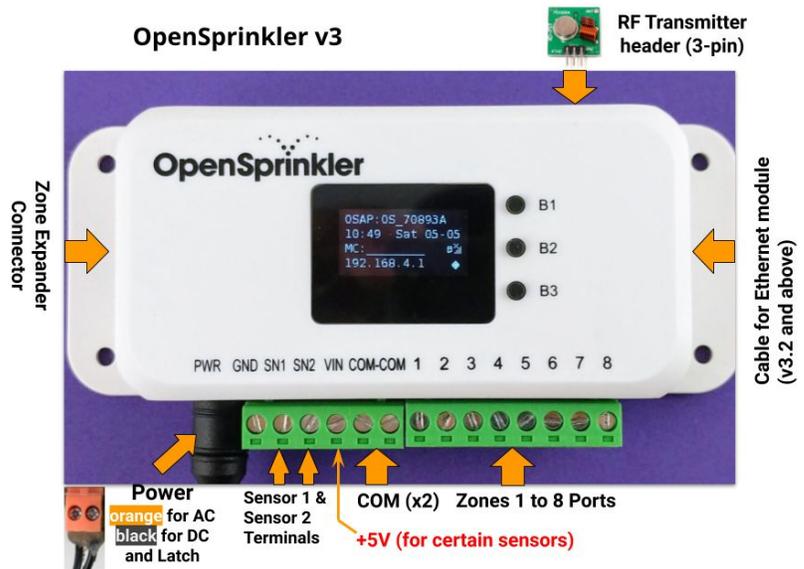


## OpenSprinkler v3 Getting Started Guide

Thank you ordering OpenSprinkler. You have received hardware **v3 with built-in WiFi, and OLED display**. This document is a brief introduction to how to get started using the device. For complete information, including video tutorials, user manual, and API document, please visit <https://www.opensprinkler.com>

### Notes

- OpenSprinkler is **NOT waterproof**. For **outdoor use**, please put the controller in a waterproof enclosure.
- OpenSprinkler v3 has several differences with the previous generation. Check the image on the right for locations and labels of connectors and terminals.
- **AC-powered** version has a **orange** terminal for 24VAC; **DC-powered LATCH** versions have a **black** DC power plug.
- There are two sensor terminals: Sensor 1 (**SN1**) and Sensor 2 (**SN2**). At the moment of this writing, the firmware only supports one sensor, through SN1. Support for the second sensor will be available in the future. To connect a sensor, such as rain or flow sensor, insert the two wires to **SN1 and GND**. These sensors are typically dry-contact switches so there is no polarity. Powered sensors (such as 5V flow sensor) can also be used: the pin labeled VIN outputs +5V.
- The **COM** (common) wire terminal has two ports internally wires together. You can use either port (COM-COM).
- OpenSprinkler v3 uses a different type of zone expander connector from previous versions. When purchasing zone expanders in the future, please make sure to purchase **Expander version 3.0** which comes with the compatible cable.
- OpenSprinkler v3 also has built-in RF transmitter connector. This is for the RF station feature (which allow OpenSprinkler to control RF wireless power sockets). When plugged in, the transmitter should face up (check user manual for details).



### Hardware Installation

#### Step 1: Label wires and remove your existing sprinkler controller.

- Carefully label and remove the wires from your existing controller. Typically you will see **24VAC power** wires, **COM (common) wire**, one or more **Zone wires**. You may also find a **Master Zone** (or Pump Start Relay) wire, and **Rain Sensor wires** (if you have a rain sensor installed).

#### Step 2: Attach OpenSprinkler, and re-insert wires.

- For the convenience of installing wires: all terminal blocks on OpenSprinkler can be removed and re-inserted later.
- For **24VAC-powered** version, insert the power supply wires to the **orange** terminal block. AC has no polarity. For **DC-powered** or **LATCH** versions, plug in the DC power supply. Insert the other wires (COM and zone wires) correspondingly. Note that **COM (common) wire should go to the COM terminal, NOT GND!!!**
- To connect a sensor, such as Rain Sensor, insert the two wires to **SN1** and **GND**. Generally there is no polarity.
- If you have a Master Zone (or Pump Start Relay) wire, insert it to any zone port – OpenSprinkler uses software defined Master Zone (up to 2 independent Master Zones), any of the available zones can be assigned as a Master Zone.

#### Step 3: Link OpenSprinkler Zone Expansion Boards (optional)

- Plug one end of the zone extension cable (comes with expanders) into OpenSprinkler's Zone Expander connector. The connector is polarized so there is only one way to plug it in. Plug the other end to the Zone Expander.
- The Zone Expander has two connectors that are equivalent, so you can plug into either. To link additional Zone Expanders, use another extension cable to link the unused connector on the first zone expander to either connector of the second expander. OpenSprinkler v3 supports **up to 4** expanders (each expander adds 16 zones).

➔ Continue to the other side

- Because all Zone Expanders are hooked onto the same (I2C) bus, you must **set for each Zone Expander a unique index** (1, 2, 3, or 4). Each Zone Expander has a DIP switch (shown on the right) that allows you to set the index. The first expander (directly connected to main controller) should have an index of **1 (OFF OFF)** on the DIP switch), the second expander should be **2 (ON OFF)**, the next is **3 (OFF ON)**, and the last is **4 (ON ON)**.



## Setting Up WiFi

- The first time you power on OpenSprinkler (or every time after a factory reset), it will **start in AP mode**, creating an open WiFi network with SSID displayed on the LCD screen (OS\_ followed by the last 6 bytes of the hardware address). Use your phone or laptop to connect to this WiFi network (**Note:** on Android phones, you may receive a warning: WiFi has no Internet connection. Select **Yes** to stay connected, before proceeding to the next step).
- Open a browser and type in IP address **192.168.4.1**. Follow the instructions to complete the WiFi setup process. In particular, you need to select (or type in) **your WiFi router's SSID and your WiFi router's password**. Then click on Connect.
- Once the device connects to your WiFi successfully, it will automatically restart and boot into **Client mode**. To access the controller in client mode, simply **click push-button B1** – that will display the **client IP** address to LCD screen.
- On your phone or computer, open a browser and type in the client IP address, you will see the OpenSprinkler web interface. **The default device password is opendoor**. You can also install OpenSprinkler mobile app (see below).

## Factory Reset and Device Password

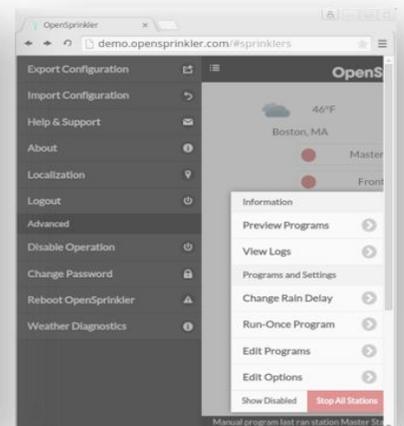
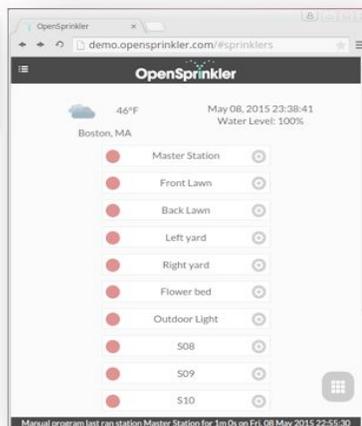
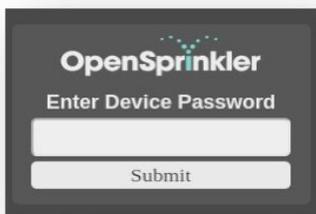
- To reset WiFi only (while preserving program settings): after controller is powered on, press B3 followed by B2 until the screen displays 'Reset to AP mode?'. Then Click B3 to confirm.
- To perform a factory reset: first unplug the main power; then plug the power back, as soon as you see the OpenSprinkler logo, **press and hold push-button B1**, and continue holding B1 until the LCD displays 'Reset?'. Make sure the answer is Yes, then **press and hold push-button B3** until the controller reboots itself and completed the resetting process.
- Upon factory reset, the device password is reset back to the default, which is **opendoor**.

## OpenSprinkler Firmware and Mobile App

OpenSprinkler's built-in web interface works with both desktop and mobile browsers. You can access OpenSprinkler using either a standard web browser, or the free OpenSprinkler mobile app. To install the mobile app, just **search opensprinkler in your app store**. We support most mobile platforms. Firmware tutorial video is available at [www.opensprinkler.com](http://www.opensprinkler.com).

After the controller is powered on and establishes the WiFi connection, you can find out its client IP address on the LCD by clicking button B1. Also, the OpenSprinkler **mobile app can automatically scan** your local network to discover OpenSprinkler's IP address. For example, your OpenSprinkler's IP address might be 192.168.1.22. Next, either use the mobile app, or open a browser and type in the IP address (e.g. 192.168.1.22). You should then see the login screen. Some screenshots are shown below. OpenSprinkler supports many advanced features. Check the user manual or the firmware tutorial videos for details.

**Device Password:** the factory default password is **opendoor**. For security, please change the password upon first use.



Thank you again for choosing OpenSprinkler! For support questions, community forum, or see our other related products, please visit: <https://www.opensprinkler.com>