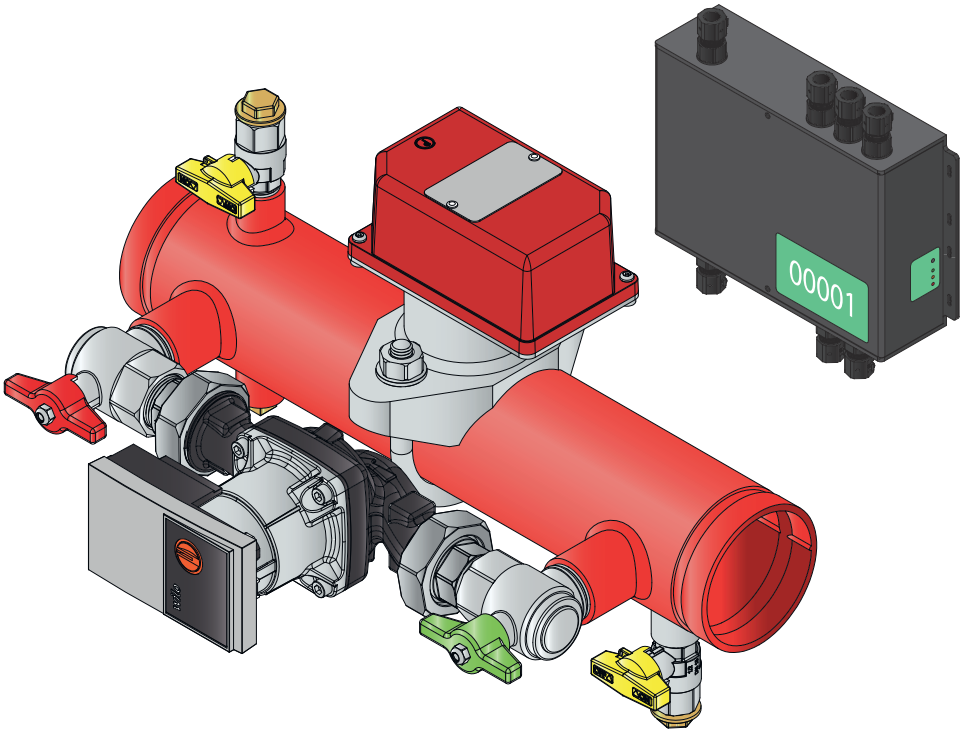
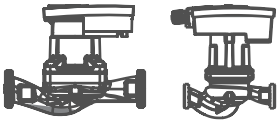
Zonecheck® Addressable



All Types



ZC-ADD-IB-04/21-10

Zonecheck Addressable

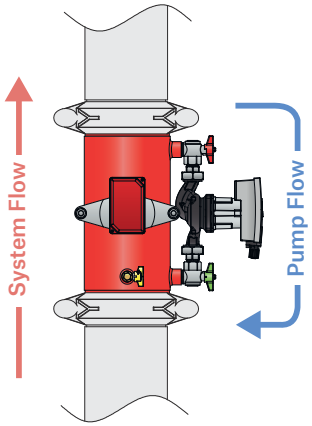
Information
While every effort has been made to ensure that the information contained within this document is correct, Project Fire makes no guarantee for completeness or accuracy. Project Fire Products Ltd reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligation.

Contents

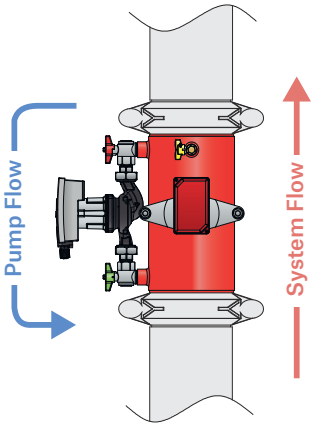
Pre-checks

Before you install Zonecheck follow these simple steps.

1. Open the box and remove all packaging
2. Check you have the correct size manifold
3. Check that you have the correct model for your site (right or left handed).
4. Check that there is an Intelligent Monitoring Module (IMM) in the box (in some cases the IMM may have been pre-programmed for a set location, make sure you have the correct IMM for the zone you are in).
5. Inspect the product to make sure it hasn't been tampered with. If you have any queries please contact your supplier.



LEFT HANDED



RIGHT HANDED

NOTE: SIZES 150 AND 200 USE A LARGER PUMP
Check for notes in this guide that refer specifically to Zonechecks 50-100 and 150-200.

Installation - All Types

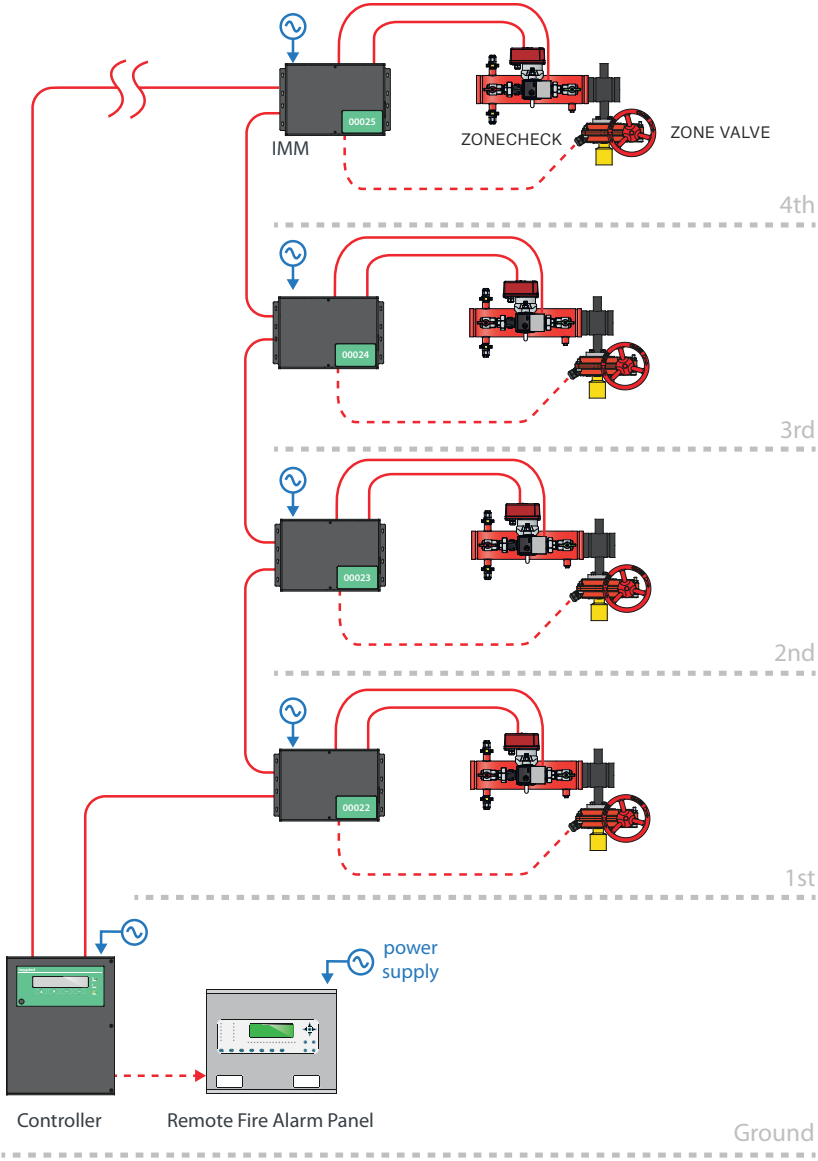
Zonecheck should be installed by a competent fire sprinkler installer and wired up by a qualified electrician.

1. Contact building management to inform them of the proposed works.
2. Isolate and drain down selected zone.
3. Orientate the Zonecheck in accordance with the diagrams in this booklet.
4. Install the Zonecheck with two approved grooved couplings (not supplied).
5. Double check that the sprinkler flow arrows on Zonecheck are facing the correct direction (see diagrams included in this booklet).
6. (Important) Remove lid from IMM and adjust IMM mode to suit application (See pages 9 & 10)
7. Fit the IMM to the wall (or adjacent pipework using a bracket) in a suitable location.
8. Wire the Zonecheck pump and flow-switch to the IMM in accordance with the diagrams in this booklet. (See pages 9-12)
9. (Optional) Wire monitored zone valve into IMM using resistor pack provided (See pages 9 & 10)
10. Wire the appropriate power supply to the IMM. (recommended 3A fused spur)

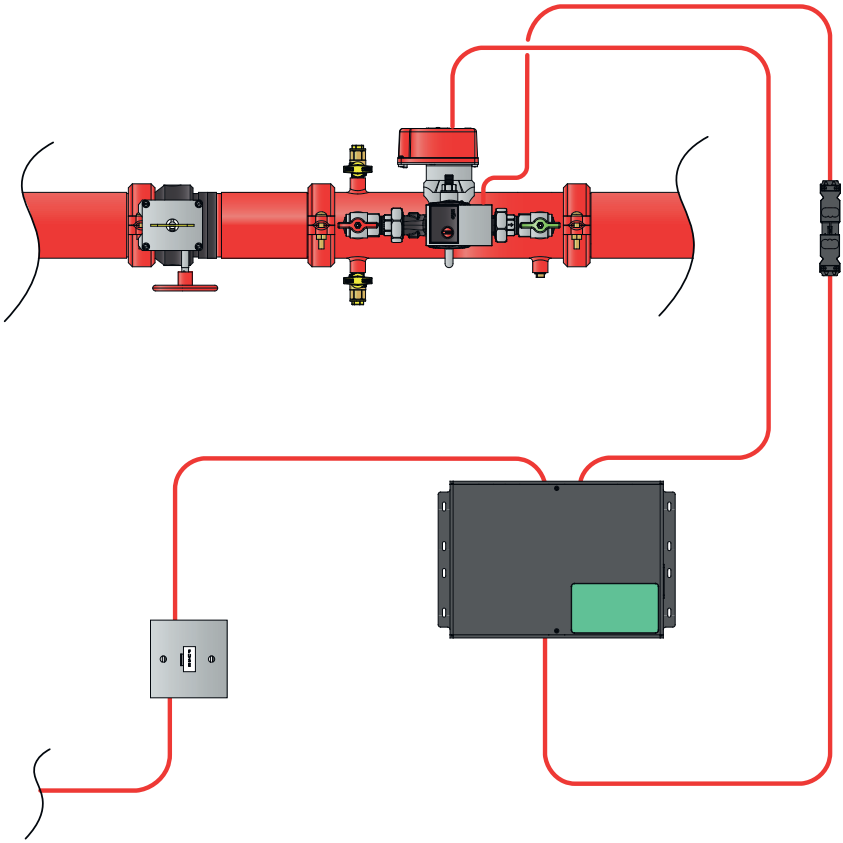
Proceed to Commissioning instructions.

DO NOT ATTEMPT TO MODIFY ZONECHECK,
TAMPERING WILL VOID THE WARRANTY.

System Overview
Example schematic showing networked IMM



System Overview
Example schematic showing stand-alone IMM

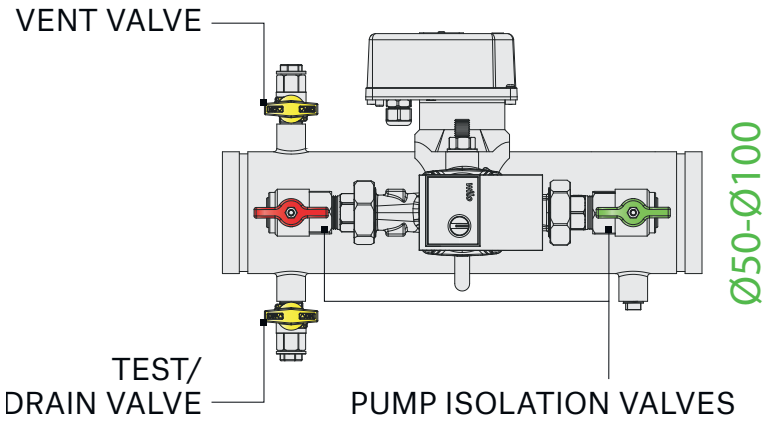


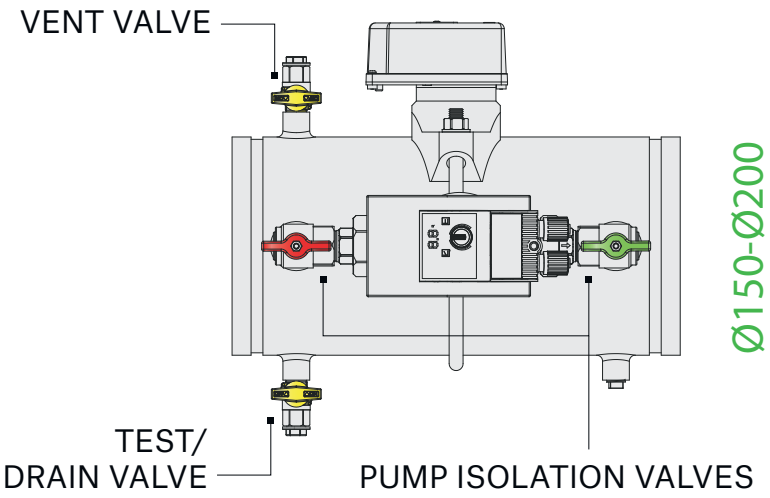
Commissioning - Networked

Before commissioning check:

- Ensure IMM mode is correct on all IMM's (See pages 9 & 10)
- All Zonechecks have been mechanically installed correctly.
- Every Zonecheck is wired to its local IMM.
- Every IMM is wired into the loop.
- Controller is on and wired into the loop.
- All IMM details have been entered into the controller (i.e. serial number, location, zone & group details).
- Ensure centre management/building control are aware of potential alarms/ system activity caused during the commissioning process.

1. Contact the centre control room to authorise a flow-switch test.
2. Ensure the Zonecheck red and green valves are in the open position.
3. Attach hosepipe to yellow vent valve (see opposite) on the Zonecheck. Now carefully open the vent valve on the Zonecheck unit to remove the air from the Zonecheck pipework, allow water to drain to make sure all air is bled from the unit. Then close vent valve and replace plug.
4. Connect a hose pipe to the test valve at the furthest point on the zone or use the drain/ test valve provided on the Zonecheck unit.
5. Discharge water through the hose (this is a once only commissioning test).
6. Ensure that the IMM has received the signal from the flow-switch, the controller will assume that there is a fire condition from the Zonecheck unit being commissioned and sound the alarm (dependant on the set-up of the fire alarm, the controller may sound all fire alarms).
7. Close the drain/test valve as appropriate.
8. Check the controller to ensure that the correct address for the Zonecheck/IMM have been shown on the display, this will be a fire alert. It will then read a zone, group and location these should all correspond with the last Zonecheck tested.
9. Contact the centre control room to check that a test signal has been received.
10. A test can be started from the IMM by pressing the internal TEST button for more than ½ second. The 'test in progress' LED will illuminate.
11. A pass is considered to be between 5 and 60 seconds from powering the pump and a fail otherwise. For internal reasons the unit will take at least 4 seconds to fail even if the flow-switch is always open or faulty. The tests will always time out after 61 seconds.
12. The 'pass/fail' LED will indicate the result of the test, green indicating that the test was successful.
13. For final comissioning of the whole system please see Zonecheck Addressable Installation & Operation Instructions (ZC-ADD-IOI).


VENT VALVE
TEST/
DRAIN VALVE
PUMP ISOLATION VALVES
Ø50-Ø100


VENT VALVE
TEST/
DRAIN VALVE
PUMP ISOLATION VALVES
Ø150-Ø200

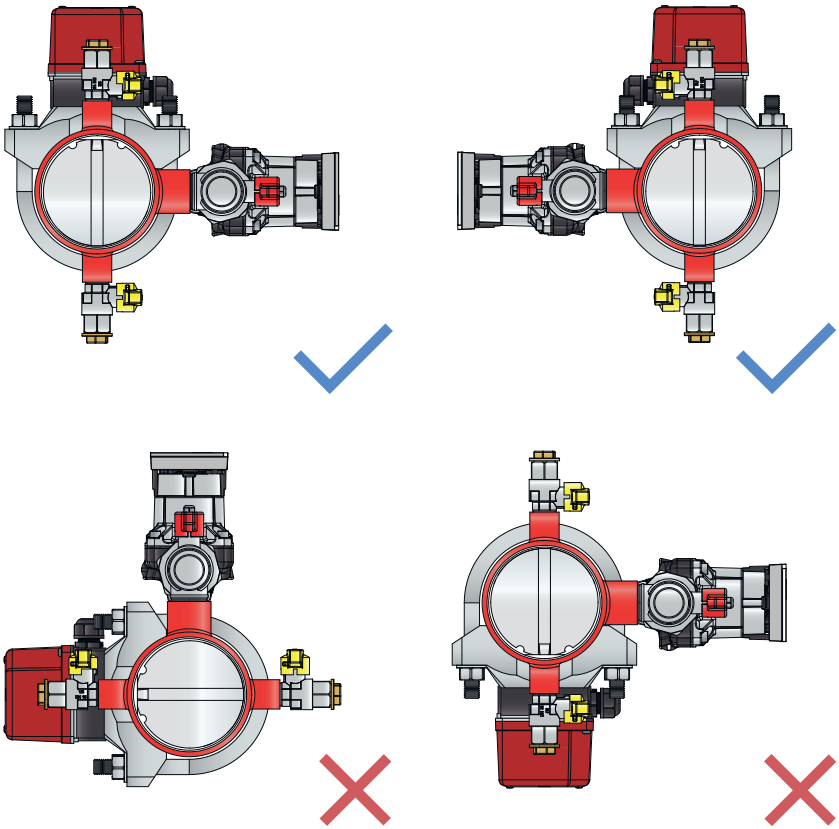
Commissioning - Stand Alone

Before commissioning check:

- Ensure IMM mode is correct for all IMM's (See pages 9 & 10)
- Ensure Zonecheck has been mechanically installed correctly.
- Zonecheck is wired to its local IMM
- Ensure centre management/control are aware of potential alarms/ system activity caused during the commissioning process.

1. Contact the centre control room to authorise a flow-switch test.
2. Ensure the Zonecheck red and green valves are in the open position.
3. Attach the hosepipe to yellow vent valve (see previous page) on the Zonecheck. Now carefully open the vent valve on the Zonecheck unit to remove the air from the Zonecheck pipework, allow water to drain to make sure all air is bled from the unit. Then close vent valve and replace plug.
4. Connect a hose pipe to test/drain valve at the furthest point on the sprinkler zone, or use the test/drain valve provided on the Zonecheck unit (see opposite).
5. Discharge water through the hose (this is a once only commissioning test).
6. Ensure that the IMM has received the signal from the flow switch (IMM status will show flashing red).
7. Close the drain/test valve as appropriate.
8. Contact the centre control room to check that a test/fire signal has been received.
9. A test can be initiated from the IMM by pressing the internal TEST button for more than 0.5 seconds. The 'test in progress' LED will illuminate. (See pages 11 & 12)
10. A pass is considered to be between 0-60 seconds from powering the pump and a fail otherwise. For internal reasons the unit will take at least 4 seconds to fail even if the flow-switch is always open or faulty. The tests will always time out after 91 seconds.
11. The 'pass/fail' LED will indicate the result of the test, green indicating that the test was successful and red for fail.
12. Fill in and hand over a completion certificate for each commissioned Zonecheck.

Orientation



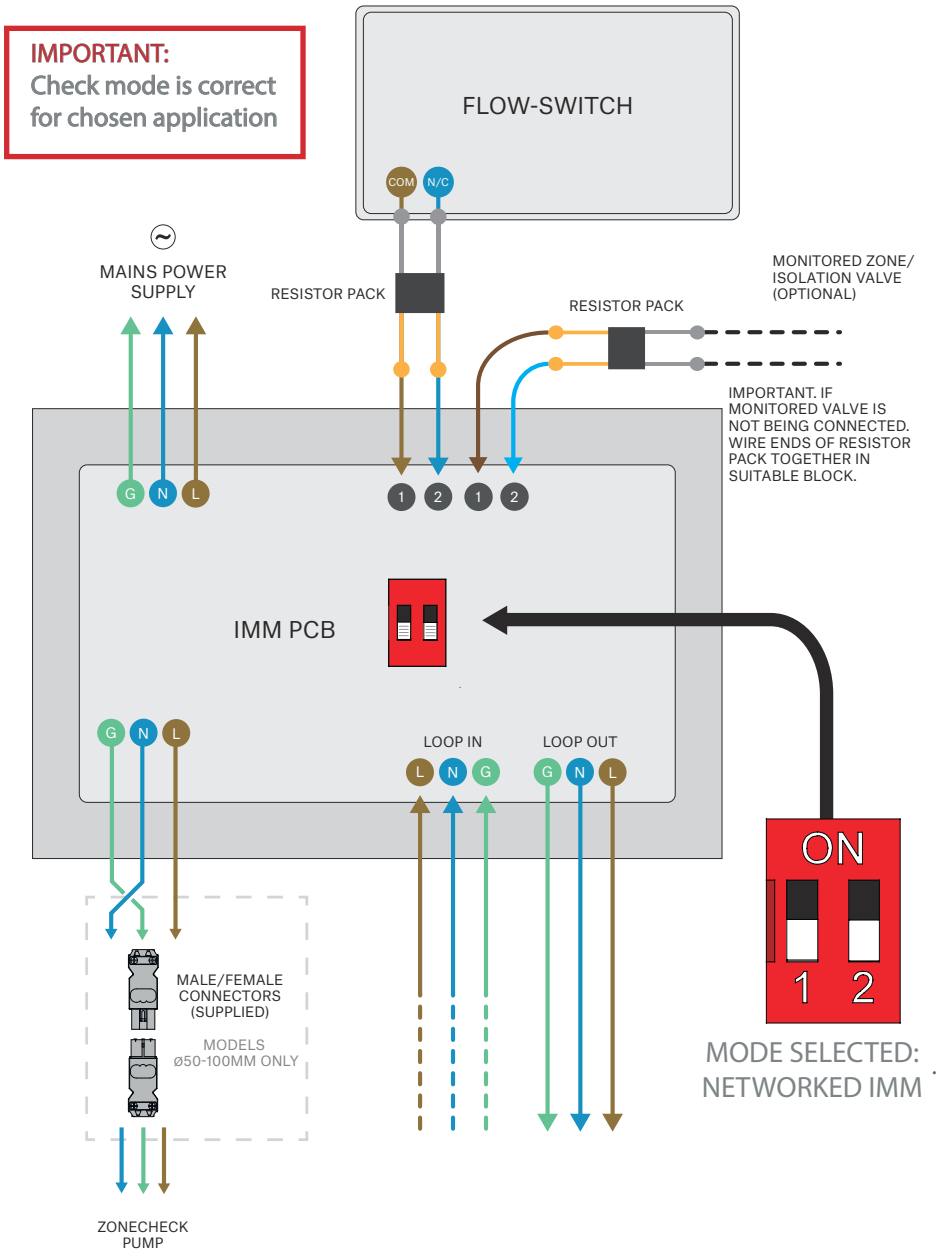
PUMP NOT HORIZONTAL

FLOW-SWITCH ON UNDERSIDE OF PIPE

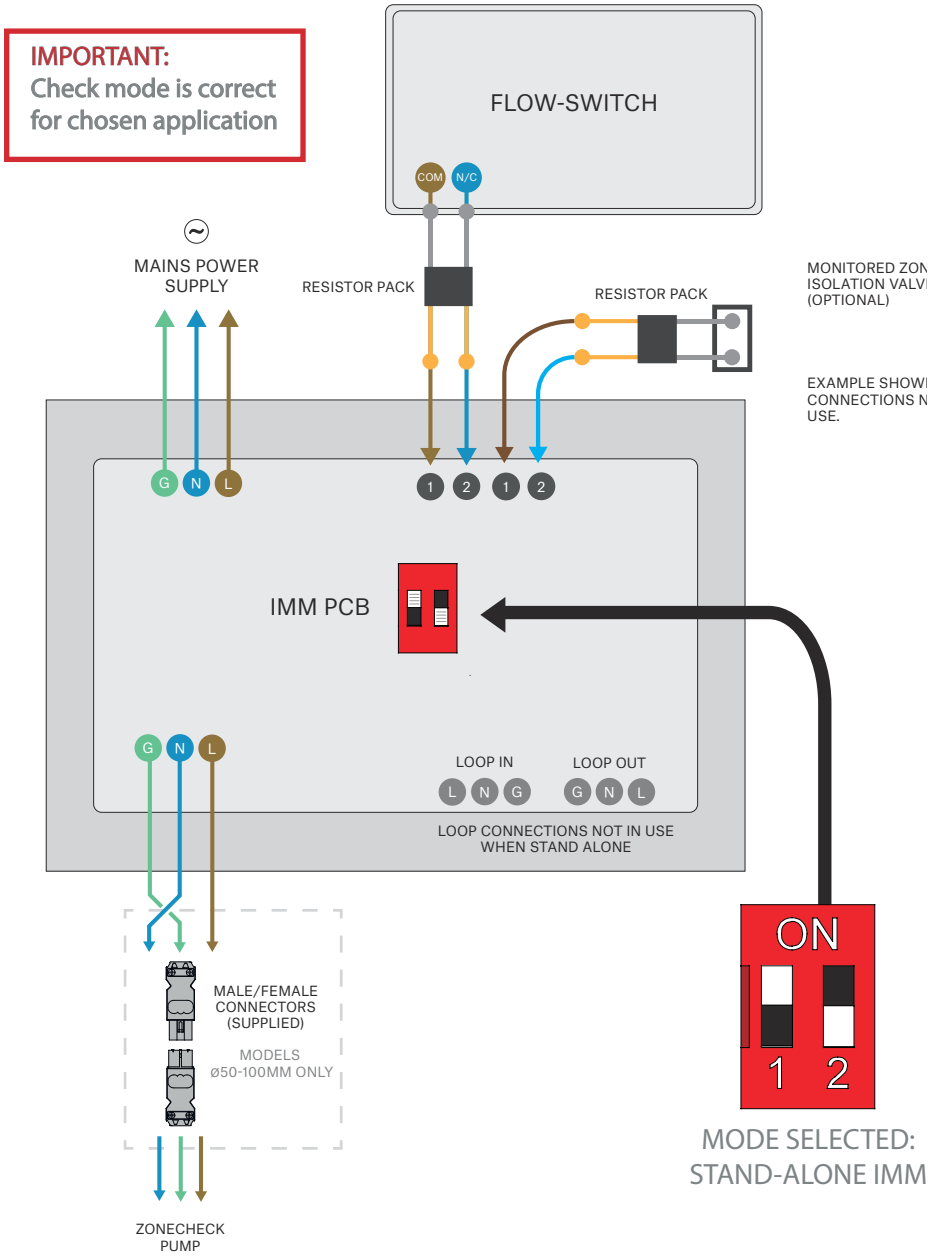
Remember:

- The pump direction-of-flow arrow faces the opposite direction to the system flow.
- Do not position the flow-switch on the underside of the pipe.
- For vertical flow applications, only mount flow-switch where up-flow conditions exist.

IMM Wiring
Example for Networked IMM



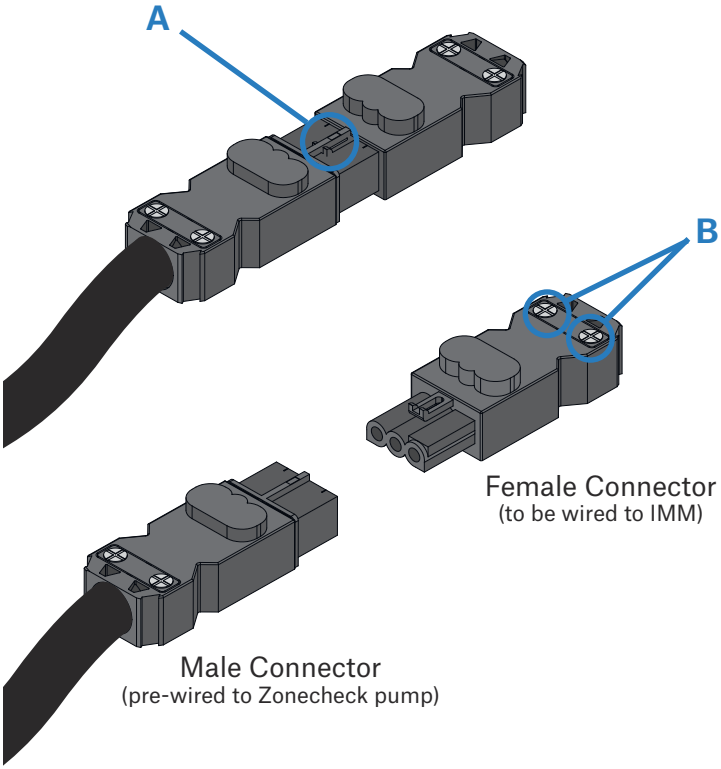
IMM Wiring
Exanple for Stand Alone IMM



Additional Wiring Information

For Zonecheck units 050-0100

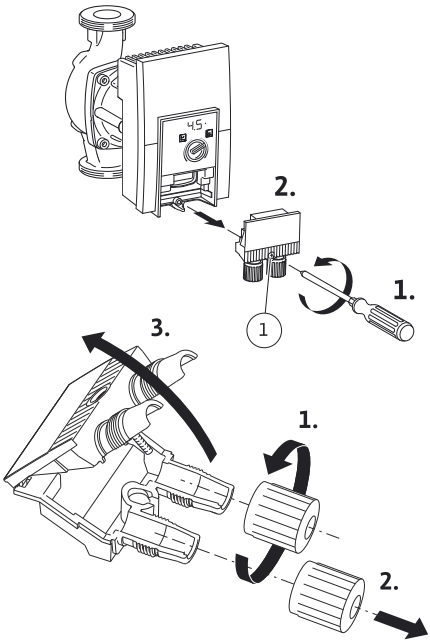
Your Zonecheck will come with male/female connectors which are connected to the pump. Simply remove the free (female) side of the connector by using a terminal screwdriver (A). Remove the cover from the connector using a PH1 screwdriver to expose the terminals (B). Then wire from IMM to the connector ensuring that the wiring matches the symbols on the connector. Finally, press the two connectors together again until they click/lock together.



Additional Wiring Information

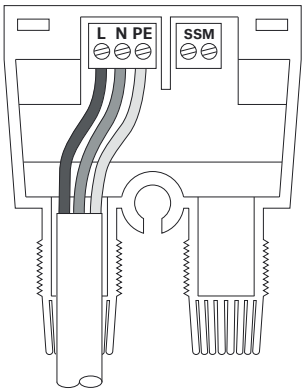
For Zonecheck units 0150-0200

Wire from the IMM directly into the pump following the proceedure shown below.



Use a screwdriver to remove wiring box from the pump head.

Unscrew the glands to allow the wiring box to hinge open.



Wiring from IMM into the wiring box. Wire to the Live, Neutral and Earth terminal blocks.

Do not use the connections marked SSM.

Hinge the wiring box closed and re-tighten the glands.

Replace the wiring box into the pump head and tighten screw to secure.

Local Testing from IMM

IMMs have functionality to perfom flow-switch testing locally as well as giving status information via three LED's located on the side of the IMM. Flow-switch testing is activated by pushing the concealed push button with a ball point pen, small electrician's screw-driver or similar. Please take care to not break the concealed push button by applying too much force.

1. Use a ball point pen, small screwdriver or similar to gently push the concealed button on the side of the IMM.
2. Test in progress LED will flash during testing
3. Pass/fail LED will show solid green to indicate a pass (this can take up to 30 seconds).

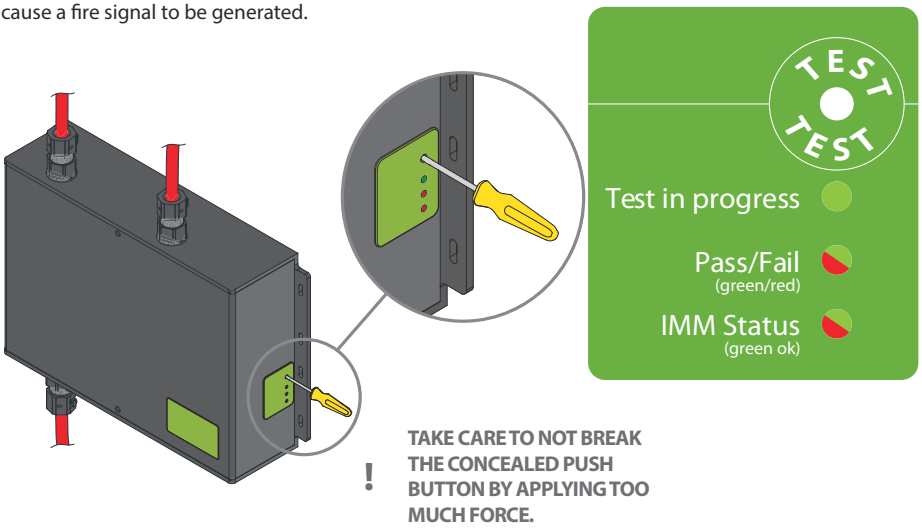
LEDs

The LEDs located on the side of the IMM indicate the following:-

- Mains LED **green** only visible when the case is removed.
- Test in progress LED **green**
- Pass/fail single bi-colour **green**/**red**

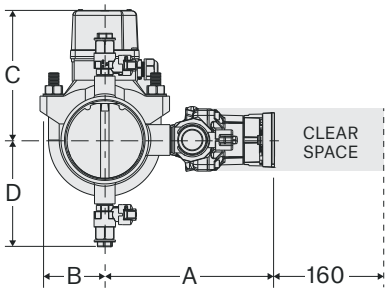
PLEASE NOTE:

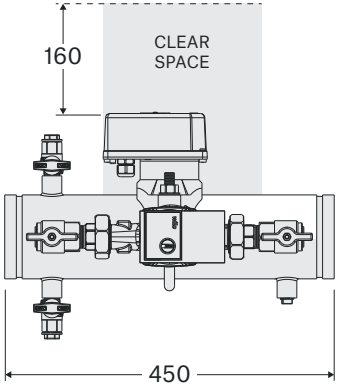
Local testing using Networked IMMs will cause a fire signal to be generated.



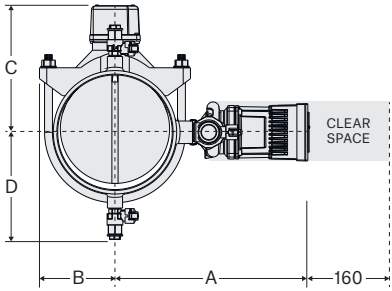
Zonecheck Dimensions

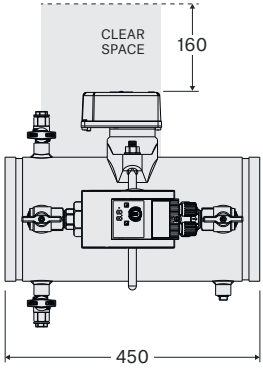
				(Potter)	*(System Sensor)*	
Øin	**Ømm**	**A**	**B**	**C**	**C**	**D**
2″	50	210	66	145	140	116
2 ½″	65	215	66	155	160	124
3″	80	220	85	165	165	130
4″	100	225	85	170	175	140



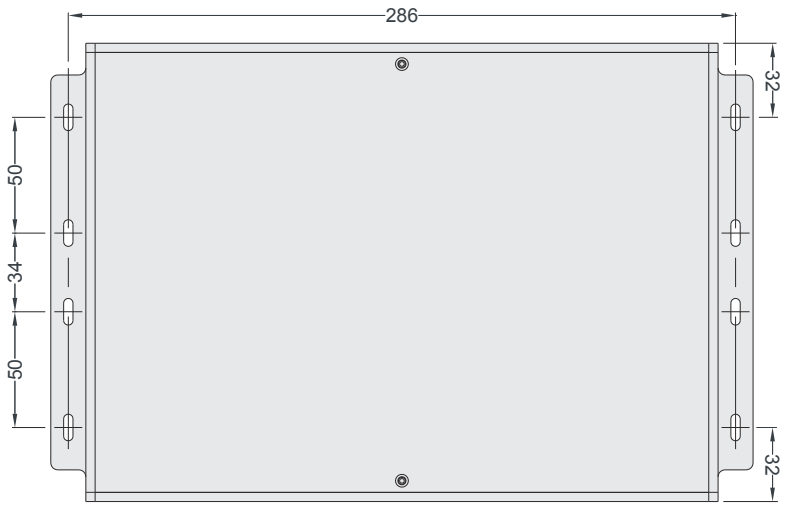


				(Potter)	*(System Sensor)*	
Øin	**Ømm**	**A**	**B**	**C**	**C**	**D**
6″	150	320	113	200	200	168
8″	200	345	148	225	235	195





IMM Dimensions



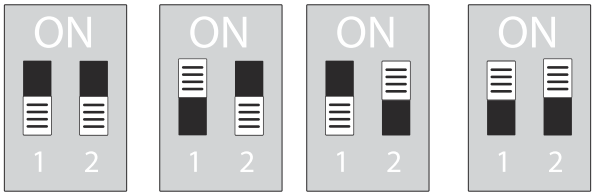
Ø4mm SLOTS

IMM Modes

Each IMM is equipped with a four way dip-switch. Each position determines the mode of that IMM. The dip-switch positions are shown below. To change the mode of an IMM first power down the system, wait 60 seconds before changing the dip-switch position and powering up the IMM again.

Network Mode

The IMM shall be connected to its local Zonecheck and sit on the wiring loop. Group testing can be done from the controller or solo testing from the concealed test button on the IMM itself.



NETWORK STAND-ALONE PUMP HOUSE GEMINI

Specifications

Zonecheck

Working Pressure Rating	Water, 12 bar (175 psi) maximum
Operating Temperature Range	0°C - 49°C (32°F – 120°F)
Pipe Diameter	50, 65, 80, 100, 150 & 200 mm (2, 2½ 3, 4, 6 & 8“)
Valves	Inlet (red): 1” Angled Ball Valve Cimberio Oulet (green): 1” Angled Ball Valve Cimberio 1” Adaptor with Non-return Valve FAR ½” Ball Valve Cimberio
Approvals	LPCB, UL, FM and VdS

Flow-switch (System Sensor)

Type	WFDE
Contact Rating	10A@125/250 VAC; 2.5 A@24 VDC
IP Rating	IP54
Time Delay	0 - 30s

Flow-switch (Potter)

Type	VSR-EU
Contact rating	10A@125/250 VAC; 2.0Amps @ 30 VDC
IP Rating	IP54
Time delay	0 - 30s

Zonecheck Pump

Ø50-100 mm	Wilo Yonos Para
Operating Voltage	1 ~ 230v 50Hz
Full Load Current	0.66 A
Power Rating	75W
IP Rating	IPX4D

Ø150-200 mm	Wilo Yonos Para HF
Operating Voltage	1 ~ 230v 50Hz
Full Load Current	1 A
Power Rating	120W
IP Rating	IPX4D

IMM

Mains Power Supply	120-240 VAC 50/60 Hz- 250w max
PCB Voltage rating	120-240 VAC 50/60 Hz- 250w max

Auxiliary Outputs

Number of outputs	1
Type	Relay, volt free, single pole, changeover/ switched mains for Zonecheck pump
Max Rating	3A resistive, 250VAC, 30VDC. 0-35 power factor
Relay 1, Fire condition	Active when a flow-switch is triggered, not under a test situation
Switched mains for pump	250VAC-3A

Inputs & Auxiliary Inputs

Mains power supply	110-230VAC 50/60 Hz
Flow-switch Input	Monitors a flow-switch
Monitored valve input	Monitors an external valve source

Cable Requirements

Type of Cable	Fire-resistant screened cable (FP200 or a equal equivalent)	
Size of Conductors	1.5 mm^2	1.5 mm^2
Max Loop Length	3 Km	4.5 Km

Important Information

- Ensure Zonecheck is installed both mechanically and electrically commissioned and tested prior to leaving site.
- Ensure protection to Zonecheck is employed whenever there is an extended period from installation to commissioning.
- If the Zonecheck could be wired when the sprinkler system zone is drained down then it is vitally important that the Zonecheck red and green valves are left in the closed position, to ensure the motor is not accidentally run dry and damaged. (Please ensure the commissioning engineer is aware of the closed Zonecheck valve status).
- Always use a flat faced wrench for Zonecheck commissioning.
- The suggested location for the IMM is at low level affixed to a wall or adjacent pipework using a suitable bracket. If IMM is "Stand Alone" it must be located for easy regular access for testing purposes.
- Each Zonecheck is factory assembled and tested. Do not attempt to reconfigure. Tampering will void the warranty.
- Maximum working pressure - 12 bar (175 psi), test pressure - 18 bar (260 psi).
- Use Zonecheck flow-switch testers in wet-pipe systems only. Do not use in dry pipe, deluge, or pre-action systems.
- Only activate the Zonecheck when the valves are opened and the sprinkler system is full.
- The stand- alone operation includes a 7 day self maintenance feature. This turns on the pump for 2 seconds every 7 days. This will not activate the flow-switch but will help to prevent the pump spindle from seizing up.

Troubleshooting

Zonecheck should be troubleshooted by a competent fire sprinkler installer and wiring checked by a qualified electrician.

No lights on IMM.	Open the IMM and check the wiring against the wiring diagram. Confirm the power supply has been connected properly.
IMM status light is flashing red.	Check monitored lines for an open or short circuit. Check IMM mode (pages 9 & 10) Check resister pack is present on monitored valve (pages 9 & 10)
Pass/Fail light is red.	Means the previous flow-switch test failed *(A pass is considered to be between 5 and 90 seconds from powering the pump).*
Pump runs hot and does not operate the flow-switch.	Pump is airlocked 1. Attach hosepipe to yellow vent valve on the Zonecheck. 2. Carefully open the vent valve on the Zonecheck unit to remove the air, allow water to drain to make sure all air is bled from the unit. 3. Close vent valve and replace plug.

Standards & Approvals

In the majority of multi-occupancy sprinklered premises it is a requirement of BS EN 12845 that each tenant should carry out a functional test on a fitted flow-switch every quarter. All international fire code standards such as NFPA etc all make the flow-switch test mandatory.

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, regardless of where the Zonecheck is installed or located in the system. As water operates the flow-switch paddle an electronic signal is sent back to the central controller via IMM on an addressable loop to indicate that the flow-switch has operated correctly. Throughout the whole process water is being re-circulated within the system and no water is discharged as Zonecheck is a closed loop system.

Zonecheck Addressable is approved to UL life safety standards and conforms with the relevant life safety requirements detailed in BS EN12845, EN54 and NFPA101. Zonecheck is fully approved to LPCB, FM, UL and VdS standards.

Responsible Disposal

Project Fire recommend that the product needs to be disposed of correctly when the product reaches the end of its life cycle.
Disposal of business or commercial waste should be in compliance and accordance with government guidance and regulations.
Disposal of electrical waste should be in compliance and accordance with “Waste Electrical and Electronic Equipment recycling” (WEEE).

One Year Warranty

Project Fire Products warrants its enclosed Zonecheck flow-switch tester to be free from defects in materials and workmanship under normal use and service for a period of one year from date of manufacture. Project Fire Products makes no other express warranty for this flow-switch tester. No agent, representative, dealer or employee of the Company has the authority to increase or alter the obligations or limitations of this warranty. The Company's obligation of this Warranty shall be limited to the repair or replacement of any part of the flow switch tester, which is found to be defective in materials or workmanship under normal use and service during the one year period commencing with the date of manufacture. After phoning Project Fire's number, 01889 271271 for a Return Authorization number, send defective units postage prepaid to Project Fire, Pasturefields Industrial Estate, Pasturefields Lane, Hixon, Staffs, ST18 0PH. Please include a note describing the malfunction and suspected cause of failure. The Company shall not be obligated to repair or replace units, which are found to be defective because of damage, unreasonable use, modifications, or alterations occurring after the date of manufacture. In no case shall the Company be liable for any consequential or incidental damages for breach of this or any other Warranty, expressed or implied whatsoever, even if the loss or damage is caused by the Company's negligence or fault.

projectfire

innovators in fire protection

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