

Installation Instructions

Cellular Sensor

Connection Kit

Air Gap Flood Sensor

2" Male NPT Connection

WARNING



Read this Manual **BEFORE** using this equipment. Failure to read and follow all safety and use information can result in death, serious personal injury, property damage, or damage to the equipment. Keep this Manual for future reference.

WARNING

You are required to consult the local building and plumbing codes prior to installation. If the information in this manual is not consistent with local building or plumbing codes, the local codes should be followed. Inquire with governing authorities for additional local requirements.

NOTICE

Use of the SentryPlus Alert® technology does not replace the need to comply with all required instructions, codes, and regulations related to the installation, operation, and maintenance of the backflow preventer to which it is attached, including the need to provide proper drainage in the event of a discharge.

Watts® is not responsible for the failure of alerts due to connectivity or power issues.

Monitor relief valve discharge with smart and connected sensor technology to detect flooding and transmit notification. The Cellular Sensor Connection Kit activates the flood sensor, enabling functions that detect flood conditions. When excessive relief valve discharge occurs, the flood sensor energizes a relay signaling flood detection and triggers real-time notification of potential flood conditions through the SynctaSM application.



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Kit Components

The sensor connection kit includes the following five components. If any item is missing, speak with your account representative.

NOTICE

The connection kit is suitable for installation on a metal air gap or pipe fitting with 2" female NPT connection.



A. Flood sensor with male 2" NPT connection

- B. Sensor activation module with an 8' 4-conductor electrical cable, ground wire, and 4 attachment screws



- C. Cellular Gateway with mounting tabs and screws



- D. 24V Power adapter (requires a 120VAC, 60Hz, GFI-protected electrical outlet)



Requirements

- #2 Phillips screwdriver
- Polytetrafluoroethylene (PTFE) tape (optional)
- Instrument with small tip to change DIP switch settings
- Wire stripper
- A suitable location within 8 feet of the flood sensor for mounting the Cellular Gateway on a wall or structure, plugging the power adapter into a GFI-protected electrical outlet, and running a ground wire from the Cellular Gateway to the ground point
- Cellular network connection
- Internet browser

Install the Flood Sensor

Attach the flood sensor to a metal device with 2" female NPT connection. Shown here with an air gap.



1. (Optional) Apply PTFE tape to the threads of the flood sensor for the best results.



2. Align the flood sensor to the air gap with a 2" female NPT connection.



3. Twist on the sensor until it is flush with the air gap. Hand-tighten the sensor up to 15 ft-lb. Do not overtighten.

Mount the Sensor Activation Module

Set SW1 DIP switch on the sensor activation module by the wet threshold table below then attach the module to the flood sensor.



DIP switches on the sensor activation module can be used to specify the wet threshold (sensitivity to water discharge) through SW1 and the timer delay (duration before alarm) through SW2. Scan the QR code for more information.

The sensor activation module receives a signal from the flood sensor when a discharge is detected. If the discharge meets the conditions of a qualifying event, the normally open contact is closed to provide a signal to the Cellular Gateway input terminal.

NOTICE



The wet threshold value must be set to 50 to detect discharges higher than 3 gpm. Change the value from 40 (default) to 50.



1. Use the #2 Phillips screwdriver to detach the four screws on the sensor activation module to remove the cover.



2. Use an instrument with a pointed tip to slide the SW1 switches to the positions noted in the following table for the wet threshold value of 50.

SW1: WET THRESHOLD OPTION				
SWITCH POSITION			REPORTED SWITCH VALUE	WET THRESHOLD VALUE
1	2	Illustrated		
OFF	OFF		0	40
OFF	ON		2	50



3. Press the RESET button to activate the new settings. (Not required whenever SW1 is set before the power adapter is connected to a power supply.)



4. Reattach the cover with the four screws, making sure the O-ring inside the cover is properly seated to maintain a seal.



5. Remove the dust cover from the flood sensor.



6. Remove the O-ring from the dust cover and place it on the sensor activation module to create a seal between the module and the flood sensor.

NOTICE

Retain the dust cover to protect the flood sensor during temporary instances when the sensor activation module may need to be removed or replaced.



7. Align the sensor activation module with cable with the flood sensor.



8. Tighten the screws attaching the activation module to the flood sensor.

Set Up the Cellular Gateway

NOTICE

When identifying a location to mount the Cellular Gateway, choose an area away from large metal objects and structures that can block cellular signal. The cellular antenna is placed inside the housing on the upper right side. Ensure that the antenna side is clear of walls, wires, pipes, or other obstructions.

These instructions cover the connection of sensor activation module cable to the terminal block of the Cellular Gateway. The 4-conductor sensor activation module cable must be attached to the Cellular Gateway to transmit a normally open contact signal and provide power to the sensor activation module. The contact signal closes when a discharge is detected.

When attaching the power adapter to the Cellular Gateway, distinguish the positive wire from the negative one. The positive wire has white stripes and must be inserted into the power terminal; the negative wire, into the ground terminal.

NOTICE

The earth ground must be connected to the Cellular Gateway before the flood sensor is put in operation.

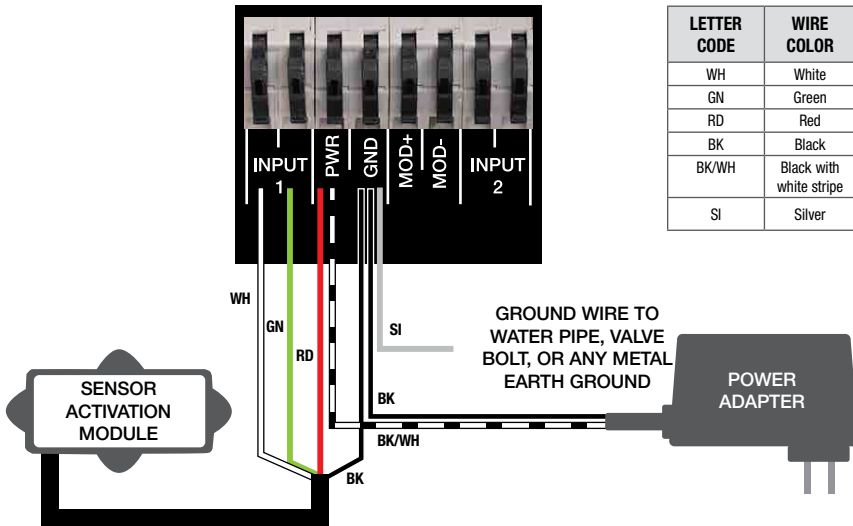
Attach the sensor activation module cable to the device before or after it is mounted to a nearby wall or structure with the mounting tabs and screws. Collect the Cellular Gateway and mounting materials, power adapter, and Phillips screwdriver, and wire stripper for this segment of the installation.

To connect the module cable to the device

1. Remove the transparent cover from the device.
2. Use the wire stripper to cut away enough insulation to expose 1 to 2 inches of the conductor wires and feed the cable through the bottom port.
3. Insert the white wire and the green wire into the first and second terminals of INPUT 1.
4. Feed the power adapter cord through the bottom port.
5. Connect the positive (black with white stripe) power adapter wire to the red wire of the sensor activation module cable and insert the wires into the PWR terminal.
6. Connect the negative (black with no stripe) power adapter wire to both the black wire of the sensor activation module cable and the ground wire then insert the wires into the GND terminal.
7. Skip MOD+ and MOD-. Reserved.
8. Reattach the device cover and plug the power adapter into a 120VAC, 60Hz, GFI-protected electrical outlet.

If adding a second flood sensor to the configuration, insert the white and green wires into the first and second terminals of INPUT 2, the red wire into the PWR terminal, and the black wire into the GND terminal.

GATEWAY TERMINAL BLOCK



Verify the Connections

NOTICE

A cellular network signal is required for successful installation.

Upon initialization, the Cellular Gateway begins the start sequence automatically. The process may take up to 10 minutes to reach steady state. Check the status of the LED indicators to confirm connectivity.

To validate the connections, press TEST on the Cellular Gateway to send a test message through the Syncta app.

To restore the factory state of the Cellular Gateway and restart the startup sequence, press RESET. This causes all ongoing operations to cease.

LED	INDICATOR	STATUS
POWER	Steady green	Unit is powered
CELL	Steady blue	Connection to cellular network is good
	Blinking blue	Searching for cellular network connection
	Blinking blue with short OFF pulses	Connection to cellular network is poor
IoT	Steady blue	Internet connection is established
	Blinking blue	Internet connection is lost or not established (The gateway attempts an internet connection indefinitely.)
FLOOD/INPUT1	Unlit	No relief water discharge is occurring
	Steady orange	Relief water discharge is occurring (This state remains for the duration of the discharge.)
INPUT2	Unlit	No relief water discharge is occurring
	Steady orange	Relief water discharge is occurring (This state remains for the duration of the discharge.)

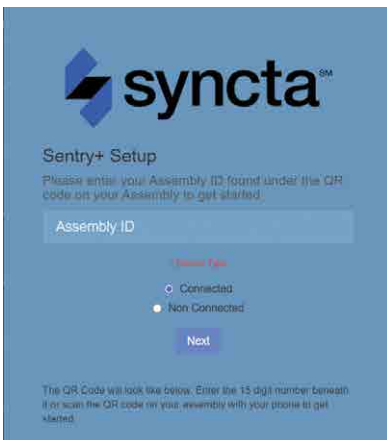
Configure the Syncta App

NOTICE

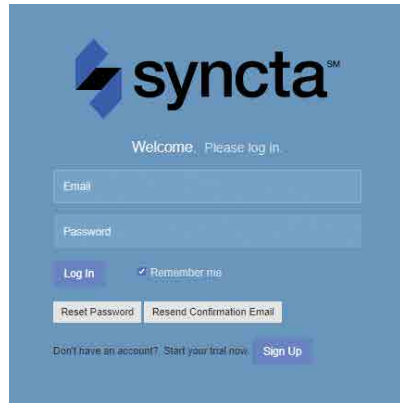
These instructions cover the minimum user input needed to install and configure the Syncta app for use with the flood sensor. An internet connection is required for laptop or mobile device. Information on the Cellular Gateway ID label is needed to configure the Syncta app for sending flood alerts by email, phone, or text. Do not remove the label.

To log in or create an account

1. Scan the QR code on the ID label or open a web browser and go to <https://connected.syncta.com>.



2. Enter the device ID, make sure Connected is selected, and tap Next. Syncta checks for the installation of a valid device. (Connected applies to devices requiring internet access; Nonconnected, to manual devices.)
3. Tap login to access an existing account.



NOTICE

For first-time users, create an account before attempting to sign in. Tap Sign Up and complete all fields. Tap the check box to agree to the Terms & Conditions. After your review, select both check boxes at the bottom of the window then select Close. Follow through with the remaining screen prompts to complete the setup of your account, profile, and first assembly.

The Syncta Dashboard

Start at the dashboard to take action on all or specific assemblies, such as view alerts, change settings to receive notifications, and test notifications.

The location of menu navigation is the only difference between desktop and mobile versions. On the desktop

version, the menu is on the left and the user pull-down list (upper right) includes the profile settings link and logout. On the mobile version, the menu navigation is upper right and includes all the function links.

Connectivity	Assembly ID / Nickname	Last Event	Type	Actions
	866425035925041	6 months	Standard without ACV	Input 1 & 2 Inactive Test Edit Delete Assembly
	866449032751031	8 days	Standard without ACV	Input 1 & 2 Inactive Test Edit Delete Assembly
	860536048698049	7 days	Standard without ACV	Input 1 & 2 Inactive Test Edit Delete Assembly
	864200053607603	4 days	Standard without ACV	Input 1 & 2 Inactive Test Edit Delete Assembly
	864200053608452	about 1 hour	Standard without ACV	Input 1 & 2 Active Test Edit Delete Assembly

From the dashboard, access the map for locations of assemblies, user-company profile, connected and nonconnected equipment, and the function to activate an assembly.

Device Map - View the location of assemblies in an area.

Company Profile - Enter or update basic user information about the user and organization maintaining the assembly. This page is also accessed through the My Profile link.

Connected Equipment - View internet connectivity of assembly, assembly ID, last event, setup type, and take an action on an assembly such as enter notification settings, enable or disable the assembly for actions with a toggle switch, test notification settings, edit assembly information, delete an assembly, and update assembly details.

Nonconnected Equipment - For record keeping, also log equipment requiring maintenance but not connectivity.

Activate New Assembly - Use this function to add an assembly or restore a previously deleted one.

To activate an assembly

1. On the dashboard, select Activate New Assembly.
2. Enter the assembly ID, select Connected, and tap Next. Syncta checks for the installation of a valid device. (Connected applies to devices requiring internet access; Nonconnected to manual devices.)

Add a New Connected Assembly

Please enter your Assembly ID found under the QR code on your Assembly to get started

Assembly ID

Device Type

☒ Connected

☐ Non Connected

Next

The QR Code will look like below. Enter the 15 digit number beneath it or scan the QR code on your assembly with your phone to get started.

3. Choose notification type from the Method drop-down list: Email Message, SMS Text Message, or Voice Call.

Method

SMS Text Message

Destination

Phone # or Email

[Remove Notification](#)

[Add Another Notification Destination](#)

Finish

4. Depending on the notification method selected, enter a phone number or an email address in the Destination field.
5. Tap Finish.

NOTICE

If the Cellular Gateway is wired for two flood sensors, configure alerts for both sensors. Configure Input 1 for the first or only flood sensor; configure Input 2 for a second flood sensor.

To set a notification alert

1. In the Actions field, select Input 1 & 2 to set up alerts.
2. Choose notification type from the Method drop-down list: Email Message, SMS Text Message, or Voice Call.

Generic Inputs Update 864200053608452

Input - 1

Input One Alert History

Method

SMS Text Message

Destination

Timer Delay(In Seconds)

0

Endpoint Type

flood

Remove Notification

Add a failure notification destination

Input - 2

Input Two Alert History

Add a failure notification destination

Save Changes

3. Depending on the notification type selected, enter phone number or email address in the Destination field.
4. Skip the Timer Delay field. For use with SentryPlus Alert Control Box only.
5. For the endpoint type, select 'Flood' for the flood sensor from the drop-down list. This value indicates the type of event the connected device is reporting.
6. To set up the same alert for another notification method, select Add a failure notification destination and repeat steps 2 to 5 for that method.
7. Configure Input 2 in the same manner, if a second flood sensor is in use.
8. Select Save Changes.
9. Return to the dashboard, locate the device, and select TEST to verify the connections.
10. Check for the test notification in your email inbox or mobile device, depending on the configuration entered.

NOTICE

In general, fill in all the fields on the Syncta app pages to create complete and accurate records of devices deployed, users, and alerts history. Edit the entries as required to maintain up-to-date records.

Start at the dashboard to add equipment or to take action on specific equipment, such as view alerts, change settings to receive notifications, and test notifications.

To update assembly info and notification settings

1. Access the Update Assembly Information page by the Edit function in the Connected Equipment section of the dashboard, or through the map locator.
2. Enter or modify additional information on the assembly.

Update 864200053608452

Additional Information & Notifications for this assembly:

Name or Location of Device

864200053608452

Used in notifications to quickly identify assemblies

Notification Delay (In Seconds)

0

Set notification delay time before sending notifications

Assembly Id

864200053608452

Type of Leak Detector

Standard without ACV

The Automatic Control Valve must be reset when triggered - used in notifications to remind you to have it reset if you are using one

Emails & Phones that will be notified when this assembly is triggered:

Method

Email Message

Destination

Remove Notification

Method

SMS Text Message

Destination

Remove Notification

Add a failure notification destination

Save Changes

3. Enter notification method and destination.
4. Remove or add a notification entry, if necessary.
5. Tap Save Changes.

To edit assembly details

1. Input assembly details including assembly information and contact information.
2. Fill in address fields to specify the exact location of the assembly.

Edit Assembly Details

Assembly Detail

Name

Assembly Id

864200053608452

Device Type

Standard

Description

Contact Name

Contact Phone

Contact Email

Address

Details

Enter Device Information:

Submit

Attachments

Assembly Alert History

Back

3. Enter any other relevant information about the assembly in the free-form comment field.
4. Tap Submit.
5. Upload files such as photos and maintenance records.
6. Tap Alert Alert History to view the message log or Back to return to the dashboard.

To update the profile

1. Start with the User Profile link or Company Profile on the dashboard.
2. Update the profile settings, as needed, for these categories:
 - Basic user information
 - Password
 - Text size options for mobile devices
 - Address where assembly is located
 - Testing/certification information
 - Gauge information
 - User signature (To make an entry, use a mouse or other input device; for touchscreen devices, use a stylus or your finger.)

Your Settings

Basic Info

Name

Email

You'll need to confirm the new address

Role

Admin

Self Help

Password

Application Options

Address

Testing Information

Your Gauges

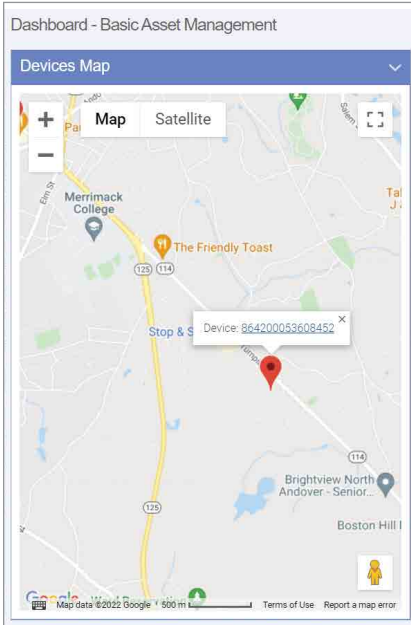
Your User Signature

Update User

3. Tap Update User to finish.

To use the map locator

Tap a marker to see the assembly ID. Tap the ID link to modify assembly information and notification settings on the Update Assembly Information page.



To view alert history

Open the Alert History page from the navigation menu or the Edit Assembly Details page.

Each entry in the Alert History log is a record of the assembly ID, alert message, and date of alert.

The delete action occurs without confirmation.

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