WATTS LF909-FS Cellular Sensor Connection Kit and Retrofit Connection Kit Instruction Manual

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Instruction Manual

Connection Kit

Retrofit Connection Kit

Series 909, LF909-FS, and 909RPDA-FS 2 1/2″ – 10″

Contents

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⚠️ **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 or power issues.

Monitor relief valve discharge with smart and connected technology for flood protection. The Cellular Sensor Connection Sensor Kit activates the integrated flood sensor to enable functions that detect flood conditions. The Cellular Retrofit Connection Kit upgrades existing installations by integrating and activating the flood sensor to enable functions for flood detection. 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 Syncta SM application.

Kit Components

All kits include the sensor activation module and power adapter to enable the flood sensor. Retrofit kits also include the flood sensor and related components. If any item is missing, speak with your account representative.
A. Sensor activation module with an 8′ 4-conductor electrical cable, ground wire, and 4 attachment screws

A

B

B. Cellular Gateway with mounting tabsand screws
C. 24V Power adapter (requires a 120VAC, 60Hz, GFI-protected electrical outlet)

C

D

D. Included in the retrofit kit only:
Flood Sensor, size 21/2″–3″ or size 4″–10″ Sensor mounting bolts Sensor O-ring

Requirements

- 1/2″ Wrench for flood sensor size 21/2″– 3″ or 9⁄16″ wrench forflood sensor size 4″–10″ (retrofit installation only)
- #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 connection

Install the Flood Sensor

NOTICE
Only for existing installations of the backflow preventer without the flood sensor.
Lay out the flood sensor, O-ring, mounting bolts, and wrench for this segment of the installation.

1. Insert the O-ring into the groove on the top of the flood sensor.

2. Use the two mounting bolts to attach the flood sensor to the relief valve.

   If an air gap is attached, use the mounting bolts to install the flood sensor between the relief port of the backflow valve and the air gap.

3. Use the wrench to tighten the bolts up to 120 in-lb (10 ft-lb). Do not overtighten.

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.

Mount the Sensor Activation Module
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.

1. Use the Phillips screwdriver to remove the dust cover from the flood sensor.

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

3. Attach the sensor activation module to the flood sensor with the 4 attachment screws.

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 should 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.

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 (A) and the green wire (B) 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 (C) to the red wire (D) of the sensor activation module cable and insert the wires into the PWR terminal.
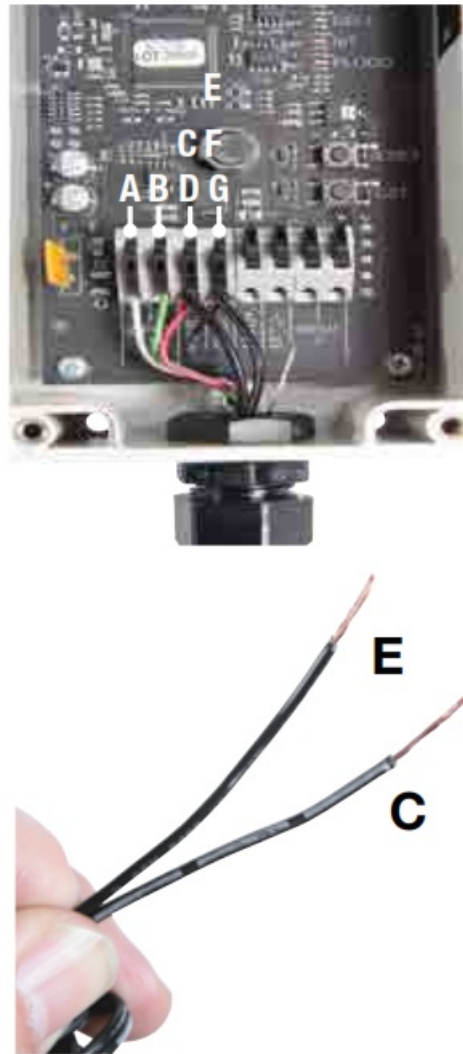
6. Connect the negative (black with no stripe) power adapter wire (E) to both the black wire (F) of the sensor activation module cable and the ground wire (G) then insert the wires into the GND terminal.

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.

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 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 intemet 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 profile settings link and logoff. On the mobile version, open the menu navigation is upper right and includes all the function links.
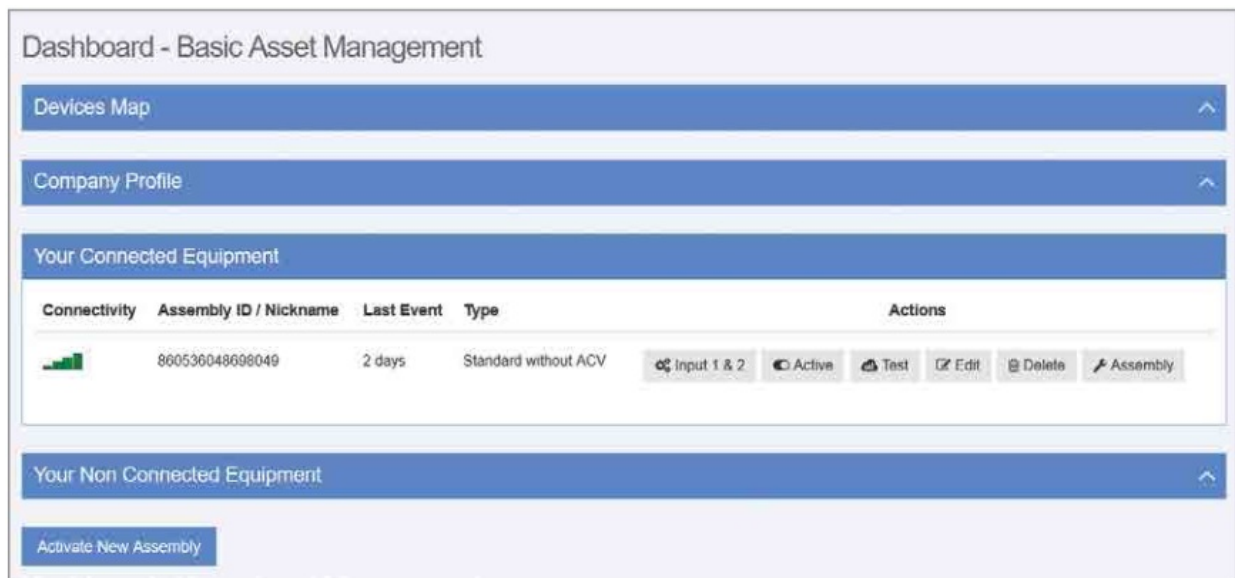
From the dashboard, access the map for locations of assemblies, user-company profile, connected and non-connected equipment, and the function to activate an assembly.

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.

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 installa- tion 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.

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
860536048698049

Input – 1

* Method

SMS Text Message

Destination

Phone # or Email

Timer Delay(in Seconds)

Endpoint Type

flood

Remove Notification

Add a failure notification destination

Input – 2

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 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.
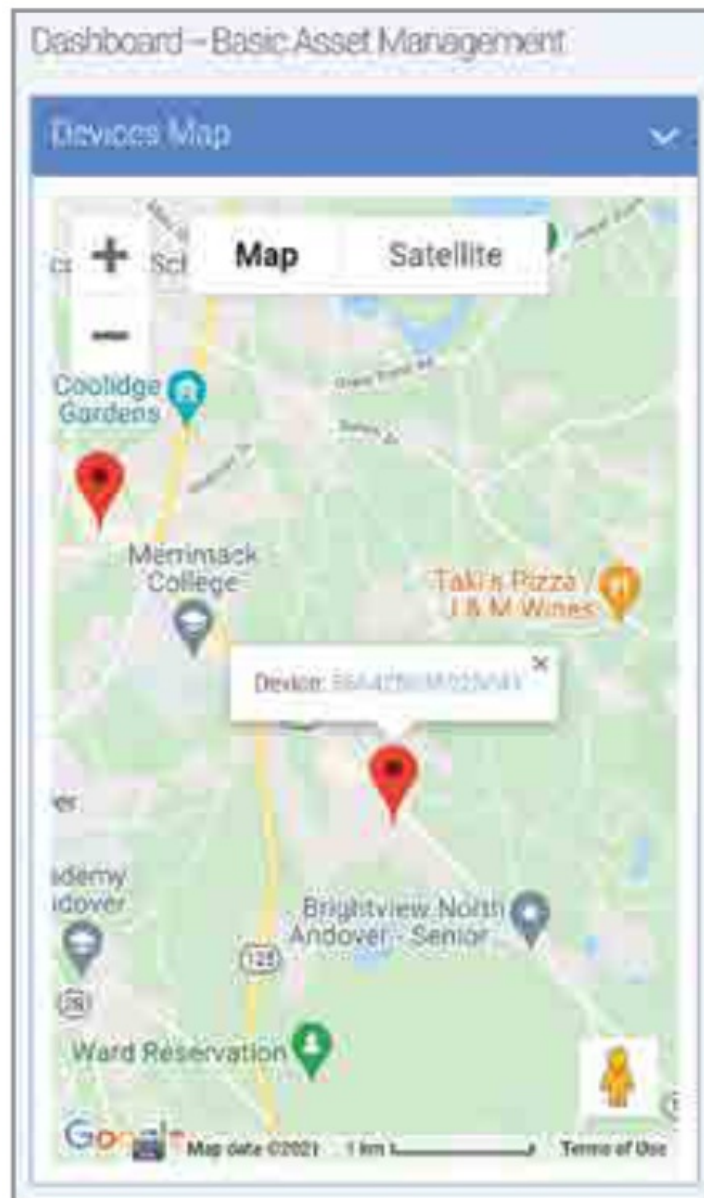
To update assembly info and notification settings

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.

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.)

3. Tap Update User to finish.

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.

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.

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.

5. Tap Alert Alert History to view the message log or Back to return to the dashboard.

Edit Assembly Details

Assembly Detail

Name

Your Name

Assembly Id

860536048698849

Device Type

Standard

Description

Contact Name

Your Name

Contact Phone

555-555-5555

Contact Email

yourname@domain.com

Access

Details

Enter Device Information

Submit

Attachments

Notes

Limited Warranty: Watts Regulator Co. (the "Company") warrants each product to be free from defects in material and workmanship under normal usage for a period of one year from the date of original shipment. In the event of such defects within the warranty period, the Company will, at its option, replace or recondition the product without charge.
THE WARRANTY SET FORTH HEREIN IS GIVEN EXPRESSLY AND IS THE ONLY WARRANTY GIVEN BY THE COMPANY WITH RESPECT TO THE PRODUCT. THE COMPANY MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED. THE COMPANY HEREBY SPECIFICALLY DISCLAIMS ALL OTHER WARRANTIES,

EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

The remedy described in the first paragraph of this warranty shall constitute the sole and exclusive remedy for breach of warranty, and the Company shall not be responsible for any incidental, special or consequential damages, including without limitation, lost profits or the cost of repairing or replacing other property which is damaged if this product does not work properly, other costs resulting from labor charges, delays, vandalism, negligence, fouling caused by foreign material, damage from adverse water conditions, chemical, or any other circumstances over which the Company has no control. This warranty shall be invalidated by any abuse, misuse, misapplication, improper installation or improper maintenance or alteration of the product.

Some States do not allow limitations on how long an implied warranty lasts, and some States do not allow the exclusion or limitation of incidental or consequential damages. Therefore the above limitations may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights that vary from State to State. You should consult applicable state laws to determine your rights. SO FAR AS IS CONSISTENT WITH APPLICABLE STATE LAW, ANY IMPLIED WARRANTIES THAT MAY NOT BE DISCLAIMED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO ONE YEAR FROM THE DATE OF ORIGINAL SHIPMENT.

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F: (978) 975-8350
Watts.com
Canada:
T: (888) 208-8927
F: (905) 481-2316
Watts.ca
Latin America:
T: (52) 55-4122-0138
Watts.com

Documents / Resources

WATTS LF909-FS Cellular Sensor Connection Kit and Retrofit Connection Kit [pdf] Instruction Manual
LF909-FS, Cellular Sensor Connection Kit and Retrofit Connection Kit, Sensor Connection Kit, Retrofit Connection Kit, Cellular Sensor, Retrofit Connection

References

- **Watts | Plumbing, Heating and Water Quality Solutions**
- **connected.syncta.com**