user is: operator and the password: operator and click on login.



After logging in with your username and password, click on the icon shown below:



Next, it will ask again for the user: operator and password: operator



From here you can access the status parameter display page for each unit.

DW2W-360 THERMOSTATIC ALARMS

The alarms described below are intended to explain which are the most recurrent problems in the equipment. These alarms are the same in terms of the modules contained in the equipment.

ALARM	NAME	DESCRIPTION
MS_M	Motor saver alarm	Phase diagnostic device alarm: this device is located inside the panel and is responsible for checking that the AC voltage supplies are balanced and have no voltage rises or falls in case the device is alarmed it will send a signal which will be represented as a device alarm showing the legend MS_M on the controller.
HP_M	Refrigerant system high pressure switch	High pressure switch signal alarm on the refrigerant discharge line; this alarm is activated when the digital pressure switch on the refrigerant discharge line reaches the maximum pressure allowed by the device.
LP_M	Refrigerant system low pressure switch	Low pressure switch signal alarm on the refrigerant suction line; this alarm is activated when the digital pressure switch on the refrigerant suction line reaches the minimum pressure allowed by the device
Suction_M	Refrigerant system low pressure transducer	Coolant suction line pressure transducer analog signal alarm: this alarm is triggered when the analog pressure switch on the coolant suction line reaches the minimum pressure allowed by the device.
Outlet_M	Low evaporator water temperature	Low evaporator water temperature alarm; activated when the evaporator water outlet temperature probe detects temperatures outside the set limits.
Cont_Frez_M	Evaporator water low temperature count	This alarm indicates when the system has been reset more than 3 times by chilled water temperature; when the system is reset by evaporator outlet water temperature it starts working again in case the system has been reset more than 3 times this alarm will be activated.
Flood_Alarm_G	Flow alarm	This alarm will be active when the system detects flooding or water leakage in the system cannot be reset until this signal has been restored.
Flow_M	Evaporator flow alarm	This alarm will activate when the evaporator flow sensor is out of range; this alarm will not reset until the flow sensor is in range again.
Flow_Cond_M	Condenser flow alarm	This alarm will activate when the condenser flow sensor is out of range; this alarm will not reset until the flow sensor is within range again.
Hit_Cond	-	This alarm is present when there is a temperature outside the allowed range of high water temperature in the condenser.
Slv_M_Offline	-	When there is a communication problem with the slaves this alarm will be activated indicating the type of slave which is off line for this particular alarm means that the master's IO slave is deenergized or disconnected from the network.
Slv_1_1_Offline	-	When there is a communication problem with the slaves this alarm will be activated indicating the type of slave which is off line, for this alarm it means that slave 1 of address 1 is deenergized or off line.

Tabla 1. ***Thermostatic Clii Mapping***

Types	Variable Name	Direction
Coil	Output_M.Compressor	ReadWrite
Coil	Output_M.Compressor_2	ReadWrite
Coil	Output_E1.Compressor	ReadWrite
Coil	Output_E1.Compressor_2	ReadWrite
Coil	Output_E2.Compressor	ReadWrite
Coil	Output_E2.Compressor_2	ReadWrite
Coil	Output_E3.Compressor	ReadWrite
Coil	Output_E3.Compressor_2	ReadWrite
Coil	Output_E4.Compressor	ReadWrite
Coil	Output_E4.Compressor_2	ReadWrite
Coil	Output_E5.Compressor	ReadWrite
Coil	Output_E5.Compressor_2	ReadWrite
Coil	BmsOnOff	ReadWrite
Coil	Global_Alarm	ReadWrite
Coil	E1_In_Alarm	ReadWrite
Coil	E2_In_Alarm	ReadWrite
Coil	E3_In_Alarm	ReadWrite
Coil	E4_In_Alarm	ReadWrite
Coil	E5_In_Alarm	ReadWrite
Coil	IN_M.FL.Value	ReadWrite
Coil	IN_M.FL_Cond.Value	ReadWrite
Coil	IN_M.HP.Value	ReadWrite
Coil	IN_M.HP_2.Value	ReadWrite
Coil	IN_M.LP.Value	ReadWrite
Coil	IN_M.LP_2.Value	ReadWrite
Coil	IN_M.MS.Value	ReadWrite
Coil	IN_E1.FL.Value	ReadWrite
Coil	IN_E1.FL_Cond.Value	ReadWrite
Coil	IN_E1.Flood.Value	ReadWrite
Coil	IN_E1.HP.Value	ReadWrite
Coil	IN_E1.HP_2.Value	ReadWrite
Coil	IN_E1.LP.Value	ReadWrite
Coil	IN_E1.LP_2.Value	ReadWrite
Coil	IN_E1.MS.Value	ReadWrite
Coil	IN_E2.FL.Value	ReadWrite
Coil	IN_E2.FL_Cond.Value	ReadWrite
Coil	IN_E2.Flood.Value	ReadWrite
Coil	IN_E2.HP.Value	ReadWrite
Coil	IN_E2.HP_2.Value	ReadWrite
Coil	IN_E2.LP.Value	ReadWrite
Coil	IN_E2.LP_2.Value	ReadWrite
Coil	IN_E2.MS.Value	ReadWrite
Coil	IN_E3.FL.Value	ReadWrite
Coil	IN_E3.FL_Cond.Value	ReadWrite
Coil	IN_E3.Flood.Value	ReadWrite
Coil	IN_E3.HP.Value	ReadWrite
Coil	IN_E3.HP_2.Value	ReadWrite
Coil	IN_E3.LP.Value	ReadWrite
Coil	IN_E3.LP_2.Value	ReadWrite
Coil	IN_E3.MS.Value	ReadWrite
Coil	IN_E4.FL.Value	ReadWrite
Coil	IN_E4.FL_Cond.Value	ReadWrite
Coil	IN_E4.Flood.Value	ReadWrite
Coil	IN_E4.HP.Value	ReadWrite
Coil	IN_E4.HP_2.Value	ReadWrite
Coil	IN_E4.LP.Value	ReadWrite
Coil	IN_E4.LP_2.Value	ReadWrite
Coil	IN_E4.MS.Value	ReadWrite
Coil	IN_E5.FL.Value	ReadWrite

APPENDICES

Coil	IN_E5.FL_Cond.Value	ReadWrite
Coil	IN_E5.Flood.Value	ReadWrite
Coil	IN_E5.HP.Value	ReadWrite
Coil	IN_E5.HP_2.Value	ReadWrite
Coil	IN_E5.LP.Value	ReadWrite
Coil	IN_E5.LP_2.Value	ReadWrite
Coil	IN_E5.MS.Value	ReadWrite
Coil	Output_E6.Compressor	ReadWrite
Coil	Output_ E6.Compressor_2	ReadWrite
Coil	Output_E7.Compressor	ReadWrite
Coil	Output_ E7.Compressor_2	ReadWrite
Coil	Output_E8.Compressor	ReadWrite
Coil	Output_ E8.Compressor_2	ReadWrite
Coil	Output_E9.Compressor	ReadWrite
Coil	Output_ E9.Compressor_2	ReadWrite
Coil	E6_In_Alarm	ReadWrite
Coil	E7_In_Alarm	ReadWrite
Coil	E8_In_Alarm	ReadWrite
Coil	E9_In_Alarm	ReadWrite
Coil	IN_E6.FL.Value	ReadWrite
Coil	IN_E6.FL_Cond.Value	ReadWrite
Coil	IN_E6.Flood.Value	ReadWrite
Coil	IN_E6.HP.Value	ReadWrite
Coil	IN_E6.HP_2.Value	ReadWrite
Coil	IN_E6.LP.Value	ReadWrite
Coil	IN_E6.LP_2.Value	ReadWrite
Coil	IN_E6.MS.Value	ReadWrite
Coil	IN_E7.FL.Value	ReadWrite
Coil	IN_E7.HP.Value	ReadWrite
Coil	IN_E7.HP_2.Value	ReadWrite

Coil	IN_E7.LP.Value	ReadWrite
Coil	IN_E7.LP_2.Value	ReadWrite
Coil	IN_E7.MS.Value	ReadWrite
Coil	IN_E8.FL.Value	ReadWrite
Coil	IN_E8.FL_Cond.Value	ReadWrite
Coil	IN_E8.Flood.Value	ReadWrite
Coil	IN_E8.HP.Value	ReadWrite
Coil	IN_E8.HP_2.Value	ReadWrite
Coil	IN_E8.LP.Value	ReadWrite
Coil	IN_E8.LP_2.Value	ReadWrite
Coil	IN_E8.MS.Value	ReadWrite
Coil	IN_E9.FL.Value	ReadWrite
Coil	IN_E9.FL_Cond.Value	ReadWrite
Coil	IN_E9.Flood.Value	ReadWrite
Coil	IN_E9.HP.Value	ReadWrite
Coil	IN_E9.HP_2.Value	ReadWrite
Coil	IN_E9.LP.Value	ReadWrite
Coil	IN_E9.LP_2.Value	ReadWrite
Coil	IN_E9.MS.Value	ReadWrite
HoldingRegister	SetPoint_Cool	ReadWrite
HoldingRegister	SetPoint_Heat	ReadWrite
HoldingRegister	IN_M.Inlet.Value	ReadWrite
HoldingRegister	IN_M.Outlet.Value	ReadWrite
HoldingRegister	IN_M.Ambient.Value	ReadWrite
HoldingRegister	IN_M.Ambient_out. Value	ReadWrite
HoldingRegister	IN_M.Suction_Press. Value	ReadWrite
HoldingRegister	IN_M.Suction_Press_2. Value	ReadWrite
HoldingRegister	IN_E1.Ambient.Value	ReadWrite
HoldingRegister	IN_E1.Ambient_out. Value	ReadWrite
HoldingRegister	IN_E1.HP_T.Value	ReadWrite

HoldingRegister	IN_E1.HP_T_2.Value	ReadWrite
HoldingRegister	IN_E1.Inlet.Value	ReadWrite
HoldingRegister	IN_E1.LP_T.Value	ReadWrite
HoldingRegister	IN_E1.LP_T_2.Value	ReadWrite
HoldingRegister	IN_E1.Outlet.Value	ReadWrite
HoldingRegister	IN_E1.Suction_Press. Value	ReadWrite
HoldingRegister	IN_E1.Suction_ Press_2.Value	ReadWrite
HoldingRegister	IN_E2.Ambient.Value	ReadWrite
HoldingRegister	IN_E2.Ambient_out. Value	ReadWrite
HoldingRegister	IN_E2.HP_T.Value	ReadWrite
HoldingRegister	IN_E2.HP_T_2.Value	ReadWrite
HoldingRegister	IN_E2.Inlet.Value	ReadWrite
HoldingRegister	IN_E2.LP_T.Value	ReadWrite
HoldingRegister	IN_E2.LP_T_2.Value	ReadWrite
HoldingRegister	IN_E2.Outlet.Value	ReadWrite
HoldingRegister	IN_E2.Suction_Press. Value	ReadWrite
HoldingRegister	IN_E2.Suction_ Press_2.Value	ReadWrite
HoldingRegister	IN_E3.Ambient.Value	ReadWrite
HoldingRegister	IN_E3.Ambient_out. Value	ReadWrite
HoldingRegister	IN_E3.HP_T.Value	ReadWrite
HoldingRegister	IN_E3.HP_T_2.Value	ReadWrite
HoldingRegister	IN_E3.Inlet.Value	ReadWrite
HoldingRegister	IN_E3.LP_T.Value	ReadWrite
HoldingRegister	IN_E3.LP_T_2.Value	ReadWrite
HoldingRegister	IN_E3.Outlet.Value	ReadWrite
HoldingRegister	IN_E3.Suction_Press. Value	ReadWrite
HoldingRegister	IN_E3.Suction_ Press_2.Value	ReadWrite
HoldingRegister	IN_E4.Ambient.Value	ReadWrite

HoldingRegister	IN_E4.Ambient_out. Value	ReadWrite
HoldingRegister	IN_E4.HP_T.Value	ReadWrite
HoldingRegister	IN_E4.HP_T_2.Value	ReadWrite
HoldingRegister	IN_E4.Inlet.Value	ReadWrite
HoldingRegister	IN_E4.LP_T.Value	ReadWrite
HoldingRegister	IN_E4.LP_T_2.Value	ReadWrite
HoldingRegister	IN_E4.Outlet.Value	ReadWrite
HoldingRegister	IN_E4.Suction_Press. Value	ReadWrite
HoldingRegister	IN_E4.Suction_ Press_2.Value	ReadWrite
HoldingRegister	IN_E5.Ambient.Value	ReadWrite
HoldingRegister	IN_E5.Ambient_out. Value	ReadWrite
HoldingRegister	IN_E5.HP_T.Value	ReadWrite
HoldingRegister	IN_E5.HP_T_2.Value	ReadWrite
HoldingRegister	IN_E5.Inlet.Value	ReadWrite
HoldingRegister	IN_E5.LP_T.Value	ReadWrite
HoldingRegister	IN_E5.LP_T_2.Value	ReadWrite
HoldingRegister	IN_E5.Outlet.Value	ReadWrite
HoldingRegister	IN_E5.Suction_Press. Value	ReadWrite
HoldingRegister	IN_E5.Suction_ Press_2.Value	ReadWrite
HoldingRegister	IN_E6.Ambient.Value	ReadWrite
HoldingRegister	IN_E6.HP_T.Value	ReadWrite
HoldingRegister	IN_E6.HP_T_2.Value	ReadWrite
HoldingRegister	IN_E6.Inlet.Value	ReadWrite
HoldingRegister	IN_E6.LP_T.Value	ReadWrite
HoldingRegister	IN_E6.LP_T_2.Value	ReadWrite
HoldingRegister	IN_E6.Outlet.Value	ReadWrite
HoldingRegister	IN_E6.Suction_Press. Value	ReadWrite
HoldingRegister	IN_E6.Suction_ Press_2.Value	ReadWrite

APPENDICES

HoldingRegister	IN_E7.Ambient.Value	ReadWrite
HoldingRegister	IN_E7.HP_T.Value	ReadWrite
HoldingRegister	IN_E7.HP_T_2.Value	ReadWrite
HoldingRegister	IN_E7.Inlet.Value	ReadWrite
HoldingRegister	IN_E7.LP_T.Value	ReadWrite
HoldingRegister	IN_E7.LP_T_2.Value	ReadWrite
HoldingRegister	IN_E7.Outlet.Value	ReadWrite
HoldingRegister	IN_E7.Suction_Press. Value	ReadWrite
HoldingRegister	IN_E7.Suction_ Press_2.Value	ReadWrite
HoldingRegister	IN_E8.Ambient.Value	ReadWrite
HoldingRegister	IN_E8.HP_T.Value	ReadWrite
HoldingRegister	IN_E8.HP_T_2.Value	ReadWrite
HoldingRegister	IN_E8.Inlet.Value	ReadWrite
HoldingRegister	IN_E8.LP_T.Value	ReadWrite
HoldingRegister	IN_E8.LP_T_2.Value	ReadWrite
HoldingRegister	IN_E8.Outlet.Value	ReadWrite
HoldingRegister	IN_E8.Suction_Press. Value	ReadWrite
HoldingRegister	IN_E8.Suction_ Press_2.Value	ReadWrite
HoldingRegister	IN_E9.Ambient.Value	ReadWrite
HoldingRegister	IN_E9.HP_T.Value	ReadWrite
HoldingRegister	IN_E9.HP_T_2.Value	ReadWrite
HoldingRegister	IN_E9.Inlet.Value	ReadWrite
HoldingRegister	IN_E9.LP_T.Value	ReadWrite
HoldingRegister	IN_E9.LP_T_2.Value	ReadWrite
HoldingRegister	IN_E9.Outlet.Value	ReadWrite
HoldingRegister	IN_E9.Suction_Press. Value	ReadWrite
HoldingRegister	IN_E9.Suction_ Press_2.Value	ReadWrite
HoldingRegister	SH_Main_C1	ReadWrite
HoldingRegister	SH_Main_C2	ReadWrite

HoldingRegister	SH_E1_C1	ReadWrite
HoldingRegister	SH_E1_C2	ReadWrite
HoldingRegister	SH_E2_C1	ReadWrite
HoldingRegister	SH_E2_C2	ReadWrite
HoldingRegister	SH_E3_C1	ReadWrite
HoldingRegister	SH_E3_C2	ReadWrite
HoldingRegister	SH_E4_C1	ReadWrite
HoldingRegister	SH_E4_C2	ReadWrite
HoldingRegister	SH_E5_C1	ReadWrite
HoldingRegister	SH_E5_C2	ReadWrite
HoldingRegister	SH_E6_C1	ReadWrite
HoldingRegister	SH_E6_C2	ReadWrite
HoldingRegister	SH_E7_C1	ReadWrite
HoldingRegister	SH_E7_C2	ReadWrite
HoldingRegister	SH_E8_C1	ReadWrite
HoldingRegister	SH_E8_C2	ReadWrite
HoldingRegister	SH_E9_C1	ReadWrite
HoldingRegister	SH_E9_C2	ReadWrite

Tabla 2. ***Electronic Clii Mapping***

Types	Variable Name	Direction
Coil	Output_M.Compressor	ReadWrite
Coil	Output_M.Compressor_2	ReadWrite
Coil	Output_E1.Compressor	ReadWrite
Coil	Output_E1.Compressor_2	ReadWrite
Coil	Output_E2.Compressor	ReadWrite
Coil	Output_E2.Compressor_2	ReadWrite
Coil	Output_E3.Compressor	ReadWrite
Coil	Output_E3.Compressor_2	ReadWrite
Coil	Output_E4.Compressor	ReadWrite
Coil	Output_E4.Compressor_2	ReadWrite
Coil	Output_E5.Compressor	ReadWrite
Coil	Output_E5.Compressor_2	ReadWrite
Coil	BmsOnOff	ReadWrite
Coil	Global_Alarm	ReadWrite
Coil	E1_In_Alarm	ReadWrite
Coil	E2_In_Alarm	ReadWrite
Coil	E3_In_Alarm	ReadWrite
Coil	E4_In_Alarm	ReadWrite
Coil	E5_In_Alarm	ReadWrite
Coil	IN_M.FL.Value	ReadWrite
Coil	IN_M.FL_Cond.Value	ReadWrite
Coil	IN_M.HP.Value	ReadWrite
Coil	IN_M.HP_2.Value	ReadWrite
Coil	IN_M.LP.Value	ReadWrite
Coil	IN_M.LP_2.Value	ReadWrite
Coil	IN_M.MS.Value	ReadWrite
Coil	IN_E1.FL.Value	ReadWrite
Coil	IN_E1.FL_Cond.Value	ReadWrite
Coil	IN_E1.Flood.Value	ReadWrite
Coil	IN_E1.HP.Value	ReadWrite
Coil	IN_E1.HP_2.Value	ReadWrite
Coil	IN_E1.LP.Value	ReadWrite
Coil	IN_E1.LP_2.Value	ReadWrite
Coil	IN_E1.MS.Value	ReadWrite
Coil	IN_E2.FL.Value	ReadWrite
Coil	IN_E2.FL_Cond.Value	ReadWrite
Coil	IN_E2.Flood.Value	ReadWrite
Coil	IN_E2.HP.Value	ReadWrite
Coil	IN_E2.HP_2.Value	ReadWrite
Coil	IN_E2.LP.Value	ReadWrite
Coil	IN_E2.LP_2.Value	ReadWrite
Coil	IN_E2.MS.Value	ReadWrite
Coil	IN_E3.FL.Value	ReadWrite
Coil	IN_E3.FL_Cond.Value	ReadWrite
Coil	IN_E3.Flood.Value	ReadWrite
Coil	IN_E3.HP.Value	ReadWrite
Coil	IN_E3.HP_2.Value	ReadWrite
Coil	IN_E3.LP.Value	ReadWrite
Coil	IN_E3.LP_2.Value	ReadWrite
Coil	IN_E3.MS.Value	ReadWrite
Coil	IN_E4.FL.Value	ReadWrite
Coil	IN_E4.FL_Cond.Value	ReadWrite
Coil	IN_E4.Flood.Value	ReadWrite
Coil	IN_E4.HP.Value	ReadWrite
Coil	IN_E4.HP_2.Value	ReadWrite
Coil	IN_E4.LP.Value	ReadWrite
Coil	IN_E4.LP_2.Value	ReadWrite
Coil	IN_E4.MS.Value	ReadWrite
Coil	IN_E5.FL.Value	ReadWrite
Coil	IN_E5.FL_Cond.Value	ReadWrite

APPENDICES

Coil	IN_E5.Flood.Value	ReadWrite
Coil	IN_E5.HP.Value	ReadWrite
Coil	IN_E5.HP_2.Value	ReadWrite
Coil	IN_E5.LP.Value	ReadWrite
Coil	IN_E5.LP_2.Value	ReadWrite
Coil	IN_E5.MS.Value	ReadWrite
HoldingRegister	SetPoint_Cool	ReadWrite
HoldingRegister	SetPoint_Heat	ReadWrite
HoldingRegister	IN_M.Inlet.Value	ReadWrite
HoldingRegister	IN_M.Outlet.Value	ReadWrite
HoldingRegister	IN_M.Ambient.Value	ReadWrite
HoldingRegister	IN_M.Ambient_out.Value	ReadWrite
HoldingRegister	IN_M.Suction.Value	ReadWrite
HoldingRegister	IN_M.Suction_2.Value	ReadWrite
HoldingRegister	IN_E1.Ambient.Value	ReadWrite
HoldingRegister	IN_E1.Ambient_out.Value	ReadWrite
HoldingRegister	IN_E1.HP_T.Value	ReadWrite
HoldingRegister	IN_E1.HP_T_2.Value	ReadWrite
HoldingRegister	IN_E1.Inlet.Value	ReadWrite
HoldingRegister	IN_E1.LP_T.Value	ReadWrite
HoldingRegister	IN_E1.LP_T_2.Value	ReadWrite
HoldingRegister	IN_E1.Outlet.Value	ReadWrite
HoldingRegister	IN_E1.Suction.Value	ReadWrite
HoldingRegister	IN_E1.Suction_2.Value	ReadWrite
HoldingRegister	IN_E2.Ambient.Value	ReadWrite
HoldingRegister	IN_E2.Ambient_out.Value	ReadWrite
HoldingRegister	IN_E2.HP_T.Value	ReadWrite
HoldingRegister	IN_E2.HP_T_2.Value	ReadWrite
HoldingRegister	IN_E2.Inlet.Value	ReadWrite
HoldingRegister	IN_E2.LP_T.Value	ReadWrite
HoldingRegister	IN_E2.LP_T_2.Value	ReadWrite
HoldingRegister	IN_E2.Outlet.Value	ReadWrite

HoldingRegister	IN_E2.Suction.Value	ReadWrite
HoldingRegister	IN_E2.Suction_2.Value	ReadWrite
HoldingRegister	IN_E3.Ambient.Value	ReadWrite
HoldingRegister	IN_E3.Ambient_out.Value	ReadWrite
HoldingRegister	IN_E3.HP_T.Value	ReadWrite
HoldingRegister	IN_E3.HP_T_2.Value	ReadWrite
HoldingRegister	IN_E3.Inlet.Value	ReadWrite
HoldingRegister	IN_E3.LP_T.Value	ReadWrite
HoldingRegister	IN_E3.LP_T_2.Value	ReadWrite
HoldingRegister	IN_E3.Outlet.Value	ReadWrite
HoldingRegister	IN_E3.Suction.Value	ReadWrite
HoldingRegister	IN_E3.Suction_2.Value	ReadWrite
HoldingRegister	IN_E4.Ambient.Value	ReadWrite
HoldingRegister	IN_E4.Ambient_out.Value	ReadWrite
HoldingRegister	IN_E4.HP_T.Value	ReadWrite
HoldingRegister	IN_E4.HP_T_2.Value	ReadWrite
HoldingRegister	IN_E4.Inlet.Value	ReadWrite
HoldingRegister	IN_E4.LP_T.Value	ReadWrite
HoldingRegister	IN_E4.LP_T_2.Value	ReadWrite
HoldingRegister	IN_E4.Outlet.Value	ReadWrite
HoldingRegister	IN_E4.Suction.Value	ReadWrite
HoldingRegister	IN_E4.Suction_2.Value	ReadWrite
HoldingRegister	IN_E5.Ambient.Value	ReadWrite
HoldingRegister	IN_E5.Ambient_out.Value	ReadWrite
HoldingRegister	IN_E5.HP_T.Value	ReadWrite
HoldingRegister	IN_E5.HP_T_2.Value	ReadWrite
HoldingRegister	IN_E5.Inlet.Value	ReadWrite
HoldingRegister	IN_E5.LP_T.Value	ReadWrite
HoldingRegister	IN_E5.LP_T_2.Value	ReadWrite
HoldingRegister	IN_E5.Outlet.Value	ReadWrite
HoldingRegister	IN_E5.Suction.Value	ReadWrite
HoldingRegister	IN_E5.Suction_2.Value	ReadWrite