WATTS BMS Flood Sensor Retrofit Connection Kit Instruction Manual

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WATTS BMS Flood Sensor Retrofit Connection Kit

Product Information

The IS-RFK-FS-ReliefValve-BMS is a flood sensor retrofit connection kit designed to monitor relief valve discharge and detect flooding. It includes various components such as an activation module, conductor cable, power adapter, dielectric grease packet, and ground wire.

The flood sensor retrofit connection kit is equipped with smart and connected sensor technology that activates the sensor installed in the relief valve discharge line. When a flowing discharge occurs, the sensor energizes a relay, signaling flood detection.

It is important to note that the 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. Proper drainage in the event of a discharge must still be provided.

Kit Components
The retrofit connection kit includes the following items:

- Activation module with 8′ conductor cable
- 24V DC power adapter
- Dielectric grease packet
- Ground wire

Depending on the outlet size of your relief valve, ensure you have the correct ordering code for the kit components.

Requirements
Prior to installation, consult the local building and plumbing codes to ensure compliance. If there are any inconsistencies between this manual and local codes, follow the local codes. Contact governing authorities for additional requirements.

Preparation
Ensure you have all the necessary components from the kit before starting the installation.

Limitations
Watts is not responsible for the failure of alerts due to connectivity issues, power outages, or improper installation.

Product Usage Instructions

Step 1: Install the Flood Sensor and Activation Module
Based on the relief valve location, determine the installation point for the flood sensor. The sensor should be installed at a 45-degree angle, either directly into the relief valve outlet or in the vertical section of the discharge line.

Step 2: Connect the Sensor Adapter
Hand tighten the sensor adapter to the NPT fittings. If desired, use a wrench on the hex flats of the adapter to secure end connections with an additional quarter turn.

Step 3: Customize Flood Sensor Settings (Optional)
The default settings on the activation module for detecting discharge are suitable for the relief valve series. However, you can customize the time delay using the DIP switch. Scan the QR code for more information on customizing the flood sensor settings.

Following these instructions will ensure proper installation and usage of the BMS Flood Sensor Retrofit Connection Kit. Refer to the user manual for any additional information or troubleshooting steps.

WARNING:

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

- **A.** Flood sensor, diameter sizes from ¾” to 2½”

- **B.** Activation module with 8′ conductor cable

- **C.** 24V DC power adapter

- **D.** Dielectric grease packet

- **E.** 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

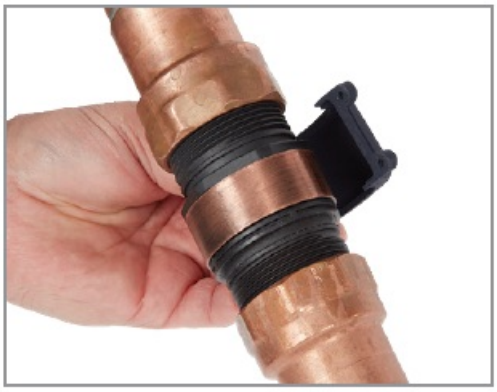
Based on the relief valve location, determine the installation point for the flood sensor. The sensor must be installed at a 45 degree angle, either directly into the relief valve outlet or in the vertical section of the discharge line, as shown in the typical installation options below. The activation 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 DIP switch for time delay can be customized. Scan the QR code for more information.



1. Hand tighten the sensor adapter to the fittings. If desired, use a wench 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.

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.

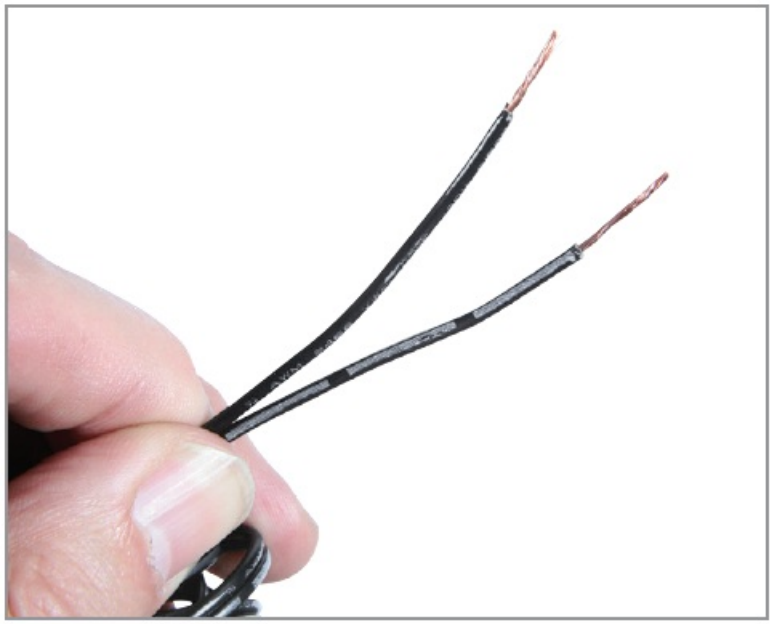
   NOTICE

   - 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.
4. 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.

Contact Information

- **USA:** T: (978) 689-6066 • Watts.com.
- **Canada:** T: (888) 208-8927 • Watts.ca.
- **Latin America:** T: (52) 55-4122-0138 • Watts.com.

Documents / Resources

	WATTS BMS Flood Sensor Retrofit Connection Kit [pdf] Instruction Manual BMS Flood Sensor Retrofit Connection Kit, BMS, Flood Sensor Retrofit Connection Kit, Sensor Retrofit Connection Kit, Retrofit Connection Kit, Connection Kit

References

- Watts Canada | Plumbing, Heating and Water Quality Solutions
- Watts | Plumbing, Heating and Water Quality Solutions