



WATTS IS-RFK-FS-ReliefValve-BM Flood Sensor Retrofit Connection Kit Installation Guide

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IS-RFK-FS-ReliefValve-BMS
Installation Instructions
BMS Flood Sensor
Retrofit Connection Kit
For Relief Valve Discharge Line
 $\frac{3}{4}'' - 2 \frac{1}{2}''$



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IS-RFK-FS-ReliefValve-BM Flood Sensor Retrofit Connection Kit



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.



WARNING

To avoid water damage or scalding due to valve operation, the discharge line must be connected to the valve outlet and run to a safe place of disposal.

Refer to the installation tag on the relief valve for additional discharge line safety requirements.

Monitor relief valve discharge with smart and connected sensor technology designed to detect flooding. BMS Flood Sensor Retrofit Connection Kit is set up to activate the sensor installed in the relief valve discharge line. When a flowing discharge occurs, the sensor energizes a relay signaling flood detection.

NOTICE

Use of flood sensor technology does not replace the need to comply with all required instructions, codes, and regulations related to the installation, operation, and maintenance of the relief valve 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.

Kit Components

The retrofit connection kit for installing and activating the flood sensor includes the items shown below. If any item is missing, speak with your account representative about the ordering code indexed to the outlet size of your relief valve.

OUTLET SIZE	ORDERING CODE
3/4"	88009464
1"	88009465
1 1/4"	88009466
1W'	88009467
2"	88009468
2W'	88009469

Flood sensor, diameter sizes from 3/4" to 2 1/2"



Activation module with 8' conductor cable



24V DC power adapter



Dielectric grease packet



Ground wire



Requirements

- #2 Phillips screwdriver
- 120VAC, 60Hz, GFI-protected electrical outlet (for kit power adapter), or power source ranging from 12V to 24V
- Wire stripper
- Fine-grade sandpaper or scour pad
- Copper tubing from relief valve to sensor
- Female NPT fittings (copper only up to sensor)
- PTFE tape

Limitations

- Flow detection. A continuous flow is required for detection.
The sensor recognizes discharge as low as 20 cc per minute.
- Steam detection. Steam releases are not detected.
- Torque. Hand tightening is advised for connecting the sensor adapter to the NPT fittings. A wrench can be used on the hex flats of the adapter to secure end connections with an additional quarter turn.

Preparation

- Abrade the copper band with fine grade sandpaper or scour pad before installation to remove any tarnish/oxidation.
- Apply PTFE tape to the end connections of the sensor adapter to improve the sealing with NPT fittings.
- Apply dielectric grease on the copper band to prevent oxidation and corrosion.
- When the sensor is installed in the discharge line, use copper tubing from the relief valve to the sensor.

Tips

- Avoid touching the copper band after cleaning and during installation.
- Add support to an extended discharge line.

Install the Flood Sensor and Activation Module

Based on the relief valve location, determine the installation point for the flood sensor. The sensor must be installed at a 45 degree angle, either directly into the relief valve outlet or in the vertical section of the discharge line, as shown in the typical installation options below.

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

Custom Flood Sensor Settings

The default settings on the activation module for detecting discharge are suitable for the relief valve series. However, the switch settings can be customized for time delay. Scan the QR code for more information.



<https://dam.watts.com/AssetLink/339884.pdf>



1. Hand tighten the sensor adapter to the fittings. If desired, use a wrench on the hex flats of the adapter to make an additional quarter turn.



2. Place the back housing on the adapter, covering the copper band and hex flats. Rotate the housing into position to attach the front housing.



3. Hook the front housing onto the back housing to join the two pieces around the sensor.



4. Use a #2 Phillips screwdriver to secure the front and back housing to the sensor with the two screws provided.



Recommended: Add support to an extended discharge line.



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.

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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 BMS

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.

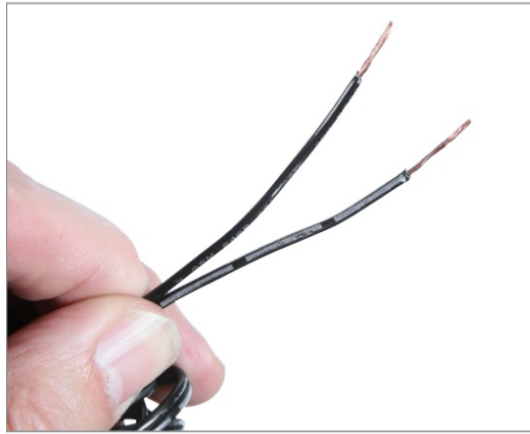
3. Insert the red wire in the power terminal. (A power source ranging from 12V to 24V is required.)
4. Insert the black wire in the ground terminal.

⚠ WARNING

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

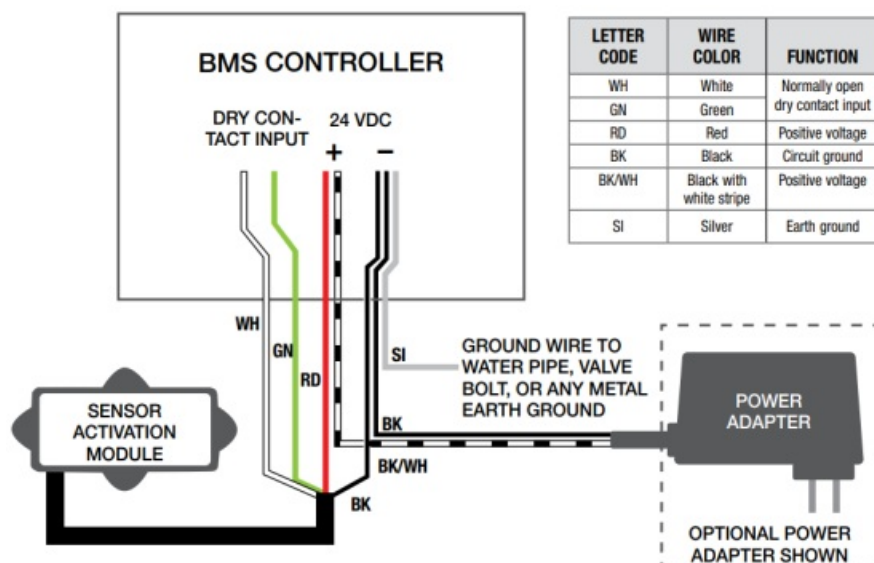
To use the optional 24V DC power adapter

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 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.

IS-RFK-FS-ReliefValve-BMS 2425
USA: T: [978-689-6066](tel:978-689-6066) [Watts.com](https://www.Watts.com)
Canada: T: [888-208-8927](tel:888-208-8927) [Watts.ca](https://www.Watts.ca)
Latin America: T: (52) 55-4122-0138 [Watts.com](https://www.Watts.com)
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Documents / Resources

	<p>WATTS IS-RFK-FS-ReliefValve-BM Flood Sensor Retrofit Connection Kit [pdf] Installation Guide</p> <p>425, 88009464, 88009465, 88009466, 88009467, 88009468, 88009469, IS-RFK-FS-ReliefValve-BM Flood Sensor Retrofit Connection Kit, IS-RFK-FS-ReliefValve-BM, Flood Sensor Retrofit Connection Kit, Retrofit Connection Kit, Connection Kit, Kit</p>
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References

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

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