



Innovative systems for leak prevention and water savings

## Smart detection system for controlling and preventing water leaks

The system identifies irregular water consumption anomalies that may result from small and or large leaks in the water supply system.

The system is cloud-based and is controlled remotely by our application or management software

Real-time notifications will be sent to your smartphone through our application about irregular water consumption that results from a leak, burst in the water lines, temperature changes and low battery percentage.

According to the user's settings the water can be shut off manually or automatically. Also, there is an option to set a schedule for opening and closing the water according to the user's needs.

The flood sensors detect flooding as soon as water hits the sensors and immediately sends the alert.

The system connects to the internet via wired, wireless or cellular communication.

The communication between the components is RF-based.

The system includes a 1" ball valve, a 1" flow sensor, a battery-controlled actuator, and a HUB.

The system can be integrated to a building management systems via API.

The system complies with NSF/ANSI 61: "Drinking Water System Components".

### Required preparation

Prepare 2 electricity points for the Hub, at a maximum distance of 35 Feet.

Prepare a network connection point(Ethernet), WIFI or cellular communication.

The advanced solution for preventing leaks and flooding in all kind of properties



Private Homes



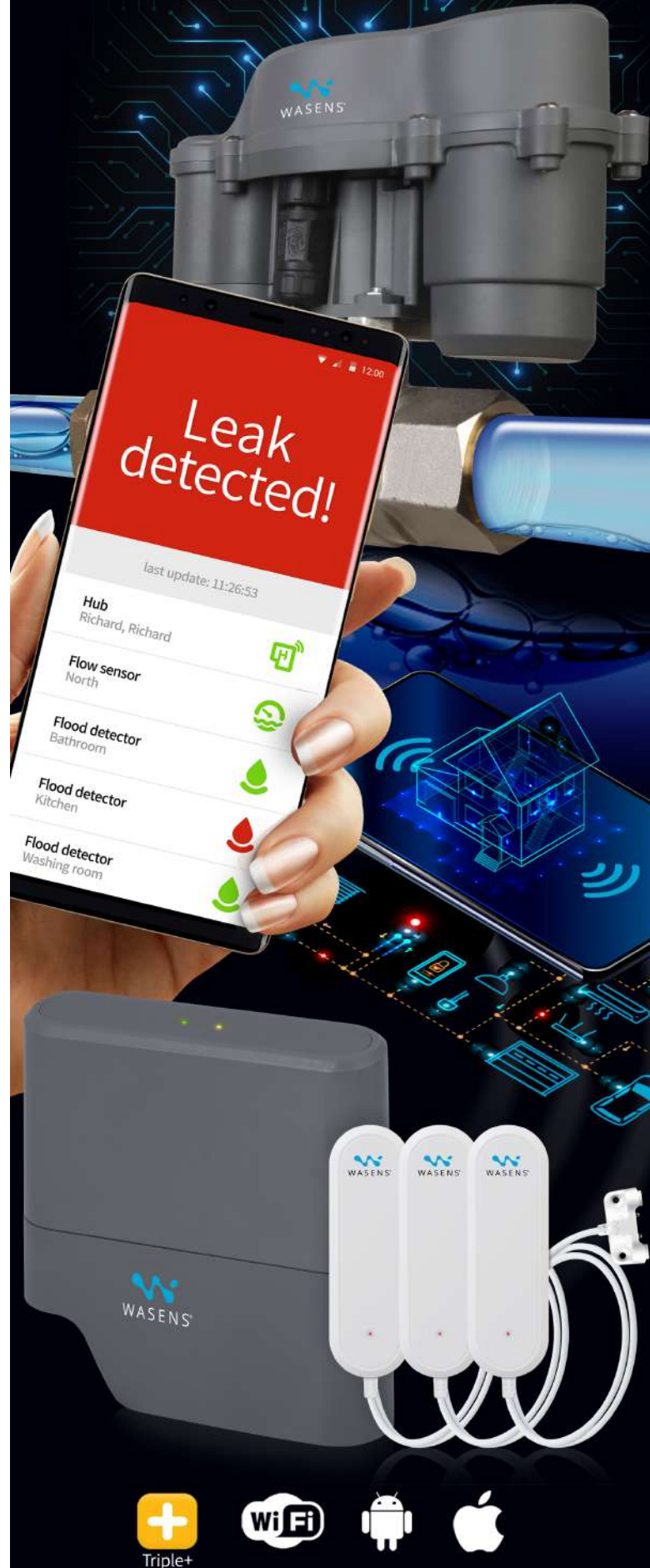
Apartment Buildings



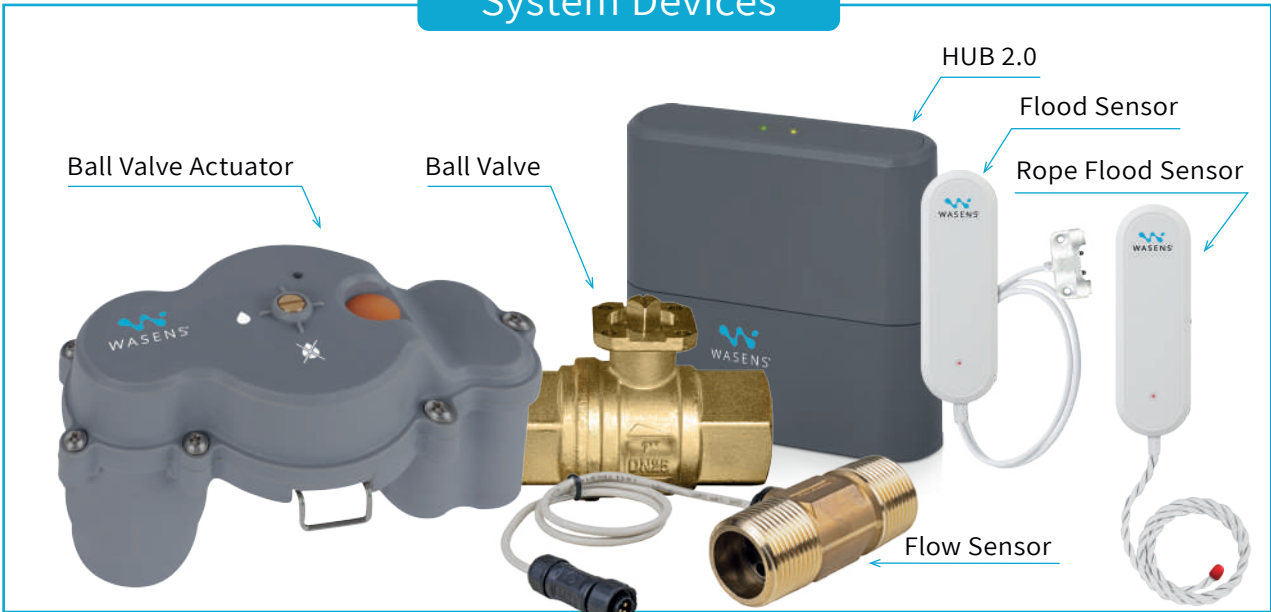
Office Buildings



Commercial Buildings



## System Devices

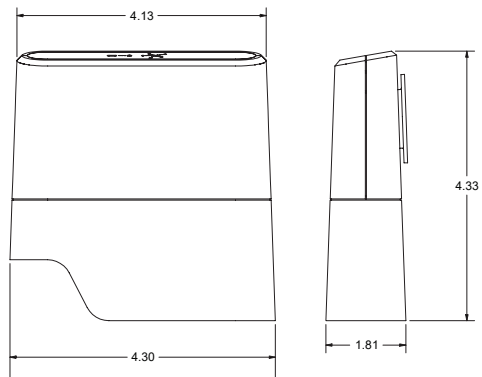


## HUB 2.0

The HUB is the core of the system and connects the wireless system components to the cloud.

The HUB communicates wirelessly with the system components, receives alerts and sends commands to the appointed people. The HUB is connected reliably and securely with the WASENS cloud.

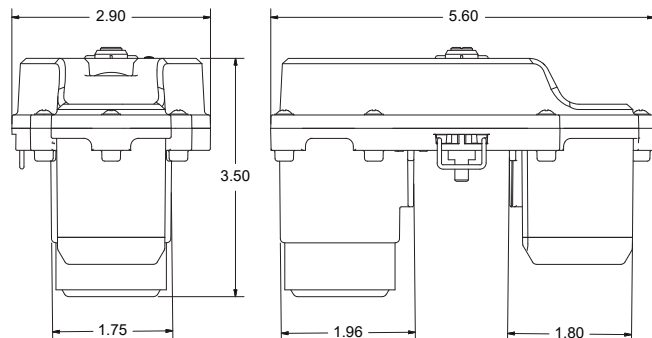
The WASENS HUB connects to AC and is backed up by batteries in case of power outages.



Dimensions	Weight	Voltage	Radio frequency	Temperature range	Backup Batteries	Communication
4.33"/4.13"/1.81"	5.63OZ	110V-240V	915MHz	-4° to 122° F	CR1234A V3 X4	WIFI/SIM/ETHERNET

## Ball Valve Actuator

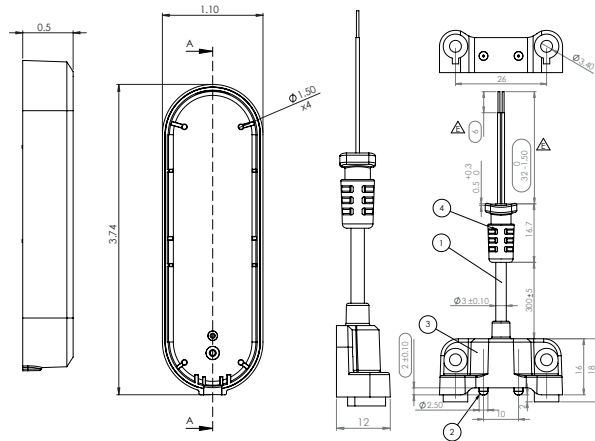
An actuator for the main valve that is controlled and operated wirelessly using batteries. The valve actuator automatically closes the water line on which it is installed when a leak or irregular flow is identified or according to the user's needs and schedule.



Dimensions	Weight	Battery life	Radio frequency	Temperature range	Batteries	Standard
5.51"/3.54"/2.75"	14.63OZ	2-4 years	915MHz	-4° to 122° F	CR1234A V3 X4	IP68 water resistant

## Wireless Flood Sensor

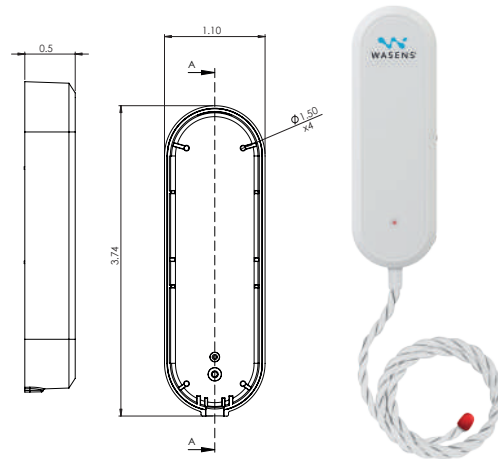
Wireless flood sensors are installed, in the sensitive areas of your property (under the sink, washing machine, toilets, etc.) They are designed to detect water flooding in it's early stage. When water is detected, the sensors send an alert to the HUB and a command is automatically received to close the valve and an alert is sent in real-time to the registered user's mobile phone via text, voice and email. Each flood sensor detects temperature and alerts in case of a change.



Dimensions	Weight	Batteries	Voltage	Radio frequency	Temperature range	Battery life
3.74"/1.10"/1.10"	1.94OZ	2 x AAA	V3	915MHz	-4° to 122° F	2 years

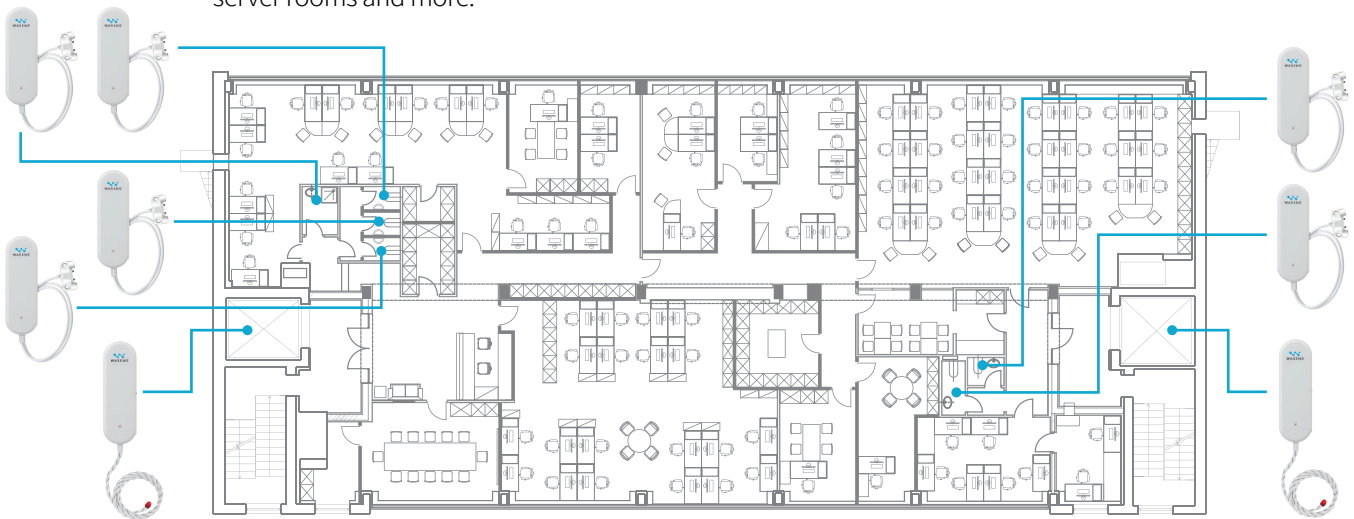
## Wireless Rope Flood Sensor

Wireless ropes sensors are designed to detect water from the beginning to its end, which allows you to cover and monitor a larger area. It can be wrapped around pipes and fittings. Ropes are installed in sensitive areas within your property (in server rooms, pump rooms, boiler rooms and machinery rooms, etc.), the sensors are designed to detect water at an early stage. When water is detected, the sensor sends an alert to the HUB and from there it is immediately forwarded to the mobile phone via text, voice and email to the registered users. Each flood sensor detects temperature and alerts in case of a change.



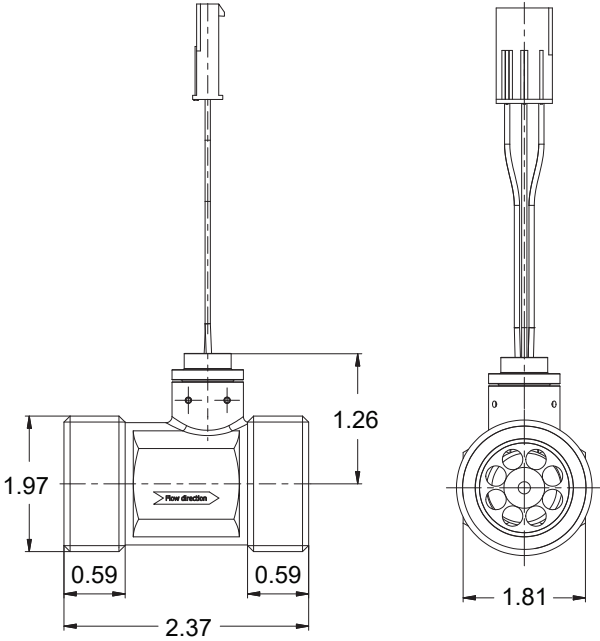
Dimensions	Weight	Batteries	Voltage	Radio frequency	Temperature range	Battery life
3.74"/1.10"/1.10"	1.94OZ	2 x AAA	V3	915MHz	-4° to 122° F	2 years

Flood detectors are located at the sensitive points in the property:  
Sinks, bathroom, water bar, coffee machine, laundry room, elevators, electrical cabinets, server rooms and more.



## Flow Sensor

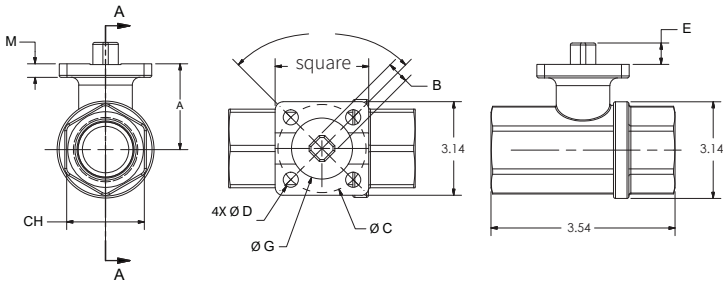
A flow Sensor is installed and connected to the ball valve actuator. this will detect irregular water consumption. The flow sensor measures continuously water usage. Abnormal water usage is typical when there is a leak, burst pipe, open faucets or leaking toilets.



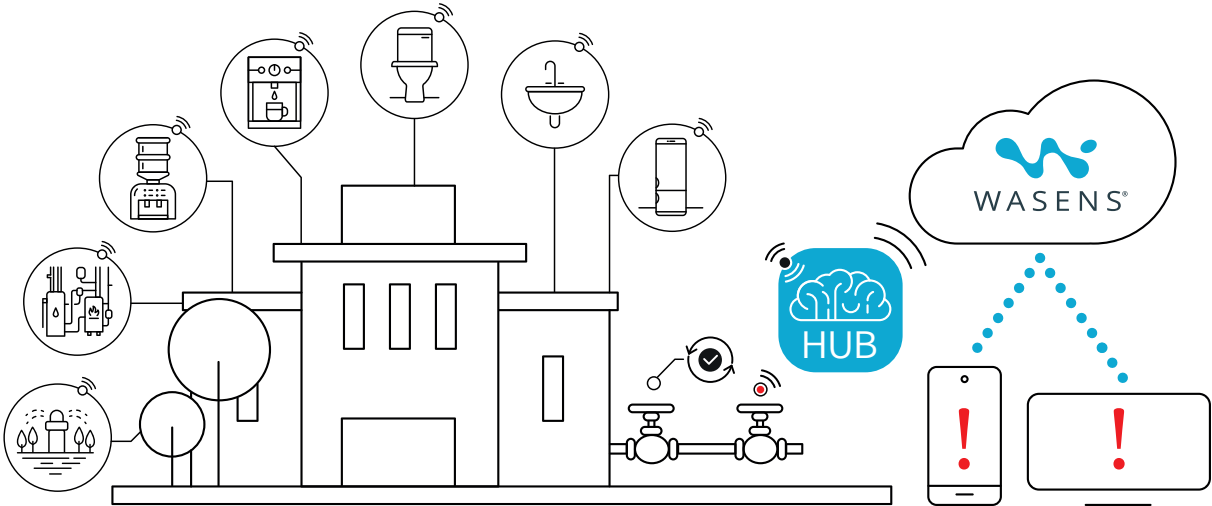
Dimensions	Weight	Material	Pressure rating	Nominal diameter	Pressure drops	Standards
2.37"/1.97"/1.81"	7.05OZ	Brass	PN16	DN20	0.33 bar	5452, WRAS, NSF/ANSI61
Accuracy	Flow range	Medium temperature	Ambient temperature			
±1%of range	±1%of reading	16.9oz ...15.85Gal per minute	32° to 194° F	32° to 158° F		

## Ball Valve

We use an ISO-5211 brass ball valve that is NSF/ANSI 61 to avoid the hammer effect that can occur with other types of valves.



Dimensions	Weight	Operating temperature	Operating pressure	Standards
3.54"/3.14"/2.16"	28.32OZ	-4° to 338° F	40 bar	5452, WRAS, NSF/ANSI61





Innovative systems for leak prevention and water savings

## Smart detection system for controlling and preventing water leaks

The system identifies irregular water consumption that may result from small and or large leaks in the water supply system.

The system is cloud-based and is controlled remotely by our application or management software.

Real-time notifications will be sent to your smartphone through our application about irregular water consumption that results from leaks or burst water lines or from pipe temperature changes and low battery percentage.

According to the user's settings the water can be shut off manually or automatically. Also, there is an option to set a schedule for opening and closing the water according to the user's needs.

A flood sensor (optional-not included) detects flooding as soon as water hits the sensor and immediately shuts off the water to the property.

The system connects to the internet via wired, wireless or cellular communication.

The communication between the components is RF-based.

The system includes a 1" ball valve, a 1" flow sensor, a battery-controlled actuator and a HUB.



The system can be integrated to a building management systems via API.

The system complies with NSF/ANSI 61: "Drinking Water System Components".

## Required Preparation

Prepare 2 electricity points for the Hub, at a maximum distance of 35 Feet.

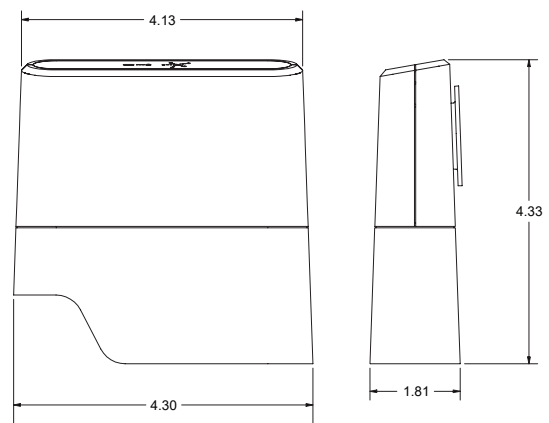
Prepare a network connection point (Ethernet), WIFI or cellular communication.

### HUB 2.0

The HUB is the core of the system and connects the wireless system components to the cloud.

The HUB communicates wirelessly with the system components, receives alerts and sends commands to the appointed people. The HUB is connected reliably and securely with the WASENS cloud.

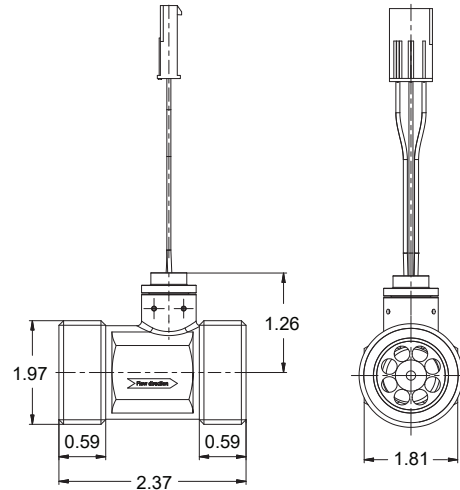
The WASENS HUB connects to AC and is backed up by batteries in case of power outages.



Dimensions	Weight	Voltage	Radio frequency	Temperature range	Backup Batteries	Communication
4.33"/4.13"/1.81"	5.63OZ	110V-240V	915MHz	-4° to 122° F	2 x AA	WIFI/SIM/ETHERNET

## Flow Sensor

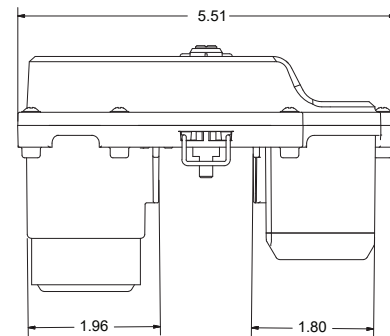
A flow Sensor is installed and connected to the ball valve actuator. This will detect irregular water consumption. The flow sensor measures continuously water usage. abnormal water usage is typical when there is a leak, burst pipe, open faucets or leaking toilets.



Dimensions	Weight	Material	Pressure rating	Nominal diameter	Pressure drops	Standards
2.37"/1.97"/1.81"	7.05OZ	Brass	PN16	DN20	0.33 bar	5452, WRAS, NSF/ANSI61
Accuracy		Flow range		Medium temperature		Ambient temperature
±1%of range	±1%of reading	16.9oz ...15.85Gal per minute		32° to 194° F		32° to 158° F

## Ball Valve Actuator

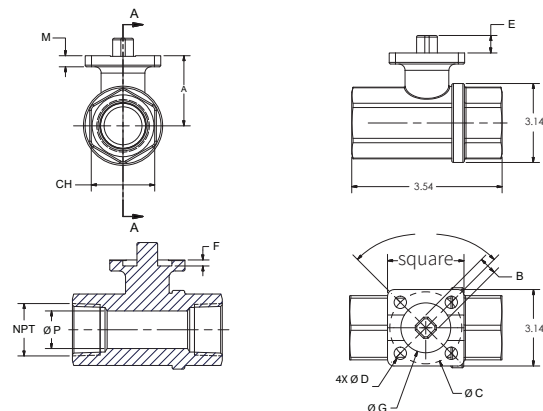
An actuator for the main valve that is controlled and operated wirelessly using batteries. The valve actuator automatically closes the water line on which it is installed when a leak or irregular flow is identified or according to the user's needs and schedule.



Dimensions	Weight	Battery life	Radio frequency	Temperature range	Batteries	Standard
5.51"/3.54"/2.75"	14.63OZ	2-4 years	915MHz	-4° to 122° F	CR1234A V3 X4	IP68 water resistant

## Ball Valve

We use an ISO-5211 brass ball valve that is NSF/ANSI 61 to avoid the hammer effect that can occur with other types of valves.



Dimensions	Weight	Operating temperature	Operating pressure	Standards
3.54"/3.14"/2.16"	28.32OZ	-4° to 338° F	40 bar	5452, WRAS, NSF/ANSI61



Innovative systems for leak prevention and water savings

### Smart detection system to alert of water flooding

A cloud-based system controlled remotely by an application and management software.

The system sends real-time notifications to your smartphone through an application about water flooding that may result from a water burst or flooding, temperature changes and communication.

The flood sensors detect flooding as soon as water hits the sensors and immediately sends alerts.

The system connects to the internet via wired, wireless or cellular communication. The communication between the components is RF based.

The system includes a HUB and flood sensors.

The system can be integrated to a building management systems via API.



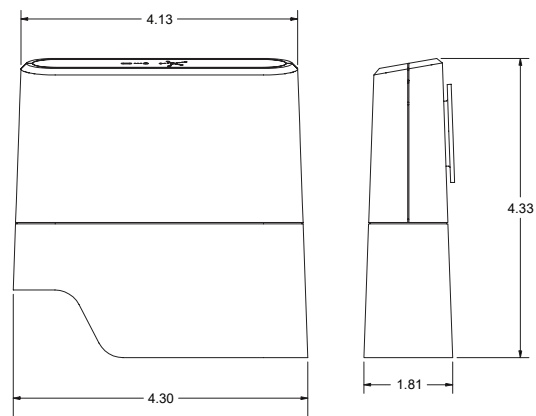
### Required preparation

Prepare 2 electricity outlets for the HUB, at a maximum distance of 35 Feet.

Prepare a network connection point (Ethernet), WIFI or cellular communication.

### HUB 2.0

The HUB is the core of the system and connects the wireless system components to the cloud. The HUB communicates wirelessly with the system components, receives alerts and sends commands to the appointed people. The HUB is connected reliably and securely with the WASENS cloud. The WASENS HUB connects to AC and is backed up by batteries in case of power outages.



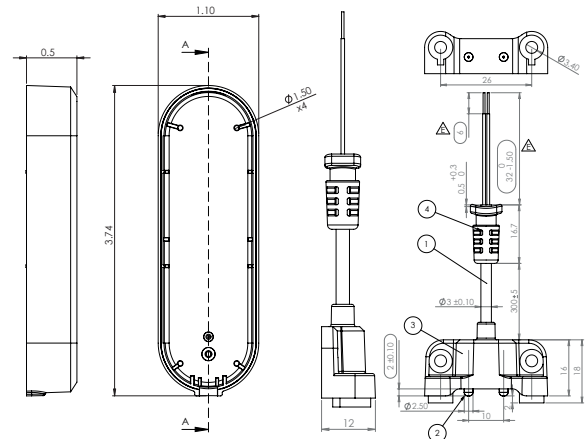
Dimensions	Weight	Voltage	Radio frequency	Temperature range	Backup Batteries	Communication
4.33"/4.13"/1.81"	5.11OZ	110V-240V	915MHZ	-4° to 122° F	2 x AA	WIFI/SIM/ETHERNET

## Wireless Flood Sensor

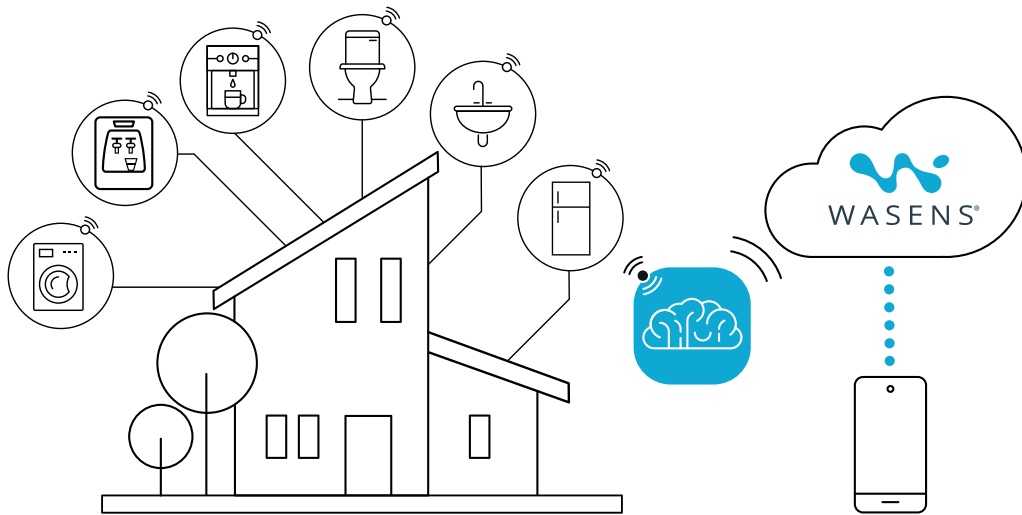
Wireless flood sensors are installed, in the sensitive areas of your property (under the sink, washing machine, toilets, etc.) They are designed to detect water flooding in its early stage.

When water is detected, the sensors sends an alert to the HUB and a command is automatically received to close the valve and an alert is sent in real-time to the registered user's mobile phone via text, voice and email.

Each flood sensor detects temperature and alerts in case of a change.

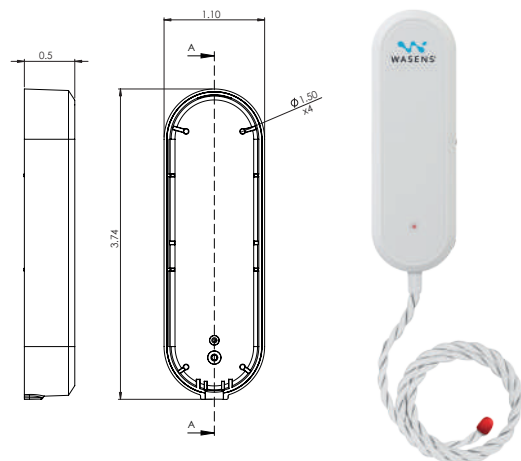


Dimensions	Weight	Batteries	Voltage	Radio frequency	Temperature range	Battery life
3.74"/1.10"/1.10"	1.94OZ	2 x AAA	V3	915MHz	-4° to 122° F	2 years



## Wireless Rope Flood Sensor

Wireless ropes sensors are designed to detect water from the beginning to its end, which allows you to cover and monitor a larger area. It can be wrapped around pipes and fittings. Ropes are installed in sensitive areas within your property (In server rooms, pump rooms, machinery rooms, boiler rooms, etc), the sensors are designed to detect water at an early stage. When water is detected, the sensor sends an alert to the HUB and from there it is immediately forwarded to the mobile phone via text, voice and email to the registered users. Each flood sensor detects temperature and alerts in case of a change.



Dimensions	Weight	Batteries	Voltage	Radio frequency	Temperature range	Battery life
3.74"/1.10"/1.10"	1.94OZ	2 x AAA	V3	915MHz	-4° to 122° F	2 years





Innovative systems for leak prevention and water savings

## Autonomous system for water leak detection and prevention

The system identifies irregular water consumption anomalies that may result from small and or large leaks in the water supply system.

Automatic water shut off after 30 minutes of a continuous flow, the system automatically resets itself at each flow stoppage.

To reopen the water :

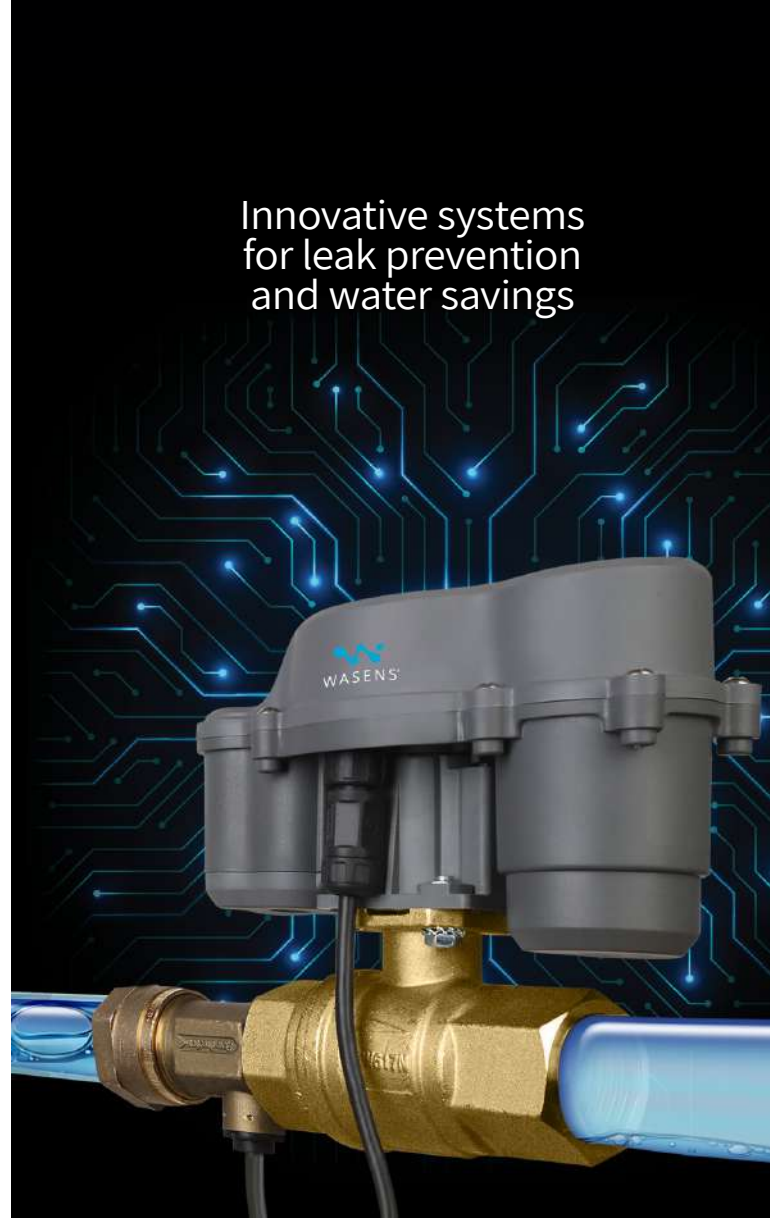
1. Press the orange button located on the actuator.
2. Use the key you received with the actuator.

The system will be installed on the main water supply line to the property after the municipality's water meter.

The "Classic" can be upgraded to an integrated smart system that is controlled by our app (see separate specifications).

The system includes a 1" ball valve, 1" flow sensor, and battery-operated actuator.

The system complies with NSF/ANSI 61: "Drinking Water System Components". Water System Components.



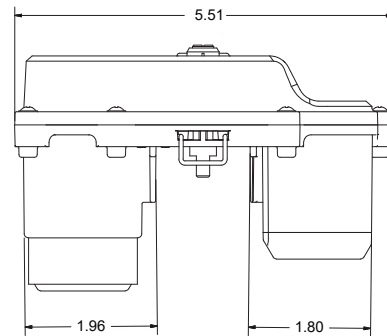
## Required preparation

Space for installing the components (see specification on following page)



## Ball Valve Actuator

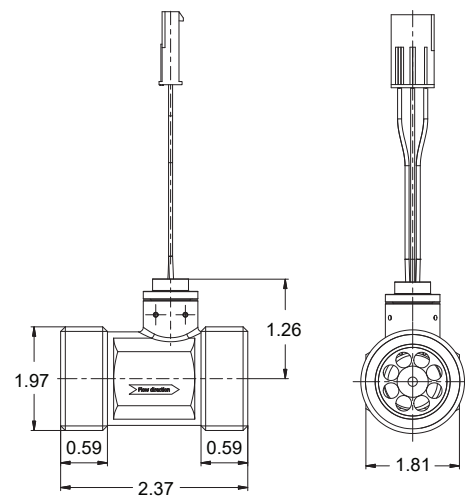
An actuator for the main valve that is controlled and operated wirelessly using batteries. The valve actuator automatically closes the water line on which it is installed when a leak or irregular flow is identified or according to the user's needs and schedule.



Dimensions	Weight	Battery life	Radio frequency	Temperature range	Batteries	Standard
5.51"/2.36"/2.75"	14.63OZ	2-4 years	915MHz	-4° to 122° F	CR1234A V3 X4	IP68 water resistant

## Flow Sensor

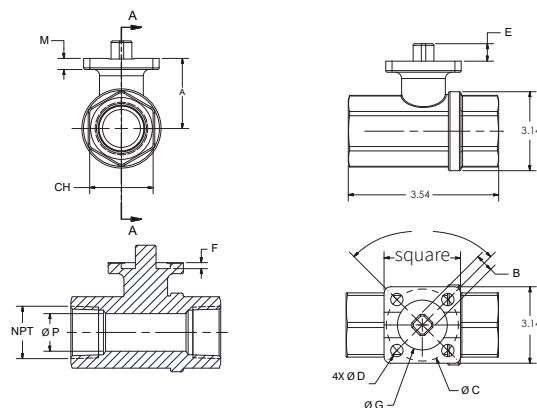
A flow Sensor is installed and connected to the ball valve actuator. This will detect irregular water consumption. The Flow sensor measures the water usage continuously. Abnormal water usage is typical when there is a leak, burst pipe, open faucets or leaking toilets.



Dimensions	Weight	Material	Pressure rating	Nominal diameter	Pressure drops	Standards
2.37"/1.97"/1.81"	7.05OZ	Brass	PN16	DN20	0.33 bar	5452, WRAS, NSF/ANSI61
Accuracy		Flow range		Medium temperature		Ambient temperature
±1%of range	±1%of reading	16.9oz ...15.85Gal per minute		32° to 194° F		32° to 158° F

## Ball Valve

We use an ISO-5211 brass ball valve that is NSF/ANSI 61 to avoid the hammer effect that can occur with other types of valves.



Dimensions	Weight	Operating temperature	Operating pressure	Standards
3.54"/3.14"/2.16"	28.32OZ	-4° to 338° F	40 bar	5452, WRAS, NSF/ANSI61



# MASTER

# Advanced Leak and Flood Prevention Systems

## Leak Monitoring and Detection System for Main Pipelines and Large Diameters

A smart system that detects and alerts abnormal consumption resulting from major leaks in the water supply system or overuse.

The system alerts of abnormal usage via the free smart mobile app.

The app offers a variety of different options and settings for notifications .

The system connects to the internet via a wired/wireless or cellular connection and to a water meter via a battery-operated remote reader and a RF transmitter device installed at the pipes entry into the building.

The batteries should be replaced every two-three years, a notification will be sent to the app or the management system as necessary.

The system includes a water meter according to the specifications on the next page and up to a diameter of 12" (supplied as part of a system kit).

Simple monitoring of hourly, daily, monthly, and annual water consumption.

A controlled shutoff valve can be connected to this system (refer to the MASTER Controlled System specification).

Flood detectors can be connected to this system (refer to the Flood Detector specifications).

A cloud-based system controlled remotely via a mobile app and/or management software.

The system notifies about floods, temperature changes, communication, and battery problems via a mobile app.

The system connects to the cloud via wired/wireless/cellular communication.

The system includes A hub and the requested quantity of flood detectors.

The system can be connected by an API to a building control system.

### Required Preparation:

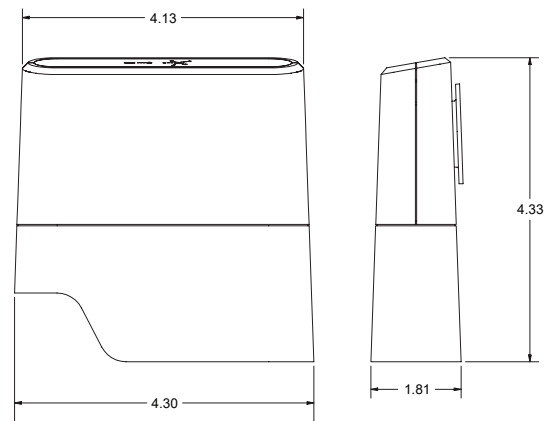
The customer should prepare a CI 4 plastic box and a deep cover with 2 flat 110V electrical sockets that be installed at the upper part of the box for the hub and the cellular router

The enclosure should be installed up to 30 feet from the water meter, in a location with cellular reception.

When installing the system in a pump room without cellular reception, the contractor should set up the pump room for communication (LAN or WIFI Internet).

## HUB 2.0

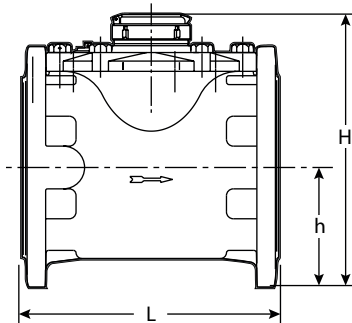
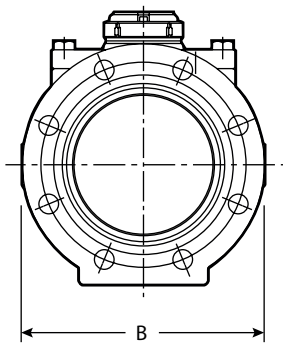
The HUB is the core of the system and connects the wireless system components to the cloud.  
 The HUB communicates wirelessly with the system components, receives alerts and sends commands to the appointed people.  
 The HUB is connected reliably and securely with the WASENS cloud.  
 The WASENS HUB connects to AC and is backed up by batteries in case of power outages.



Dimensions	Weight	Voltage	Radio frequency	Temperature range	Backup Batteries	Communication
4.33"/4.13"/1.81"	5.63OZ	110V-240V	915MHz	-4° to 122° F	2 x AA	WIFI/SIM/ETHERNET

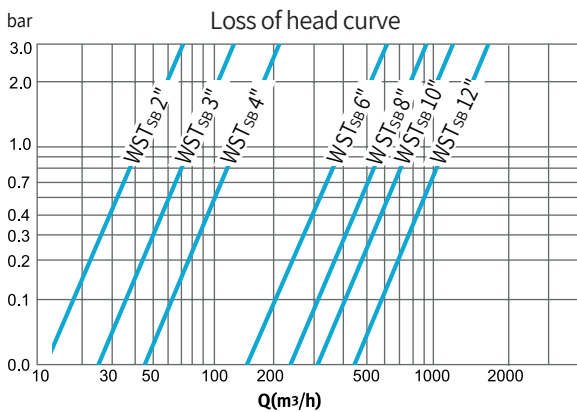
# 3"-12" WATER METER REED SWITCH OUTPUT

\*במקרים חריגים ניתן להזמין גם בקוטר 2"



## Specification

Measure Accrue between Q1 - Q2	Measure Accrue between Q2 - Q4	Smallest Accrue Unit (Liter)	R	Maximum Accrue Reading (m <sup>3</sup> )	Start Measure (m <sup>3</sup> /h)	Q1 Minimum Flow (m <sup>3</sup> /h)	Q2 Transition Flow (m <sup>3</sup> /h)	Q3 Nominal Flow (m <sup>3</sup> /h)	Q4 Maximum Flow (m <sup>3</sup> /h)	Model: WST <sub>SB</sub>	
										mm	inch
± 5	± 2%	0.5	100	10 <sup>6</sup>	0.15	0.63	1.01	63	78.75	50	2
		0.5	100	10 <sup>6</sup>	0.15	0.63	1.01	63	78.75	65	2½
		0.5	100	10 <sup>6</sup>	0.25	1	1.6	100	125	80	3
		5	100	10 <sup>7</sup> / 10 <sup>6</sup>	0.3	1.6	2.56	160	200	100	4
		5	100	10 <sup>7</sup> / 10 <sup>6</sup>	0.8	2.5	4	250	312.5	150	6
		50	50	10 <sup>8</sup>	2	12.6	20.16	630	787.5	200	8
		50	50	10 <sup>8</sup>	3	20	32	1000	1250	250	10
		50	50	10 <sup>8</sup>	4	20	32	1000	1250	300	12



## Dimensions

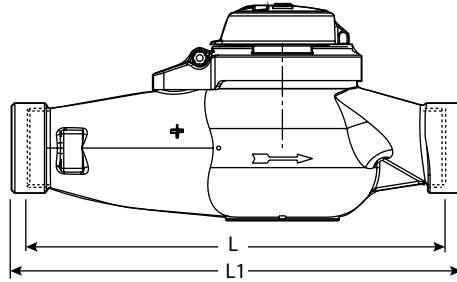
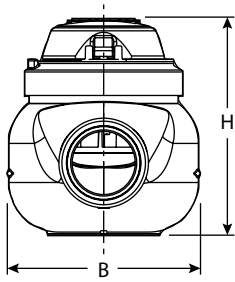
WST <sub>SB</sub>								MODEL
300	250	200	150	100	80	50	mm	Nominal Diameter
12	10	8	6	4	3	2	inch	
500	450	350	300	250	230	200	mm	L-length
489	406	340	283	220	200	165	mm	B-width
338	438	338	310	250	234	214	mm	H-height
330	258	158	130	106	90	70	mm	H-height
95	80	41	35.5	19	15.5	12.5	Kg	Weight

## Installation:

The water meter can be installed at any angle. In a non-horizontal position, the water flow will be from bottom to top. The inlet pipe to the water meter must be flushed before installation. The water meter must have a full flow section. For maximum accuracy, install straight pipe sections with the water meter diameter D, length of D5 at the inlet, and length of D3 at the outlet.



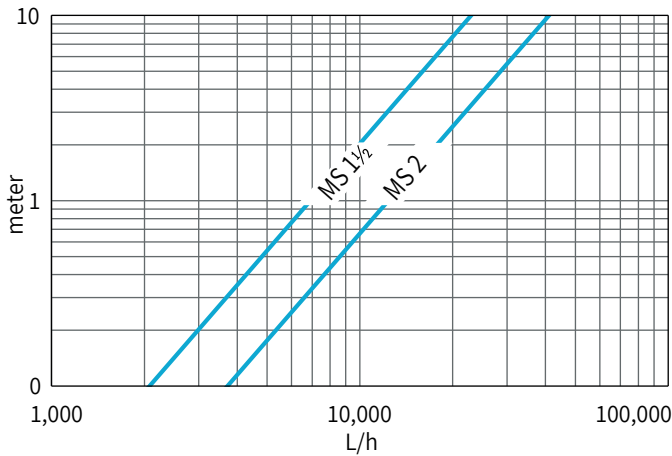
# 1.5" - 2" WATER METER REED SWITCH OUTPUT



### Specification

Measure Accrue between Q1 - Q2	Measure Accrue between Q2 - Q4	Smallest Accrue Unit (Liter)	R Q3/Q1	Maximum Accrue Reading (m <sup>3</sup> )	Q4 Maximum Flow (m <sup>3</sup> /h)	Q3 Minimum Flow (m <sup>3</sup> /h)	Q2 Transition Flow (m <sup>3</sup> /h)	Q1 Nominal Flow (m <sup>3</sup> /h)	Nominal Diameter (inch)	MODEL
± 5	± 2%	0.5	100	999,999	20	10	0.15	0.1	1½	MS 40
			50		20	16	0.512	0.32	2	MS 50

Loss of head curve



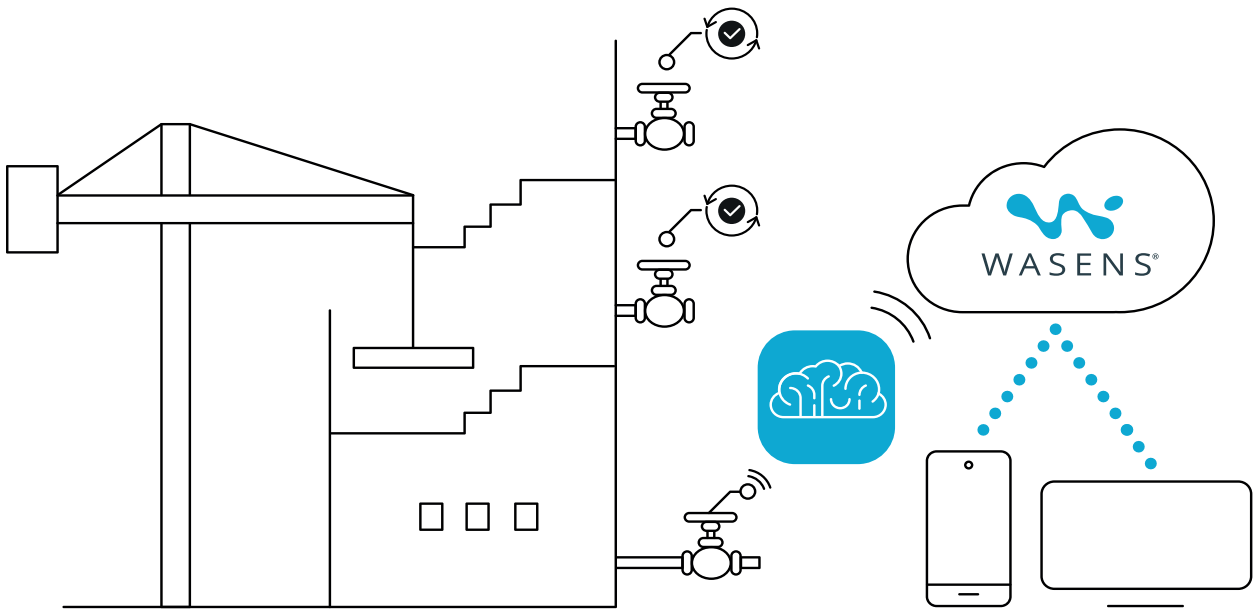
Dimensions

MS50	MS40	MODEL	
50	40	mm	Nominal Diameter
2	1½	inch	
300	300	mm	L-length less clutches
460	435	mm	L1-length with clutches
160	125	mm	B-width
190	140	mm	H-height
8	4.1	Kg	Weight less clutches
9.4	5.1	Kg	Weight with clutches

### Installation:

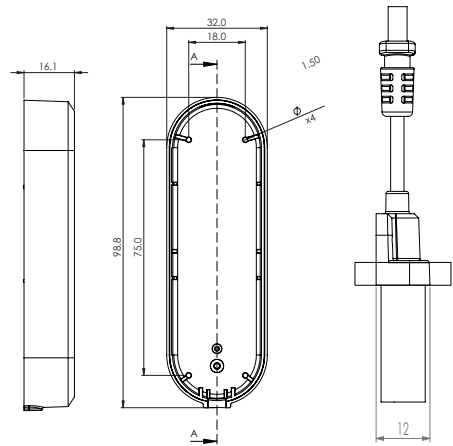
The water meter can be installed at any angle. In a non-horizontal position, the water flow will be from bottom to top. The inlet pipe to the water meter must be flushed before installation. The water meter must have a full flow section. For maximum accuracy, install straight pipe sections with the water meter diameter D, length of D5 at the inlet, and length of D3 at the outlet.





## Remote meter reader

The remote meter reader unit interfaces from the water meter to the cloud through the reed switch. This advanced wireless system integrates with WASENS automatic reading management tools and the analytics can be customized to the unique needs of each customer, and especially to the specific requirements of various sites. The system eliminates the need for physical and individual inspection of the meters and provides real-time alerts about leaks.



Dimensions	Weight	Voltage	Radio frequency	Temperature range	Backup Batteries	Battery Life
3.74"/1.10"/1.10"	1.94OZ	3V	915MHz	-4° to 122° F	2 x AAA	2 years



WASENS<sup>®</sup>  
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