Installation Instructions

Flood Sensor Upgrade for Cellular Communication

Series LF909, 909RPDA

2½" – 10"

⚠ 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 is it 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 issues, power outages, or improper installation.

Monitor relief valve discharge with smart and connected technology for flood protection. When a qualifying relief valve discharge occurs, the flood sensor energizes a relay signaling flood detection and triggers real-time notification of potential flood conditions through the Syncta℠ application.

Components Needed

You need the appropriate-sized flood sensor for your valve assembly and activation module with conductor cable, power adapter, and ground wire. If you need help obtaining any component, speak with your account representative.

Activation module with an 8' 4-conductor cable

Cellular Gateway with mounting hardware

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

Flood sensor and mounting bolts, valve sizes 2½" to 3"

Flood sensor and mounting bolts, valve sizes 4" to 10"

Ground wire

Requirements

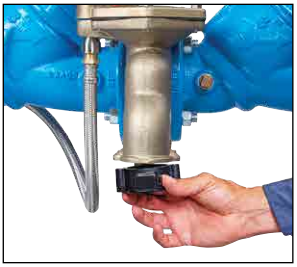
- ½" Wrench for flood sensor size 2½" to 3" or 9⁄16" wrench for flood sensor size 4" to 10"
- #2 Phillips screwdriver
- Wire stripper
- A suitable location within 8 feet of the flood sensor for mounting the Cellular Gateway on a wall or structure, plugging the power adapter into a GFI-protected electrical outlet, and running a ground wire from the Cellular Gateway to the ground point
- Cellular network connection
- Internet browser

NOTICE

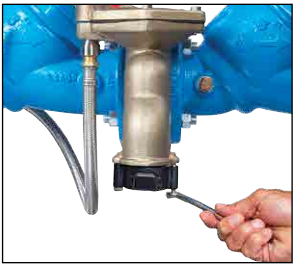
When installing an air gap, attach the air gap brackets directly onto the flood sensor.

Installing the Flood Sensor

Use the appropriate sized wrench to install the flood sensor.



1. Position the flood sensor on the relief valve.



2. Insert and tighten the bolts to secure the flood sensor to the valve. Do not overtighten.

Mounting the Activation Module

Attach the activation module to the flood sensor on the relief valve of the reduced pressure zone assembly. Then wire the module to the relay box.

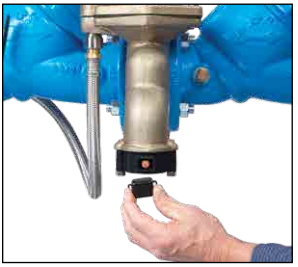
The activation module is designed to receive a signal from the flood sensor when a discharge is detected. If the discharge meets the conditions of a qualifying event, the normally open contact is closed to provide a signal to the relay box, energizing the ACV Solenoid bypass valve (normally closed) to open and the main valve to close.

Custom Flood Sensor Settings

Activation module switch settings can be customized to specify the wet threshold (sensitivity to water discharge) and the timer delay (duration before alarm). Scan the QR code for more information.

NOTICE

Retain the dust cover to protect the flood sensor when the activation module needs to be removed or replaced.

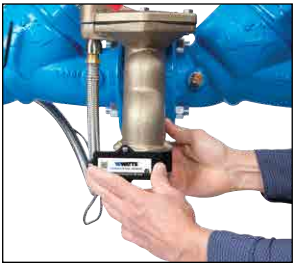


1. Remove the dust cover from the sensor.

2. Press the sensor activation module onto the sensor.

NOTICE

For more information on the SentryPlus Alert kit, refer to the ES-FS-ConnectionKit specification at watts.com.



3. Check that the module is fully seated to seal the O-ring and to make electrical contact.

Setting 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 activation module cable to the terminal block of the Cellular Gateway. The 4-conductor activation module cable should be attached to the Cellular Gateway to transmit a normally open contact signal and provide power to the 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

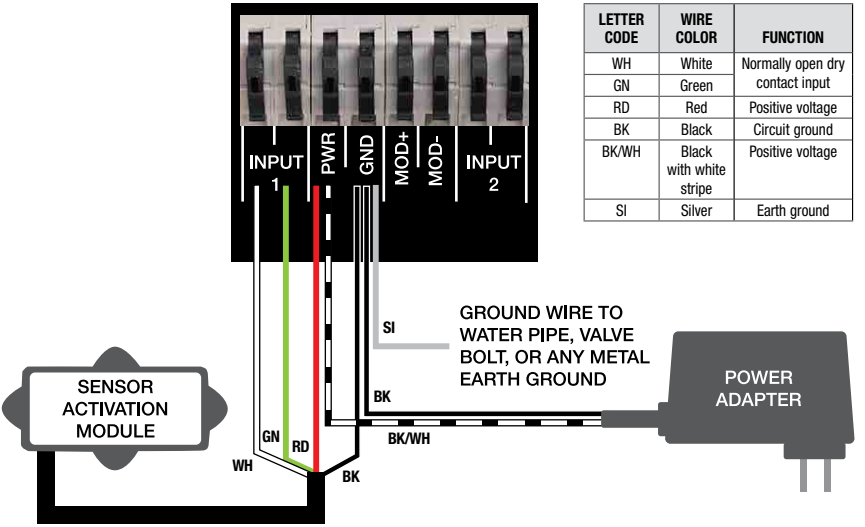
The earth ground must be connected to the Cellular Gateway before the flood sensor is put in operation.

Attach the 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.

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 (WH) and the green wire (GN) 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 (BK/WH) to the red wire (RD) of the activation module cable and insert the wires into the PWR terminal.
6. Connect the negative (black with no stripe) power adapter wire (BK) to both the black wire (BK) of the activation module cable and the ground wire (SI) 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



LETTER CODE	WIRE COLOR	FUNCTION
WH	White	Normally open dry contact input
GN	Green	
RD	Red	Positive voltage
BK	Black	Circuit ground
BK/WH	Black with white stripe	Positive voltage
SI	Silver	Earth ground

Verifying 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 the TEST button 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 the RESET button. 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.)

Configuring 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.

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.

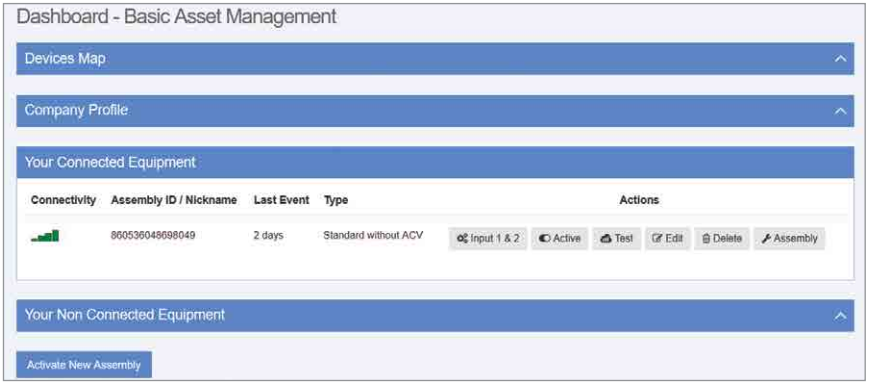
NOTICE

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 profile settings link and logoff. On the mobile version, open the menu navigation is upper right and includes all the function links.



From the dashboard, access the map for locations of assemblies, user-company profile, connected and non-connected 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 is also page 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.

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

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

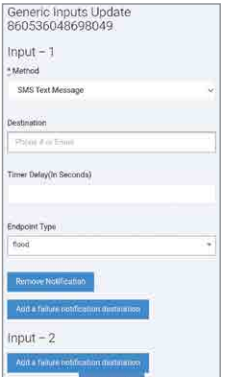
Activate an assembly

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

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.
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.

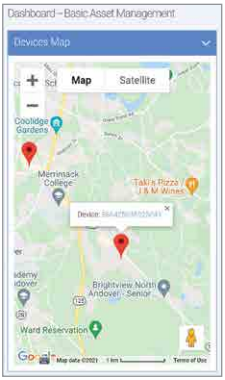
NOTICE

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.

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.



Update assembly info and notification settings

1. Access the Update Assembly Information page through the map or by the Edit function in the Connected Equipment section of the dashboard.
2. Enter or modify additional information on the assembly.
3. Enter notification method and destination.
4. Remove or add a notification entry, if necessary.
5. Tap Save Changes.

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.)
3. Tap Update User to finish.

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.

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.
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.

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