Installation

Follow the link to make the installation easier:

youtu.be/kOtS3V0M4w8

We recommend that the installation of the valve should be performed by a certified plumber

Getting ready

First, check the content of the box: make sure all parts are present and that you have enough sensors for your property configuration.

Using a pencil and inventory sheet, browse your property. Identify each place to protect and write them on the sheet.

The sensors are powered by two 3V batteries. If the batteries are not already installed, insert them into the socket on the back of each sensor. Make sure they are in the "**ON**" position.

Install the 9V battery in the control box. Make sure that the battery is not discharged by checking that the indicator lights come on.

Plug the control box into an electrical outlet and connect the valve to the control box.

Before proceeding with the installation, it is important to test the proper functioning of each component of the system.

Tools

Here is the list of tools you will need :

Snap-off blade knife
Level
Cisors
Mesuring tape
Cutter
Drill
Screwdriver

For plumbing:

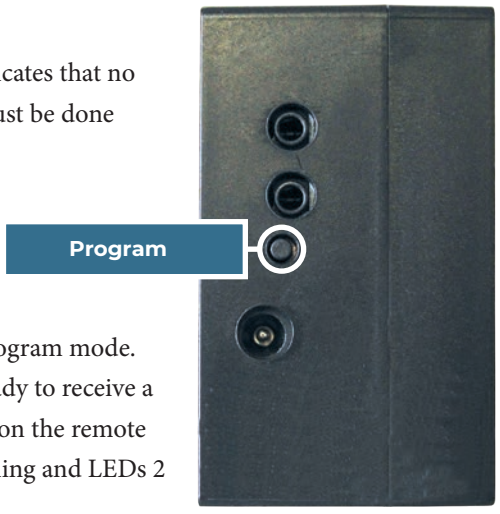
Wescott wrench

Teflon tape

Pliers

Synchronizing and functioning

After the initial power-up, all the LEDs on the the 886E control panel will flash. This indicates that no control devices have yet been synchronized (paired) to the unit. This synchronization must be done before the system components can be deployed.



Synchronizing the remote

The first device to be synchronized with the main unit must be the remote control.
Proceed as follows: Push the **Program** Button on the Main Control Unit to activate Program mode. When the leftmost three LEDs (1-3) start to flash, the unit is in Program mode and is ready to receive a synchronizing signal from the remote control. This is sent as follows: push the 2 buttons on the remote control simultaneously and wait until only the first LED on the Main Control is still flashing and LEDs 2 and 3 are OFF. The remote is now synchronized.

Synchronizing and functioning (continued)

Synchronizing the sensors

The unit is now ready to use. To test the sensors, you will need to simulate the presence of water on each sensor using the tester tool (small screwdriver). Press the tester tool on the two metal contacts of the sensor. If the sensor is functional, an indicator light will come on the control panel and the valve will close.

The basic Water-Protec kit includes 5 sensors but it is possible to add as many as needed. The sensors can be identified on the control panel and by pairing sensors (on special order), 20 zones could be programmed so, several sensors can occupy the same position on the control panel.

Press the metal portion of the tester tool onto the two metal contacts of the sensor. If the sensor is functional, a light will come on the control box and the valve will close. Note the position of the sensor on the control box and identify the sensor with the corresponding numbered sticker. This is an important step. It will allow you to quickly identify the source of a leak in case of water damage.

The next position on the control box will be automatically selected to allow you to synchronize the next sensor. If you use twin sensors, only one of the sensors must be associated with the tester tool for the pair to be synchronized.

Before usage, the additional sensors must be synchronized to the control box. To synchronize a sixth sensor press the synchronization button six times slowly until the sixth light on the control box flashes. Make sure the indicator light changes position before pressing the button between each position. The synchronization mode will automatically turn off after 15 seconds of inactivity. Remember to identify sensors using the corresponding numbered sticker.

If you want to add sensors at a later time, refer to the **inventory sheet** to find a free position. The inventory sheet is at the end of this guide.

Valve Installation

Now that all the necessary tests are done and that the sensors are correctly synchronized and identified, you can install the valve.

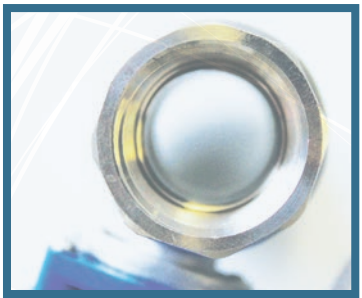
Make sure that the diameter of the valve matches the water inlet hose and use the appropriate fittings for your piping.

First, find an installation point for the valve. It must be located immediately after the residence's main water supply and, where applicable, before the junction of the outdoor sprinklers.

In order to power the control panel, an electrical outlet must be available nearby (gauge #24).

Close the circuit breakers for appliances connected to a water supply and the water heater. Close the water inlet.

Empty the water pipes by opening a tap at the lowest point of the residence. If necessary, also open the bathtub at the highest point of the residence. Once the pipes have been emptied, turn off the tap at the lowest point of the property.



For a valve of **more than 1 inch,** it must be equipped with a **booster relay**

Valve Installation (continued)

Measure the length of the pipe to be cut and cut the pipe. Apply Teflon tape to the end caps and securely thread the end caps into the valve using an adjustable wrench.

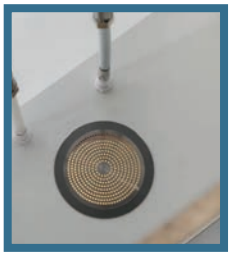
Insert the valve into the piping and seal securely with a pex conduit clamp.

Install the control box in an accessible place. Plug the valve into the control box and then the control box into the power outlet. Reopen the water inlet.

Make sure there is no air in the plumbing by opening a tap at the highest point of the residence. If the bathtub has been left open, turn off the faucet once the water has started flowing again. Switch on the circuit breakers. You can now install the sensors.

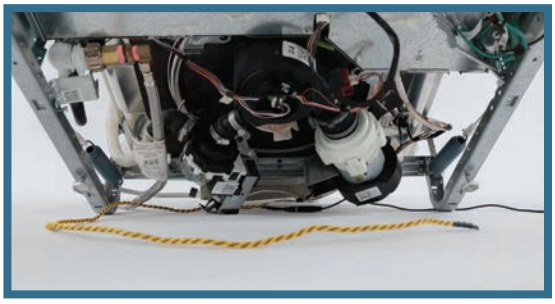
Sensors installation

Sensors should be installed at the lowest point of the floor to allow water to reach the sensor. They must be securely fastened with the Velcro supplied and must never be installed directly on concrete. A sticker to prevent contact with concrete is provided in the box. Drill as close to water lines as possible, making sure you do not damage them.



Fix the sensor in the hole. If you decide to cover the hole, use a grid to allow water to flow to the sensor.

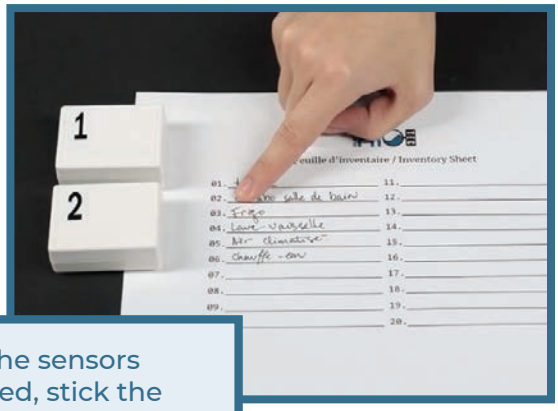
Remember to respect the locations you have numbered. Remove the top plate from the dishwasher and attach the sensor to the lowest level of the floor near the water inlet. You can also order a sensor with a detection wire for better protection.



Install the sensor on the back of the fridge near the water supply. Install the sensor behind the toilet near the water supply line and the toilet bowl. Install the sensor on the back of the washer under the water supply lines and the waste water return.

If your water heater is protected by a tank, install the sensor inside the tank with a Velcro.

If your water heater is not protected by a tank, install the sensor at the lowest point of the floor making sure to protect the sensor contacts from the concrete with the sticker provided.



Repeat the steps according to the number of places to protect relevant to your home.

Once all the sensors are installed, stick the inventory sheet **near the control panel.**

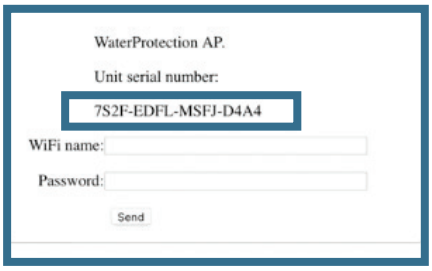
Wifi connection

The 20-position Water-Protec system is equipped with a WiFi transmitter. You can choose to connect it to the Internet. This allows you to view the status of your system from a secure portal and receive an email or a SMS notifications when a leak is detected. The portal can be accessed from a cell phone, tablet or computer to remotely monitor system status.

To connect your system to the Internet, you must first allow the control panel to communicate on your Wi-Fi network. Press the **Reset** and **Cancel** buttons simultaneously for at least 10 seconds. When the 20th position indicator light flashes, release both buttons and press **Cancel**.

LED 13	LED 14	LED 15	
On	Off	Off	Access point server begin
Off	On	Off	Access point web site activated
Off	Off	On	Access point ready
On	Off	On	Access point should appear in a list of Wi-Fi networks.

On your computer or mobile device, make sure the Wifi Transmitter is enabled and connect it to the newly created network : **WP886E_AP**. Enter the password **waterprot886e**. Once connected, open a web browser and visit the address **192.168.4.1.**



Check that the 16 characters on the screen correspond to the 16 characters of the serial number of your control panel. This serial number is located behind the door of the battery case.

Enter the name of your personal Wifi network and its password in the appropriate fields and press "**Send**". The control panel will restart. If the information entered is correct, the panel will now be connected to the Internet.

If the data has been successfully accepted, this message will display:

"Included: **saved to EEPROM**... Water-Protect is about to reboot."

If an error has been found, the following message will appear:

"Error: Name or Password" - The device cannot identify the name and password of the Wi-Fi client entered. It is the responsibility of the user to provide the correct name and password of their Wi-Fi network.

Account synchronization

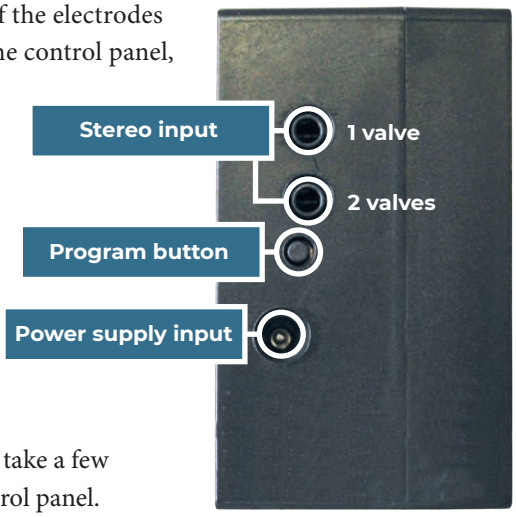
In your Web browser, follow the steps to create your account.

Once your account is created, link your valve by entering the 16 characters of your serial number.

Welcome to **client.water-protec.com**

Communication with the control panel

The water sensors as well assending an alarm signal if the electrodes are sensing water, also periodically send a signal to the control panel, indicating that they are present and functional. If this signal is not received on schedule by the control panel, an alarm is triggered. The water sensors also have an internal battery check, made on a regular basis. An alarm will be triggered by a water sensor with low battery voltage.



NOTE : After detecting water, the water supply will be shut off. Make sure the sensor is completely dry. If water has gotten inside the sensor, you must replace it.

To restore the water supply, press the **Open** button on the remote control (which may take a few moments to respond) or the **Reset** button on the control panel.

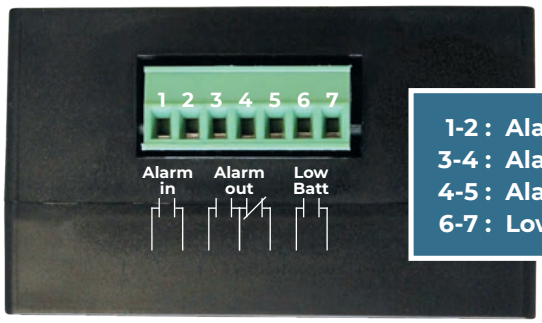
The control panel has two main connection points. It is also equipped with a concealed push button to be used during programming and synchronization only. Jacks (2) 3.5mm stereo connected in parallel for one or two shutoff valves. The jacks are equipped with integral switches which close when a valve is plugged in. The control circuit will issue an alarm if a valve becomes disconnected. In the event that only one valve is deployed, a dummy plug must be inserted in the other jack.

Alarm system connection

Water-Protec recommends that this connection be made by your alarm technician

For units configured for use with home alarm systems, the 886E control is fitted with 2 relays. One alarm relay, which outputs NO (normally open) / NC (normally closed) contacts to the alarm system in the event of a shutoff alarm, and a second relay : a low battery warning - that outputs a contact to the alarm system if a low battery signal is received from a water sensor.

Alarm output contacts from the 886E operate when there is an alarm that closes the valve – not when the valve is deliberately closed by the remote.



Terminals are provided to connect with a local alarm system. The Alarm Input closes when the alarm system is set as when leaving the residence. After a delay of 2 hours (to allow completion of washer/dishwasher cycles) the valve should close. It will reopen when the alarm input contacts open.

If Alarm system is not used, no connections need to be made to these terminals

Additional information

Replacing the remote control

In the case of loss or failure, to replace a remote control that has already been synchronized with a control panel,take the following steps: First, push the **Program** button on the control panel to activate Program mode. The control panel is in Program Mode when the first LED is flashing. When the first led flashes, push the **Reset** button on the control panel three times. The first three LEDs should start to flash. Unit is ready to receive a syncronization signal from a remote control.

Replacing or adding a water sensor

Set the Main Control to program mode by pressing the **Program** button. The first LED will flash. Push the **Open** button on the remote control – each push will move the flashing LED to the next position. When the desired position is reached, synchronize the new sensor by shorting the electrodes as described previously. The selected LED should now be continuously lit, and the next one, flashing.

Battery replacement

It is better to change batteries every 12 months. **Batteries should be changed if the sensors have been activated when water is detected.**

Sensors

The water sensors are equipped with two 3V/20mm lithium coin cells (ex.: Panasonic CR2032). To replace the low batteries (2.7V or less), open the sensor case by removing one fixing screw, remove old batteries and replace with new – carefully observing marked polarity (Positive upward). Replace the cover and return to service. (Note: the sensor will function with only one battery in place, with reduced lifetime.)

Remote control

The remote control is equipped with one 3V / 16mm lithium coin cell (ex.: Panasonic CR-1632).

Control Panel

The control panel is equipped with one 9V Battery (ex.: 6LR61). To replace, slide out the access hatch from control panel, remove the old battery and insert the new, then replace the cover.

Alarms of the control panel

The control panel has 20 numbered LED indicators. These show **green** when there are no anomalies. If one or more sensors fail, or detect water, the corresponding LED will light **red**, the valve will close and you will hear an alarm.

Sensor Low Battery

If a water sensor has low battery, it periodically sends a signal to the control panel. The corresponding LED on the control panel will show **orange**, and the audible alarm will sound, and continue for 15 minutes. The LED will remain **orange** until the condition is rectified. Water will shut off after 4 low battery signals have been received. The system also outputs a relay contact to remote alarm system if a low battery alarm occurs. The battery of the corresponding sensor must be replaced, though it should continue to function for some time. Battery life should be in excess of one year.

Water detection

If any sensor detects water, the corresponding LED will light **red** and the audible alarm sound. The valve will immediately close, and remain closed until opened with the remote or until the **Reset** button is pressed.

IOK Signal Loss (This technology is not found in all programming versions of the control panel).

When water sensors are present and working, they send an IOK (I'm OK) signal 6 times a day (every 4 hours). In view of the fact that these signals are brief so as to conserve battery power, sometimes they may not be received due to interference or signal overlaps. If three consecutive signals are missed, after 12 hours the relevant LED flashes **green**. If six consecutive signals are missed over 24 hours, the LED flashes **red**, an alarm is registered, and the valve is closed. If an IOK signal is received at any time during this 24 hour period, the software resets and the flashing **green** is cancelled.

Power Loss

The control panel is equipped with a 9V standby battery. This allows operation to continue during power outages and the valve remains unchanged. The control panel indicates power loss by a **red** flashing battery light. If the local standby battery reaches a critically low level, the valve will close and remain so until the battery is replaced and the system is **reset**.

Low temperature Alarm

The control panel is equipped with a tempereature sensor. Should the ambient temperature drop to near-freezing levels (5 degrees Celsius), the valve will close, and remain so until the system is reset. The battery/temperature LED should show **orange**.

Fault Responses

Occurrence	Test Period	LED Display	Position	Colour	Audible Alarm	Action
None	S.O.	Steady	All	Green	None	None
Water Detected	Immediate	Steady	Fault location	Red	1/2 s On 1/2 s Off	Close valve
Sensor low battery Signal	12 hours	Steady	Fault location	Orange	Bip 1/4 s toutes les 10 s	None
After 4 consecutive low battery signals	48 hours	Steady	Fault location	Orange	1/2 s On 1/2 s Off	Close valve
IOK signal (3 signals missed)	12 hours	Flashing	Fault location	Green	None	None
After 2 consecutive (6 signals missed)	24 hours	Flashing	Fault location	Red	1/2 s On 1/2 s Off	Close valve
AC Power Outage (Rxon battery)		Flashing	Temp/Battery*	Green	None	None
Rx Battery Low		Flashing	Temp/Battery*	Red	None	Close valve
Low temperature		Steady	Temp/Battery	Orange	None	Close valve
Valve opened		Steady	Open/Close	Green	None	
Valve closed		Steady	Open/Close	Red	None	
Valve disconnected		Flashing	Open/Close	Orange	1/2 s On 1/2 s Off	

*Position LEDs OFF to conserve power

You can photocopy the inventory sheet below and place it near the control panel. This will also allow you to use it again in case you add twin sensors for example.

Inventory Sheet	
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
13.	
14.	
15.	
16.	
17.	
18.	
19.	
20.	

List of strategic location to protect

Kitchen sink, dishwasher, refrigerator connected to water, central air conditioning, water heater tank, toilets, bathroom sinks (2 sensors if double sink), bidet, shower, bath, garage sink,etc.

Special situations and reminder

Sensors

If your sensor has been in contact with water, you should change its batteries. The system takes its battery readings at 12-hour intervals. If your sensor has water inside its casing, we recommend that you replace the sensor with a new one.

Reminder : Water-Protec recommends that you change your batteries every 12 months so that you do not experience low battery levels that will impair system operation.

Sensors equipped with a wire sensor

Sensors with detection cable are available for hard-to-reach places (under the dishwasher, fridge, etc.). They can also be useful to protect a main water pipe, for example. Standard sizes are 3, 6 and 8 feet. However, they can be as long as you need.

Valves

Valves of more than 1 inch must be equipped with an booster relay.

Artesian well pump

Additional accessories are available to ensure that the system functions optimally. For example, if you have an artesian well, the system must be equipped with an additional relay (875). The relay receives a dry contact signal from the receiver to switch off the power to the well pump. It is designed for 240VAC systems, and pump motors up to 3HP. The control power is 24VAC at 4VA (supplied by the unit's internal transformer).

If you have a water treatment system with osmosis, such as an artesian well, it is important to mention this to the plumber who will do the installation since a water analysis is required. Water with too many minerals could interfere with the proper functioning of the system.

Web server and data security certification

- Here are the elements put in place to maximize the security of the web application, the communications between the server and the controllers and the data on the server for the Water-Protec product. These elements allow the Water-Protec product and web services to comply with the Personal Information Protection and Electronic Documents Act (PIPEDA). Authentication (guarantees a user's identity)
- Logging in to the web application requires user name and password authentication.
- Authentication is performed using a strong password only. Authorization (based on the authenticated user, validates the access list)
- Users created by default have limited access (standard user).
- A standard user only has access to the data of his equipment or to the data of the equipment of another user who has previously authorized his access.
- Only Water-Protec has the right to give a specific access according to the configuration of the profile and the group. Web server security
- User passwords are encrypted with hash functions. It is not possible, even for those who have access to the database, to see anyone's password.
- SQL Injection Protection: Protects against a malicious user capable of executing arbitrary SQL code on a database, which can lead to record deletion or data leakage.
- Cross site scripting (XSS) protection: Protects against the majority of XSS attacks, allowing a user to inject client-side scripts into other users' browsers.
- SSL / HTTPS: protects against malicious network users to detect authentication information or any other information transferred between the client and server to modify data sent back and forth.
- Host Header Validation: protects against the use of a false host value used for cross-site request forgery, cache poisoning attacks and link poisoning in e-mails.
- Cross-site request forgery protection (CSRF): Protects against a malicious user performing actions using another user's credentials without their knowledge or consent.

By Centris Technologies 24-1471 Boul. Lionel-Boulet, Varennes, Qc, Canada J3X 1P7

Information

We would like to thank you once again to buy Water-Protec Product. Water-Protec is a Canadian company and its distribution network is present in all the provinces. We help prevent water damage through a technological innovation designed and assembled in Canada. We install an electronic valve, at the customer's main water supply, that automatically shuts off as soon as sensors placed in strategic areas perceive an overflow of water in the property.

The product is intended for any building in the residential, industrial and commercial sectors. The main promoters of the product are plumbers, insurance companies, plumbing distributors/wholesalers, alarm companies, as well as condominium and home owners.

24/7 helpline service in case of problems

1 833 487-7997

Get more information on service contract:

We take care of maintenance of the system and we certify the installation annually.

We also offer a certified installation service

A certified installation includes:

- A proactive installation method that fits your home. For example, the positioning of the sensors takes into account the levelling of your floors.
- The possibility to subscribe to a service contract: we take care of changing the batteries at the right time and re-certify the installation annually.

Water-Protec brings peace of mind to our customers

Water-Protec has been marketing the product since 2014 and continues to invest in research and development of the product. Therefore, we invite you to share your comments with us in order to always offer a quality product that meets your needs. You can contact us any way you prefer.

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