



FL-1000 WATER LEAK DETECTION SYSTEM

Installation Guide

COMPONENTS

What's in the Box



FL-1000 In-Pipe Flow Sensor

Dual-element thermal probe installed inline with main water supply. Detects flow anomalies down to 2 oz per minute. Available in 3/4" and 1".



Valve & Sensor Controller + Power Supply

Connects the FL-1000 sensor and actuated ball valve to the IG-1000 hub via **LoRa wireless**. Displays real-time temperature and valve state in app.



Actuated Ball Valve

Motorized shutoff valve — closes automatically on leak detection.
Installed size: 3/4". Available in 3/4", 1", 1 1/4", 1 1/2", and 2".



IG-1000 Internet Gateway Hub

Local **LoRa-to-internet bridge**.
Connects all SafeHous devices to the cloud platform. Requires 120V outlet and Ethernet or 2.4 GHz WiFi.

Additional Sensor Options



Point of Location Sensor

Point of Location Sensor detects the presence of water on floors, under appliances. Either "Pucks" or "Rope" styles are available

Other Sensors, Integrations & Relays

SafeHous has a wide range of other sensors, including temperature / humidity, security & relays for more flexible solutions. Check www.safehous.com for more products

TOOLS REQUIRED

- Pipe cutter
- Adjustable wrench
- Deburring tool
- Drill + screwdriver
- Teflon tape / pipe dope
- Smartphone (iOS/Android)



Before You Begin

Shut off main water supply at the meter before any plumbing work.



LoRa Wireless System

Devices communicate via **LoRa** (not WiFi). Only the IG-1000 Gateway Hub needs Ethernet/LAN or WiFi — **2.4 GHz only**.



For **licensed plumbing professionals**. Read all steps before beginning. The entire system configures through the app in under 30 minutes — no professional wiring, no hub programming, no IT involvement.

Support: safehous.com · 866-310-1055 · info@safehous.com

PRE-INSTALLATION

Inspect & Prepare

Inspect Components

Check each item before proceeding

- ☐ FL-1000 sensor body and threads are intact — no cracks, dents, or damage
- ☐ Sensor cable and connector pins are clean & undamaged
- ☐ Valve & Sensor Controller powers on — LED defaults to **red** while the Actuated Ball Valve is unplugged
- ☐ Connect the Actuated Ball Valve to the Controller and test: press the "Set" button — valve rotates from fully open (**Green LED**) to fully closed (**Red LED**)
- ☐ Valve size matches measured pipe OD — confirm before installing
- ☐ All included items match the packing slip

Prepare the Installation Site

Points to be aware of before installation begins

- 1 Identify the water main line — after the Main Manual Shutoff and before the first plumbing branch
- 2 Locate a 120V outlet within 6 ft for the Sensor / Valve Controller power supply
- 3 After the Main Manual Shutoff, verify 12" of straight accessible pipe is available for the FL-1000 In-Pipe Sensor and Actuated Valve
- 4 Shut off main water supply at meter — confirm zero flow before cutting
- 5 Open lowest faucet to fully relieve line pressure
- 6 Cut pipe to the required FL-1000 insertion length — the tip of the sensor must sit in the water flow path
- 7 Deburr and clean both pipe ends thoroughly — no debris inside pipe

- i Plan cable routing from the FL-1000 and Actuated Valve to the Controller location before cutting pipe. The IG-1000 Gateway Hub can be in another part of the home — up to 200–300 ft from the controller depending on site conditions.

HARDWARE + DEVICES + App

Install Gateway, Controller & Safehous App

1 Connect IG-1000 Gateway to Internet

LoRa-to-internet gateway · Ethernet or WiFi

OPTION 1 — ETHERNET LAN "PLUG AND PLAY"

- 1 Plug the USB cable and power adapter into a wall outlet to power the IG-1000 — **green PWR LED** on
- 2 Plug an **Ethernet cable** into the IG-1000 and the homeowner's router or network switch
- 3 **Blue Internet LED on solid** = connected to the internet



OPTION 2 — WIFI TO GATEWAY SETUP

- 1 Power on the IG-1000 — **green PWR LED** on
- 2 Press and hold the **SET button** on the Gateway Hub for 5–10 seconds — Internet LED begins to **flash blue** (WiFi settings mode)
- 3 Log into the homeowner's WiFi on your phone
- 4 In the Safehous app: select "**Hub**" → tap the **WiFi icon** → review the Setup WiFi screen
- 5 Confirm WiFi name and password → tap **Continue**
- 6 WiFi setup complete — **Blue Internet LED solid** = connected

⚠ 2.4 GHz WiFi only. 5 GHz networks are not supported. Have the homeowner's WiFi password ready before this step.

2 Connect Valve & Sensor Controller

Physical wiring — before app setup



- 1 Mount Controller using included mounting screws
- 2 Connect FL-1000 sensor cable to the Controller **SENSOR** port (left, labeled)
- 3 Connect valve cable to the Controller **VALVE** port (right, labeled)
- 4 Plug the 24V power supply into a 120V outlet

CONTROLLER LED STATUS

● Solid Green	Valve open
● Solid Red	Valve closed
● Red (default)	Valve not connected

3 Install App & Create Account

The app manages all devices on the property

- 1 Download **Safehous** from the Apple App Store or Google Play
- 2 Create account — email + username + password
- 3 Approve all notification and alert permissions on your phone



Apple



Android



4 Add Additional User Details

Extra User details

- 1 Tap **top left icon "3 lines"** → Settings → Account
- 2 Complete extra user account details ie: phone; 2FA
- 3 Advanced Settings → Set up desired notifications

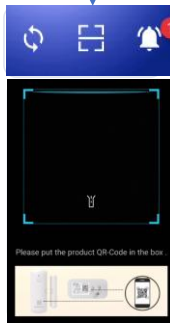
SETUP & INSTALL

Add Devices & Plumbing Installation

5 Add All Devices via QR Code

Each device has a unique QR code on front or back

- 1 Tap the **QR scanner icon** in the top bar of the app
- 2 Point camera at the QR code on the device to add it to the account
- 3 Device appears in app — repeat for Leak Controller and every sensor



6 Firmware - Valve & Sensor Controller

Check for Firmware Updates

- 1 Tap **Leak Controller** → top right icon “3 dots”
- 2 Scroll to Firmware and confirm that there are no updates pending.
- 3 If the Firmware update is pending, proceed with firmware update. Update usually takes 30 minutes

ⓘ Update Fails: Controller can be master reset
Hold down set button 20-25 seconds – Flash Red/Green
Press Set button again to reconnect

7 Install FL-1000 In-Pipe Flow Sensor

Tip of Flow Sensor and Tee must be in the direct flow path of the tee



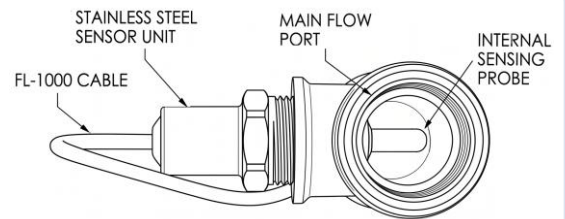
- 1 Install Flow Sensor and Pipe Tee Fitting downstream from the main shutoff
- 2 Position Flow Sensor — **horizontal or vertical facing down orientation is acceptable**
- 3 Apply thread sealant or compression fittings per pipe material
- 4 Pipe Tee, hand-tighten then wrench ¼ turn — do **NOT** overtighten; Install bleed screw with hex wrench
- 5 Route sensor cable to Controller location and secure with clips

Critical ⚠

- Pressure test and check for leaks after installation
- Irrigation or Pool Fillers – If desired, to monitor house flow only; install flow sensor after the irrigation or pool filler line tee
- Do **NOT** use a torch to solder while the Flow Sensor is installed in the Tee.

INSTALLATION REFERENCE

Install horizontal or facing down. Facing up is acceptable only if air is purged from the Tee.



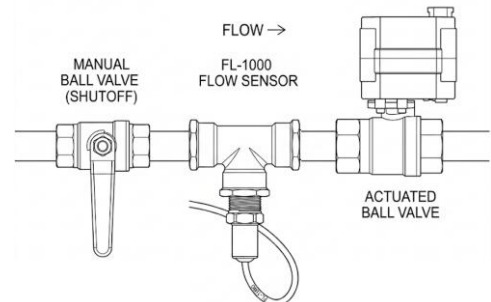
Tip of the Flow Sensor must sit in the direct flow path within the Tee

8 Install the Actuated Valve

Must face up or 90° — **do not** install facing down



- 1 Install Valve **downstream** of Flow Sensor (between sensor and appliances)
- 2 Verify flow direction arrow on valve body aligns with water flow
- 3 Maintain minimum 3" of straight pipe between Flow Sensor outlet and valve
- 4 Secure per pipe type: soldered, threaded, or push-to-connect
- 5 Route valve cable alongside sensor cable to Controller location



Inline order: Manual shutoff → FL-1000 and Tee → Actuated Valve

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Calibrate the FL-1000 Sensor

Teaches baseline water temperature

- 1 Ensure no water is flowing for **5 minutes**
- 2 Tap the **Leak Controller** device → tap the top right icon **"3 dots"** → Details
- 3 Navigate to Water → select **Cold Water** or **Hot Water** to match the monitored supply line
- 4 Navigate to **Calibration** → ensure *no water is flowing*
- 5 Wait **20 seconds** — app confirms: Heated thermistor, Water temp, Differential ✓

⚠ **No water must be flowing** during calibration. Close all faucets and confirm zero pressure before starting.

FINAL CONFIGURATION

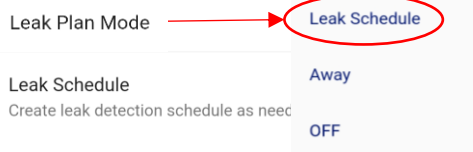
Schedule, Test & Automate

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Set Leak Detection Time Windows

Schedule when the system actively monitors

- 1 Details menu → Navigate to **Alert** → Leak Detection → Leak Plan Mode → **Leak Schedule**

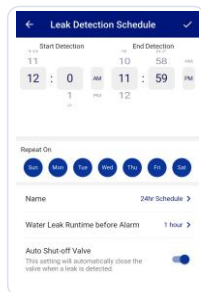


- 2 Tap **"Leak Schedule"** → tap **+** icon
(Ignore "Schedule" link)

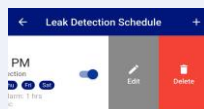
- 3 Create a 24-hour leak detection schedule
12:00 AM to 11:59 PM

- 4 Water Leak Runtime
1 hour
 Auto-Shutoff Valve
On (blue) Confirm ✓

- 5 Back ← Confirm ✓ → **Save**



- **Double Check**
Schedule after Save
- Swipe **LEFT** to edit or delete any Leak Detection Schedule

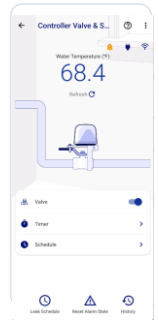


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Alarm Alerts — Leak Detected

Water flow exceeds the Leak Schedule window

- 1 A **Bell icon** alarm appears — **investigate** for potential water leaks
- 2 Check that all water in the home is turned off
- 3 Reset alarm state: **Open Valve** → tap **Refresh** → Current: 0
- 4 If Current is still counting after Refresh: confirm all water is off, then **calibrate the sensor again**

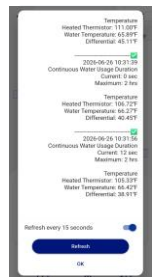


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Leak Quick Test — "Refresh" Icon

3-minute leak test

- 1 **Start test** → tap **Refresh** on the Leak Controller (under the Water Temperature reading)
- 2 Open a house faucet to start water flow — the **Current** timer starts counting
- 3 **Stop test** → close the faucet — Current timer returns to 0. Test complete
- 4 If the quick test is unsuccessful, calibrate the Flow Sensor and repeat test from Step 1



Optional

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Point-of-Leak Sensor Automation

Floor pucks and ropes → auto valve close

- 1 Add each POL sensor using its QR code, then open the **Smart tab** (bottom toolbar) → **Automation**
- 2 Tap **+** → name the automation
- 3 **When** → Device Actions → POL Sensor → **Water Detected** ✓ · Add More Conditions → remaining POL sensors
- 4 **Behavior** → Device Actions → Valve Controller → **Close** ✓ → save ✓
- 5 Test: wet the POL sensor pins with a moist towel — sensor alarms and the Leak Controller closes the actuated valve

✓ INSTALLATION COMPLETION CHECKLIST

- | | |
|--|---|
| ☐ FL-1000 Sensor & Actuated Valve show no leaks | ☐ App: all device icons blue, status shows "Normal" |
| ☐ IG-1000 Gateway Hub online (solid blue LED) | ☐ App: FL-1000 Flow Sensor calibration complete — readings confirmed |
| ☐ Controller wired, power on, LED on (Green = open, Red = closed) | ☐ App: leak detection schedule configured + tested |
| ☐ Valve Controller bound in app — online, valve toggle works | ☐ App automations: POL sensors set up and tested |

Username:

APP Password:

Email:

REFERENCE

Warranty & Disclaimers

SafeHous, LLC ("SafeHous") warrants that its smart IoT leak detection products ("Products") are free from defects in materials and workmanship under normal residential use for a period of three (3) years from the date of purchase.

● WHAT'S COVERED

Manufacturing defects in materials or workmanship. If a covered defect is confirmed, SafeHous will cover:

- ✓ Replacement or repaired Product
- ✓ Standard shipping (incl. return shipping if required)
- ✓ Reasonable labor for removal/replacement by a qualified installer when required by installation type or code

WARRANTY PERIOD

COVERAGE BEGINS	COVERAGE LENGTH
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Date of Purchase	Three (3) years
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Purchase and Installation date may be verified by an installer invoice, customer documentation, or SafeHous activation records.

● WHAT'S NOT COVERED

- ✗ Improper installation, misuse, abuse, or unauthorized modification
- ✗ Use outside intended residential applications
- ✗ Normal wear and tear or cosmetic damage
- ✗ Damage from external events (fire, flood, freezing, power surge, pests, etc.)
- ✗ Network, WiFi, cellular, internet, or smart-platform issues outside SafeHous' control
- ✗ Consumable components (e.g., batteries, if applicable)
- ✗ Products with altered serial numbers or purchased from unauthorized sellers
- ✗ Claims where the installation date cannot be verified

HOW TO MAKE A CLAIM

- 1 Contact SafeHous Customer Support with a description of the issue
- 2 Provide proof of installation date
- 3 Follow troubleshooting or return instructions if requested

i Replacement labor reimbursement may require pre-approval and paid invoices.

ADDITIONAL TERMS

- Replacement Products are covered for the remainder of the original warranty period
- Warranty is limited to one repair or replacement per Product
- SafeHous is not liable for indirect or consequential damages
- Total liability will not exceed the original purchase price of the Product, except for covered replacement costs