

# User Guide



## Thanks

Thank you for choosing Water-Protec. We want to offer you the best product that protects you from water damage and we want to give you peace of mind. We invite you to read this guide carefully. It contains useful information about the system.

## The most complete solution for water damage prevention

Since 2014, Water-Protec has aimed to protect its clients' living environments from water damage, in the easiest and most comprehensive way possible.

In 2021, we are making the ecological choice of adding water monitoring to our range of tools and services, in order to help you consume drinking water responsibly.

We have also redesigned our packaging to be more eco-friendly: it contains no styrofoam, no plastic, and is made from 100% recycled cardboard.

Our sensors and control panels are also made from recycled materials. The flow meter is optional and available in the size you need.



## **F SERIES** Our system at its best

### *Water-Protec cares about the planet*

- Our product is made from recycled materials
- The packaging is also made from 100% recyclable products
- We help everyone to better manage their water consumption

### *Designed and manufactured in Canada*



## Warranty

Water-Protec products are manufactured according to the highest quality standards in the industry. This is why Water-Protec offers the owner of a system a 5-year warranty on the stainless steel actuator and valve, 2 years on parts including the control panel, the sensors, the wired sensors, the remote control and the adapter from the original date of purchase or installation.

If a part is proven to be defective during the warranty period, Water-Protec will provide, free of charge, the parts necessary to restore the system to working order. A proof of purchase (sales invoice) must accompany any warranty claim. Defects or damage caused by the use of parts other than original Water-Protec parts are not covered by this warranty.

Please note that the warranty does not include damage caused by improper installation or improper use of the product. In this case, labour or replacement of parts will be at the owner's expense.

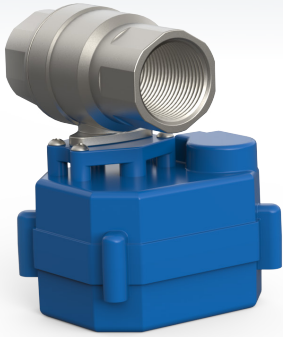
For a claim request, please first contact our technical service at the number at the bottom of the page. They will then guide you through the process of sending the defective part with a Return Merchandise Authorization (RMA) number, or by email at: [orders@water-protec.com](mailto:orders@water-protec.com)



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## New design, new features



Our system uses radio frequency communication with FCC (2AD56-915) and IC (21278-915) approval.

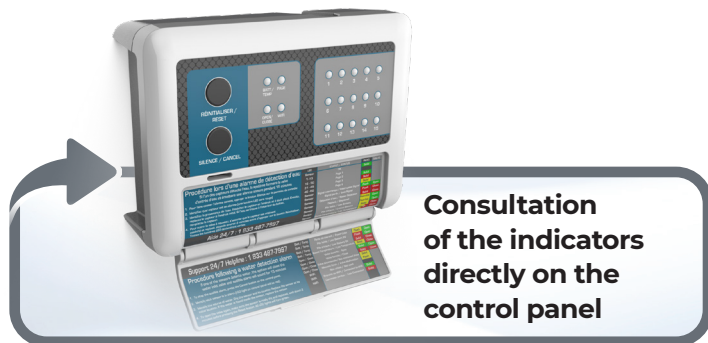


## Basic content

1. Valve : A smart stainless steel valve is installed at the main water inlet and will automatically shut off water supply if sensors detect a leak. This valve can handle a pressure of 150 Psi and it is a full port valve.
2. Control Panel : This panel gives you access to the main control functions of the system. It can control up to 2 electronic valves. It is equipped with a 9 V battery to operate the system in situation of power failure.
3. Remote control: From a distance, you are able to close or open the water supply manually.
4. The sensors: The basic kit includes 5 sensors that must be placed in strategic locations on the floor (for example, near the water heater, sinks, etc.) The sensors send an alarm signal if the stainless steel electrodes simultaneously detect water. They also send an occasional signal to the control panel to indicate that they are functional.
5. Power adapter: A 15V DC (direct current) power adapter.

## Better autonomy

- Longer lasting battery life in our sensors



### On each sensor :

- **Low temperature detection**
- **Accelerometer** : Allows real time detection in case of sensor movement and sends a notification.

## \*Optional :

### Flow meter

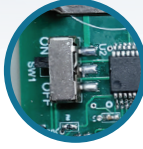
Allows to measure and monitor the flow of water and available in the desired format



## 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 (p.10), browse your property. Identify each place to protect and write them down 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.

The sensors are powered by two 3V batteries (CR2032). If the batteries are not already installed, insert them into the socket on the back. Plug the control panel into an electrical outlet and connect the valve to the control panel.

## System Operating Modes

The box has 3 operating modes:

1. **Supervision (default mode)**
2. **Sensor/remote control Setup**
3. **Wi-Fi Setup**

In Sensor/remote control mode and Wi-Fi mode, the system automatically returns to Supervision mode after a timeout. To change the mode from Supervision mode:

Sensor/remote control: Press the **Program** button for 3 seconds. After 15 seconds of inactivity, the system returns to Supervision mode.

Wi-Fi: Press the **Cancel** button for 3 seconds. Alarms are supervised only in Supervision mode.

**Note :** If no sensors are configured, the system starts in Sensor/remote control mode. Otherwise, it starts in Supervision mode.



### Step 1: Synchronize the remote control

**Note :** If you are not using the remote control, you must press **Cancel**.

Press the **Program** button on the control panel to activate this mode. When the LEDs (1-3) start flashing, the control panel is ready to receive the sync signal from the remote control. Press both buttons (open/close) on the remote control simultaneously and wait until only LED 1 is flashing and LEDs 2 and 3 are off. The remote control is now synchronized.

### Second step: sensor synchronization

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 60 areas can be programmed.

There are 4 pages of 15 sensors (see Supervision Mode section).

The page changes automatically when you reach the 16<sup>th</sup> position

with the the 16th position with the **Program** button to go to the next sensor. If you try to configure a sensor that is already configured on another page, the page changes temporarily until the problem is shown and then you return to the current page.

To synchronize a sensor, use a metal tool (e.g., screwdriver, knife) to touch the 2 blades of the sensor simultaneously to simulate the presence of water. This will associate the sensor with the control panel. If the sensor is functional, a light will come on the control panel and the valve will close.

If the sensor is not functional, the LED will flash red when trying to synchronize it.

Note the position of the sensor on the control panel 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 panel is automatically selected to allow you to synchronize the next sensor

## Valve Installation

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

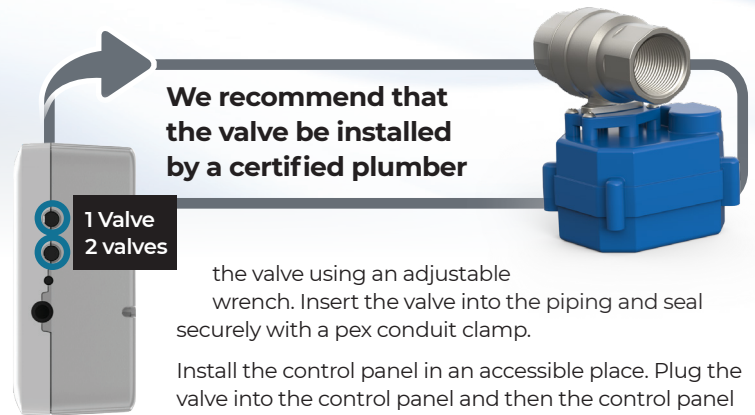
First, find an installation point for the valve. It must be located immediately after the residence's main water supply and, where applicable, before the junction of the outdoor sprinklers.

In order to power the control panel, an electrical outlet must be available nearby.

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.

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



**We recommend that the valve be installed by a certified plumber**

the valve using an adjustable wrench. Insert the valve into the piping and seal securely with a pex conduit clamp.

Install the control panel in an accessible place. Plug the valve into the control panel and then the control panel 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.

## Sensors installation

Sensors should be installed at the lowest point of the floor to allow water to reach the sensor. If the sensor is placed on a humid concrete floor, place it on a paper towel. 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 wired sensors or detection plates can be used for better protection in hard to reach areas, such as dishwasher.

## Supervision Mode

There are 4 pages of 15 sensors for a possible total of 60 identifiable areas. LEDs 1 to 15 display the status of the sensor while the Page

LED indicates the current page. The page changes automatically every 7 seconds.

**Here are the sensor numbers corresponding to LEDs 1 to 15 according to the page number**

**Page 1 (OFF)** Sensors 1 to 15

REINITIALISER / RESET

BATT/ TEMP PAGE

OPEN/ CLOSE WIFI

CANCEL

1 2 3 4 5

6 7 8 9 10

11 12 13 14 15

**Page 3** Sensors 31 to 45

REINITIALISER / RESET

PAGE

SILENCE / CANCEL

31 32 33 34 35

36 37 38 39 40

41 42 43 44 45

**Page 2** Sensors 16 to 30

REINITIALISER / RESET

PAGE

SILENCE / CANCEL

16 17 18 19 20

21 22 23 24 25

26 27 28 29 30

**Page 4** Sensors 46 to 60

REINITIALISER / RESET

PAGE

SILENCE / CANCEL

46 47 48 49 50

51 52 53 54 55

56 57 58 59 60



## WiFi Setup Mode

You can choose to connect your system to the Internet. This allows you to view its status from a secure portal and receive notifications by email or text message. It is also possible to share your system status with other users.

1. To enter Wi-Fi mode, press and hold the **Cancel** button for 3 seconds.
  - a. If the manoeuvre was successful, LEDs 1 to 4 light green in sequence.
2. When the mode is ready, LEDs 1 and 2 and then 3 and 4 light green in sequence and a Wi-Fi network named Water-ProTec AP becomes available.
3. Connect your computer, tablet or phone to the **Water-ProTec AP** Wi-Fi network.
4. Once connected, open a web browser and type the following numbers in the address bar: **192.168.4.1**
5. The router configuration web page is displayed in the language of the browser used (English or French).
6. Find the name of your Wi-Fi network and enter your password.
7. Press Save.
  - a. LEDs 1 to 4 will light yellow in sequence while attempting to connect to your router.
  - b. If the connection is successful, LEDs 1 to 4 will flash green for 10 seconds.
  - c. If the connection to the router is not made after 15 seconds, LEDs 1 to 4 will flash red for 10 seconds. In this case, start again from step 1.
8. When the system is connected to a router, the Wi-Fi LED lights up green.
9. If no Wi-Fi network is configured, the Wi-Fi LED is off.
10. If a Wi-Fi network is configured to your system but it cannot connect, the Wi-Fi LED is red.

## WPS connexion (Wifi Protect Setup)

**Attention :** You must have a compatible router to use this connection mode. Enabling WPS mode will erase any previous configuration on the Water-Protec system.



To activate this mode:

1. Press the **Cancel** button for 3 seconds..
  - a. If the manoeuvre was successful, LEDs 1 to 4 light green in sequence.
2. Press the **Program** button (located on the left side of the panel) for 3 seconds.
  - a. LEDs 1 to 4 will light yellow in sequence while WPS mode is activated (approximately 30 seconds).
3. Find your router and press the WPS button.
4. Return to the Water-Protec system.
  - a. If the configuration is successful, LEDs 1 to 4 will flash green for 10 seconds.
  - b. If the configuration failed, they flash red for 10 seconds.

<b>LED 1</b>	Deleting the final memory area
	Transfer the new program to the final memory area
	Problem during the transfer of the new program

When updating the program via the website, the panel will automatically open and close to activate the new program. This activation consists in copying the new program in the temporary memory area to the final memory area. During this time (about 15 seconds), LED 1 indicates the operations progress by flashing rapidly.

## Platform: create your account and activate notifications

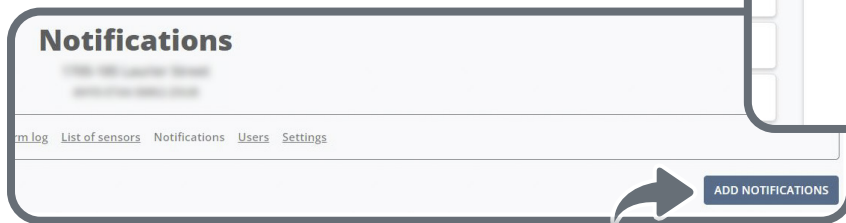
Once your equipment is connected to a Wi-Fi network, you can create an account to access the data. Visit client [client.water-protec.com](http://client.water-protec.com).

1. Cliquez sur « **Créer un compte** » et remplissez le formulaire.
2. Vous recevrez un courriel de confirmation dans votre boîte courriel. Vous devez cliquer sur le lien pour activer votre compte.
3. Une fois votre compte activé, vous pouvez vous connecter.
4. Vous devez y associer votre nouvel équipement en cliquant sur « **Ajouter un équipement** »
5. Entrer le code à 16 caractères indiqué sur votre panneau de contrôle (en dessous) et cliquer sur « **Ajouter** »



### Pour activer les notifications:

6. Allez dans la page de votre équipement. Cliquez sur « **Notifications** » et ensuite sur « **Ajouter des notifications** »
7. Choisissez si vous voulez activer les notifications courriels et/ou SMS et entrez vos informations.



## Mpble app : create your account and activate notifications



1. Go to the App Store or Google Store and download the Water-Protec app. Click on « **Create an account** » and fill out the form.
2. You will receive a confirmation email that contains a link that you must click to activate your account.
3. Once your account is activated, you can log in.
4. You must associate your new equipment by clicking on « **Add equipment** ». To choose the right model, refer to the models

5. below. The 16-character barcode is located under the control panel. Click on « **Add** ».

### To enable notifications:

6. Go to your equipment page. Click on «Notifications» and then on «Add notifications».
7. Choose if you want to enable email and/or SMS notifications and enter your information

Select **Model F** if you have one of these models:



Select **Model E** if you have this model:



## Alarms with valve closure and audible warnings without valve closure

LEDs are green when the sensor status is normal. The **Cancel** button can be used to silence an active audible alarm. The audible alarm will resume one hour later unless the problematic situation has been resolved.

Audible warnings that do not close the valve are in «auto-reset» mode. When the warning disappears, it is automatically cancelled on the panel (e.g. the audible motion warning disappears when the

sensor has not been in motion for 1 minute). The auto-reset delay depends on the type of alarm.

Alarms that cause the valve to close do not reset automatically. They must be cancelled by pressing the **Reset** button or the **Cancel** button on the remote control. Other audible alarms do not have this reset delay and return immediately when received.

## Types of alarms and audible warnings

### Low sensor battery

If a sensor's battery is low, 2.75 V or less, the sensor will periodically send a low battery signal to the control panel. The corresponding LED will flash orange and is accompanied by a beeping sound every 15 seconds until the situation is resolved. The sensor batteries should be replaced soon.

### Critical sensor battery

If a sensor's battery is very low, 2.70 V and less, the sensor will send a critical battery signal to the control panel. The corresponding LED is orange and a rapid beeping sound is heard for 15 minutes. The LED will remain orange until the situation is corrected. The valve will close. The batteries in the corresponding sensor must be replaced as soon as possible.

### Water detection

If a sensor detects water, the corresponding LED is red and an audible alarm is emitted. The valve closes immediately and remain closed as long as the sensor is detecting water. When the situation is resolved, the valve can be reopened by using the remote control or by pressing **Reset**.

## Other types of alarms

### Faulty accelerometer

If a sensor's accelerometer is faulty, it will report movement even if it is not. The corresponding LED will light up on the control panel.

### Emergency power mode

If the system goes into emergency power mode (9V battery or rechargeable battery) due to a power failure, the colour remains the

### Sensor communication loss - IOK

The control panel receives a presence signal from each installed sensor. If a sensor signal is not received for 12 consecutive hours, the corresponding LED will flash green and an audible warning is emitted. If a signal has not been received for over 24 hours, the LED flashes red and an audible alarm is emitted, causing the valve to close.

### Power failure

The control panel is equipped with a 9 V battery backup. This ensures that the control panel continues to function and that the valve remains open in the event of a power failure. If the battery backup reaches a critical level, the valve will close and remain closed until the battery is replaced and the system reset, or until power is restored.

### Low temperature Alarm

The control panel and sensors are equipped with temperature sensors. If the ambient temperature drops near freezing (5°C), the valve will close and remain closed until the system is reset. The **batt/temp**. LED will alternate between red and orange.

same. Only the display time changes in some cases to save batteries energy. The Wi-Fi connection remains active for 3 minutes while a final status update is sent to the web platform.

### Blue sensor (no close type)

The blue sensor reports water leakage but does not send a valve closure signal. The sensor error is self-resetting and disappears without having to press the **Reset** button. The 2-minute delay for panel reset does not apply to the blue sensor.

## Procedure following a water detection alarm

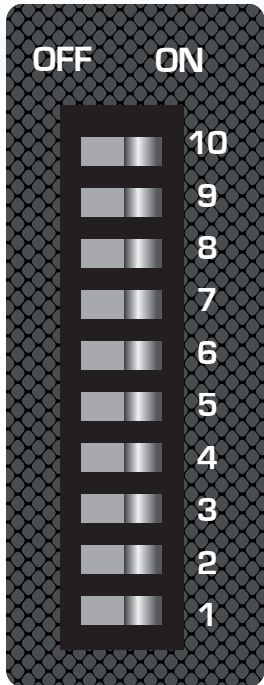
If one of the sensors detects water, the system will close the water inlet valve and audible alarm will sound for 15 minutes.

- To stop the audible alarm, press the **Cancel** button on the control panel.
- Identify which sensor is in alarm (LED light on control panel is red).
- Identify the source of the water. Dry the sensor and its location. Replace the sensor at its initial location. If the water is found inside the sensor, replace the sensor.
- To open the valve again, make sure the sensor is really dry and replaced. Wait about 2 minutes before pressing the **Reset** button. All LED lights will turn green.

LED	STATUS	INDICATOR		VALVE STATUS
Page	OK	Fixed		—
1 - 15	Page 1			—
16 - 30	Page 2	Fixed		—
31 - 45	Page 3	Fixed		—
46 - 60	Page 4	Fixed		—
Sensor	Interrupted Signal	Flash		Opened
Sensor	Lost Signal	Flash		Closed
Sensor	Water Detection	Fixed		Closed
Sensor	Displaced	Flash slow		Opened
Sensor	Low battery	Flash fast		Opened
Sensor	Critical battery	Fixed		Closed
Sensor	Low Temperature	Flash	Flash	Closed
Batt. / Temp.	Power loss	Flash		Opened
Batt. / Temp.	Low battery	Flash		Opened
Batt. / Temp.	9V - Critical battery	Fixed		Closed
Batt. / Temp.	Low Temperature	Fixed		Closed
Open / Close	Valve opened	Fixed		Opened
Open / Close	Valve closed	Fixed		Closed
Open / Close	Not connected valve	Fixed		—
Open / Close	Valve malfunction	Flash		—
WiFi	Not used			—
WiFi	Connected to Wifi	Fixed		—
WiFi	Lost connection	Fixed		—



## DIP switch



Here are the DIP switch functions according to whether they are ON or OFF.

OFF	ON
Available	Available
Available	Available
Available	Available
No rechargeable battery	Rechargeable battery available
2 hour valve closing delay upon activation of the alarm system	Immediate valve closure on activation of the alarm system
Checking the valve current	Valve current verification disabled
Alarm connector disabled	Alarm connector activated
Valve activated	Valve disabled
Valve opening in 15 sec.	Valve opening in 30 sec.
1 valve	2 valves

## Connection to the alarm system

### Alarm relay

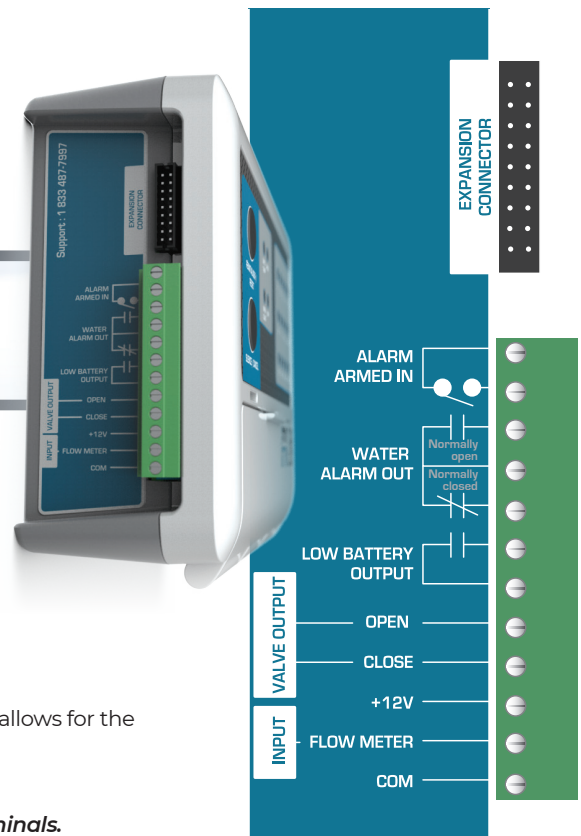
The alarm relay connects the NO/NC (Normally Open - Normally Closed) contacts to the alarm system. It is activated when the control panel sends a signal to close the valve, but not by using the remote control.

### Low battery relay

The low battery relay connects the contact to the alarm system. In the event that a low sensor battery message is received. Two terminals are also available for normally open contacts of the home alarm system and indicate to the control panel that the alarm system has been armed. The control panel will shut off the water 2 hours after these contacts are closed and will reopen the water when the contacts are opened again (the 2-hour delay allows for the completion of the current cycle of the washing machine or dishwasher).

*If the alarm system is not in use, no connections should be made to these terminals.*

**We recommend that the system be connected by your alarm provider**



## Replacement of parts and batteries

### Replacing the remote control :

First, press the **Program** button on the control panel to activate the synchronization mode; the first LED is flashing. Press the **Reset** button 3 times. The first three LEDs flashing. The system is ready to receive a synchronization signal from a remote control.

### Replacing or adding a water sensor

Press the **Program** button. The first LED flashes. Press the **Open** button on the remote control. Each press will move the flashing LED to the next position. Once the desired page and sensor number are set, synchronize the new sensor by shorting the electrodes. The LED in the selected position will glow steadily and the next LED will flash.

### Battery replacement - Sensors

The water sensors are equipped with two 3V/20mm lithium batteries (e.g. type CR2032). To replace the weak battery (2.7 V or less), open the sensor by first removing the central screw. Remove them and install the new batteries. Caution: + facing up. Replace the sensor and turn it on again.

### Battery replacement- Remote

The remote control is equipped with a 3V/16mm lithium battery (e.g. type CR-1632). Simply unscrew the shell, remove the weak battery and install the new battery (position B1).

### 9V Battery replacement- Control Panel

The control panel is equipped with a 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.

## 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.



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