Engineering Specification

Job Name _____ Contractor _____

Job Location _____ Approval _____

Engineer _____ Contractor's P.O. No. _____

Approval _____ Representative _____

Relief Valve Flood Sensor Retrofit Connection Kit

FOR BUILDING MANAGEMENT SYSTEMS

SentryPlus Alert® Flood Sensor Retrofit Connection Kit for relief valve discharge adds flood protection to boilers or water heater units. The connection kit is available in six sizes to accommodate discharge outlets ½" to 2½". Compatible with building management systems.

Features

- Installs with no disruption to water system service
- Detects excessive water discharge from the relief valve
- Activates the flood sensor and provides connectivity to third-party building management systems
- Connects to BMS through dry contact output from the kit (No communication protocol integration required.)
- Flags issues with the system such as over temperature (when used with a T&P valve), overpressure, or potential preventative maintenance
- Is customizable for wet threshold and timer delay

Contents

Relief valve discharge flood sensor
Activation module with cable
Dielectric grease packet
Power adapter, 24V DC
Ground wire

Call customer service if you need assistance with technical details.

OUTLET SIZE	ORDERING CODE
¾"	88009464
1"	88009465
1¼"	88009466
1½"	88009467
2"	88009468
2½"	88009469

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.

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

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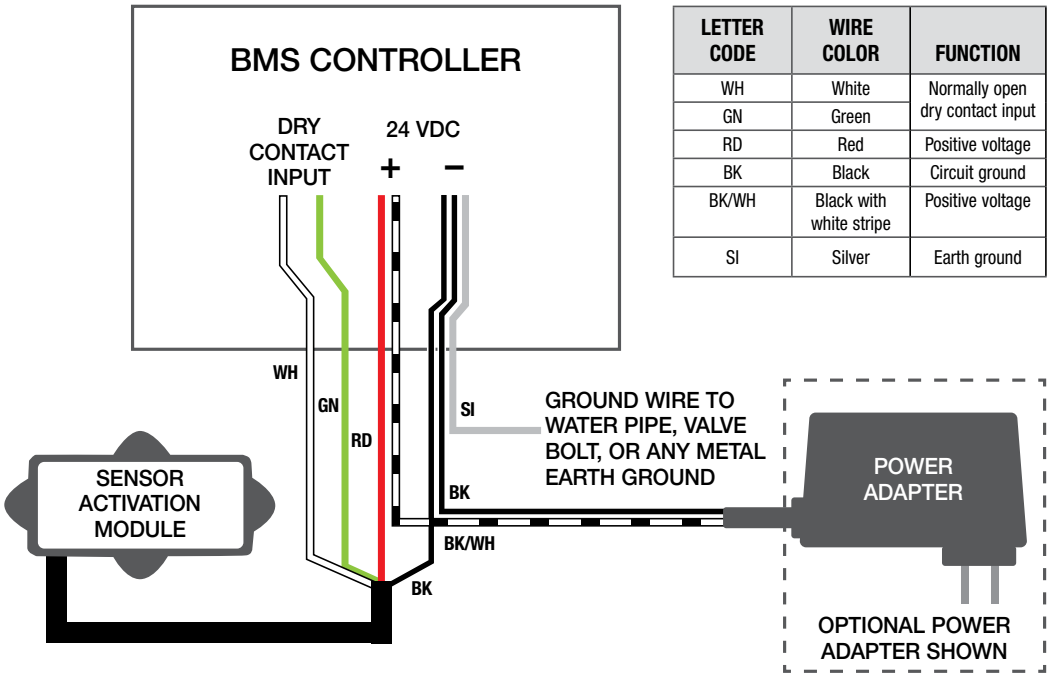
Wiring Schematic



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

Operation

The SentryPlus Alert system helps protect against property damage resulting from excessive relief valve discharge, which could be worsened by a blocked or overwhelmed floor drain. The discharge may be caused by one of these typical conditions:

- Scale or debris fouling the relief valve seat
- Failed or improperly charged expansion tank
- Failing pressure regulator
- Failing fill valve
- Coil leak in a tankless coil boiler
- Failing tank thermostat
- Mismatch between the system operating pressure and the relief valve

The retrofit connection kit is designed to activate the sensor attached to the outlet or the discharge line of the relief valve. (The sensor does not alter relief valve functions or certifications.) When an excessive discharge occurs, the system energizes a relay signaling potential flooding.

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. The signal sent to the BMS input may trigger alerts, specified and distributed by the BMS application.

Specification

The retrofit connection kit shall activate the flood sensor installed at the outlet or in the discharge line of a relief valve and enable monitoring of excessive discharge that may result from heater, expansion tank, or other equipment malfunction.

A signal from the flood sensor shall be received by the activation module when a discharge is detected. If the discharge meets the conditions of a qualifying event, the normally open contact shall close to relay a signal to the BMS input terminal. A signal relayed to BMS shall then allow for notification of a potential flooding event or maintenance need, as specified by the BMS application.

The activation module shall include adjustable settings for wet threshold and timer delay. The timer delay shall prevent the alert system from issuing false warnings on intermittent discharges from the relief valve.

The connection kit shall include flood sensor, activation module, dielectric grease packet, ground wire, and power adapter. The kit shall be purchased separately from the relief valve.

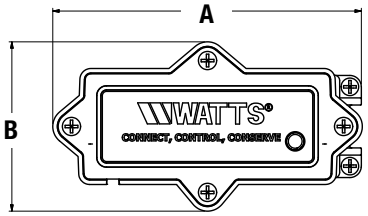
Flood Sensor

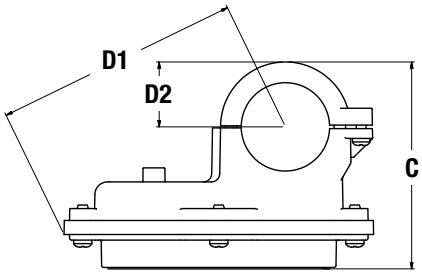
The sensor consists of a polypropylene copolymer resin adapter body, UNS C10200 or UNS C12200 copper band, and rubber-compounded O-ring. The sensor can be installed directly into the relief valve outlet at a 45 degree angle or in the discharge line at a 45 degree angle to detect flowing discharge. For more information, refer to ES-FS-ReliefValve.

Activation Module

The activation module contains the electronic circuit assembly, interfaces with the flood sensor, and provides connectivity to the BMS input terminal. An 8-foot cable is included with the module.

The module is designed with adjustable settings for wet threshold (sensitivity to water discharge) and timer delay (duration before alarm). For more information on custom flood sensor settings, download IS-FloodSensor-Settings 2144.





SIZE	DIMENSION										WEIGHT	
NPT	A		B		C		D1		D2			
in.	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lb*	*g*
¾	4 7/16	112.0	2 7/16	61.2	2 11/16	68.8	3½	87.8	¾	20.6	0.20	92
1	4 7/16	112.0	2 7/16	61.2	2 15/16	75.2	3½	89.2	⅞	23.5	0.21	94
1¼	4⅝	117.9	2 7/16	61.2	3⅜	87.1	3⅝	91.9	1 3/16	29.8	0.22	100
1½	4¾	120.4	2 7/16	61.2	3 11/16	93.2	3 11/16	93.6	1¼	32.5	0.22	102
2	5	125.5	2 7/16	61.2	4	102.6	3¾	95.9	1½	37.5	0.23	104
2½	5¼	134.4	2 7/16	61.2	4⅝	116.8	4 1/16	102.4	1¾	44.8	0.25	111

Dielectric Grease

Chemical compound	Silicone
Temperature range	Up to 400°F
Physical form	Translucent white gel
Property	Corrosion resistance
Container size	2 grams

Ground Wire

24 AWG

Solid core, uninsulated, tinned copper wire

RoHS compliant

5 feet

Power Adapter

Output DC voltage	24V ±2.0%
Output current range	0 ~ 1.04A
Input voltage range	90 ~ 264VAC
Input frequency range	47 ~ 63Hz
Input AC current	0.7A/115VAC 0.35A/230VAC

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