

Zonecheck Flow Switch Tester



Manifold Models

| UL/FM Models with 110 V Pump | ULC Models with 110 V Pump |
|------------------------------|----------------------------|
| ZC20 | ZC20A |
| ZC25 | ZC25A |
| ZC30 | ZC30A |
| ZC40 | ZC40A |

Retrofit Models

| UL/FM Models with 110V Pump | ULC Models with 110V Pump | International Models with 220V Pump |
|-----------------------------|---------------------------|-------------------------------------|
| ZCR20 | ZCR20A | ZCR20E |
| ZCR25 | ZCR25A | ZCR25E |
| ZCR30 | ZCR30A | ZCR30E |
| ZCR40 | ZCR40A | ZCR40E |
| ZCR60 | ZCR60A | ZCR60E |
| ZCR80 | ZCR80A | ZCR80E |

Replacement Parts

- ZCK-1 Zonecheck 110V Keyswitch
- ZCK-1E Zonecheck 220V Keyswitch
- ZCK-1EG Zonecheck 220V Keyswitch (German)
- ZCP-110 Zonecheck 110V Pump
- ZCP-220 Zonecheck 220V Pump
- ZCRK Zonecheck Replacement Kit

Product Overview

Simplifies compliance to NFPA 25 for quarterly flow switch testing

Does not require opening the inspector's test connection

Saves as much as 400 gallons of water per flow switch per year

Does not activate the building's fire pump Testing initiated by a key switch

Key switches may be interconnected to control all Zonechecks from one master switch

Significantly reduces testing time

Includes a System Sensor flow switch with each model

Offered in manifold and retrofit configurations

Zonecheck Manifold Model



System Sensor's Zonecheck flow switch tester is an automatic method for performing quarterly flow switch tests per NFPA 25.

Code Compliance. Quarterly flow switch tests are mandated by NFPA 25. Zonecheck simplifies testing by re-circulating the water within the pipe around the flow switch, to simulate the flow of one sprinkler head in operation. This simulation is achieved without having to open the inspector's test connection.

Environmental Savings. Zonecheck re-circulates the water within the pipe, so no water is expelled from the system. Over the course of one year, Zonecheck can save as much as 400 gallons of water per flow switch, per year.

Ensured Life Safety. Since Zonecheck does not require opening the inspector's test connection, a building's fire pump is not activated, to avoid unnecessary fire department dispatches. This also reduces the likelihood of the fire pump being turned off manually during flow switch testing, thereby ensuring the sprinkler system's integrity.

Time Savings. Zonecheck's pump is activated by the turn of a key switch. The key switch may be wired to initiate one pump locally, or can be interconnected. When interconnected, any key switch may activate all Zonecheck pumps, to significantly reduce testing time.

Applications Flexibility. All Zonechecks are equipped with a System Sensor flow switch. Models include manifold and retrofit configurations with either 110V or 220V pumps, and UL, ULC, or International style flow switches.



Standard Specifications

Working Pressure Rating

175 PSI

Operating Temperature Range

32°F - 120°F (0°C - 49°C)

Compatible Pipe (Manifold Models)

Schedule 10, 2" - 4" diameter

Compatible Pipe (Retrofit Models)

Schedule 10 and 40, 2" - 8" diameter
(50 mm through 200 mm)

Service Use

Inspection, Testing and Maintenance of
Water-Based Fire Protection Systems:
NFPA25

National Fire Alarm Code: NFPA 72

Manifold Assembly Length (Manifold Models)

25.6" (65 cm)

Component Connections (included) (Manifold Models)

2 - 1" NPT/25mm British Standard
Thread elbows

Component Connections (included) (Retrofit Models)

2 - 1" NPT/25mm British Standard
Thread elbows
2 - 25mm British Standard
Thread elbows

Valves (included)

Red: Standard valve
Green: Contains check valve

Warranty

3 years

Approximate Weight

| Style | Weight |
|-------|---------------------|
| ZCR20 | 31 lbs. (14.1 kg) |
| ZCR25 | 31.5 lbs. (14.3 kg) |
| ZCR30 | 32 lbs. (14.5 kg) |
| ZCR40 | 33 lbs. (14.9 kg) |
| ZCR60 | 34 lbs. (15.4 kg) |
| ZCR80 | 35 lbs. (15.9 kg) |
| ZC20 | 37 lbs. (16.8 kg) |
| ZC25 | 39 lbs. (17.7 kg) |
| ZC30 | 41 lbs. (18.6 kg) |
| ZC40 | 45 lbs. (28.8 kg) |

Electrical Specifications

Pump Operating Voltages

UL, ULC, FM models: 1.63A @ 110V,
60Hz International models : 0.88A
@ 220V, 50Hz

Key Switch Operating Voltage

ZCK-1: 110VAC

ZCK-1E, ZCK-1EG: 220VAC

Key Switch Mounting Options

Includes back box for surface or flush
mounting. For pre-wiring, use a
4¹¹/₁₆" x 4¹¹/₁₆" back box.

Flow Switch Included with Zonecheck

UL/FM Models with 110V Pump

| Retrofit Model | Manifold Model | Flow Switch Model Included |
|----------------|----------------|----------------------------|
| ZCR20 | ZC20 | WFD20 |
| ZCR25 | ZC25 | WFD25 |
| ZCR30 | ZC30 | WFD30-2 |
| ZCR40 | ZC40 | WFD40 |
| ZCR60 | | WFD60 |
| ZCR80 | | WFD80 |

ULC Models with 110 V Pump

| Retrofit Model | Manifold Model | Flow Switch Model Included |
|----------------|----------------|----------------------------|
| ZCR20A | ZC20A | WFD20A |
| ZCR25A | ZC25A | WFD25A |
| ZCR30A | ZC30A | WFD30-2A |
| ZCR40A | ZC40A | WFD40A |
| ZCR60A | | WFD60A |
| ZCR80A | | WFD80A |

International Models with 220V Pump

| Retrofit Model | Flow Switch Model Included |
|----------------|----------------------------|
| ZCR20E | WFD20E |
| ZCR25E | WFD25E |
| ZCR30E | WFD30E |
| ZCR40E | WFD40E |
| ZCR60E | WFD60E |
| ZCR80E | WFD80E |

For flow switch specifications, refer to the appropriate flow switch
instructions manuals.

Key Switch Operation Modes

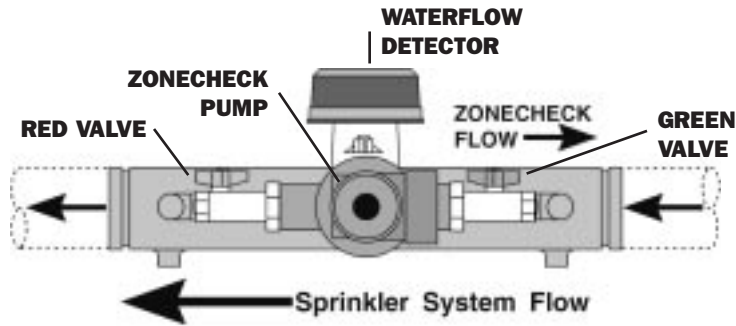
Self-test: Wired locally
Group test: Interconnected

Key Switch LED Operation

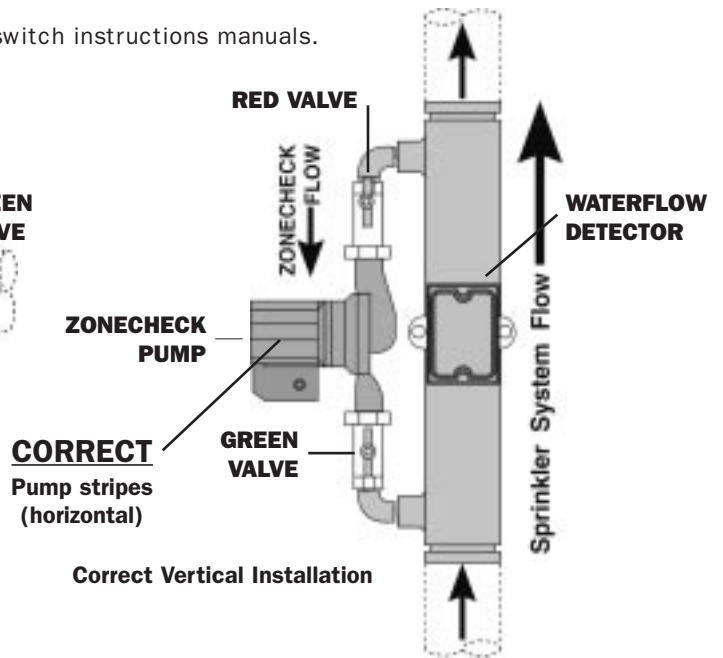
Ready state: No LED
Test initiation: Green LED
Flow switch activation: Red LED for
ZCK-1
Flow switch activation: Green LED for
ZCK1E + ZCK1EG

Zonecheck Installation

For flow switch specifications, refer to the appropriate flow switch instructions manuals.

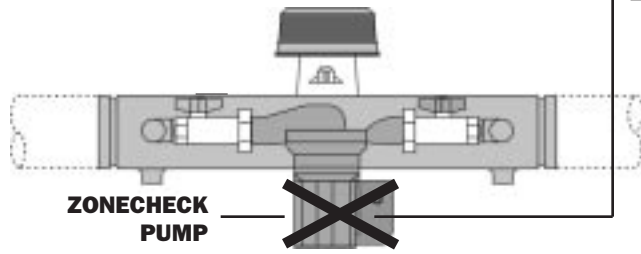


Correct Horizontal Installation

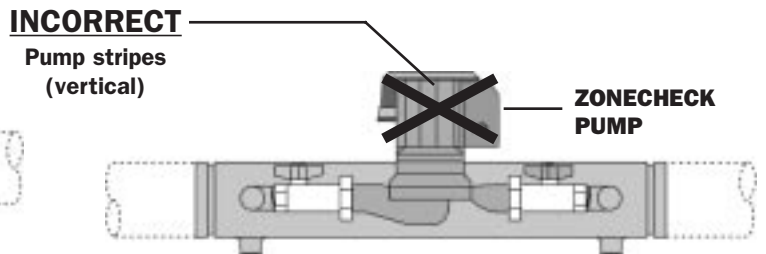


CORRECT
Pump stripes
(horizontal)

Correct Vertical Installation



Incorrect Horizontal Installation



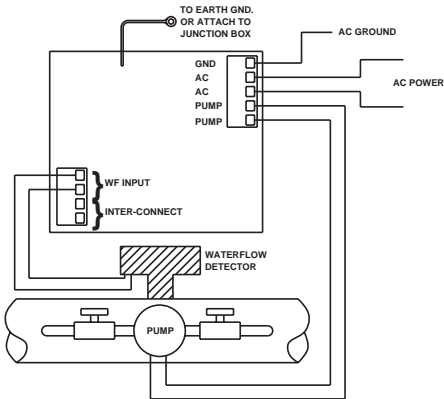
INCORRECT
Pump stripes
(vertical)

Incorrect Horizontal Installation

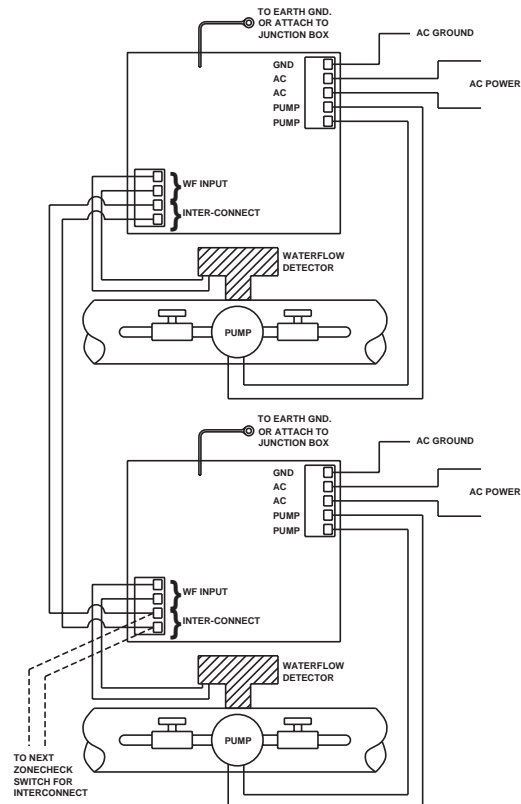
Electrical Wiring Diagrams

FOR INTERCONNECTING MULTIPLE ZONECHECK UNITS

WIRING DIAGRAM FOR STAND ALONE APPLICATION



NOTE:
WF INPUT NOT REQUIRED FOR
KEYSWITCH OPERATION IF WATERFLOW
DETECTOR IS CONNECTED TO PANEL
OR OTHER MONITORING DEVICE.
AC POWER AND PUMP WIRING
MUST CONFORM TO NEC OR
YOUR LOCAL CODES.



Engineering Specifications

General/Retrofit Model Specifications

Model shall be a Zonecheck Flow Switch Tester model _____ as manufactured by System Sensor. Flow Switch Tester shall be installed on a sprinkler system riser as designated on the drawings and/or as specified herein. Flow Switch Tester assembly shall mount on any clear pipe span of the appropriate nominal size, either in a vertical upflow or horizontal run, between 6" and 12" from the flow switch. Flow Switch Tester shall consist of a recirculating pump, operating at nominal 110V or 220V as appropriate, two (2) sets of valves and elbows to facilitate the circulation of the water, a System Sensor vane-type waterflow detector, and a key switch to activate the recirculating pump. When activated, the pump shall circulate the water within the sprinkler riser around the waterflow detector vane to simulate the flow of one sprinkler head in operation. The activating key switch shall provide the means to be wired locally to one Zonecheck Flow Switch Tester, or interconnected with other key switches for group activation. Flow Switch Tester shall be available for manifold and retrofit installation applications. Zonecheck Flow Switch Tester retrofit models shall be listed by Underwriters Laboratories, Inc.

Manifold Model Specifications

Zonecheck Automatic Flow Switch Tester manifold models shall further consist of a schedule 10 pipe assembly of the appropriate nominal size. Manifold assembly shall provide grooved ends for accepting the appropriate grooved connection fittings. Manifold assembly shall include no less than two drain ports with the appropriate drain plugs. Manifold Zonecheck models shall come with the pump, valves, elbows, pipe assembly, drain plugs, and System Sensor waterflow detector pre-assembled. Zonecheck Flow Switch Tester manifold models shall be listed by Underwriters Laboratories, Inc.

Ordering Information

| Manifold Model Number | Pipe Size | Pump Voltage | Flow Switch |
|-----------------------|---------------------------|--------------|-------------|
| ZC20 | 2" | 110V | WFD20 |
| ZC25 | 2 1/2" | 110V | WFD25 |
| ZC30 | 3" | 110V | WFD30-2 |
| ZC40 | 4" | 110V | WFD40 |
| ZC20A | 2" | 110V | WFD20A |
| ZC25A | 2 1/2" | 110V | WFD25A |
| ZC30A | 3" | 110V | WFD30-2A |
| ZC40A | 4" | 110V | WFD40A |
| Retrofit Model Number | Pipe Size | Pump Voltage | Flow Switch |
| ZCR20 | 2" | 110V | WFD20 |
| ZCR25 | 2 1/2" | 110V | WFD25 |
| ZCR30 | 3" | 110V | WFD30-2 |
| ZCR40 | 4" | 110V | WFD40 |
| ZCR60 | 6" | 110V | WFD60 |
| ZCR80 | 8" | 110V | WFD80 |
| ZCR20A | 2" | 110V | WFD20A |
| ZCR25A | 2 1/2" | 110V | WFD25A |
| ZCR30A | 3" | 110V | WFD30-2A |
| ZCR40A | 4" | 110V | WFD40A |
| ZCR60A | 6" | 110V | WFD60A |
| ZCR80A | 8" | 110V | WFD80A |
| ZCR20E | 50 mm | 220V | WFD20E |
| ZCR25E | 65 mm | 220V | WFD25E |
| ZCR30E | 80 mm | 220V | WFD30E |
| ZCR40E | 100 mm | 220V | WFD40E |
| ZCR60E | 150 mm | 220V | WFD60E |
| ZCR80E | 200 mm | 220V | WFD80E |
| Replacement Model No. | Description | | |
| ZCK-1 | 110V Keyswitch | | |
| ZCK-1E | 220V Keyswitch | | |
| ZCK-1EG | 220V Keyswitch (German) | | |
| ZCP-110 | 110V Pump | | |
| ZCP-220 | 220V Pump | | |
| ZCRK | Zonecheck Replacement Kit | | |

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