060a/01

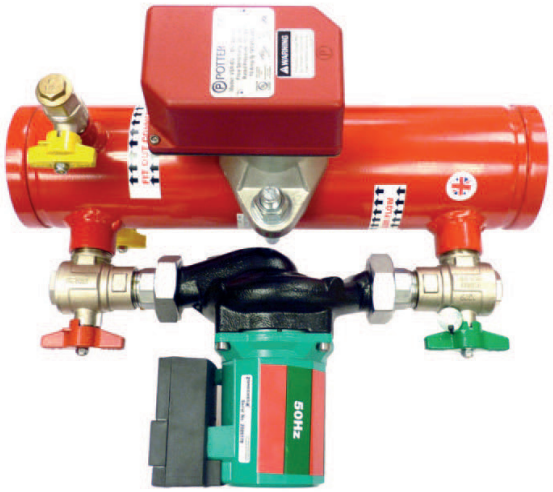
Zonecheck
Model 450

General Description

Zonecheck is a remote flow-switch testing device. It works by using a closed loop system that re-circulate water to simulate sprinkler head operation and test the flow-switch without discharging water.

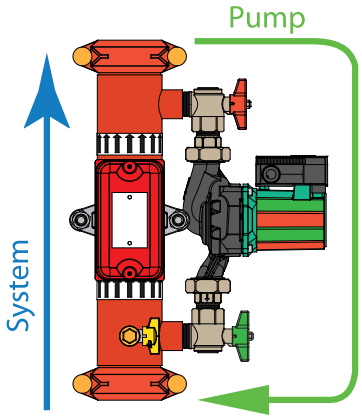
Approvals

UL , FM, LPCB and VdS

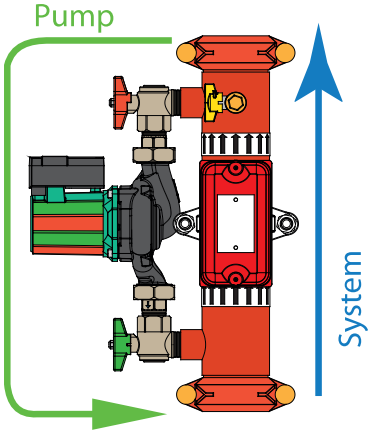


Specification

Zonecheck	
Maximum Working Pressure	15 bar (water)
Compatible Pipe	2", 2$^{1}/_{2}$", 3", 4", 6" & 8"
Connections	Roll Groove (both ends)
Installation	Horizontal or Vertical
Flow Switch	
Triggering Flow Rate	30-57 LPM
Enclosure Rating	IP54
Conduit Entrances	Ø22.2mm
Contact Ratings	10 A @ 125/250V AC 2.5 A @ 24V DC
Operating Temperature Range	0 - 68°C (32 - 155°F)
Pump	
Operating Voltage	240V 50Hz
Full Load Current	0.88
Power Rating	185 Watts
Enclosure Rating	IP43
Maximum Working Pressure	12 bar (175psi)
Key-switch	
Operating Voltage	Single-phase 240V-50Hz
Key Switch Operation Modes	Self-test: Wired locally Group test: Interconnected
Key-switch LED Operation	Ready state: No LED
Test Initiation	PUMP LED (green)
Flow Switch Activation	WATER FLOW LED (green)
Full Load Current	0.88 amps
Power Input (P1)	185 watts
Rated Power (P2)	90 watts
Capacitor	400 VDB



Left handed



Right handed

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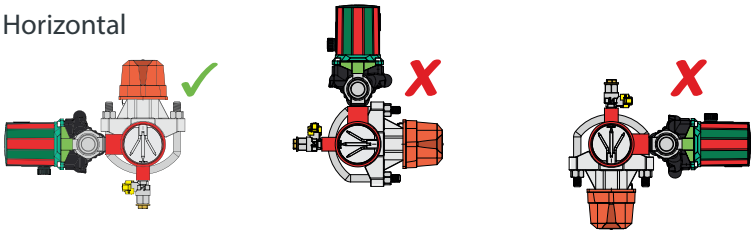
Installation

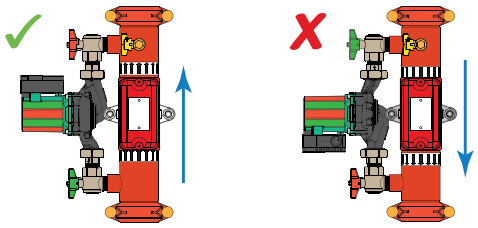
Zonecheck® connects into a wet-pipe sprinkler system using two grooved couplings (not included). When fitted correctly, the red and green stripes on the pump are always horizontal. On horizontal runs, the flow-switch must always be on the top of the pipe.

For vertical flow applications, only mount Zonecheck where up-flow conditions exist.

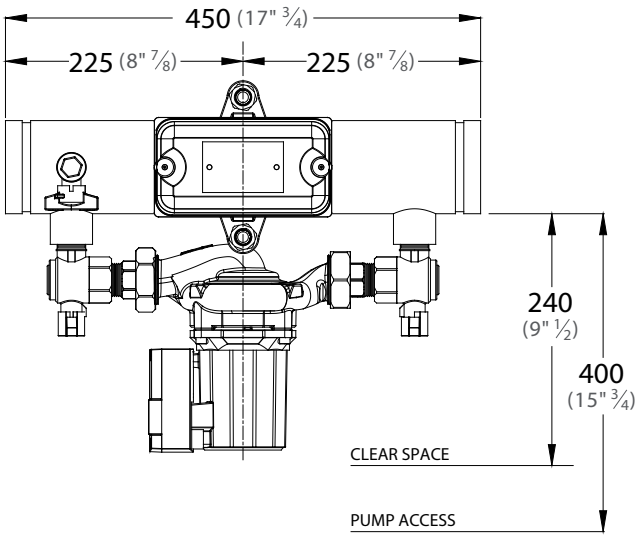
Horizontal



Riser

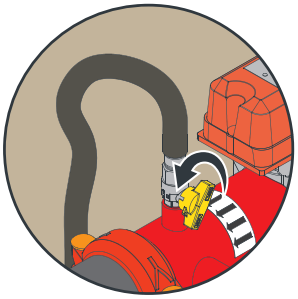


Dimensions



Venting

Zonecheck will not work properly if air is trapped within the unit. Follow these simple steps to vent trapped air.



1. Notify building management of your actions.
2. Isolate alarms & main fire pump.
3. Have a suitable container or drain ready to catch any water.
4. Remove the vent plug from the uppermost yellow vent-valve on the Zonecheck®.
5. Attach a suitable connector & hose pipe to the uppermost yellow vent-valve on the Zonecheck®.
6. Carefully crack open the yellow vent-valve.
7. Keep yellow vent-valve open until all air is expelled and only water is coming from the vent (may take up to 10 minutes).
8. Shut the yellow vent-valve.
9. Remove the connector & hose pipe.
10. Carefully re-insert and tighten the vent plug.
11. Don't forget to contact building management & let them know when you have finished testing.
12. Where applicable, re-establish the alarms and main re pump.

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Data Sheet 7.25
Issue B

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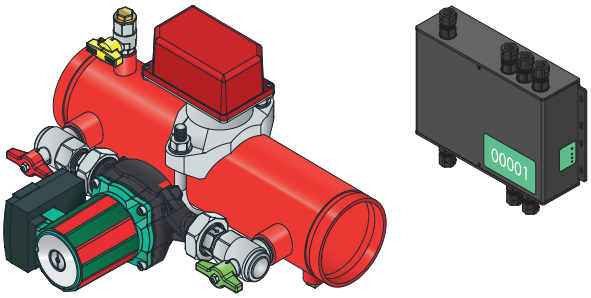
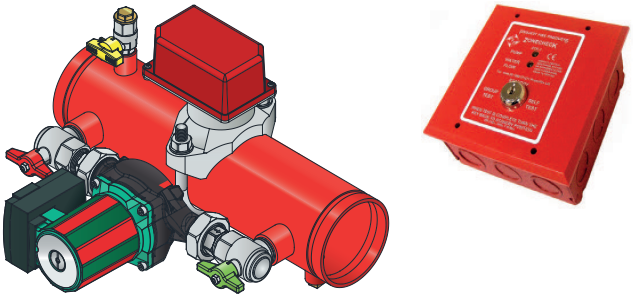
Addressable Zonecheck



Zonecheck with Key switch



Ordering Codes

Size		Description	Weight (kg)	Ordering Code
mm	in			
DN50	2"	Right Handed	14.0	RDZCAD050R
DN65	2 1/2"	Right Handed	14.2	RDZCAD065R
DN80	3"	Right Handed	15.3	RDZCAD080R
DN100	4"	Right Handed	17.1	RDZCAD100R
DN150	6"	Right Handed	22.1	RDZCAD150R (UK)
DN150	6"	Right Handed	22.1	RDZCAD168R (EU)
DN200	8"	Right Handed	28	RDZCAD200R
Addressable IMM - Intelligent Monitoring Module				RDZC-IMM
Addressable Controller				RDZC-CONTROLLER
Addressable SCADA Controller				RDZC-CONTRSCADA

Note: Left handed versions available on request

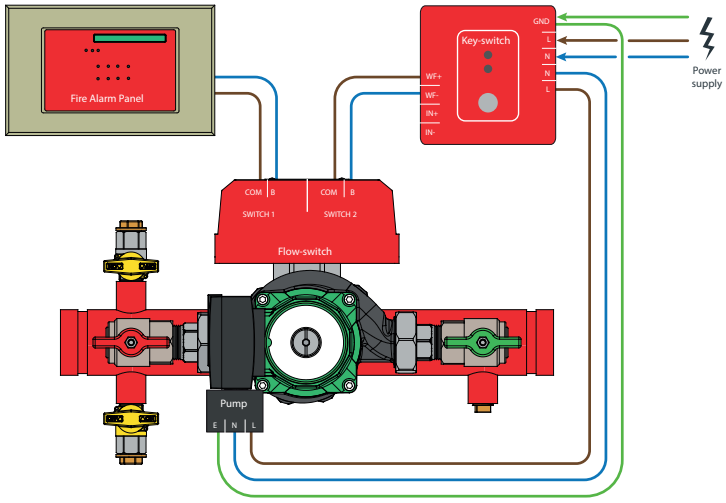
Ordering Codes

Size		Description	Weight (kg)	Ordering Code
mm	in			
DN50	2"	Right Handed	14.0	RDZC050R
DN65	2 1/2"	Right Handed	14.2	RDZC065R
DN80	3"	Right Handed	15.3	RDZC080R
DN100	4"	Right Handed	17.1	RDZC100R
DN150	6"	Right Handed	22.1	RDZC150R (UK)
DN150	6"	Right Handed	22.1	RDZC168R (EU)
DN200	8"	Right Handed	28	RDZC200R
Key switch (spare)				RDZC-KYSE

Note: Left handed versions available on request

Key switch Wiring Diagram

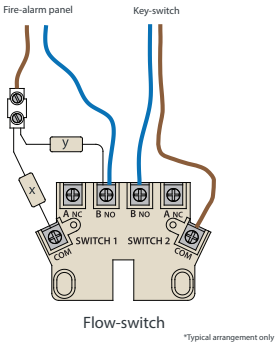
Wiring



Flow-switch wiring

Typical fire-alarm/flow-switch connection*. Refer to specific fire-alarm panel instructions for information.

x =fire/alarm resistor (usually 1Ω)
y = end of line resistor (usually 470Ω)



Flow-switch

*Typical arrangement only

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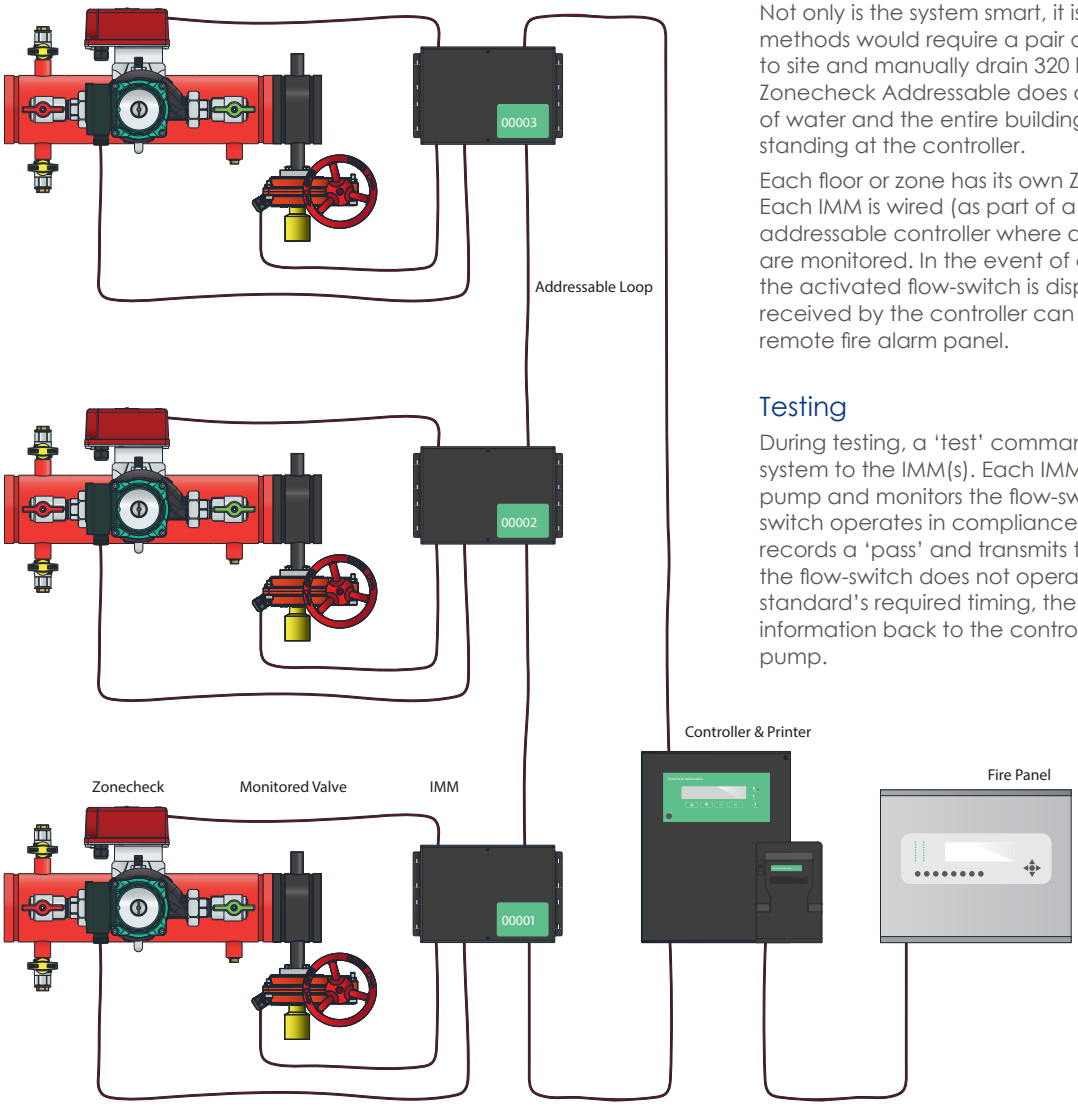
Addressable Wiring Diagram

Intelligent Flow-switch Testing

The intelligent nature of the IMMs mean that they do much more than just relay information regarding flow-switch operation and its exact location within the building. The IMM has additional capabilities that include the ability to monitor the local zone isolation valve and the local 'mains' supply. Further to this, the IMM has the capability for an auxiliary out connection, which could be used as part of a wider fire protection strategy (for example – to open local smoke vents or close fire doors in a given zone).

The addressable system is designed to manage a sprinkler system more effectively, for example when a monitored valve is closed a fault alert is indicated. At this point only authorised personnel can access the pin-protected controller to mute the audible alarm (for up to 4 hours). After this period, the alarm will activate again so that the system will be managed in strict compliance with the applicable life safety codes.

The system also includes an 'autorun' feature where each Zonecheck pump is run for two seconds every week to reduce the risk of seizing. In short, flow-switch testing is just the start – Zonecheck Addressable forms the basis for an all-encompassing, flexible and intelligent fire risk management and detection system.



Green Testing

Not only is the system smart, it is also green. Traditional testing methods would require a pair of fully trained engineers to travel to site and manually drain 320 litres of water for every flowswitch. Zonecheck Addressable does all of this without wasting a drop of water and the entire building can be tested by an individual standing at the controller.

Each floor or zone has its own Zonecheck, IMM and zone valve. Each IMM is wired (as part of a looped system) back to the addressable controller where all of the Zonechecks in the loop are monitored. In the event of a fire or fault, theexact location of the activated flow-switch is displayed on screen. The information received by the controller can then be relayed to a building's remote fire alarm panel.

Testing

During testing, a 'test' command is transmitted via the looped system to the IMM(s). Each IMM operates its local Zonecheck pump and monitors the flow-switch operating time. If the flow-switch operates in compliance with code standards, the IMM records a 'pass' and transmits the result back to the controller. If the flow-switch does not operate, or operates outside of the code standard's required timing, the IMM records a 'fail', relays the information back to the controller and automatically turns off the pump.

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