tyco®

SprinklerSense

The next generation of self testing
flow switches and system monitoring

Johnson Controls

What is SprinklerSense?

SprinklerSense is an intelligent water flow switch designed to enable a sprinkler system's status to be constantly monitored, tested and recorded to far greater depths than traditional methods. SprinklerSense uses solid-state sensors with no moving parts and greatly reduces time to test and commission a system.

Key Features

SprinklerSense helps enable businesses to protect assets with the next generation of flow switches, sprinkler monitoring and maintenance technology.

Smart Monitoring

- Offers precise reporting and full audit trail for management purposes ;all reporting can be downloaded via USB
- Intelligent Test Module (ITMU) loop connected with a compatible detector system enhances remote testing and monitoring capabilities

Diagnostic Information

Enhanced diagnostics help ensure the sprinkler system functionality is continuously monitored for key indicators:

- Flow alarm detection – water flow in the system
- Dry pipe detection – an empty or partially filled system
- Sensor self-check detection – scale build up or debris around the senor which could prevent an alarm
- Freeze risk detection – low water temperature
- Leak detection – a low discharge of water continually over a period of time
- Battery low alarm – a supply fault
- No unit comms – indicates communication failure

Testing

With SprinklerSense, it is no longer necessary to have engineers working at height testing sprinkler systems and water levels. Testing can be completed on demand, using a single button from a local interface unit at ground level.

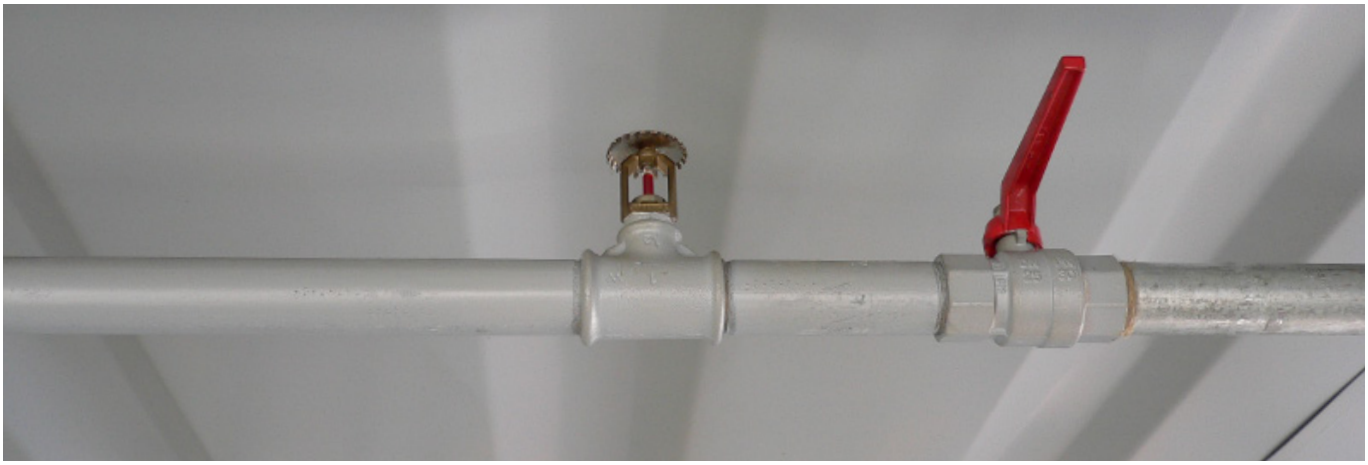
Hardware and Installation

SprinklerSense is a compact and lightweight solution weighing only 0.8kg. Made from stainless steel, the solution is intended to be hardwearing against corrosion and other elements. SprinklerSense can be installed into a single hole or an existing flow switch hole, reducing time, cost and leakage risk during installation.

SprinklerSense is approved for water pressure of up to 20 Bar.

Industry Approvals

The unit is Loss Prevention Certificate Board (LPCB) approved and meets BS EN12259-5 standards.



Business Benefits

Smarter ways to protect your business

Improved Hardware Reliability

SprinklerSense uses solid-state technology with no moving parts, reducing risk of hardware failure.

Cost Savings

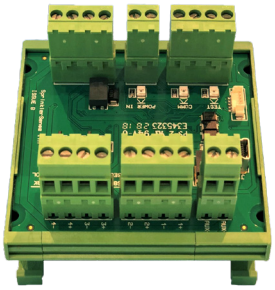
Early problem detection and notification, alerts users to faults and leaks before they develop into major issues that could result in expensive repairs. System faults can usually be rectified with minimal business disruption.

Health and Safety

The remote functionality allows engineers easy access to the system – no need to work at height. This helps reduce the potential for health and safety risks on site.

Minimal Business Disruption

The potential for water leaks during the testing phase is reduced with testing done with a simple button press, eliminating the need for water flow. This also removes the complex, time-consuming logistical process required to access and test water flow associated with traditional methods.



Why SprinklerSense?

Choosing SprinklerSense can provide you with true benefits compared to traditional methods of sprinkler system testing.

Zoned Systems

Zoned systems, traditionally found in larger sites such as shopping centres and all life safety environments, need to carry out testing after hours as a larger work area is required for the discharge of water during testing. This can prove difficult and costly for businesses. SprinklerSense allows for remote testing directly from the ground level, meaning it can be completed during working hours with minimal disruption.

Addressable

SprinklerSense in combination with the ITM can be connected to an IO Module. This makes SprinklerSense addressable and able to be installed in a loop, which is intended to reduce wiring.

No Flowing Water

Unlike mechanical flow switches that require flow of large water volumes during testing, SprinklerSense uses solid-state technology sensors. These sensors remove the need to force water flow whilst still providing effective testing and recordings. Additionally, conventional flow switch testing uses pumps to circulate the water around a smaller circuit to test water flow. The use of pumps, pipes and the need for drainage can lead to leaks. SprinklerSense monitors flow without needing to pump water while also constantly testing temperature and water presence.

SprinklerSense ITM

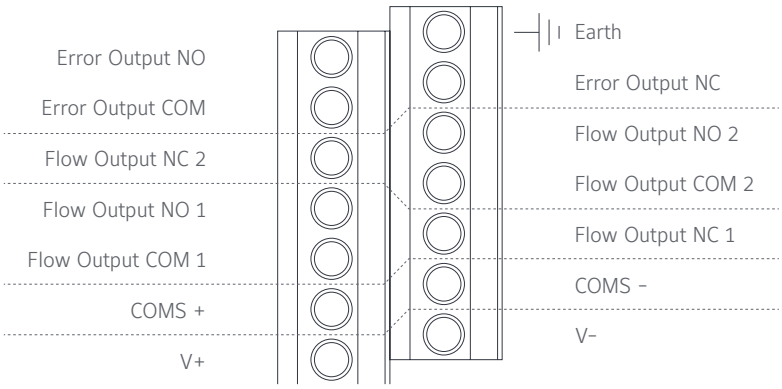
The Complete Solution

SprinklerSense SPDB90 is approved by LPCB as a water flow alarm switch. SprinklerSense uses solid-state sensing technology and electronics to provide dependable switch performance.

An Intelligent Test Module (ITMU) loop connected with a compatible detector system allows for remote testing and monitoring, continuous self-check, water presence and low water temperature sensing.

Fixed (FTI) or portable (PTI) test interfaces allow similar functions to be carried out locally.

Electrical Connections



Inadequate sprinkler pipework venting can trap excessive air pockets within a system. As well as increasing corrosion risk in metal pipework systems, entrapped air can amplify the effects of flow and pressure surges, leading to false alarm signals. The adjustable delay is factory set to a maximum 90 seconds, and it is recommended that this is only reduced once system pipework has been adequately vented of air.

Applications & Functions

Applications

Shopping Centres & Retail Units

High-rise Buildings

Offices

Warehouses

Distribution Centres

Storage Facilities

Industrial & Engineering Sites

Archiving

Functions

Function	SprinklerSense	Traditional Methods
Continuous self checking	✓	✗
On demand switch testing	✓	✓
Single button multiple testing from switch panel	✓	✗
Water run off	✗	✓
Running of pumps for testing	✗	✓
Event history log	✓	✗
USB records (to laptop)	✓	✓ with addressable unit
Flow display when inspectors valve open	✓	✗
Freeze risk detection	✓	✗
Dry pipe detection	✓	✗
Leak detection	✓	✗
Remote delay setting	✓	✗
No moving parts	✓	✗
Maintenance free	✓	✗
Stainless steel parts	✓	✗
Low voltage wiring to switch	✓	✓
Additional relays available	✓	✗
Automated or remote testing - ITF Module	✓	✓ with addressable unit

Part Numbers

Part Number	Description
SPDB9080V	Sprinklersense flowswitch VER DN80/3"
SPDB9065V	Sprinklersense flowswitch VER DN65/2,5"
SPDB9050V	Sprinklersense flowswitch VER DN50/2"
SPDB90150V	Sprinklersense flowswitch VER DN150/6"
SPDB90100V	Sprinklersense flowswitch VER DN100/4"
SPDB9080H	Sprinklersense flowswitch HOR DN80/3"

Part Number	Description
SPDB9065H	Sprinklersense flowswitch HOR DN65/2,5"
SPDB9050H	Sprinklersense flowswitch HOR DN50/2"
SPDB90150H	Sprinklersense flowswitch HOR DN150/6"
SPDB90100H	Sprinklersense flowswitch HOR DN100/4"
ITMPCB	Addressable test unit PCB
FTIM	Fixed test unit SprinklerSense

Sprinkler sense fixed test interface & portable test interface

Key Test Interface Units

- Key operation for commissioning and alarm function test
- Alarm, supervisory (audible), LED and status display
- Additional alarm and supervisory relays
- The USB PC interface provides diagnostics and event logs to be viewed and recorded

Connecting an LPCB approved SprinklerSense flow switch to a fixed or portable test interface unit allows the fuller benefits of this flow switch technology to be realised:

- Continuous assurance of flow switch sensor operation
- Key switch checking of switch function and alarm outputs back to panel
- Detection of empty pipe and low temperature conditions
- Helps identify excessive air in the pipe system, allowing corrective action to be taken to mitigate pipe corrosion
- Recorded test and events log

About Johnson Controls
Johnson Controls Building Technologies & Solutions is making the world safer, smarter and more sustainable – one building at a time. Our technology portfolio integrates every aspect of a building – whether security systems, energy management, fire supression or HVACR – to ensure that we exceed customer expectations at all times. We operate in more than 150 countries through our unmatched network of branches and distribution channels, helping building owners, operators, engineers and contractors enhance the full lifecycle of any facility. Our arsenal of brands includes some of the most trusted names in the industry, such as Tyco®, YORK®, Metasys®, Ruskin®, Frick®, PENN®, Sabroe®, Simplex® and Grinnell®.

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