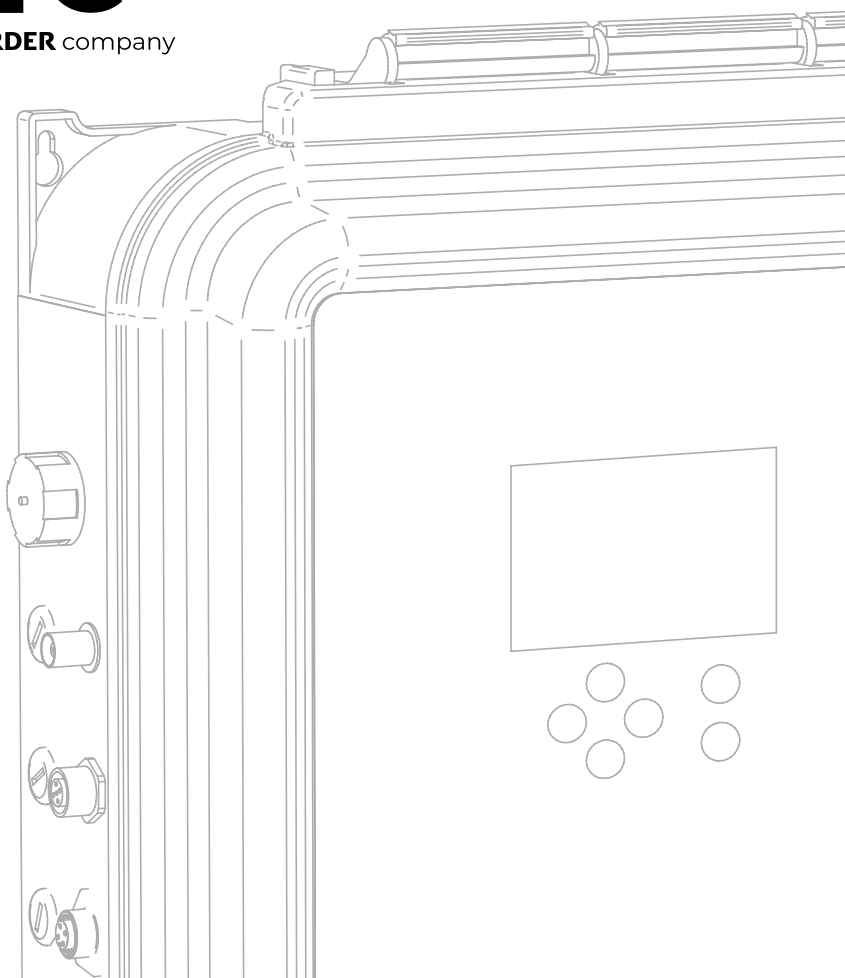


ITC

a **VERDER** company



WTRTEC **GOLD**

MANUAL

ENGLISH

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SAFETY INSTRUCTIONS

To avoid personal injury, environmental damage, and to ensure the proper operation of the equipment, personnel responsible for installation, commissioning and maintenance must follow the instructions in this manual, with particular attention to the recommendations and warnings explicitly provided. In addition, the specific instructions for the use of the chemical products to be dosed must be followed.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or with a lack of experience and knowledge, unless they have been given supervision or instruction. Children must not play with the appliance without supervision.

1 GENERAL DESCRIPTION

Simplicity in irrigation control.

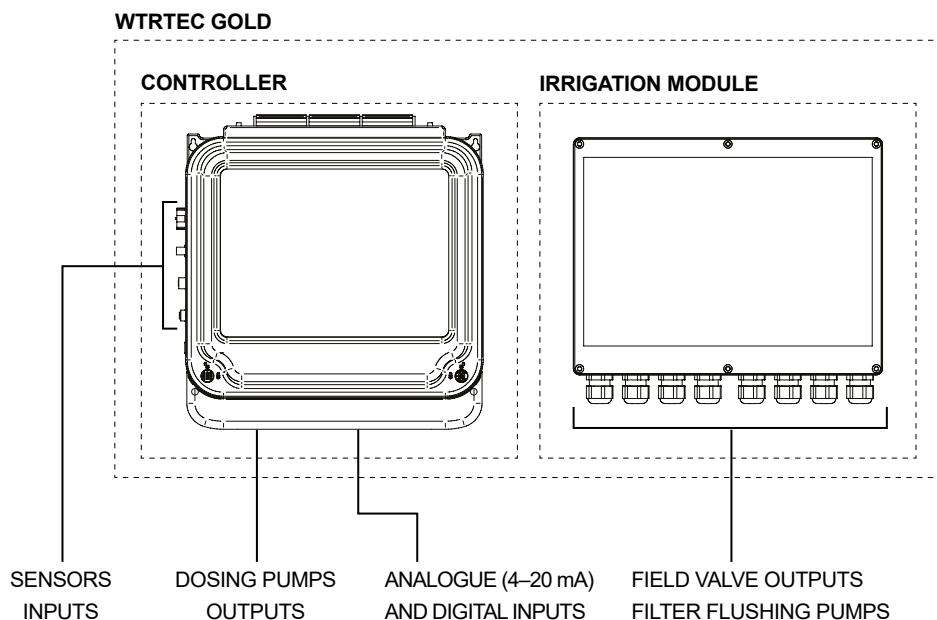
Control of 96 different sectors using 200 irrigation programmes. Each programme can be activated independently or linked together, creating programme sequences and simplifying irrigation setup.

Precision in dosing

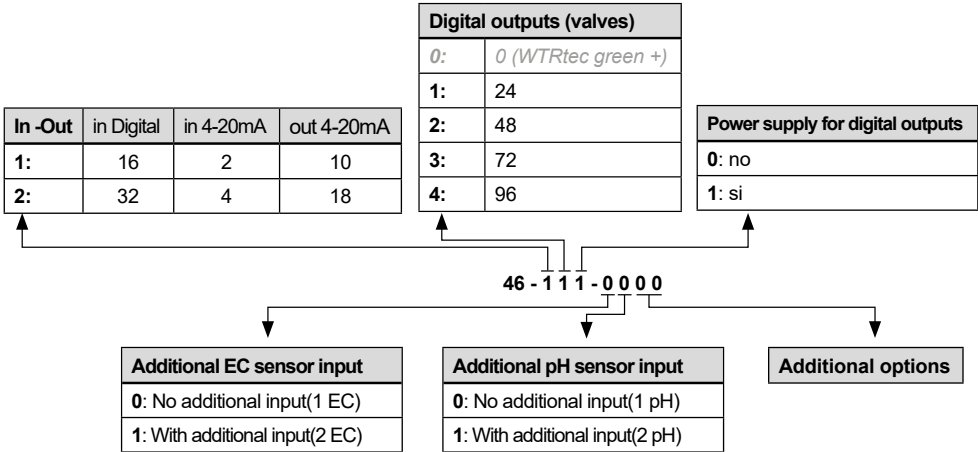
Fertigation control through 200 programmes applicable to each of the irrigation programmes, with independent dosing of up to 18 different products. Simultaneous control of proportionality, EC and pH through the PIQ algorithm developed by ITC®

Modbus: dosing control via the Modbus RTU protocol.

1.1 EQUIPMENT DESCRIPTION



Code structure



2 TRANSPORT AND HANDLING

The original packaging is designed to ensure that the equipment can be transported and stored without being damaged, provided it is kept in dry, well-ventilated areas and away from heat sources

The packaging includes:

- WTRtec Gold Irrigation and Fertigation Controller
- WTRtec Gold Irrigation Module
- Quick Installation Guide

2.1. WASTE DISPOSAL



This equipment is marked with the crossed-out wheeled bin symbol in accordance with EU Directive 2012/19/EU on Waste Electrical and Electronic Equipment (WEEE). Do not dispose of this device with household waste. For proper disposal, use the designated collection and recycling points and comply with applicable local regulations.

It is the owner's responsibility to ensure that the equipment is treated as waste in accordance with the applicable regulations in the country of use at the end of its service life.

3 TECHNICAL CHARACTERISTICS

Power supply: 100-230 ($\pm 20\%$) Vac 50/60Hz.Vdc

12 VDC (green + only)

Power consumption: 6 W

Protection rating: IP55

Enclosure material: ABS

Operating temperature: 0...45°C / 32...113°F

Maximum relative humidity: 95% non-condensing

Inputs

Flow Pulse flow input, galvanically isolated, for high-frequency flow meters (paddle wheel or electromagnetic) or low-frequency counters.

Conductivity (EC) Optically isolated input for ITC conductivity sensor with temperature compensation.

pH Isolated input for connecting a pH sensor.

Analogue 2 × 4–20 mA analogue inputs (+2 optional)

Digital 16 x voltage-free inputs (+16 optional)

Outputs

Analogue 0 × 4–20 mA analogue outputs for dosing pumps (+8 optional)

Alarms Relay outputs: 2 NO/NC + 3 NO, 24 VAC 1 A max.

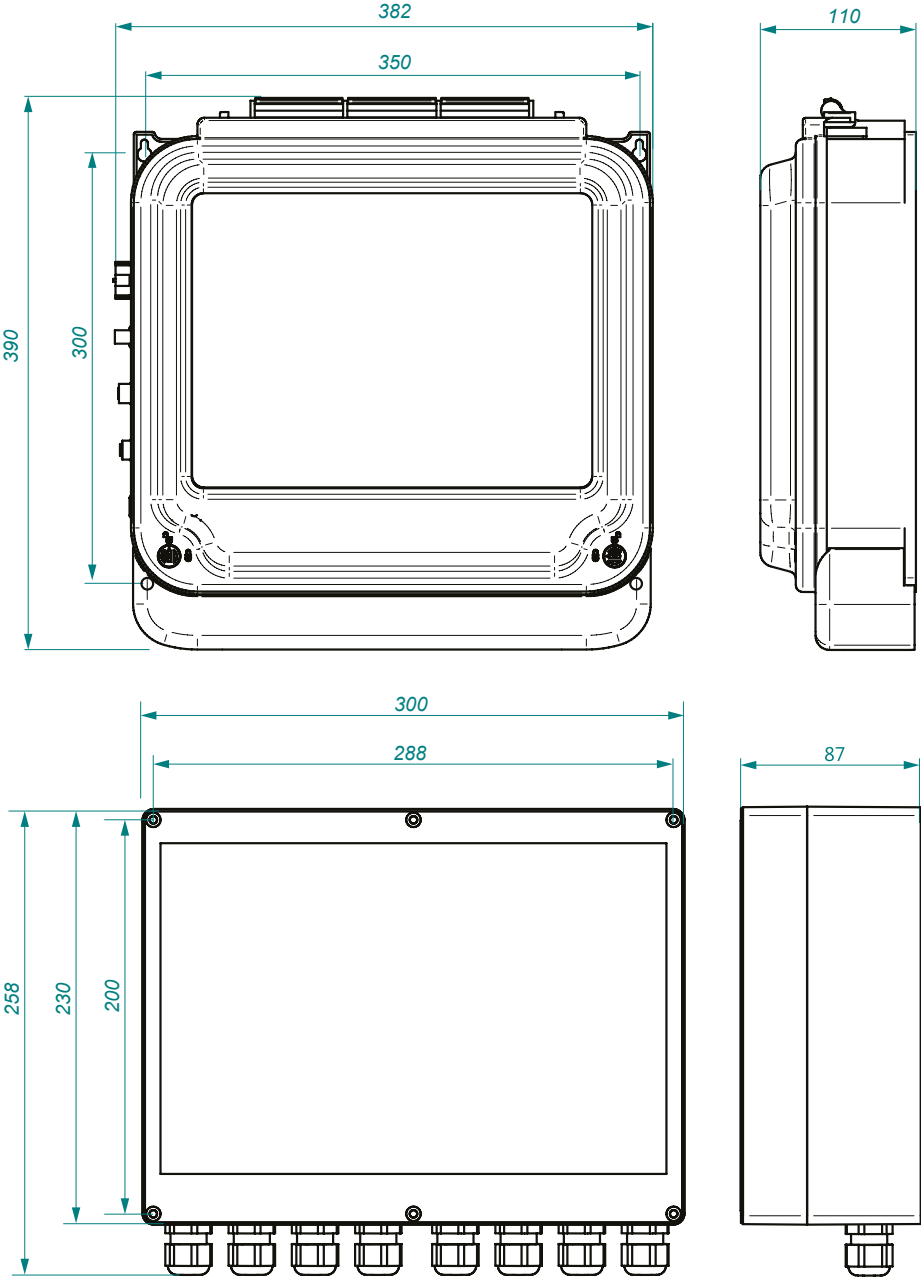
Digital NO relay outputs, 24 VAC 1 A max (8 A total max). Up to 24 per irrigation module, up to 4 modules (96 outputs total).

Communications

Local Wifi (access point)

Cloud Cloud Ethernet, Wifi (internet)

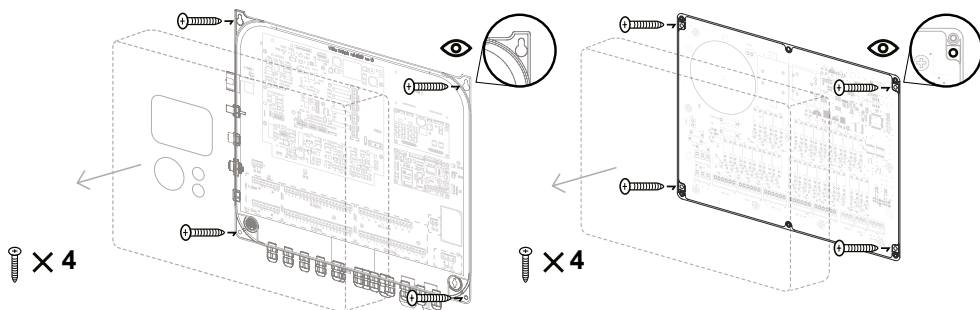
DIMENSIONS



4 INSTALLATION

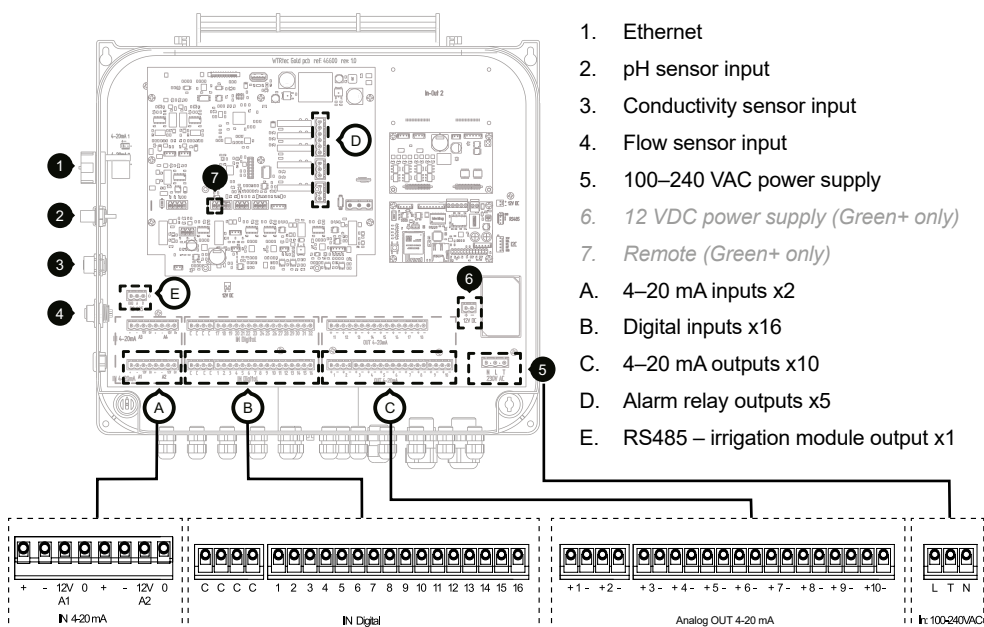
For installation, select a location protected from water, away from heat sources and direct sunlight.

The controller and the module must be mounted on a flat, stable and easily accessible surface, using the four fixing points provided to ensure secure installation.

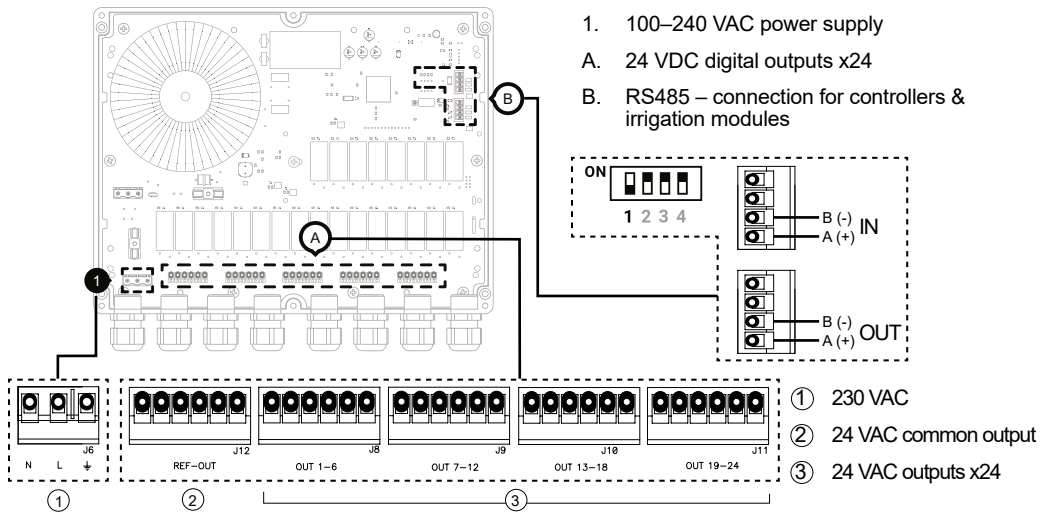


4.1. WIRING

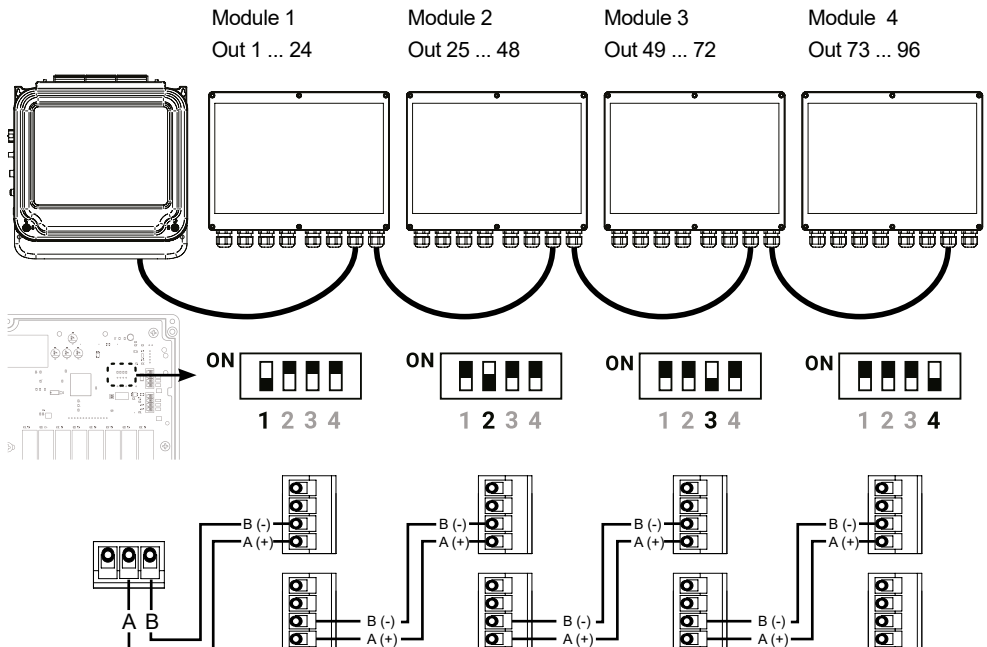
Controller:



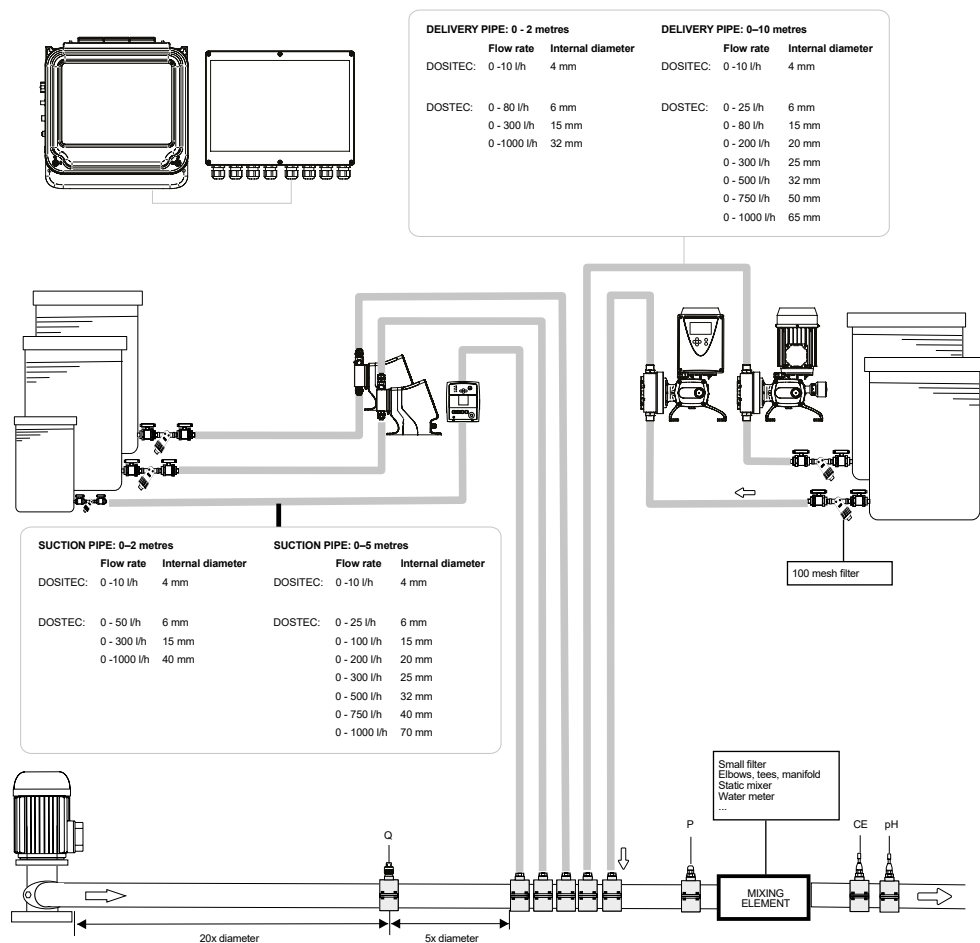
Irrigation module:



Wiring diagram between irrigation modules:



4.2 HYDRAULIC SCHEME



5. CONFIGURATION

5.1 FIRST STEPS

For commissioning and operation of the equipment, the ITC Cloud Manager application is required, including all advanced configuration options managed through the app.

The integrated keypad on the device allows basic information display and limited operations, but does not allow full system configuration.



5.1.1 Ethernet (LAN) connection

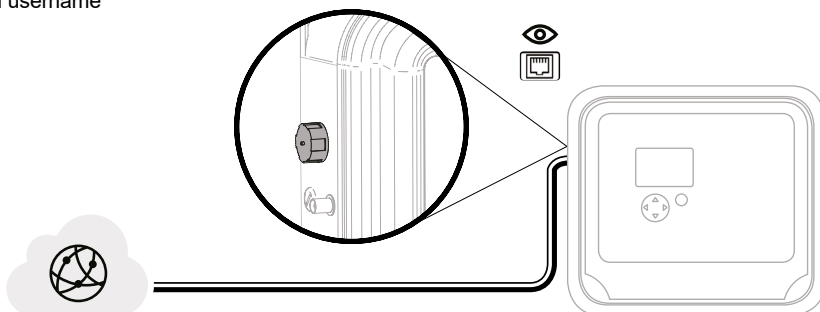
Connect the device using an RJ-45 cable to the Ethernet port.

Then download the application on your mobile device or access it via a web browser.

On first access, the system will request a username and password. If you do not have credentials, you must request access by sending an email to sat.itc@verder.com, indicating:

Equipment model (WTRtec Gold or Green+)

- Serial number
- User email address
- Desired username



5.1.2 WiFi connection

The device generates a local WiFi network for initial configuration.

The network name and access password are provided on the label on the top of the device.

It is recommended to change these credentials after first access for security reasons.

If you do not have the password, contact your distributor.

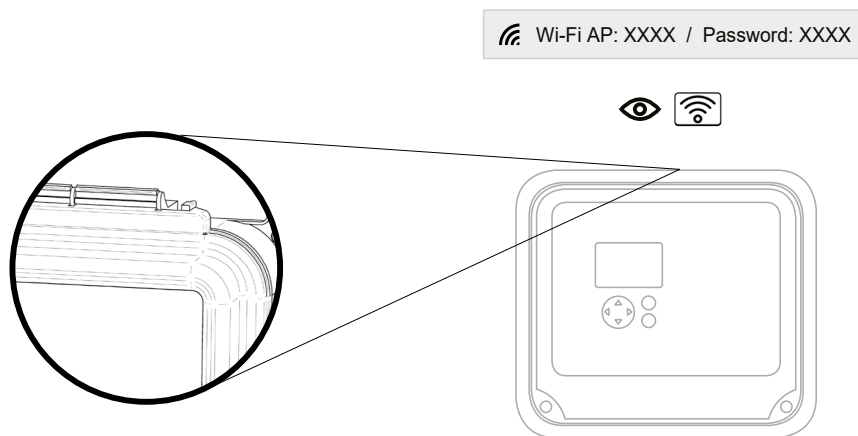
To connect:

Connect your device to the unit's WiFi network.

Access the application or web browser.

Access is made directly to the device without cloud credentials, as this is a local connection.

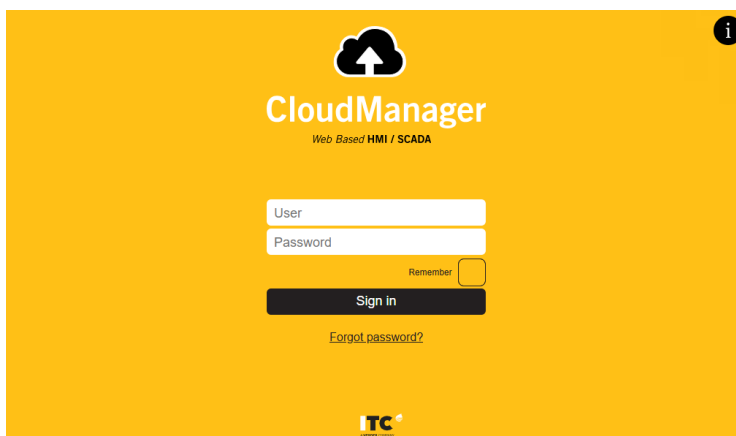
This connection mode is intended exclusively for initial setup or local system control.



5.1.3 Remote access (Cloud)

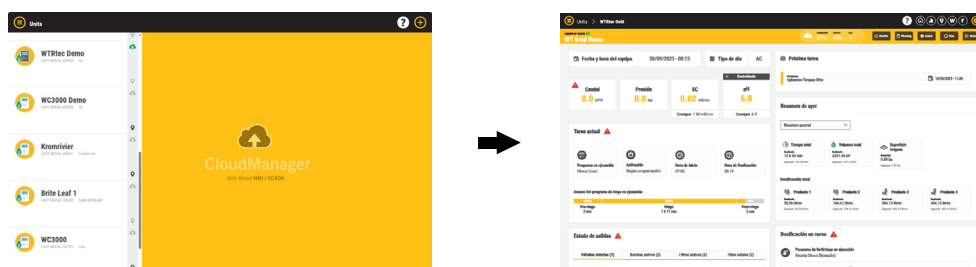
Once the device is configured and the data SIM card is active in the gateway, the system can be managed remotely via the Cloud platform.

5.2 SET UP

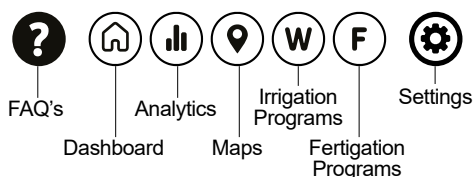


Cloud Manager login screen

When accessing the application, the system will display the different devices managed by your user account. Select the WTRTEC Gold unit you wish to configure or monitor. Once the device is selected, you will access the device screen.



In the top-right corner, you will find the menu to access the different monitoring sections of the unit, as well as the system configuration.



To configure the system, access the general settings menu. 

5.2.1. DEVICE INFORMATION

This section allows you to view the device specifications, such as model, serial number, hardware version and firmware version, as well as assign a name to the device.

In this section it is also possible to restore the device to factory settings and/or update the firmware version.

5.2.2. GENERAL CONFIGURATION

This section allows you to set the date and time of the device, measurement units, and operating timers.

To save the settings, press the Save button for each modified parameter.

5.2.3 PERMISSIONS

This section allows you to manage user access permissions for the device.

The Device Owner is the main user of the system and has the highest level of administration and control over the device configuration.

In addition, a list of users is displayed, to whom an access level can be assigned via the User Access

Permissions option:

- No access to the device
- Read-only access and consultation
- Read and modify parameter access

5.2.4 NOTIFICATIONS

This section allows you to configure system notifications and alerts based on different device events.

To enable or disable each notification, press the corresponding switch next to each event and notification channel.

The switch state indicates whether the notification is Enabled  or Disabled. .

Notifications can be sent via:

- App: in-app notification
- Email: email notification
- SMS: text message to a mobile phone

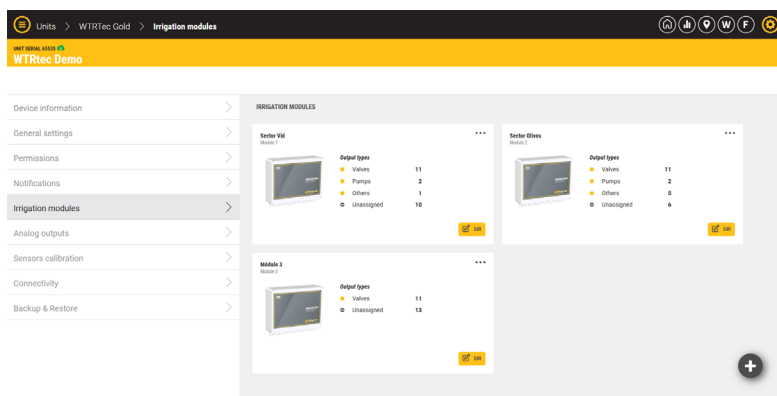
5.2.5 IRRIGATION MODULES

This section allows you to view and manage the different irrigation modules available in the system.

Each module has an assigned name and module number. Each module can be linked to different installation elements, such as valves, water pumps, filters or agitators, among other devices.

5.2.5.1 Creating a new irrigation module

If no modules are yet configured in the system, the first step is to create a new one. To do so, press the (+) button located at the bottom-right of the screen.



A configuration window will open where the new irrigation module can be created and the following parameters configured:

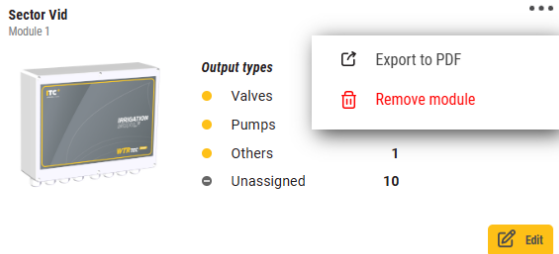
- Module name
- Configuration of up to 24 available outputs
- Activation or deactivation of alarms associated with each output

Once configuration is complete, press Save to store the changes. If Cancel is pressed, the configuration is not saved and the process is aborted.

5.2.5.2 Editing an existing module

To edit an already created module, press the  **Edit** option corresponding to the module you wish to modify. From here, the module configuration can be updated following the same process described in section 5.2.5.1.

Each module has an additional options menu, accessible via the ●●● icon, which allows you to generate a PDF report of the module or delete the selected irrigation module from the system.



5.2.6 ANALOGUE OUTPUTS

This section allows you to view and configure the analogue outputs available in the system.

Analogue outputs are used to control devices that require a variable control signal, adjusting their operation proportionally according to the defined parameters. Each output has an identifier and allows individual configuration within the system.

5.2.6.1. Output general configuration

When configuring an analogue output, the following parameters can be defined:

- Label: output identifier name
- Output type.
 - Unassigned: default option. Indicates the output has no device assigned.
 - Dosing pump: output configured for a dosing pump.
 - Servo valve: output configured for a servo valve.
- Alarm management

Dosing pump

When selecting the dosing pump option, an additional Pump information section is enabled, where specific pump parameters are configured:

- Pump model:
 - Dostec AC
 - Dosmart
 - Other (select this option when using a pump controlled via inverter or a pump from another manufacturer)

Output 1

Label	NPK
Output type	Dosing pump ▼
Ignore alarms	☒
Pump information	
Dosing pump model	Dostec AC ▼
Nominal flow l/h	240
Has 60 Hz inverter	☒

- Nominal dosing flow rate.
- Inverter at 60 Hz: indicates whether the pump has an inverter configured at 60 Hz

Output 2

Label	Blueberries
Output type	Servo valve ▼
Ignore alarms	☒
Valve information	
Valve model	DN15 ▼

Servo Valve

When selecting the Servo Valve option, the corresponding valve configuration is enabled. From this section it is possible to define the valve model and manage alarms associated with the output.

5.2.7 SENSOR CALIBRATION

This section is used to configure and calibrate the different sensors connected to the system, in order to ensure accurate measurements and correct system operation.

5.2.7.1 Flow meter calibration

In this section, the flow meter operating parameters must be entered.

Sensor frequency type: selection of frequency type (High or Low)

Flowmeter K-factor expressed in pulses per litre (pulses/l)

Flow

Sensor frequency type

High ▼

Flowmeter K-factor
pulses/l

12,3

Save

Once the values have been entered, press Save to store the configuration.

5.2.7.2 Pressure sensor calibration

Allows adjustment of the sensor reading scale using input current values.

To calibrate the sensor, enter the manufacturer's values for pressure at 4 mA and 20 mA.

Pressure

Pressure at 4 mA
bar

0

Pressure at 20 mA
bar

10

Save

Once configuration is complete, press Save to store the changes.

5.2.7.3 pH sensor calibration

To correctly calibrate the pH sensor, place the sensor in pH 4 buffer solution, wait approximately 1 minute until the reading stabilises and press Calibrate.

Remove the sensor, rinse if necessary, and place it in pH 7 buffer solution. Wait again for 1 minute and press Calibrate.

pH

Point 1

pH buffer

4

Calibrate

Point 2

pH buffer

7



Once both points are completed, the sensor will be calibrated.

EC sensor calibration

To correctly calibrate the EC sensor, place the sensor in pH 7 buffer solution, wait approximately 1 minute until the reading stabilises and press Calibrate.

EC

Point 1

EC buffer
mS/cm

1,4	Calibrate
-----	-----------

Once completed, the sensor will be calibrated.

5.2.8 Connectivity

Local communication access

Configuration of the device Access Point, which enables direct local communication with the unit. The device generates its own WiFi network, which can be accessed without internet connection.

In this section, the network parameters can be configured and modified:

- Network name: name of the WiFi network generated by the device
- Network password: password required to connect to the network

After making any changes, ensure you save the settings for the new configuration to take effect.

Access point for local communication

Network name

WT Gold 65535

Network password

***** 

To access the device locally, select this network from your mobile device or PC and enter the corresponding password.

WiFi configuration

Network settings (configuration of the device WiFi network)

Network name (SSID): name of the device WiFi network.

Network password: access password for the network.

These parameters can be modified to customise network access.

Network adapter configuration of the device.

IP assignment: selection of IP assignment mode.

In case of manual configuration:

IP address: device IP address.

Subnet mask: subnet mask.

Gateway: network gateway.

Preferred DNS: primary DNS server.

Alternate DNS: secondary DNS server

WiFi configuration

Network settings

Network name

SSID

My network name

Network password

..... 

Adapter settings

IP assignment

Manual

IP address

10.1.1.10

Subnet mask

255.255.255.0

Gateway

0.0.0.0

Preferred DNS

8.8.8.8

Alternate DNS

8.8.4.4

WAN configuration

Internet source: Selección de la fuente de conexión a Internet del equipo.

Automatic: el sistema selecciona automáticamente la conexión disponible.

WiFi: conexión a Internet mediante red inalámbrica.

Ethernet: conexión a Internet mediante cable de red.

Ethernet configuration

Adapter settings (Configuración del adaptador Ethernet del equipo).

IP assignment: selección del modo de asignación de IP.

En caso de configuración manual:

IP address: dirección IP del equipo.

Subnet mask: máscara de subred.

Gateway: puerta de enlace de red.

Preferred DNS: servidor DNS principal.

Alternate DNS: servidor DNS secundario.

Ethernet configuration

Adapter settings

IP assignment

Manual ▼

IP address

10.1.1.10

Subnet mask

255.255.255.0

Gateway

0.0.0.0

Preferred DNS

8.8.8.8

Alternate DNS

8.8.4.4

6. FERTIGATION CONFIGURATION

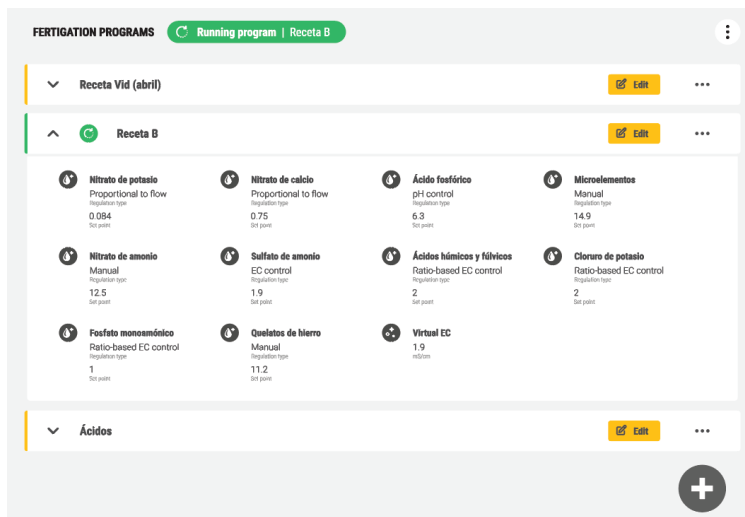
To access this section, press the **F** icon in the main menu. This section is used to configure fertigation programmes.

6.1 FERTIGATION PROGRAMMES

A list of configured fertigation programmes is displayed. Programmes currently in operation are shown with the  symbol.

When selecting a programme, its content is expanded, allowing you to view the configured fertigation recipe, edit a programme using the  **Edit** button, or delete a programme from the options menu (⋮)

It is also possible to export programme information from the top menu (⋮)



6.2 FERTIGATION PROGRAMME CONFIGURATION

To create or edit a programme, press the **+** button or  **Edit** on an existing programme.

A configuration window will open where the following parameters can be defined:

- Programme information
- Programme name
- Enable or disable programme
- Set pH or EC control setpoint
- Dosing stations participating in the programme
- Select control mode

6.2 FERTIGATION CONTROL

Allows automatic control of pH and EC in the fertigation system to be enabled and adjusted. The system automatically regulates product dosing to maintain the defined setpoints.

6.2.1 pH control

Allows automatic pH control to be enabled or disabled for previously configured fertigation programmes.

The type of corrective product used (acid or base) must be defined according to the characteristics of the irrigation water and the required correction in the installation.

pH control

Active

Product type

acid/alkaline

Acid

Initial dosage

Active

Initial amount

ppm (auto-adjusted to flow)

10

Control tuning

Correction strength

10

Correction persistence

10

Product propagation

Time

seconds

5

Reference flow

m³/h

10

Initial dosage

Allows an initial dosing stage to be enabled in order to speed up correction of the EC value at the start of the control process. When enabled, the system applies a higher initial dose to reach the target value more quickly. Afterwards, automatic control continues regulating dosing in a gradual and stable manner.

In Initial amount, the initial fertiliser quantity is defined in %, automatically adjusted according to flow rate.

Control tuning

Defines the behaviour of the automatic EC control system.

Correction strength: Determines how strongly the system reacts when the measured value does not match the target value. Higher values allow faster correction, although excessive tuning may cause oscillations or instability in the control.

Correction persistence: Determines the system's ability to apply progressive corrections over time and maintain a stable target value.

Higher values help correct slow deviations, although excessive tuning may generate unstable responses.

Product propagation

The product propagation parameter corresponds to the time elapsed between product dosing and its detection at the EC sensor.

This time depends on the installation, the distance between the injection point and the sensor, the water flow rate, and the sensor response time.

Time: product propagation time in the installation (T_{delay}), expressed in seconds.

Reference flow: reference flow rate (Q_{test}), expressed in m^3/h .

If Reference flow is set to 0, propagation time is fixed. If Reference flow is different from 0, the system automatically adjusts propagation time according to water flow, in inverse proportion.

To ensure control stability, the propagation time has a limited adjustment range.

Practical adjustment of propagation time

To determine the correct propagation time value, the following procedure is recommended:

- Start irrigation without product dosing
- Wait until sensor readings are stable
- Manually activate a dosing pump and start timing
- Observe when the sensor begins to detect the change and stabilises
- The elapsed time corresponds to the approximate product propagation value

6.2.2 EC control

Allows automatic control of electrical conductivity (EC) to be enabled or disabled for previously configured fertigation programmes.

The irrigation water conductivity reference value (Irrigation water EC) must be defined. This value is used by the system as the basis for fertigation control according to installation characteristics.

EC control

Active



Irrigation water EC
mS/cm

1

Initial dosage

Active



Initial amount
% (auto-adjusted to flow)

1,5

Control tuning

Correction strength

10

Correction persistence

10

Product propagation

Time
seconds

5

Reference flow
m³/h

10

Initial dosage

Allows an initial dosing stage to be enabled in order to speed up correction of the EC value at the start of the control process. When this function is enabled, the system applies a higher initial dose to reach the target value more quickly. Afterwards, automatic control continues regulating dosing in a gradual and stable manner.

In Initial amount, the initial fertiliser quantity is defined in %, automatically adjusted according to flow rate.

Control tuning

Define el comportamiento del sistema de regulación automática de EC.

Correction strength: Determines how strongly the system reacts when the measured value does not match the target value. Higher values allow faster correction, although excessive adjustment may cause oscillations or instability in the control.

Correction persistence: Determines the system's ability to apply progressive corrections over time and maintain a stable target value. Higher values help correct slow deviations, although excessive adjustment may generate unstable responses.

Product propagation

The product propagation parameter corresponds to the time elapsed between product dosing and its detection at the EC sensor.

This time depends on the installation, the distance between the injection point and the sensor, the water flow rate, and the sensor response time.

Time: product propagation time in the installation (Tdelay), expressed in seconds.

Reference flow: reference flow rate (Qtest), expressed in m³/h.

If Reference flow is set to 0, propagation time is fixed. If Reference flow is different from 0, the system automatically adjusts propagation time according to water flow, in inverse proportion.

To ensure control stability, the propagation time has a limited adjustment range.

Practical adjustment of propagation time

To determine the correct propagation time value, the following procedure is recommended:

- Start irrigation without product dosing
- Wait until sensor readings are stable
- Manually activate a dosing pump and start timing
- Observe when the sensor begins to detect the change and stabilises
- The elapsed time corresponds to the approximate product propagation value

6.3. FERTIGATION ALARMS

6.3.1 pH alarms

Allow deviations of the pH value from the configured setpoint to be detected.

- pH rise: generates an alarm when the pH value is higher than the configured setpoint.
- pH drop: generates an alarm when the pH value is lower than the configured setpoint.

It is also possible to configure the duration of the deviation before the alarm is triggered, expressed in seconds.

Additionally, an action associated with the alarm can be defined:

- Auto reset: automatic alarm reset
- Alarm action:
 - Stop the entire system
 - Stop Channel A pumps
 - Stop Channel B pumps
 - Do nothing

6.3.2 EC alarms

Allow deviations of the EC value from the configured setpoint to be detected.

- EC rise: generates an alarm when the EC value is higher than the configured setpoint.
- EC drop: generates an alarm when the EC value is lower than the configured setpoint.

It is also possible to configure the duration of the deviation before the alarm is triggered, expressed in seconds.

Additionally, an action associated with the alarm can be defined:

- Auto reset: automatic alarm reset
- Alarm action:
 - Stop the entire system
 - Stop Channel A pumps
 - Stop Channel B pumps
 - Do nothing

6.3.2 Flow alarm (out of range)

Allows detection of dosing flow anomalies or situations where the system cannot operate within the defined operating range.

This alarm is triggered in the following situations:

Q = 0: an alarm is generated when there is no dosing flow while control is active.

Out of range: an alarm is generated when the dosing flow is outside the pump operating range ($q < 8\%$ of maximum flow or $q > \text{maximum flow}$).

It is also possible to configure the duration of the deviation before the alarm is triggered, expressed in seconds.

The system behaviour when the alarm is triggered can also be defined:

- Stop the entire system
- Stop Channel A pumps
- Stop Channel B pumps
- Do nothing

6.4 DOSING STATIONS

Each dosing station integrates the configuration of a dosing pump, an agitator (if available), and the assignment of an identified product.

Stations are automatically generated from the pumps configured in the system.

6.4.1 Dosing station configuration

When selecting a station, its configuration can be viewed. The configuration can be modified using the  **Edit** option.

Dosing station information

- Station identifier name
- Enable or disable dosing station

Dosing pump

Each station includes an associated dosing pump.

This section displays the configured pump and its operating flow rate. It is possible to:

- Limit the maximum pump flow rate
- Define the maximum allowed flow value

Agitation

Allows an agitator to be linked to the dosing station and configured:

- Operating mode of the agitator (Manual, Pre-fertigation, Continuous, Discontinuous)
- Time: agitation duration (in minutes)
- Frequency: agitation interval (in minutes)

Associated product

Defines the product associated with the dosing station. This parameter is for identification purposes and is used to organise and recognise each station within the system.

7. IRRIGATION CONFIGURATION

To access this section, press the  icon in the main menu

This section is used to configure irrigation programmes.

7.1 IRRIGATION PROGRAMMES

A list of configured irrigation programmes is displayed. Programmes currently in operation are shown with the  symbol.

When selecting a programme, its information and configuration can be viewed:

- Frequency: days on which the programme is active
- Start times: irrigation start schedule
- Irrigation time: total duration of the programme
- Outputs: elements associated with the programme (valves, pumps, agitators and sectors)
- Fertigation programmes: fertigation recipes associated with the irrigation programme
- Pre-irrigation: stage prior to the main irrigation
- Post-irrigation: stage after the main irrigation
- Estimated flow: water consumption estimate based on selected outputs

A programme can be edited using the  **Edit** button or deleted from the options menu (...)

It is also possible to export programme information from the top menu (:)

7.1.1 IRRIGATION PROGRAMME CONFIGURATION

To create or edit a programme, press the **+** or  **Edit** button on an existing programme.

Programme information

- Name: irrigation programme identifier
- Enable or disable programme
- Expected flow: estimated flow based on selected valves

Frequency

Defines the days on which the irrigation programme will run:

Not defined

Every day

Every 2 days

Every 3 days

User-defined weekdays

For Every 2 days and Every 3 days modes, the system uses an internal day classification:

Every 2 days: alternation between A and B days

Every 3 days: alternation between C, D and E days

The current day type (A, B, C, D or E) can be checked from the Home screen (home icon).

In weekday mode, manual selection of specific operating days is enabled.

Irrigation time

Defines the duration of the irrigation programme in hh:mm:ss format.

Start times

Allows setting the irrigation start time for the configured days, together with the corresponding duration.

Outputs

Allows selection of the elements included in each irrigation sector programme.

Fertigation

Allows linking a previously configured fertigation programme to the irrigation programme. This synchronises fertiliser injection with the irrigation cycle.

7.2 IRRIGATION SEQUENCES

A list of configured irrigation sequences is displayed. Sequences currently in operation are shown with the  symbol.

When selecting a sequence, its information and configuration can be viewed:

- Frequency: days on which the sequence is active
- Start times: irrigation start schedule
- Assigned irrigation programmes
- Total sequence duration

A sequence can be edited using the  **Edit** button or deleted from the options menu (...)

It is also possible to export programme information from the top menu(:)

7.2.1 IRRIGATION SEQUENCE CONFIGURATION

To create or edit a sequence, press the **+** or  **Edit** button on an existing sequence.

Programme information

- Name: irrigation programme identifier
- Enable or disable programme
- Total sequence duration based on selected irrigation programmes

Frequency

Defines the days on which the irrigation programme will run (Not defined / Every day / Every 2 days / Every 3 days / User-defined weekdays).

In weekday mode, manual selection of operating days is enabled.

Start times

Allows setting the irrigation start time for the configured days in hh:mm:ss format.

Irrigation programmes

Allows selection of irrigation programmes for each sector included in the sequence.

7.5 EXPRESS PROGRAMMES

Allows external activation of up to 32 irrigation programmes or sequences via digital inputs. In edit mode, the digital input used to activate each programme or sequence can be assigned.

7.6 FILTER CLEANING

This section allows configuration of the automatic filter cleaning system.

General configuration

Stop watering: stops irrigation during the filter cleaning process

Only while watering: allows cleaning only when irrigation is active

Cleaning times

Allows automatic cleaning cycles based on a scheduled frequency. Delay between filters: waiting time between cleaning one filter and the next, expressed in seconds

Total cleaning time: estimated total duration of the cleaning cycle

Timer-based cleaning

Permite activar ciclos automáticos de limpieza según una frecuencia programada.

- Activate cleaning by timer: enables or disables timer-based automatic cleaning
- Cleaning frequency: interval between automatic cleanings, expressed in hh:mm

Pressure switch cleaning

Allows automatic cleaning to be triggered when a defined pressure condition is detected in the installation.

- Activate cleaning by pressure switch: enables or disables pressure-based cleaning
- Pressure switch digital input: digital input used for the pressure switch signal

Supplementary output activation

Allows activation of an auxiliary output associated with the cleaning process.

- Offset type: defines the activation mode of the auxiliary output
- Offset time: delay time for activation, expressed in mm:ss

7.7 IRRIGATION ALARMS

This section allows configuration of alarms related to the hydraulic operation of the irrigation system.

Alarms are used to detect abnormal pressure or flow conditions and define the system response when they occur.

Pressure alarms

Allow monitoring of system pressure values and triggering an alarm when configured limits are exceeded.

It is possible to configure both maximum and minimum pressure alarms by defining the pressure value in bar, the time the condition must persist, and the action to be executed when the alarm is triggered.

No water flow alarm

Allows detection of absence of water flow during irrigation system operation.

It can be enabled by defining the time during which no flow must be detected before triggering the alarm, as well as the system action upon activation.

Flow alarms

Allow monitoring of flow deviations from the configured reference value.

High and low flow alarms can be configured by defining the allowed deviation percentage, validation time, and system action upon activation.

Alarm actions

For each alarm, the system action can be defined when it is triggered.

Available options may vary depending on system configuration and may include irrigation stop, stopping specific elements, or no action.

7.8 IRRIGATION CONFIGURATION

This section allows configuration of general irrigation system parameters.

Water pump starting delay: defines the delay before activating the water pump when an irrigation programme starts, expressed in seconds. This parameter ensures proper system stabilisation before water flow begins.

Daily time for programs reset: defines the daily time at which irrigation programmes are reset, in hh:mm format. This reset restores programme execution status for the new daily cycle.

7.9 IRRIGATION SECTORS

This section is used to configure the system's irrigation sectors.

Sectors are linked to valves previously configured in the system (see valve configuration section).

Sector definition and positioning on the map is performed in the maps section (see section 8. Maps).

When selecting a previously defined valve, the irrigation sector parameters can be configured.

These parameters include the sector area in hectares (Ha).

This value can be entered manually or automatically calculated based on the area defined in the map. In some cases, automatic calculation may show small deviations, so manual adjustment is allowed to ensure greater accuracy.

8. MAPS

This section allows you to visualise and manage the irrigation installation on a Google Maps-based map. From this interface, it is possible to geolocate irrigation sectors and define the location of the irrigation cabinet, where the system controller is installed.

Irrigation sectors on the map

Irrigation sectors are displayed on the map and identified using the format X/Y, where:

X: irrigation module

Y: sector number within the module

To create or edit irrigation sectors, press the configuration button (gear icon). A side menu will open displaying all available valve outputs. Configured valves are highlighted in yellow, while unconfigured valves are shown in grey.

When edit mode is enabled, sector customisation using map points is activated.

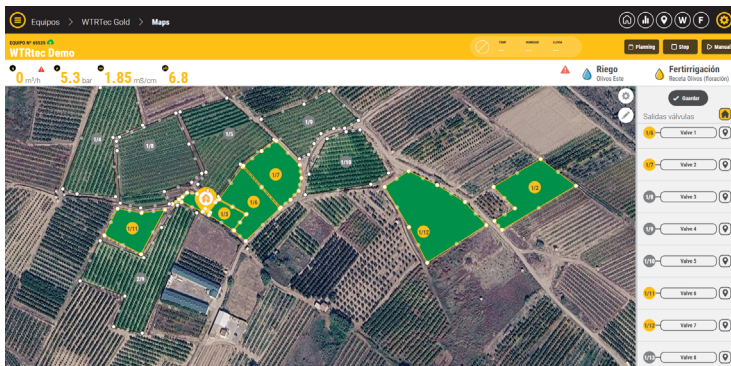
To create a new sector, select the corresponding valve from the side menu and press the geolocation icon. The sector boundary is then defined by marking the required points on the map.

Once editing is complete, press Save to store the changes and press the (gear) button again to close the side menu.

Irrigation cabinet

It is also possible to define the location of the irrigation cabinet, corresponding to the physical point where the system controller is installed.

This location allows the control point of the installation to be visually identified on the map.



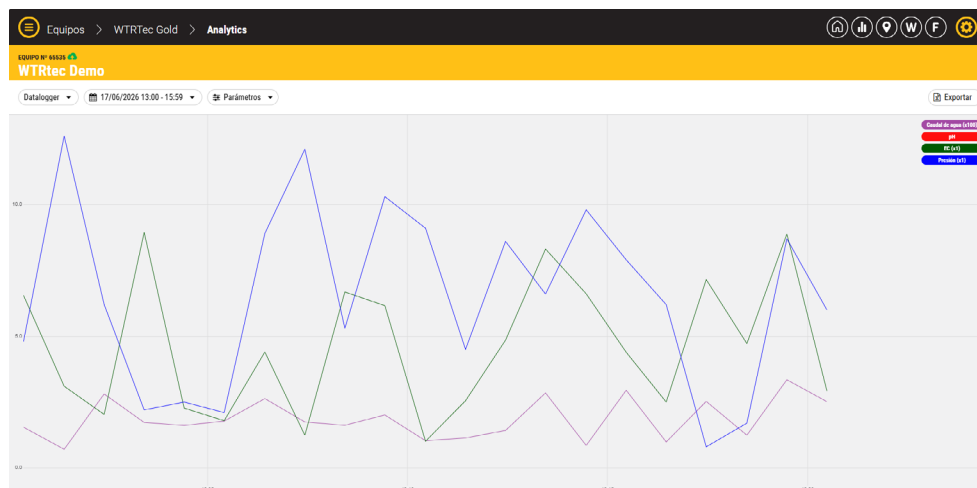
9. ANALYTICS

To access this section, press the (charts) button in the main menu.

The analytics section allows you to view the historical data recorded by the system and review the evolution of the main operating parameters of the installation.

Using interactive charts, it is possible to analyse variables such as pH, electrical conductivity (EC), pressure and flow rate over time.

The displayed data can be exported to Excel format using the (Excel) button for further analysis or storage.



10. HOME (DASHBOARD)

To access this section, press the (home) button in the main menu.

The home screen provides an overview of the installation status and the processes currently running in real time.

From this screen, it is possible to quickly access the most relevant system information, including:

- Date and time of the device
- Configured day type
- Water flow rate
- Installation pressure

- Electrical conductivity (EC)
- pH
- Configured setpoints
- Running programmes and tasks
- Active dosing operations
- Next scheduled task
- Action menu

From the main screen, the following functions are also available:

Start

Allows manual start of a previously configured irrigation programme or sequence.

Stop

Allows stopping all running programmes and sequences.

Planning

Allows you to view irrigation and fertigation scheduling. This screen clearly displays all programmes and sequences scheduled for the selected period, indicating their current status (Scheduled, In progress, Completed or Interrupted).

It is also possible to consult other days or time periods to review planning and execution history.

Monitor

Allows real-time visualisation of system status, including digital input states, connected sensor readings, and their values, as well as calibration parameters.

CE DECLARATION OF CONFORMITY



I.T.C S.L..

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Declares that all models of the WTRtec products identified by serial number and year of manufacture comply with the Low Voltage Directive 2014/35/EU and the Electromagnetic Compatibility Directive 2014/30/EU, provided that installation, use and maintenance are carried out in accordance with current regulations and following the instructions in the user manual.

Xavier Corbella

Managing Director

WARRANTY



I.T.C. S.L. guarantees the product specified in this document for a period of 1 year from the date of purchase, against any manufacturing or material defects, provided that the installation, use and maintenance of the equipment have been carried out correctly.

The equipment must be sent, carriage free, to our workshop or to an authorised I.T.C. S.L. technical service centre, and its return will be made with carriage charges payable by the recipient.

The equipment must be accompanied by the warranty document showing the date of purchase and the stamp of the selling dealer, or a copy of the purchase invoice.

MODEL

SERIAL No.

**Date of purchase and stamp
of the selling dealer**

Date: _____



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