

# Irrigation System

## Documentation

*English version*



The Irrigation System is an automated solution designed to manage and optimise watering of plants or crops. It ensures efficient water usage by delivering the right amount of water at the right time, reducing waste and promoting healthy plant growth. This irrigation system supports 4 to 16 independent outlets, depending on the model. Each outlet can be individually configured with:

- Irrigation frequency (e.g., every 4 days)
- Start time (e.g., 15:00),
- Watering volume.

A built-in water flow sensor monitors water activity. If no water is detected during a scheduled irrigation, the system alerts the user with an audible beep warning. The device includes an internal real-time clock powered by a backup battery, ensuring scheduled operations continue without disruption even if the main power supply is lost.

This document explains how to use the product.

## Agenda

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2. Usage
3. Set time
4. Schedule
5. Trigger
6. Water Flow Sensor
7. Advanced Config
8. Clock Battery
9. Constraints
10. Safety Notices

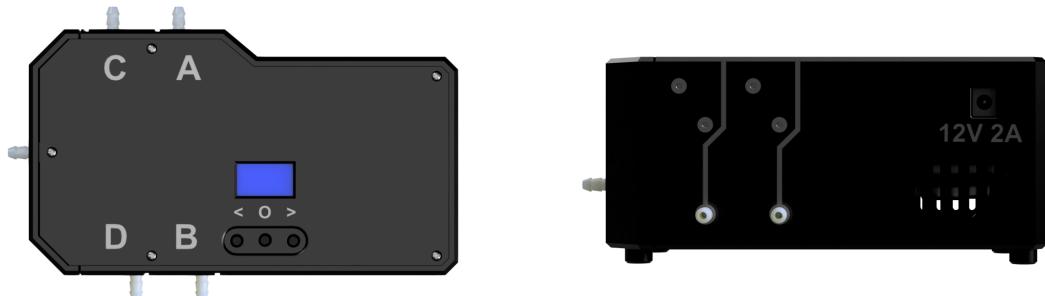
## Models

Each model has the same height and width, but the number of outlets differs, which affects the total length.

- **Height:** 81 mm
- **Width:** 99 mm

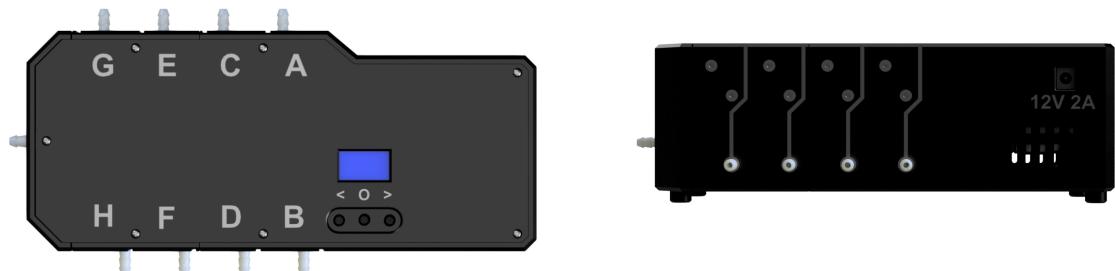
## O4

**Length:** 172 mm



## O8

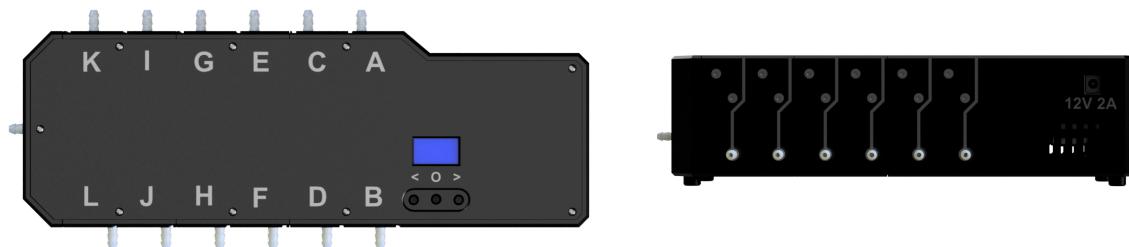
**Length:** 229 mm





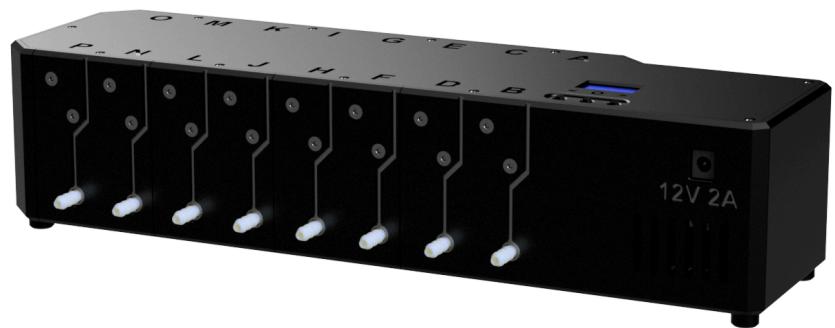
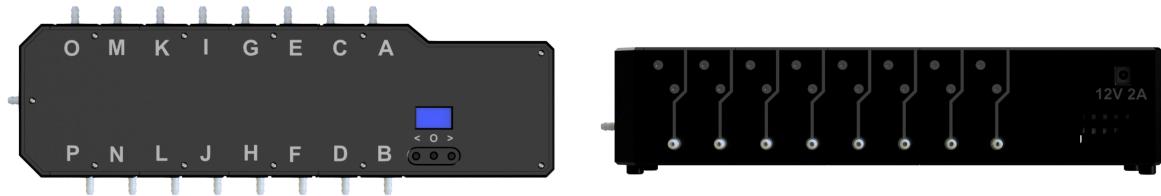
## O12

**Length:** 286 mm



# O16

**Length:** 343 mm

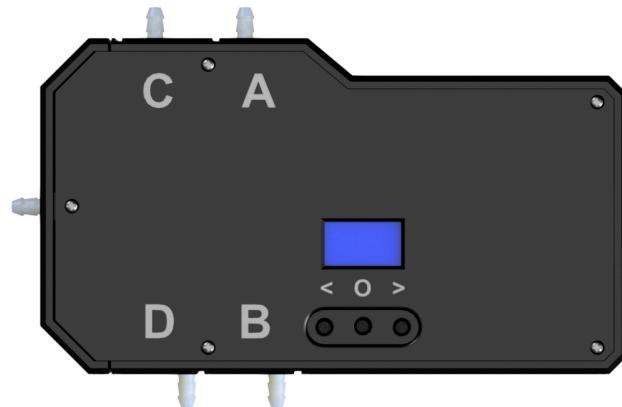


## Usage

Connect one end of the hose to the **INPUT** port and the other end to the **hose filter**.



Next, connect one of the **OUTPUT** ports to a plant. Plug the **power supply** into the device, then into a wall socket. Once the device is powered on, you can begin configuration.



The device's control panel includes:

- A display
- Three navigation buttons: <, O, and >
- Clearly labelled output ports

Once the device is powered on, you can begin configuration. By default, the display is locked to prevent accidental button presses.



To **unlock** the device, press and hold the **O** button for 3 seconds. Once unlocked, the user interface will become visible on the display.



The screen will **lock and turn off automatically after 10 seconds of inactivity**.

Once the screen is unlocked, you'll see the **current date and time** displayed in the **top bar**.

If the message "**Change clock battery!**" appears, the internal battery needs to be replaced — otherwise, the device will not save the date and time settings.

In the **middle of the screen**, the **menu** is displayed. Use the < and > buttons to scroll through the available menu items.

Before setting a watering schedule, make sure the **date and time** are correct. To adjust them, use the > button to navigate to **Set Time**.



## Set time



On the **Set Time** screen:

- Use the < and > buttons to move the **cursor** between fields (day, month, year, hour, minute).
- Press **O** to enter **edit mode** for the selected field.
- While in edit mode, use < and > to change the value.
- Press **O** again to exit edit mode.

Once the date and time are set, **press and hold O to confirm and apply** the changes. You will then be returned to the main menu.

## Schedule

On this screen, you can configure watering schedules **independently for each outlet**.



In the example above, **Outlet A** is enabled and configured to water a plant **every 3 days at 18:30**, dispensing **0.5 liters**.

- Use the < and > buttons to switch between outlets.
- Press **O** to enter **edit mode** for the currently visible outlet.
- Use < and > to navigate between fields (e.g., frequency, time, volume).
- Press **O** to edit a field, then use < and > to adjust the value.
- Press and hold **O** to exit field editing mode, then select another field if needed.
- Once all settings are configured, **press and hold O again to save and apply** the schedule.

**⚠ Note:** if the current date is 2025.01.01 and you setup the schedule every 3 days, it won't include the current day, meaning, it will get triggered on 2025.01.04 at 18:30.

If multiple outlets are scheduled to run at the same date and time, they will be activated sequentially in order (e.g., A, B, F).

## Forecast



On this screen, you can view the next scheduled activation time for each outlet. **ON/OFF** indicates whether the outlet is currently enabled or disabled.



## Trigger



On this screen, you can manually start watering a selected outlet. This feature is useful for testing or for manual watering outside of the scheduled plans.



Select the target outlet using the < and > buttons. Press and hold **O** to start watering. Press **O** again to stop and exit manual watering mode.

## Water flow check

The device has a built-in water flow sensor. If the water flow stops during scheduled watering, the device will immediately stop and start alerting. It will beep and display the following message on the screen:



Refill the water container, then press **O** to continue.

## Advanced Config

**⚠ Note:** If you are not confident with the advanced settings, it is best to leave the default values unchanged.



On this screen, you can adjust several core settings.



On this screen, you can configure the following settings:

- **WCI (Water Check Interval):** The duration (in seconds) for checking water flow. The default value is **5**. You may increase this if the distance from the water container to the INPUT port is long, as it takes

more time for water to reach the sensor. However, avoid setting this value too high, as it will delay the detection of a water shortage.

- **TMPT (Throughput):** The amount of water (in liters) pumped per second. The default value is **0.013**. This setting is for **calibration purposes only**. For example, if you use a hose with a smaller diameter than the original, or the hose is too long, you might adjust this value if you need higher accuracy. However, using hoses other than the recommended type or exceeding constraints is not advised.

## Clock Battery

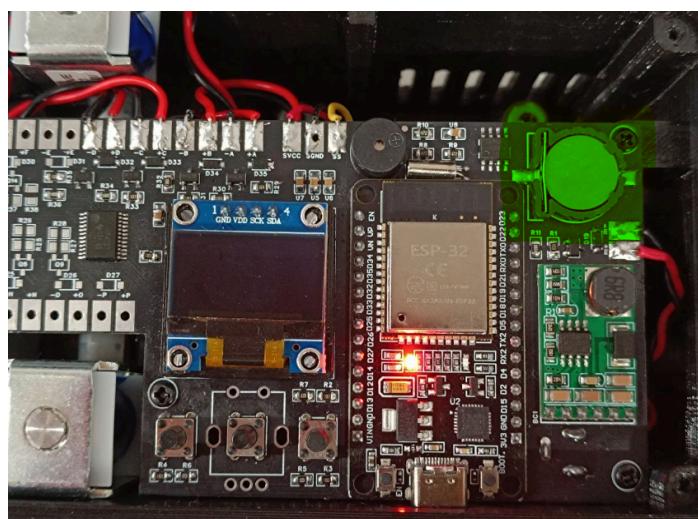
If you see the following message: “Change clock battery”



**⚠ You must replace the clock battery to prevent the date and time from resetting when the device loses power.**

To replace the battery:

1. Disconnect the power supply.
2. Unscrew the screws on the top panel.
3. Remove the top panel carefully.
4. Locate and remove the battery in the right corner.



### Use battery: CR1220

**⚠ Insert the battery following the polarity markings [+] and [-] on both the battery and the device.**

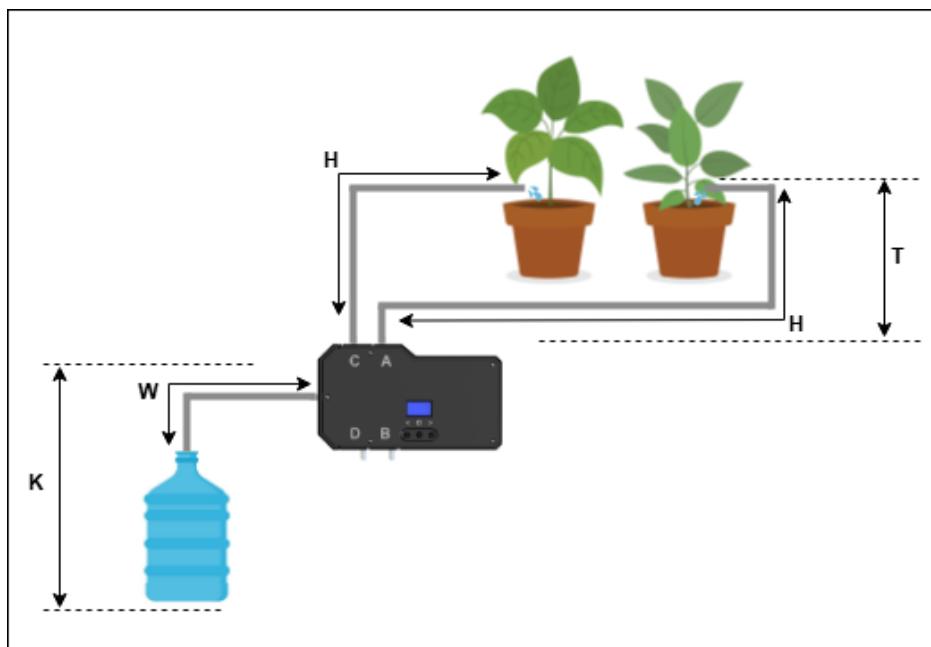
After replacing the battery:

1. Screw the panel back in place.
2. Plug in the power supply.
3. Navigate to the **Set Time** screen to configure the current date and time.

## Constraints

Please be aware of the following limitations:

- The length (**H**) from a single outlet to a plant **should not exceed 5 meters**.
- The plant **should not be positioned (T) more than 2 meters higher** than the product.
- The length from the water container to the **INPUT port** **should not exceed 10 meters**.
- The product itself **should not be placed more than 5 meters above** the water container (**K**).



**⚠ Important:** Exceeding these constraints may overload the pump, leading to reduced performance or permanent motor damage.

## Safety Notices

- Place the device securely on the designated pads.
- Use only the provided power supply.
- Ensure all hose connections are secure and reliable.
- Do **not** spill water on the device.
- Do **not** place any objects on top of the device.
- Avoid dropping the device or making any hardware modifications.
- Keep the device away from explosive materials.
- Do **not** expose the product to extreme temperatures, direct sunlight, magnetic fields, or moisture, as these can damage it.
- This product is suitable for children aged 12 years and older, as well as persons with reduced physical, sensory, or mental capabilities.
- Children should **not** play with the device.
- Cleaning and maintenance should only be performed by children under adult supervision.

- Dispose of the clock battery at designated recycling points.
- Do **not** attempt to recharge the clock battery.
- Don't exceed the constraints.