

IS-FS-009-909S BMS BMS Sensor Connection Kit



IS-FS-009-909S-BMS BMS Sensor Connection Kit Instruction Manual

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IS-FS

IS-FS-009-909S-BMS BMS Sensor Connection Kit



Product Information

Specifications

- **Product Name:** BMS Sensor Connection Kit
- **Model Number:** IS-FS-009/909S-BMS
- **Power Adapter:** 24V DC (requires 120VAC, 60Hz, GFI-protected electrical outlet)

Product Usage Instructions

Kit Components

All kits include the 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, please contact your account representative.

New Valve Installation

The sensor connection kit includes four (4) deflectors marked by size. Select the size designed to fit the backflow relief valve of the installation.

1. Remove the flood sensor from the valve.
2. Align the grooves of the deflector with the internal ribs of the sensor and insert the deflector inside the flood sensor.
3. Position the flood sensor on the relief valve and align the deflector to fit inside the relief valve.
4. Use a #2 Phillips screwdriver to tighten the captive screw.

Existing Valve Installation

The following procedures include the deflector with the installation of the sensor connection kit.

1. Align the deflector to fit inside the relief valve. (For Series 009, sizes 1 to 2 only. Some sensor connection kits include multiple deflectors. Install the deflector designed specifically for the backflow valve size in use.)
2. Position the flood sensor on the relief valve and insert the two mounting bolts.

Mount the Activation Module

Set the SW1 DIP switch on the activation module according to the wet threshold table below, then attach the

module to the flood sensor. The 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 BMS input terminal. Custom Flood Sensor Settings: DIP switches on the activation module can be used to specify the wet threshold (sensitivity to water discharge) through SW1 and the timer delay (duration before the alarm) through SW2. Scan the QR code for more information.

1. Use the #2 Phillips screwdriver to detach the four screws on the activation module to remove the cover.
2. Locate the valve size in the provided table and use an instrument with a pointed tip to slide the SW1 switches to the positions noted for that size. The wet threshold option values range from 40 (default) to 55 (most sensitive).

FAQs

- **Q: What is included in the kit?**

A: All kits include the activation module and power adapter. Retrofit kits also include the flood sensor and related components.

- **Q: What are the power requirements for the 24V DC power adapter?**

A: The power adapter requires a 120VAC, 60Hz, GFI-protected electrical outlet.

- **Q: Can I use this kit for existing installations?**

A: Yes, the connection kits are suitable for both new and existing installations of the specified valve assemblies.

- **Q: How do I set the wet threshold and timer delay?**

A: The wet threshold (sensitivity to water discharge) can be set using the SW1 DIP switches on the activation module. The timer delay (duration before the alarm) can be set using the SW2 DIP switches. Please refer to the provided table and scan the QR code for more information.

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 before 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 issues, power outages, or improper installation.

Monitor relief valve discharge with smart and connected technology to detect and notify of flooding. The BMS Sensor Connection Kit activates the flood sensor to enable functions that detect flood conditions. The BMS Sensor 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 building management system.

Kit Components

All kits include the 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. Activation module with 8' conductor cable and ground wire



B. Four deflectors (For Series 009, sizes 1/2" to 2")



C. 24V DC power adapter (requires a 120VAC, 60Hz, GFI-protected electrical outlet)



D. Included in retrofit kits:

- Sizes 1/2" to 3/4" flood sensor with captive screw and deflector
- Sizes 1" to 1 1/2" flood sensor with 2 deflectors (1" and 1 1/4" to 1 1/2") and 2 mounting bolts
- Sizes 2" to 3" flood sensor with deflector and 2 sets of mounting bolts (larger bolts for LF009 2 1/2" to 3" only)

NOTICE The connection kits are suitable only for new or existing installations of the specified valve assemblies.

Requirements

- #2 Phillips screwdriver
- 3/16" Allen wrench
- 1/2" Wrench
- An instrument with small tip to change DIP switch settings
- Power source, ranging from 12V to 24V
- Wire stripper

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

A Note About the Deflector

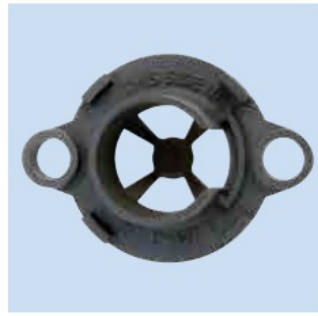
A properly sized deflector is required when the flood sensor is activated on either new or existing valve installations of Series 009 reduced pressure zone assemblies, sizes 1/2" to 2". The deflector helps seat the flood sensor against the backflow valve and direct discharge from the valve. Each deflector is embossed with a positioning indicator to assist installation.



1/2" – 3/4"



1"



1 1/4" – 1 1/2"



2"

- **New valve installation**

The sensor connection kit includes four (4) deflectors marked by size. Select the size designed to fit the backflow relief valve of the installation.

Remove the flood sensor from the valve then follow procedures in the next two sections to install the deflector with the flood sensor and configure and mount the activation module.

- **Existing valve installation**

The following procedures include the deflector with the installation of the sensor connection kit.

Install the Flood Sensor

For Series 009 assemblies, sizes 1/2" to 2", attach both the deflector and the flood sensor to the backflow relief valve. For sizes 1/2" to 3/4", the deflector fits inside the flood sensor. For sizes 1" to 2", the deflector fits inside the relief valve.

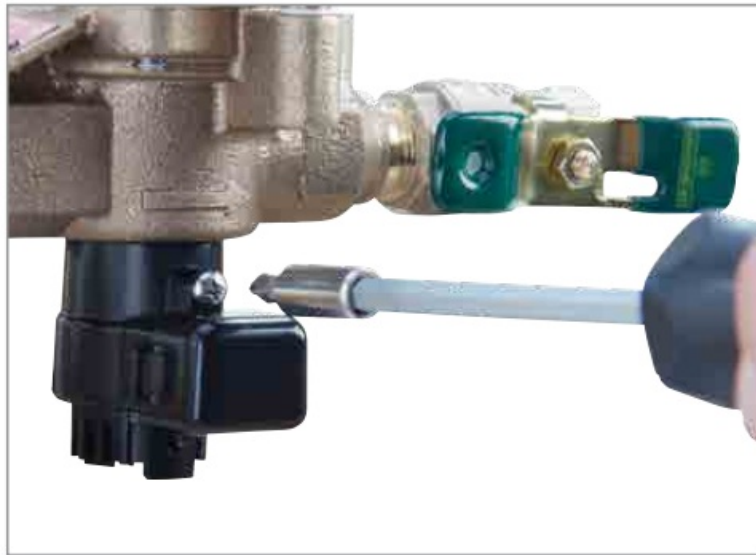
NOTICE The deflector must be installed for the flood sensor on Series 009, sizes 1/2" to 2", to function properly.

Series 009, sizes 1/2" – 3/4"

1. Align the grooves of the deflector with internal ribs of the sensor to insert the deflector inside the flood sensor.



2. Position the flood sensor on the relief valve.
3. Use a #2 Phillips screwdriver to tighten the captive screw.



Series 009, sizes 1" – 3"; Series 909 Small, sizes ¾" – 2"

1. Align the deflector to fit inside the relief valve. (For Series 009, sizes 1" to 2" only. Some sensor connection kits include multiple deflectors. Install the deflector designed specifically for the backflow valve size in use.)
2. Position the flood sensor on the relief valve and insert the two mounting bolts.



3. Tighten the bolts to secure the deflector and the flood sensor. Do not over tighten.



- For Series 009 sizes 1" to 1½" and Series 909 Small sizes ¾" to 1", use a 3/16" Allen wrench.
- For Series 009 sizes 2" to 3" and Series 909 Small sizes 1¼" to 2", use a ½" wrench.

Mount the Activation Module

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

The 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 BMS input terminal.

Custom Flood Sensor Settings

DIP switches on the 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.


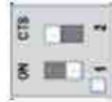



NOTICE The wet threshold value must be set by backflow valve size.

- 1. Use the #2 Phillips screwdriver to detach the four screws on the activation module to remove the cover.
- 2. Locate the valve size in the following table then use an instrument with a pointed tip to slide the SW1 switches to the positions noted for that size. The wet threshold option values range from 40 (default) to 55 (most sensitive).



SW1: Wet Threshold Option

Series	Assembly Size	DIP Switch Position			Reported Switch Value	Wet Threshold Value
		1	2	Illustrated		
009	1/2" – 3/4"	ON	ON		3	55
	1" – 3"	OFF	ON		2	50
909 Small	3/4" – 2"	OFF	ON		2	50

- 3. Press the RESET button to activate the new settings.
- 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. Press the activation module with cable on to the flood sensor.



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

7. Check that the activation module is seated securely on the flood sensor.



Attach the Activation Module Cable to the BMS Controller

The 4-conductor activation module cable should be attached to the BMS controller to transmit a normally open contact signal and provide power to the activation module. The contact signal closes when a discharge is detected.

To connect the module cable to the controller



1. Use the wire stripper to cut away enough insulation to expose 1 to 2 inches of the conductor wires.
2. Insert the white and green wires into the input terminal.

NOTICE Either the BMS power source (ranging from 12V to 24V) or the 24V DC power adapter provided can be used. With each power source, an earth ground connection is required. If using the optional power adapter, skip to the next set of instructions. Be sure to use the ground wire provided if there is no other earth ground on the BMS controller.

3. Insert the red wire in the power terminal. (A power source ranging from 12V to 24V is required.)
4. Insert the black wire in the ground terminal.

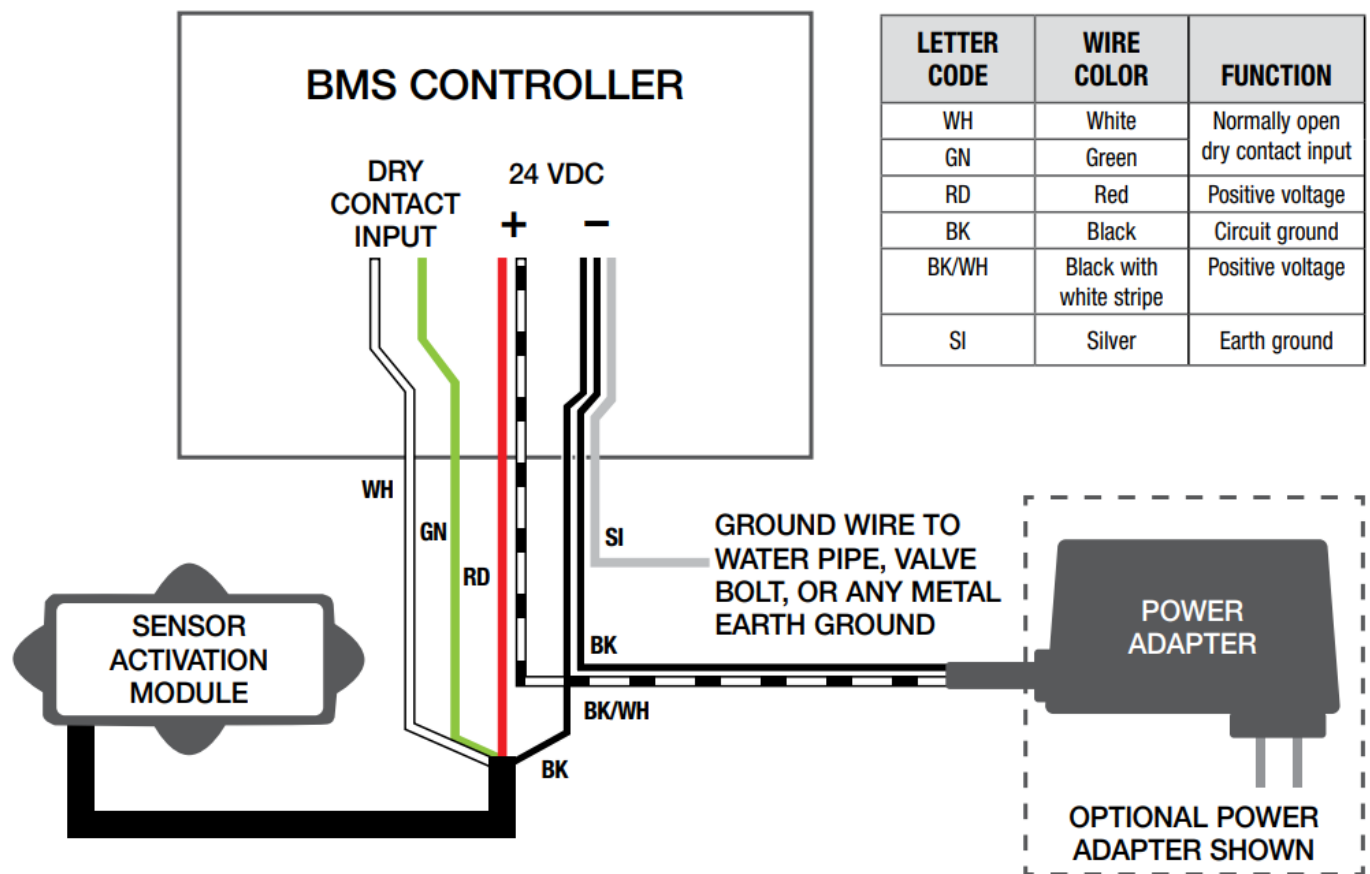
WARNING The earth ground must be connected to the BMS controller before the flood sensor is put in operation.

To use the optional 24V DC power adapter

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.

1. Connect the positive power adapter wire (black with white stripe) to the red wire of the activation module cable and insert the wires into the power terminal.
2. Connect the negative power adapter wire (black with no stripe) to both the black wire of the activation module cable and the ground wire (if needed) then insert the wires into the ground terminal.
3. Plug the power adapter into a 120VAC, 60Hz, GFI-protected electrical outlet.

The flood sensor LED is steady green when the unit is ready.



Limited Warranty


Watts Regulator Co. (the "Company") warrants each product to be free from defects in material and workmanship under normal usage for 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 CONCERNING 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.

Documents / Resources

	<div> IS-FS IS-FS-009-909S-BMS BMS Sensor Connection Kit [pdf] Instruction Manual </div> <div> IS-FS-009-909S-BMS BMS Sensor Connection Kit, IS-FS-009-909S-BMS, BMS Sensor Connection Kit, Sensor Connection Kit, Connection Kit </div>
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References

- [Watts Canada | Plumbing, Heating and Water Quality Solutions](#)
- [Watts | Plumbing, Heating and Water Quality Solutions](#)
- [User Manual](#)

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