

Zonecheck® Addressable



Installation & Operating Instructions



FIRE EDGE®



The only approved
fully compliant solution
for fire sprinkler testing
and monitoring.



System Overview	4
IMM	8
Controller	16
Setup	26
System Configuration	28
Action Menus	38
Alarm Codes	46
Service	51
Specification	52

System Overview

Zonecheck Addressable System

Zonecheck Addressable is a system designed to effectively manage a buildings water-flow alarm testing routine. Zonecheck Addressable automatically tests every flow-switch at set, regular intervals and automatically records the results on the controller with a time and date stamp. Further to this, the end user is able to instigate a water flow alarm test for every flow-switch on the system directly from the controller at any time. These features give direct control for group testing to the building owner/ primary lease holder whether installed in a single or multiple occupancy building.

Typical system

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 the Zonechecks in the loop can be remotely tested. The information received by the controller can then be relayed to a building's remote alarm panel.

Testing

During testing a 'test' command is transmitted via the looped system to the appropriate IMM(s). Each IMM operates the 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. At this point the Zonecheck pump is switched off automatically. 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.

Definitions

Controller

Every IMM is wired (as part of a looped system) back to the Zonecheck Addressable Controller. The Controller allows the user to test every Zonecheck® and to monitor the status of every zone valve incorporated into the system. You only need one Controller to monitor up to 1000 IMM.

IMM

An IMM (intelligent monitoring module) is a small, sealed box which houses a PCB board capable of communicating with the controller, initiating a flow-switch test and transmitting fire and fault information. Every Zonecheck® comes with its own IMM which should be installed on a nearby wall or next to the Zonecheck® on the pipe. The circulating pump, flow-switch and zone valve (optional) are wired to the IMM. The IMM can also be used to monitor Gemini pre-action heads, Bellcheck, Pump House Signals and Trace Heating units.

Printer

The printer connects to the Zonecheck Addressable Controller via the designated RS485 port. This allows for test records to be automatically printed to make record keeping simple, reliable and quick.

IDENT Panel

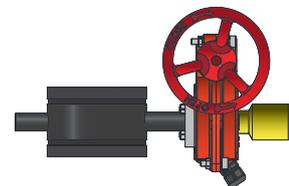
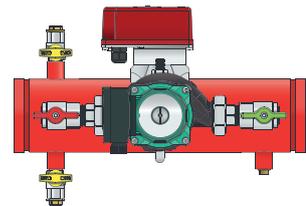
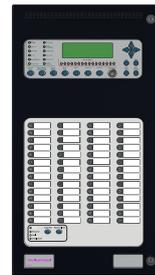
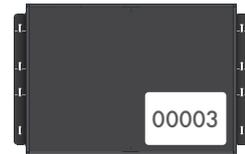
The IDENT panel is a fire detection panel with 54 LED zone indicators to identify fire and fault for each zone. The panel is connected to the Zonecheck Addressable Controller via a single ethernet cable. For systems greater than 54 zones, multiple IDENT panels can be networked together. The panel has a minimum 24 hours battery backup.

Zonecheck

Zonecheck is a factory assembled and tested product that includes a flow-switch and circulating pump. Zonecheck® circulates water around the flow-switch to simulate a flow of water to complete a code-compliant water-flow alarm test. You will need one Zonecheck® for every zone.

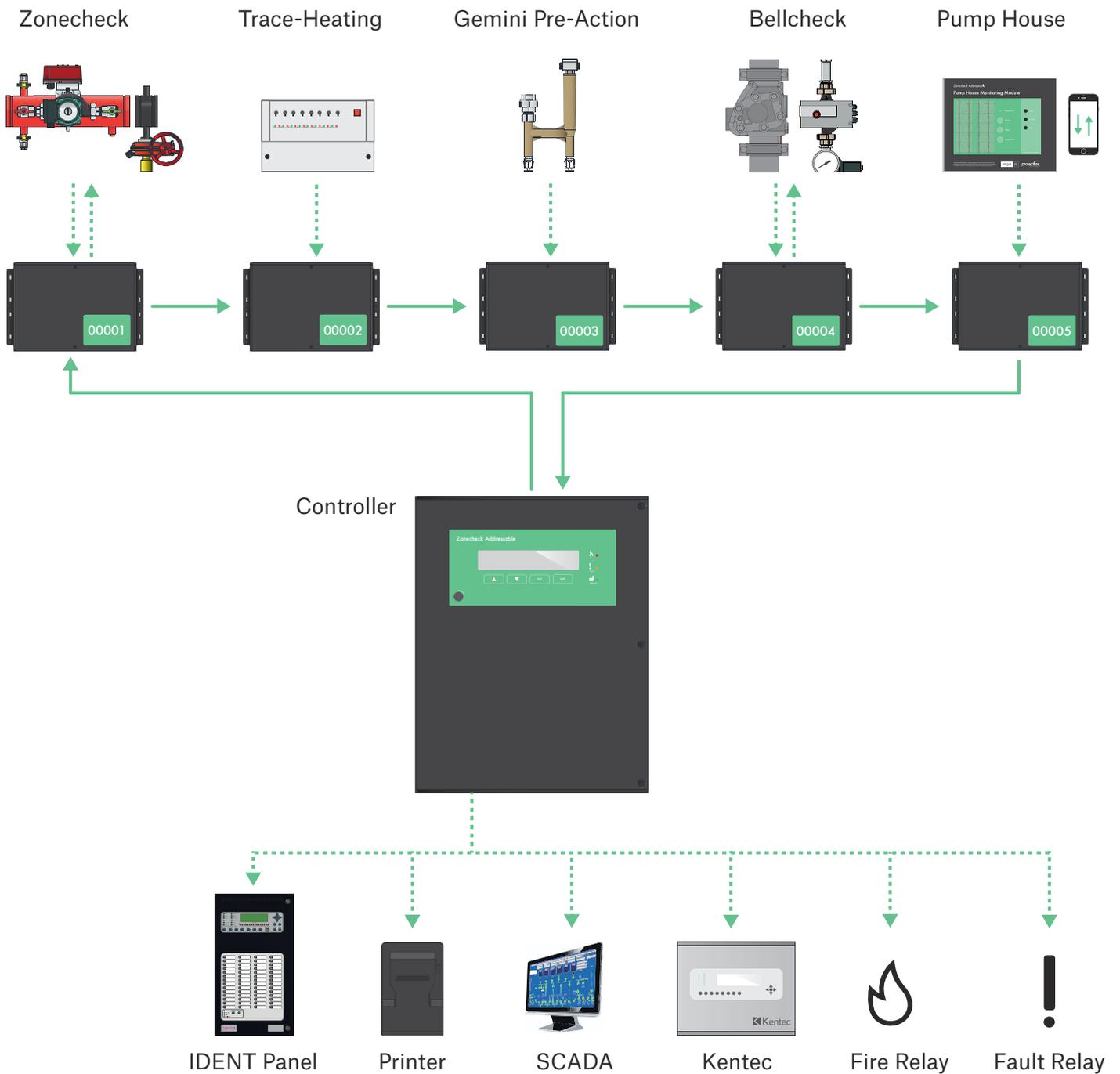
Zone valve

The zone-valve can isolate the supply of water to a given sprinkler zone. Every zone (or floor) must have its own zone valve. If desired, this valve can be wired to its local IMM. There must be one zone valve for every zone.



System Configuration

Zonecheck Addressable provides a number of different methods for its UL approved testing and monitoring system. These capabilities are shown in the diagram below.



Installation

Use the following guide as a step-by-step checklist for installing the Zonecheck Addressable system:

1. Create list of every IMM's serial number and assign location, zone and group information (use IMM Log).
2. Mechanically install every Zonecheck
3. Mechanically fit every IMM adjacent to every Zonecheck
4. Mechanically fit the controller
5. Wire every Zonecheck and zone-valve (or supplementary equipment) to its own IMM
6. Wire every IMM into the loop back to the controller
7. Connect power supply to every IMM.
8. Connect power supply to the controller
9. Setup the controller
10. Install the printer (optional feature)
11. Connect and programme any outputs from the controller (Kentec/UOM/SCADA etc.)
12. Commission each Zonecheck
13. Handover - to be performed with the end-user present.
14. Activate flow-switch test for all Zonechecks on system
15. Pass the end-user guide onto the end user
16. Complete & sign a handover certificate (ZC-ADD-HC)

Overview

The IMM is a unit designed predominantly for monitoring the state of several inputs. It communicates information to the user either via LED or by sending data via its loop ports back to the Controller. It is an intelligent unit that has built in functionality for carrying out Zonecheck tests, monitoring Gemini sprinkler heads, pump houses and trace heating systems.

IMM Log

Before you start installing the system you should create a comprehensive list using the IMM Log spreadsheet which includes the following information. This spreadsheet can be downloaded at www.projectfire.co.uk

General PIN	0	0	0	0		
Keyboard PIN	5	6	7	8		
Syncro Node	0					
Zonecheck Node	0					
Controller Location						
UOM fitted	0					

IMM logical No.	IMM serial No.	Location	Zone ID	Group ID	Test Period (D/W/M)	
1	1091	Starbucks	1	1	M	OK
2	1105	Costa Coffee	2	1	M	OK

General Pin

This is a four digit pin to access the controller's functions. The default pin is 0000 and must be entered using the buttons on the controller.

Keyboard Pin

This is a four digit pin to access the configuration menu using the optional keyboard. The default pin is 5678 and must be entered using the keyboard.

Syncro Node

This is only used when connecting the controller to a Kentec Syncro AS panel. In these circumstances set the Syncro Node to 1.

Zonecheck Node

This is only used when connecting the controller to a Kentec Syncro AS panel. In these circumstances set the Zonecheck Node to 2.

Controller Location

Type in the physical location of the Controller e.g. Control Centre (max 34 characters). This can also be left blank.

UOM Fitted

Type in the number of UOMs that have been connected to the system. If no UOM's are connected use 0.

IMM Logical Number

This is the loop order that the IMM's have been installed and must be entered in sequentially (1, 2, 3 etc.).

Serial Number

This is a five digit number that is permanently associated with the IMM. This serial number can not be changed.

Location

This is the physical location of the IMM and should reflect the name of the area installed (e.g. Maternity Ward 2). This is a maximum of 34 characters.

Zone

Allows you to create a zone number for each IMM. This means you can test Zonechecks individually.

Group

Allows you to create a group for a number of Zonechecks. This means you can test Zonechecks as separate groups.

Test Period

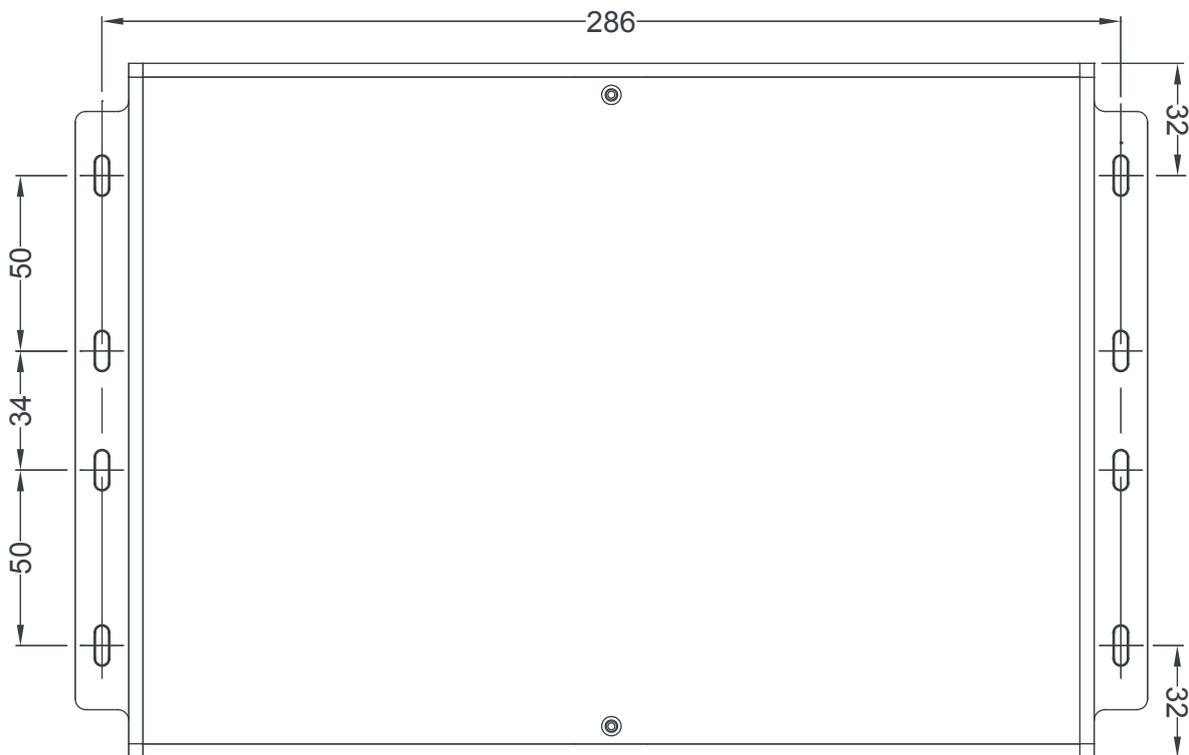
Allows you to determine how often the IMM will be automatically tested. This can be set to daily, weekly or monthly (D, W or M).

Status

Type OK in the final column for every IMM as shown.

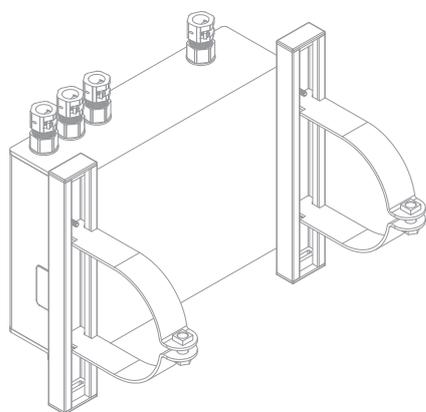
Mounting

The IMM box must be mounted on a flat surface without any protrusions using the correct fixings or using the mounting kit for easy connection onto nearby sprinkler pipework.



Mounting Kit

To simplify IMM installation use the IMM Pipe Mounting Kit available from Project Fire Products Ltd.



Ø DIA (mm)

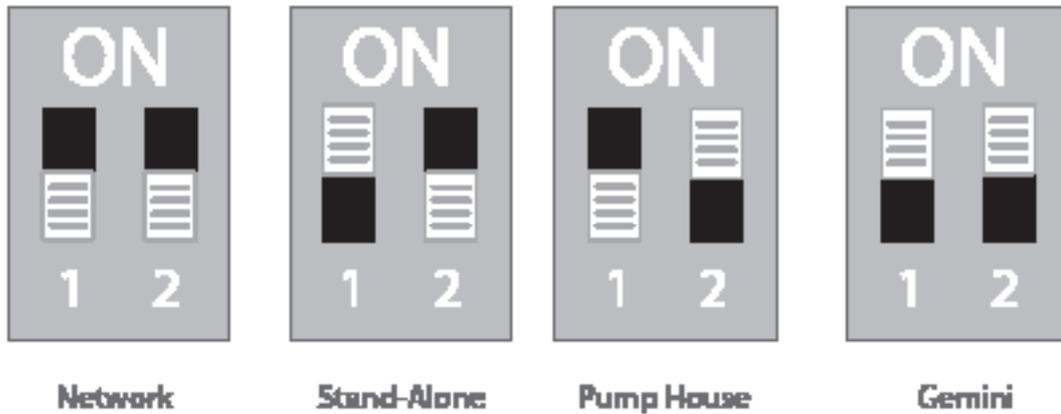
- 50
- 65
- 80
- 100
- 150
- 200

Order Code

- ZC-ADIPC50
- ZC-ADIPC65
- ZC-ADIPC80
- ZC-ADIPC100
- ZC-ADIPC150
- ZC-ADIPC200

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.

Stand-Alone Mode

The IMM will be connected to its local Zonecheck but will not be connected to the wiring loop. The only way to test this Zonecheck will be to use the concealed test button on the IMM itself.

Pump House Mode

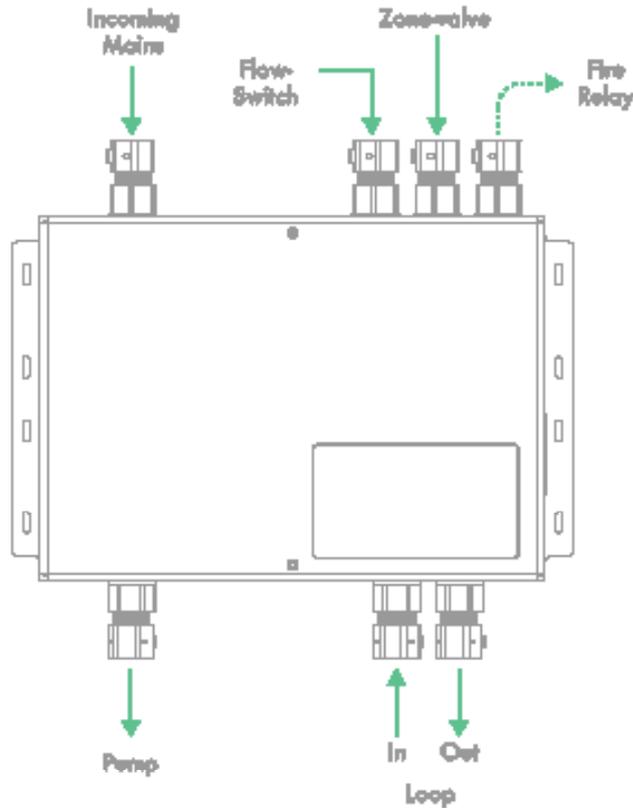
The IMM must be connected to a Pump House Monitoring Module and must sit on the wiring loop. The IMM monitors the fault output from the Pump House Monitoring Module and will transmit a PUMP HOUSE FAULT to the Controller.

Gemini Mode

The IMM must be connected to the Gemini sprinkler head(s) and must sit on the wiring loop. The IMM monitors the fault output from the Gemini pre-action sprinkler head and will transmit a GEMINI FAULT to the Controller.

Connecting the IMM

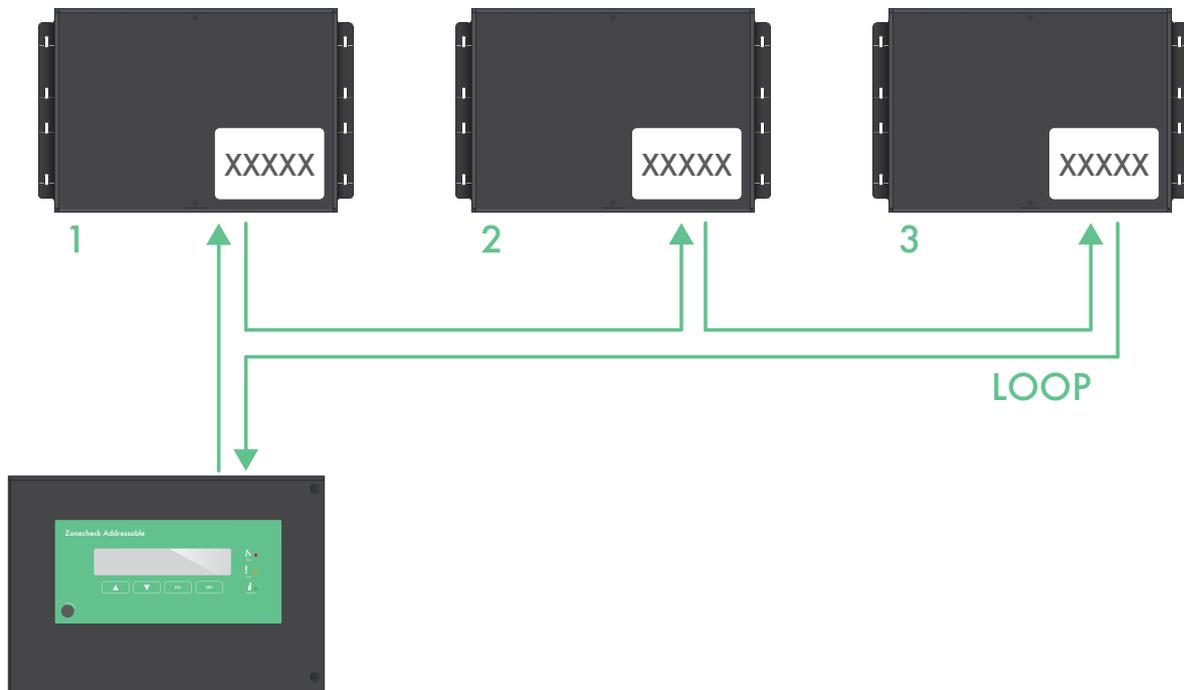
The IMM connections should be installed with great care as some are mains and some low voltage, these should be kept as separate as possible so please carefully follow the IMM wiring diagrams showing where to install each cable and which 'knockouts' to remove. The enclosures come with ready made 'knockouts' to use. Under NO circumstances should you drill any new holes in the enclosure, this will **void the warranty** if done. When connecting an IMM, a minimum of 150mm of cable tails is required within the enclosure, we recommend when entering the enclosures the tails roll under themselves to make the most of the space.



Addressable Loop

When connecting the addressable loop into the controller refer to the controller wiring diagrams (ensure the mains power and battery power are isolated before connecting the loop).

It is important that every IMM is wired into the loop in sequence, this must be carried out throughout the whole installation to ensure a successful loop setup.

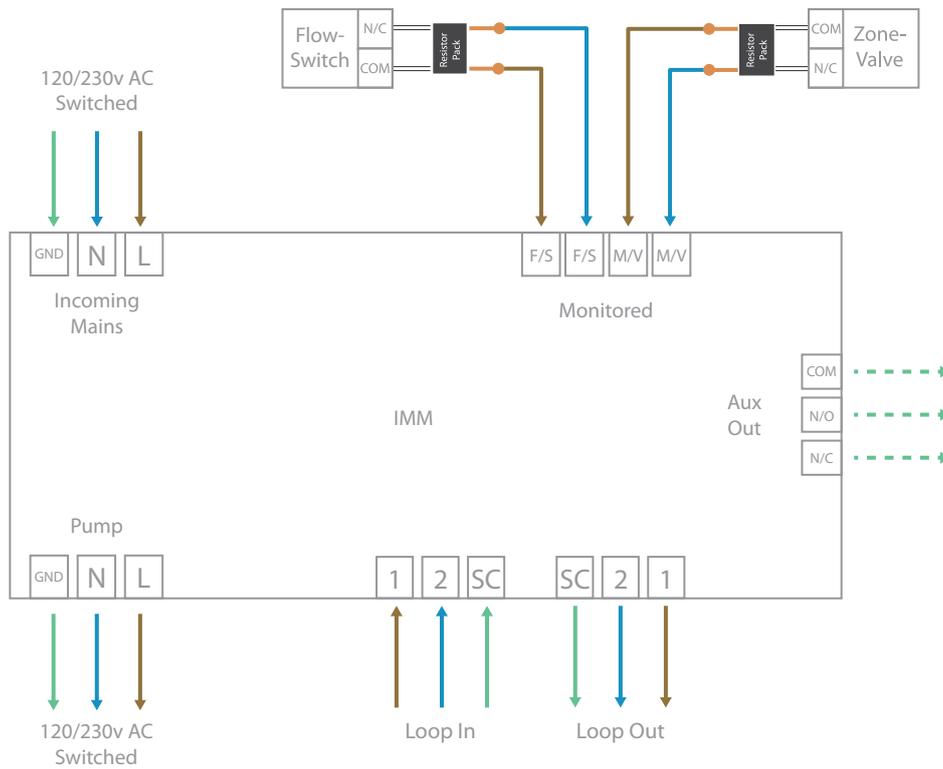


IMM Wiring

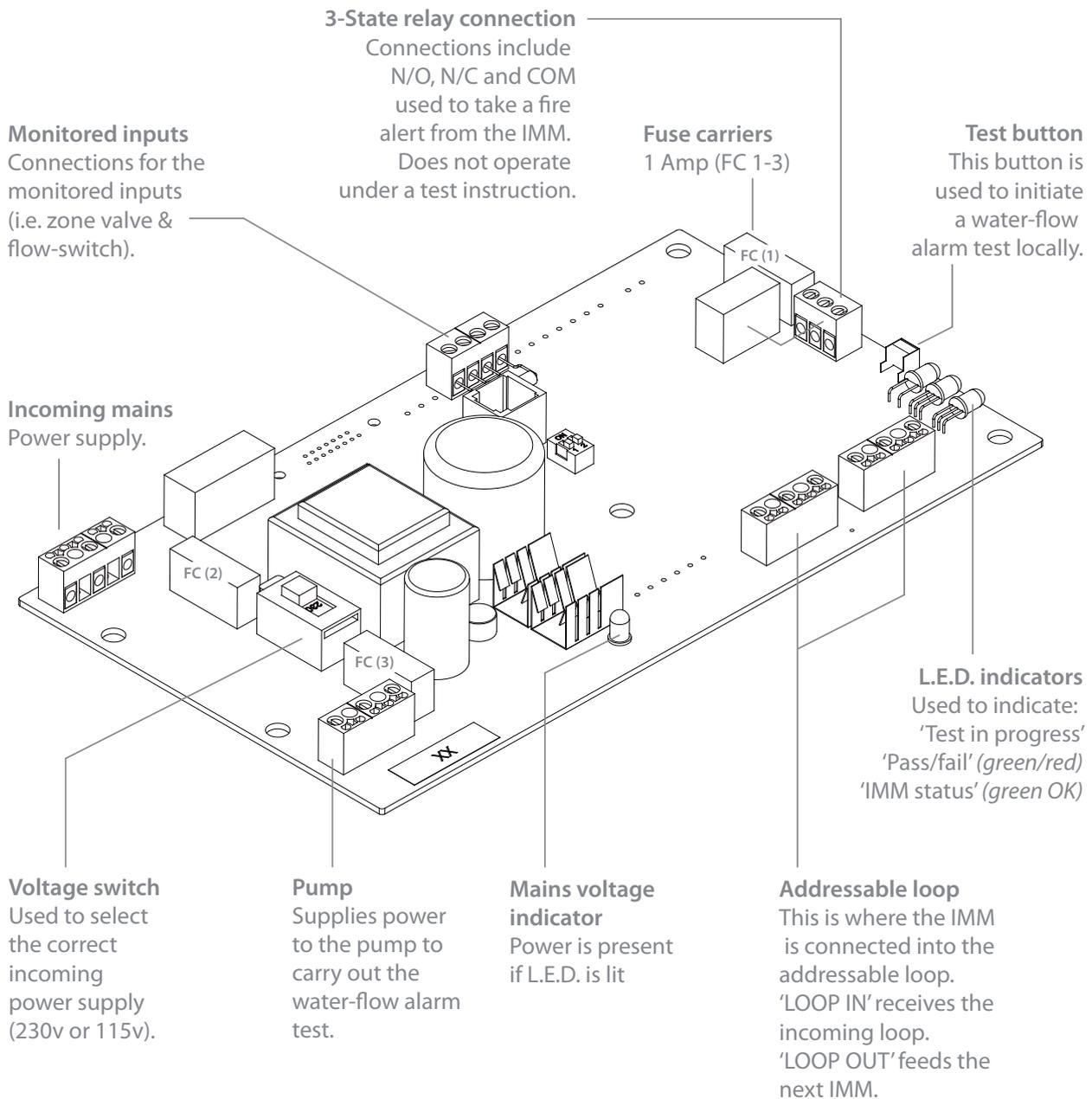
The flow-switch and zone-valve are connected to the IMM via monitored lines, this allows the IMM to determine if there is a problem with the connection cabling as well as the state of the switches. In order to provide this function, resistor packs are used at the switch connection point. There are 3 possible states for each input- *active*, *inactive* and *fault*. An *active* state is an alarm condition. An *inactive* state is a normal condition. A *fault* means the line connecting to that switch is either open circuited or short-circuited.

Resistor Packs

Each IMM is provided with two quick and reliable pre-wired resistor-pack solutions for connecting the monitored zone-valve and flow-switch to the IMM.

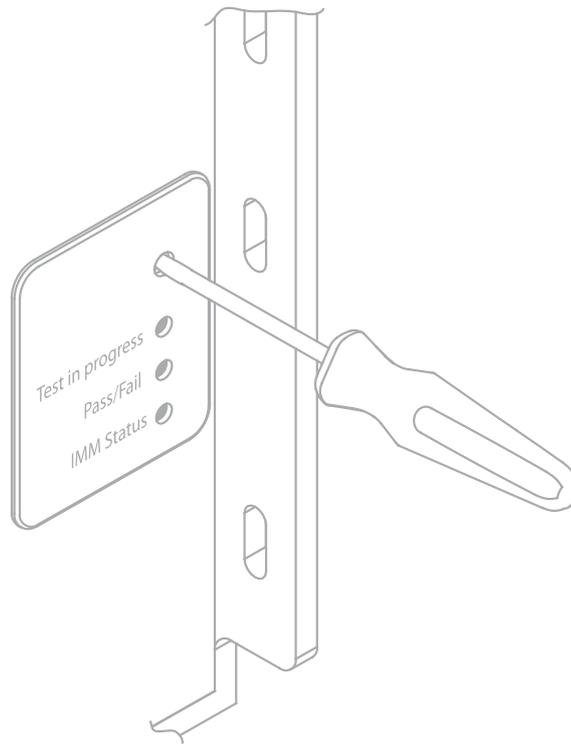


Understanding the IMM



Local IMM Test

To initiate a local test of the IMM press and release the concealed push button on the side of the IMM case using a small screwdriver or ball point pen. You will need to wait up to 45 seconds for the test result.



LED Indicators

	L.E.D. Status		Meaning
Test in Progress	OFF		Normal Condition
	Flashing Green		Test in Progress
Pass/Fail	OFF		No previous test result available
	Solid Green		Last test successful
	Solid Red		Last test failed
IMM Status	Solid Green		All OK
	Flashing Red		Flow-Switch input issue
	Flashing Green		Monitored-valve input issue
	Flashing Red/Green		Flow-switch and Monitored Valve Issue

Controller

Overview

The controller is used to communicate with up to 1,000 IMM units, all connected to the controller via a single loop of fire resistant cable. When flow-switches do become active it is imperative that this information is readily relayed to the controller and then on to the fire alarm panel or emergency services calling system. The controller has the ability to communicate to a fire-alarm panel via two independent volt free relay contacts, one of these will change status if a flow-switch is activated - fire (not during testing) and the other changes status if a connected zone valve changes status - fault.

General Operation

Upon power up for the first time the controller needs to know a certain amount of information regarding the IMM's in the system.

For each IMM it will need:

1. Its serial number
2. Its location (34 characters max)
3. The zone it belongs to (1 to 1,000, 0 if none)
4. The group it belongs to (1 to 1,000, 0 if none)

This information is best uploaded via the Zonecheck Addressable software using the IMM log. However, if the controller doesn't know this information a special menu system will open at start up in order for the user to enter such details. At this point, connect a PS2 keyboard to enable entry of alphanumeric data. A keyboard PIN will be needed, this is 5 6 7 8.

If the controller has previously been configured then the user still has an opportunity to enter this menu to view, edit or remove IMM details and to set the controller clock.

Once this information has been entered, the controller will now attempt to configure the IMM's and verify the loop integrity. The loop will communicate with each IMM in turn, starting with the first one which is connected to its loop out port. If successful, the IMM will close its internal loop switch which will then apply power to the next one along the loop. This process ripples through until power finally reaches the loop return port on the Controller.

Throughout this process there are checks on IMM integrity, shorts on the loop or open circuits. There has to be complete success before the controller will carry on to the next stage.

The controller will try five times before a complete fail is assumed. In case of error, the controller will highlight the nature of the fault on the display and the approximate physical location by detailing the last successful IMM. The fault can therefore be rectified and the loop check sequence can begin again. Each IMM takes about 0.3 second to be tested so this sequence could take up to 300 seconds (5 minutes) on large installations.

Open circuit

An open circuit will generate a fault condition which will need to be rectified. Despite this, the system will still operate as normal since all IMM's have two ports there will still be a communication path to the controller in the event of one break in the loop. Error messages are displayed and logged if this event occurs.

Short circuit

Although the system can automatically recover from a short it does upset the operation as a new loop initialisation sequence is required. Upon detection of a short the controller cuts all voltage to the loop. The IMM's recognise this and re-initialise themselves.

The controller then applies power to the *first* IMM which then closes its switch and therefore applies power to the next IMM. This process continues until a switch is closed leading onto a section of loop that contains a short. The controller and IMM recognise this and as a result, open the switch of the IMM to isolate the short. The controller repeats this process again but this time working from the *last* IMM and then backward until the short is recognised by the IMM to the right of the short, this IMM opens its switch. The short is now totally isolated and operation can resume. Note: protection against a single short or open circuit of the loop is in compliance with the requirements of international codes.

Back-up Battery

The batteries will provide a minimum of 24 hours battery backup. This battery is tested under load once a day.

Logging

Any change in status is termed an *event*. Each event is logged and displayed by the controller (and stored on the SD card supplied). Events can either originate from an IMM or the controller itself. Each type of event has a code and will be displayed by the controller so that the user can find more detailed information. The display is limited in the amount of information it can convey. The SD card is capable of storing in excess of 1 million events, once the event memory is full the oldest event will be overwritten. See the *alarm code* section for details on events, codes and other information.

Display

Information is conveyed to the user by a 4 line by 40 character display. The first two lines are generally dedicated to event type information and the last two to instructions. Each event is displayed 20 times for 2 seconds, for IMM events there is an alternating set of data in order to supply the user with more information using a limited display. This is easier to see than explain in this document! There is a simple menu system that allows the user to inspect the event log and to initiate tests for groups or zones.

Mounting

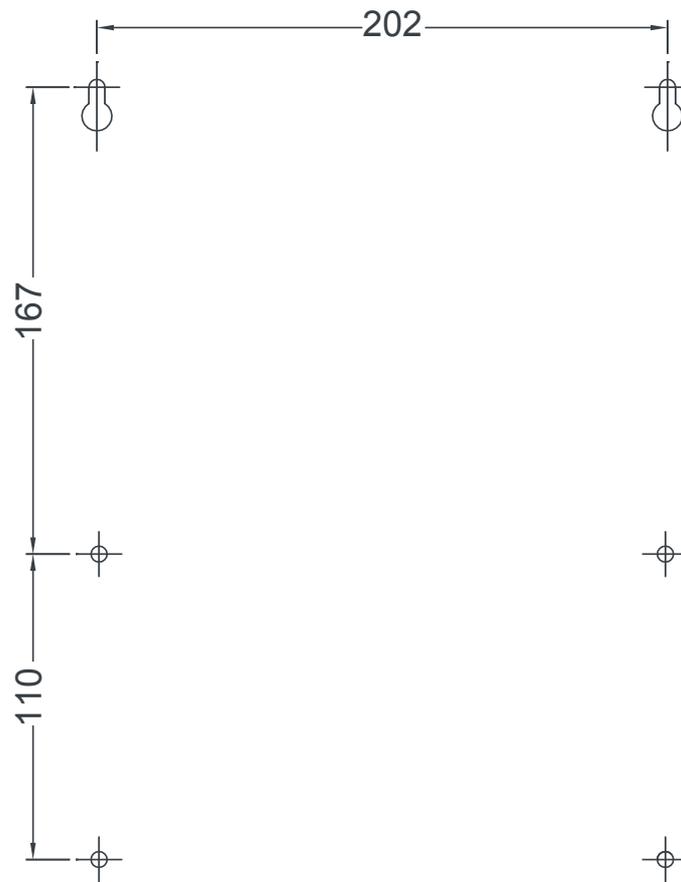
The Controller can be easily mounted using the six 5mm fixing holes provided. Do not drill any new holes into the enclosure as this will void the warranty.

Mounting the Controller

The controller must be installed in an indoor/dry location (area defined by UL 864 65.4.1).

The controller must be mounted on flat surface without any protrusions using the suitable fixings. Make sure not to cover the air vents and the rear of the unit.

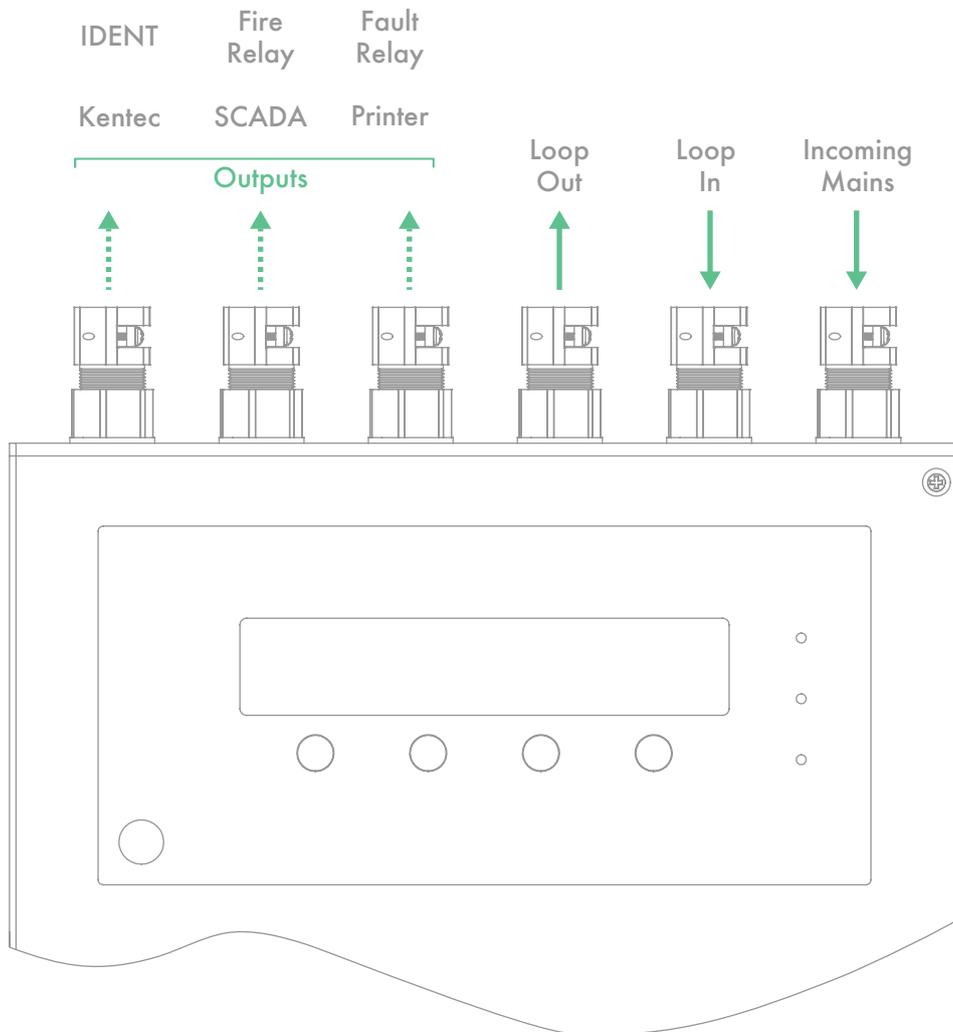
Hole Centres



note: Ø6mm holes

Connecting the Controller

There are six connections which have knockouts located on the top of the controller which have to be considered. These connections should be installed with great care as some are mains and some low voltage, these should be kept as separate as possible so please carefully follow the wiring diagrams showing where to install each cable and which 'knockouts' to remove. The enclosures come with ready made 'knockouts' to use. Under NO circumstances should you drill any new holes in the enclosure, this will **void the warranty** if done.



Controller Connections

Port Outputs

Laptop Port JP3

Use a standard ethernet cable to connect the laptop to the controller.

Programming Port JP6

This connection is for certified commissioning engineers use only.

SD Card U16

All events are automatically recorded onto the SD card provided with the controller. Never remove the SD card without using menu 7 on the controller.

SCADA

The SCADA output connects to the smaller SCADA PCB

Battery

This connects directly to the batteries as shown below.

PSU

This connects directly to the PSU. Take great care when wiring PSU & battery connections. Wiring them the wrong way round may result in board failure.

Loop Out RHS

Wire this to the first IMM on the loop.

Loop In LHS

Wire the last IMM to the controller.

UOM

Connect a Fire resistant red cable (FP200) 2 core & earth

Kentec/IDENT RS485_1

Transfer information to an IDENT or Kentec AS Syncro panel.

Printer RS485_2

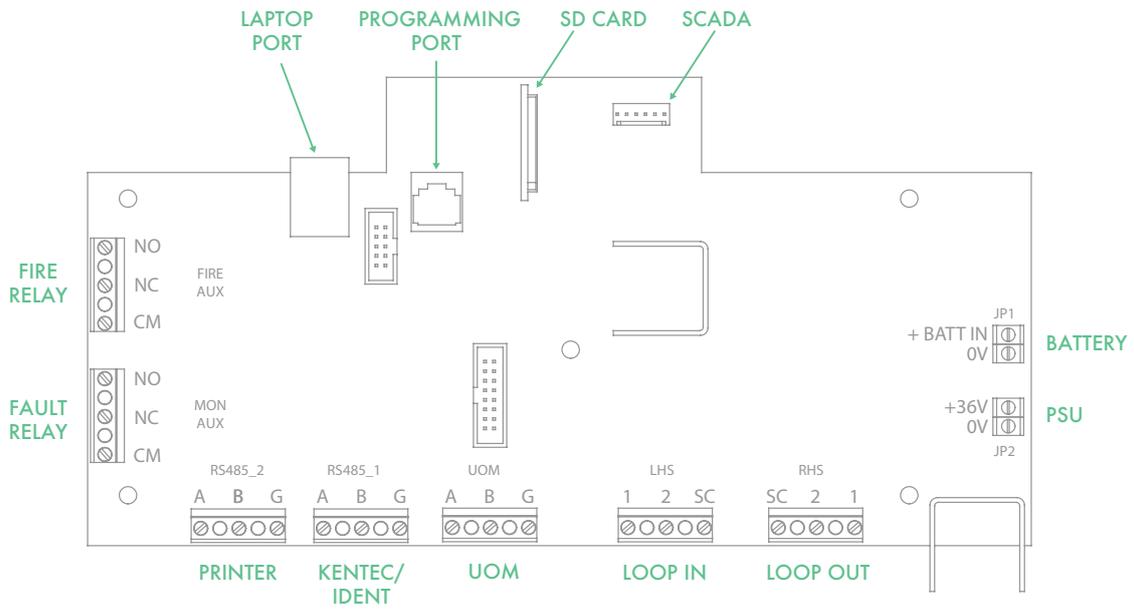
Use the supplied printer cable and follow the instructions provided with the printer.

Fire Relay Fire Aux

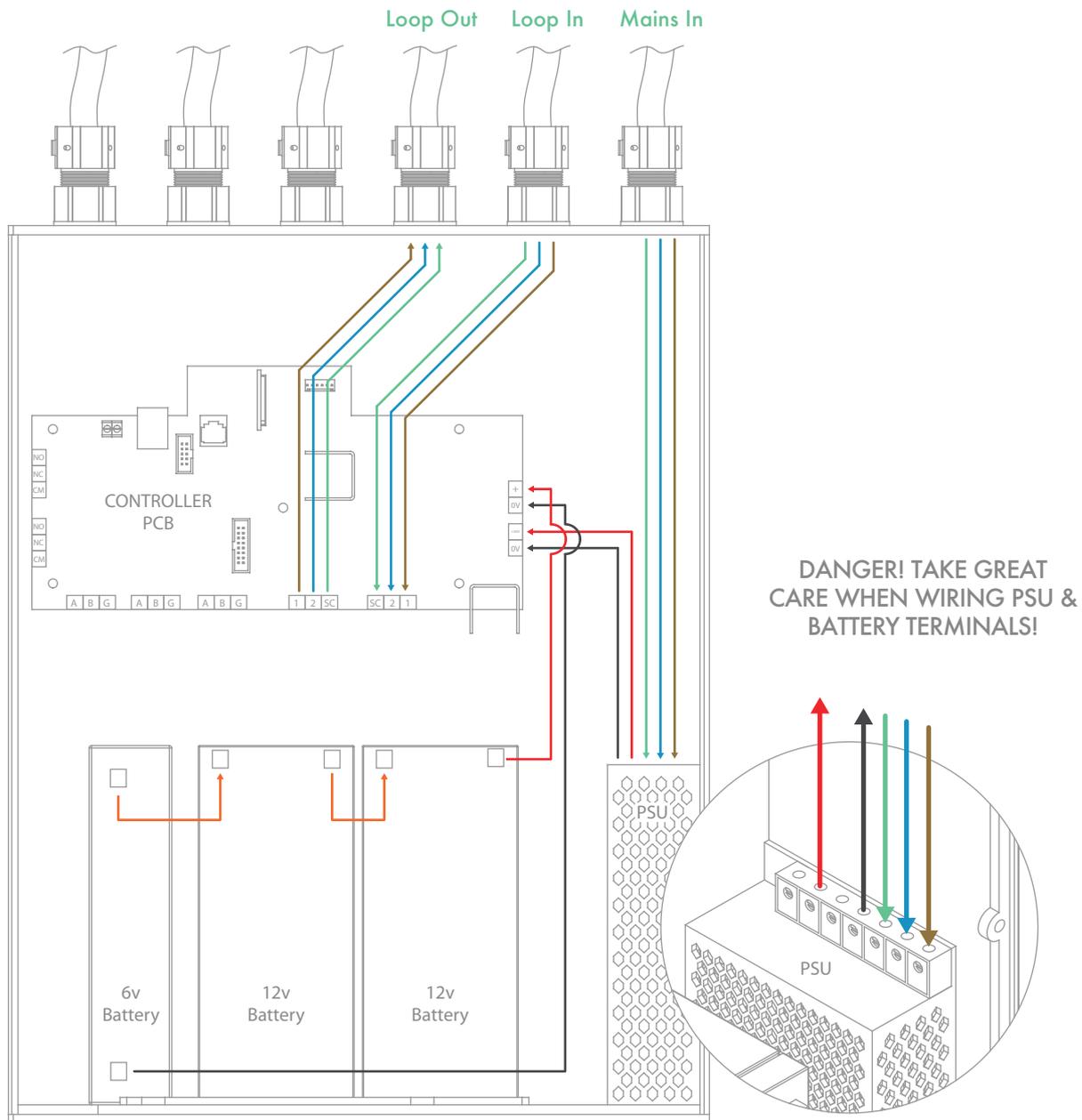
Exports a basic Fire signal.

Fault Relay Monitored Valves Aux

Exports a basic Fault signal.



Controller Wiring



Power Supply

The controller is powered by a 36V power supply and a 30V battery set.

Connecting mains power to the controller PCB

Important!

- Never wire the mains directly to the PCB.
- Do not apply power to the controller until every IMM has been connected (this will prevent problems occurring during the commissioning stage).

The controller's PSU is an 88v-240v, 50/60Hz AC switched mode power supply that has an output of 36v DC. The output of this must be wired into the '36v IN'.

Batteries

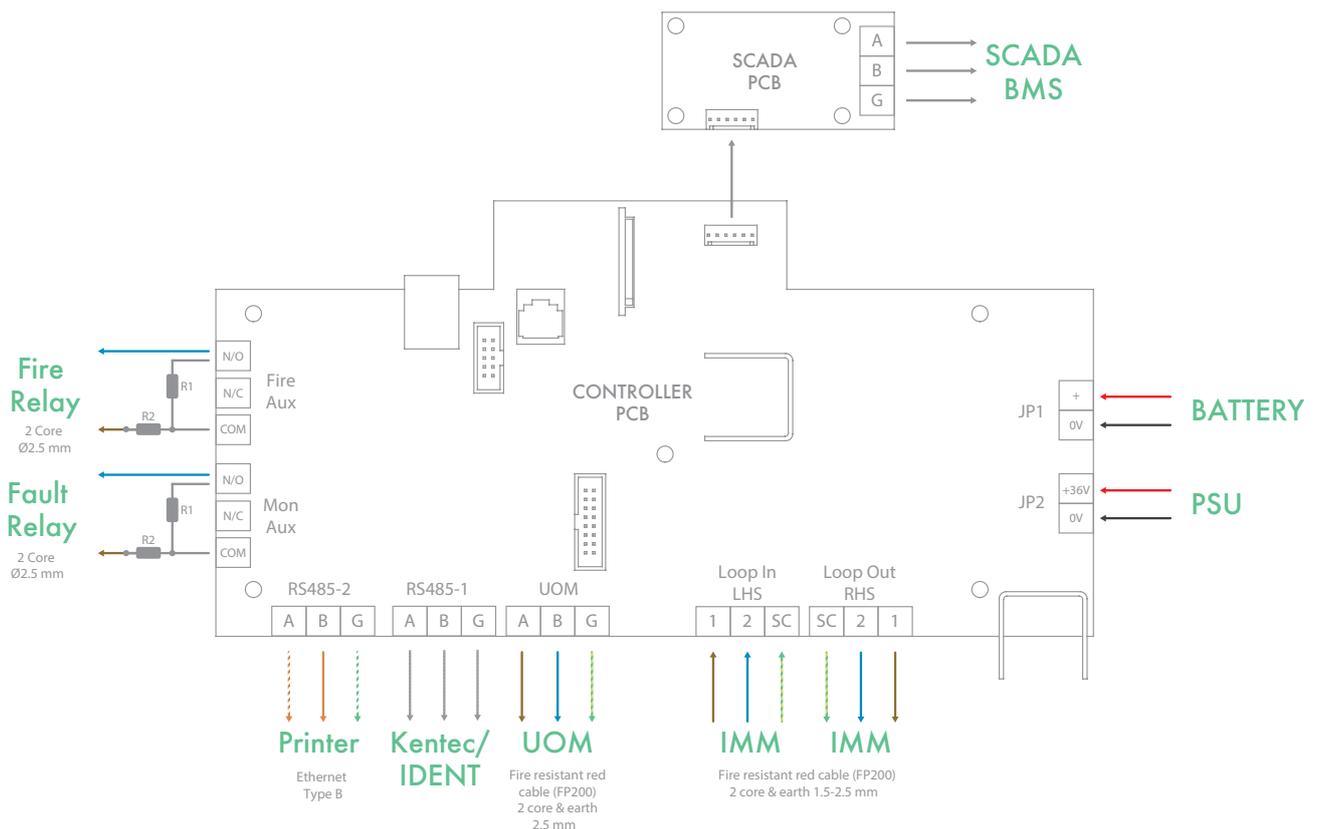
Connecting batteries to the controller

The controller is supplied with two 12v batteries and one 6v 7Ah battery. We recommended using Yuasa batteries. These are to be wired in series using the links and connection cables that are supplied in the accessories pack included inside the controller. The battery connects to the 'BATT IN' connector. Refer to relevant wiring diagram for correct wiring of batteries.

36v PSU Main Power.....Main power
 30v Battery Backup Power.....Backup power

Controller Outputs

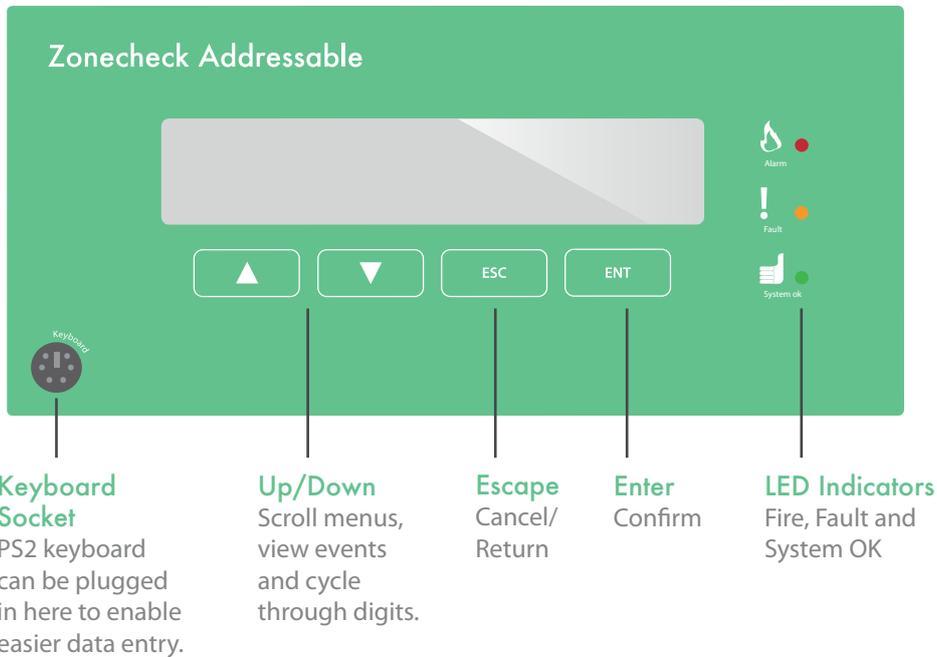
Carefully follow the wiring diagram.



Understanding the Controller

Using the Keypad

The keypad can be used to navigate menus, initiate testing, edit the system configuration, convey system information and much more besides.



Keyboard

Use the Keyboard Socket to plug a PS2 type keyboard into the controller when prompted to do so. This will be used when initial setup is done and when you are changing any of the preferences on IMMs.

Sounder

To enhance the ability to capture attention when in amber or red status a sounder will operate. The sounder will alert in a constant fashion when in red status and intermittently when in amber status. An audible fault alert can be muted for 4 hours.

Display

The liquid crystal display (LCD) provides the user with details of what is happening in the system. It is set up as a 4-line screen, generally speaking the top two are information lines that give you information on what is or what has happened, it shows all events and faults. Generally speaking, the bottom two lines are for the screen menu which allows you to go through the different sub menus built into the controller, these allow you to display recent events, activate flow-switch testing, mute sounders (internal) and reset the controller of faults and alarms.

Condition Status

There are 3 LEDs on the front panel of the Controller. These indicate the status of the overall system.



Alarm



Fire

Will illuminate red when a flow-switch has activated in the system (not during soft-testing). This is accompanied with a continuous audible alarm.



Fault



Warning

Will operate and become amber if something in the system is in fault, it will also be accompanied with an intermittent audible alarm. This LED is a warning to show that the Zonecheck addressable system needs attention.



System OK



Healthy

LED is green and normally would be lit/illuminated, when this is on the Zonecheck addressable system is in fine and in complete working order. There is no audible alarm with this.

Setup

Now everything is mechanically installed and fully wired, use this section to setup the controller using the controller display and PS2 keyboard.

System start-up

Before you start, check:

- Every Zonecheck has been mechanically installed & commissioned.
- Every IMM has been wired up to its local Zonecheck & zone-valve (if required).
- Every IMM has been wired into the looped system back to the controller.
- The controller has been wired up and is ready to receive power.

You will need:

- A list of IMM serial numbers with their respective location, zone and group information.
- A PS2 keyboard (recommended)

Now everything is mechanically installed and fully wired, use this section to setup the controller using the controller display and PS2 keyboard.

Power up the controller by connecting the mains followed by the battery.

Awaiting setup information

Using stored setup information

Would you like to edit system configuration?

Promptly hit **ENT** for Yes.

Insert keyboard and enter pin

Insert keyboard into PS2 port on front of controller.

Enter PIN **5678**. Press ENTER.

1= Language 2= Add IMM 3= Remove IMM
4= Edit IMM 5= View IMM 6= Set time
7= Syncro Node 0 8= ZC Node 0
9= Exit

You have 5 seconds to respond. If no is selected, or there is no response within 5 seconds you will need to disconnect and reconnect the power and start again.

It is possible to setup the system without using an external PS2 keyboard, however using a keyboard will save you lots of time!

System Configuration

To enter the Configuration Menu scroll to Menu 6 and press Enter. When the controller restarts follow the following instructions:-

ALL OK
Menu 6. Edit Config/Restart
ENT=select DOWN=view other menu items

Press ENT

Fault
Enter PIN 0 0 0 0
UP, DOWN to change ENT=OK ESC=next

Enter PIN using ▲▼ to change the number and ESC to move to the next digit.

Press ENT

The controller will now restart.

Would you like to edit system configuration?

Promptly hit ENT for Yes.

Insert keyboard and enter pin

Insert keyboard into PS2 port on front of controller.

Enter PIN 5678. Press ENTER.

Configuration Menu

1= Language	2= Add IMM	3= Remove IMM
4= Edit IMM	5= View IMM	6= Set time
7= Syncro Node 0	8= ZC Node 0	
9= Exit		

You have 5 seconds to respond. If no is selected, or there is no response within 5 seconds you will need to disconnect and reconnect the power and start again.

1. Language

Configuration Menu

1= Language 2= Add IMM 3= Remove IMM
4= Edit IMM 5= View IMM 6= Set time
7= Syncro Node 0 8= ZC Node 0
9= Exit

Type 1 to enter the **Language** menu.

1 = English 2 = Deutsch

Press 1 or 2.

2. Add IMM Manually

Configuration Menu

1= Language 2= Add IMM 3= Remove IMM
4= Edit IMM 5= View IMM 6= Set time
7= Syncro Node 0 8= ZC Node 0
9= Exit

Type 2 to enter the **Add IMM** menu.

Please enter new serial number
of the IMM to add to the system.

Total number of IMM's 0

Type in the serial number. Press Enter.

Please enter the location

Type in the name of the location. Press Enter.

Please enter the zone (0-1000)

Type in the number of the Zone. Press Enter.

Please enter the group (0-1000)

Type in the number of the Group. Press Enter.

Test 1=Daily 2=Weekly 3= Monthly 4=Never

Type 1, 2, 3 or 4. Press Enter.

Serial = 00150 Test period = 3
Zone =1 Group=1
Location= Coffee Shop
1= OK 2=Re-enter info 3= Exit

Type 1, 2 or 3.

3. Remove IMM

Configuration Menu

1= Language 2= Add IMM 3= Remove IMM
4= Edit IMM 5= View IMM 6= Set time
7= Syncro Node 0 8= ZC Node 0
9= Exit

Type 3 to enter the **Remove IMM** menu.

Please enter the serial number
of the IMM to remove from the
system.

Total number of IMM's 64

Type in the serial number. Press Enter.

Serial = 00150 Test period = 3
Zone = 1 Group = 1
Location = Coffee Shop
1 = Delete 2 = Exit without deletion

Type 1 or 2.

Serial numbers have 5 digits (e.g. 00001). The serial number for each IMM can be found on the green sticker on the front of each IMM.

Should a fire or fault occur in the system the display will highlight the IMM's location. It is therefore important that the location name entered accurately reflects the actual location and corresponds with existing building schematics or layout drawings. Examples for location names may be:- "Floor one", "Blue area", "Shop Unit 272", "WHSmith (Unit 272)" or "Corridor 8 - North West" (etc). Entering accurate information at this stage will also assist fault finding if required at any point.

It is important the sprinkler zone number is entered accurately and corresponds with the buildings existing sprinkler zone numbering.

You may want an area of the building to be organised into a group. This means a group of zones can be tested without effecting the other zones. If no grouping is needed, press 0.

This information is critical for the response to a fire situation and for testing. Make sure the serial number corresponds to the correct zone, group and location.

4. Edit IMM

Configuration Menu

1= Language 2= Add IMM 3= Remove IMM
4= Edit IMM 5= View IMM 6= Set time
7= Syncro Node 0 8= ZC Node 0
9= Exit

Type 4 to enter the **Edit IMM** menu.

Please enter new serial number
of the IMM to edit.

Total number of IMM's 65

Type in the serial number. Press Enter.

Please enter the location

Type in the name of the location. Press Enter.

Please enter the zone (0-1000)

Type in the number of the Zone. Press Enter.

Please enter the group (0-1000)

Type in the number of the Group. Press Enter.

Test 1=Daily 2=Weekly 3= Monthly 4=Never

Type 1, 2, 3 or 4. Press Enter.

Serial = 00150 Test period = 3
Zone =1 Group=1
Location= Coffee Shop
1= OK 2=Re-enter info 3= Exit

Type 1, 2 or 3.

To edit any detail for an IMM you must enter the details for every field, regardless if all other details have remained the same. Therefore, it is recommended to make a note of the original IMM details before editing.

5. View IMM



Serial numbers have 5 digits (e.g. 00001). The serial number for each IMM can be found on the green sticker on the front of each IMM.

6. Set Time

Configuration Menu

1= Language 2= Add IMM 3= Remove IMM
4= Edit IMM 5= View IMM 6= Set time
7= Syncro Node 0 8= ZC Node 0
9= Exit

Type 6 to set the TIME.

Please enter the year (0-99)

Enter the year.

Please enter the month (1-12)

Enter the month.

Please enter the day (1-31)

Enter the day.

Please enter the hour (0-23)

Enter the hour.

Please enter the minute (0-59)

Enter the minute.

Please enter the second (0-59)

Enter the second.

14:26:00 HH:MM:SS

10/07/17 DD/MM/YY

1= Set clock 2= Re-enter clock info

Type 1 or 2.

7. Syncro Node

Configuration Menu

1= Language 2= Add IMM 3= Remove IMM
4= Edit IMM 5= View IMM 6= Set time
7= Syncro Node 0 8= ZC Node 0
9= Exit

Type 7 to set the Syncro Node.

Please enter the Syncro node (0-64)
Input 0 if there is no Syncro connected

Type 1 if a Syncro panel is
connected, otherwise type 0.

Press Enter.

8. ZC Node

Configuration Menu

1= Language 2= Add IMM 3= Remove IMM
4= Edit IMM 5= View IMM 6= Set time
7= Syncro Node 0 8= ZC Node 0
9= Exit

Type 8 to set the ZC Node.

Please enter the ZC node (0-64).
Input 0 if there is no Syncro connected.

Type 2 if a Syncro panel is
connected, otherwise type 0.

Press Enter.

Action Menus

The action menus can be accessed from the home screen. The home screen consists of four lines of information - the top two lines display messages, with the bottom two lines displaying the action menus. Use this section to learn how to perform the actions listed below.

The end user will be able to cycle through the action menus by pressing the ▼ ▲ button on the keypad.

There are six action menus which include:

1. Display Event Log

Shows a list of recent events in chronological order.

2. Reset alarm condition

After solving the fault use this command to reset the panel condition from 'fire' or 'warning' to 'healthy'.

3. Activate flow-switch test

Perform flow-switch tests.

4. Re-send current IMM errors

Runs a 'health check' on the system.

5. Mute alarm

Silences the alarm for 4 hours. After four hours the alarm will resound if the system is in warning condition.

6. Edit configuration/restart

For advanced users / commissioning engineer only. This menu is used for setting up or modifying the system.

7. SD Card Access

Use this menu to remove or insert the SD card. Failure to use this menu during insertion or removal may cause in data loss.

1. Display Event Log

ALL OK

Menu 1. Display Event Log
ENT=select DOWN=view other menu items

Press ▼ to highlight Menu 1. **Display Event Log**

Press **ENT**

ALL OK

AMBER Reset	16:21:00	10/07/17
Controller	UP, DOWN or ESC	

Use ▼ ▲ to navigate through the list of events.

Hit **ESC** to return to the main screen.

*Denotes most recent event. See alarm-code list section for interpretation of alarm codes.

2. Reset Alarm Condition

AMBER Unread Events Please check Log
Menu 2. Reset Alarm Condition
ENT=select DOWN=view other menu items

Press ▼ to highlight Menu 2. Reset Alarm Condition

Press ENT

AMBER Unread Events Please check Log
Enter PIN 0 0 0 0
UP, DOWN to change ENT=OK ESC=next

Enter PIN using ▲ ▼ to change the number
and ESC to move to the next digit.

Default PIN is 0000

Press ENT

ALL OK

Menu 1. Display Event Log
ENT=select DOWN=view other menu items

The alarm can only be reset once the original source of the problem has been corrected. For example if the closing of a zone valve caused a 'warning' condition, the valve must be fully opened before attempting to reset the alarm condition.

3. Activate Flow-switch Test

ALL OK
Menu 3. Activate Flow-switch Test
ENT=select DOWN=view other menu items

Press ▼ to highlight Menu 3. Activate Flow-switch Test

Press ENT

All OK
Enter PIN 0 0 0 0
UP, DOWN to change ENT=OK ESC=next

Enter PIN using ▲▼ to change the number and ESC to move to the next digit.

Press ENT

ALL OK
Relay activation? No (ESC) Yes (ENT)
Make your selection

Soft Test Hard Test
ESC ENT
or

ALL OK
By Group (ESC) or Zone (ENT) ?

Group Test Zone Test
ESC ENT
or

Enter PIN using ▲▼ to select the group or zone number.

Press ENT

Please note, after testing the top two lines of the display will alternate between showing the test results and IMM information. All menus can still be accessed as normal during this phase.

4. Resend Current IMM errors

Fault

Menu 4. Resend Current IMM Errors
ENT=select DOWN=view other menu items

Press ▼ to highlight Menu 4. Resend Current IMM Errors

Press ENT

Fault

Enter PIN 0 0 0 0
UP, DOWN to change ENT=OK ESC=next

Enter PIN using ▲▼ to change the number
and ESC to move to the next digit.

Press ENT

Fault

Enter PIN 0 0 0 0
UP, DOWN to change ENT=OK ESC=next

Cycle through the faults using ▲▼.

Trigger Mon Valve

Enter PIN 0 0 0 0
UP, DOWN to change ENT=OK ESC=next

5. Mute Alarm

Fault

Menu 5. Mute Alarm

ENT=select DOWN=view other menu items

Press ▼ to highlight **Menu 4. Mute Alarm**

Press **ENT**

Fault

Enter PIN 0 0 0 0

UP, DOWN to change ENT=OK ESC=next

Enter PIN using ▲▼ to change the number
and **ESC** to move to the next digit.

Press **ENT**

Fault

Enter PIN 0 0 0 0

UP, DOWN to change ENT=OK ESC=next

Alarm will be muted. If the fault is not rectified
within four hours the alarm will sound again.

6. Edit Configuration/Restart

ALL OK

Menu 6. Edit Config/Restart
ENT=select DOWN=view other menu items

Press ▼ to highlight Menu 4. Resend Current IMM Errors

Press ENT

Fault

Enter PIN 0 0 0 0
UP, DOWN to change ENT=OK ESC=next

Enter PIN using ▲▼ to change the number
and ESC to move to the next digit.

Press ENT

Would you like to edit system configuration?

Promptly hit ENT for Yes.

Configuration Menu

1= Language 2= Add IMM 3= Remove IMM
4= Edit IMM 5= View IMM 6= Set time
7= Syncro Node 0 8= ZC Node 0
9= Exit

7. Remove/Insert SD Card

ALL OK

Menu 7. Remove/Insert SD. 5S allowed!
ENT=select DOWN=view other menu items

Press **ENT**

ALL OK

5 seconds remaining
ENT=select DOWN=view other menu items

Promptly Remove SD

Alarm Codes

Alarm Codes

The alarm code list is a directory of all errors, events and situations that could be shown on the controller's display. If a fault or event occurs within the system the controller will let the user know by displaying one or more alarm codes. These codes relate to an event which the controller will log. Some codes indicate a system fault and some indicate an event occurring within the system (a flow-switch activating for example). The codes are also shown with a short description. The alarm codes range from 18-145. Codes 18 - 68 are generated from an IMM somewhere on the system with codes 110 - 145 originating from the controller itself.

All alarm codes/descriptions will be shown on the display ten times before being replaced by a reminder to read unread messages. These unread messages can be accessed through action menu 4 - Resend current IMM errors.

The following list of alarm codes can be used to assist in fault finding and restoring the Zonecheck Addressable system to a healthy status. Use the alarm code list to determine what the code means and what action should be taken.

-  Alarm (LED)
-  Fault (LED)
-  System ok (LED)
-  Fire condition
-  Warning condition
-  Healthy condition
-  Fault finding
-  Mechanical work
-  Electrical work
-  Call engineer

Alarm Code	Displayed Text	Situation	Source	Description	Action
18	Trigger Mon Valve	Monitored Valve becomes active	IMM	A valve has been closed in the system.	Note IMM serial no. & location. Check with building management – why was valve closed? If all clear, open valve.
19	Re-set Mon Valve	Monitored Valve becomes inactive	IMM	Closed valve has been re-opened	Determine reason for valve being re-opened. Reset alarm condition (action menu 2).
20	Trigger Flowswitch	Flow-switch becomes active	IMM	A flow-switch is activated in the system.	Fire! Follow your normal fire response procedure.
21	Re-set Flowswitch	Flow-switch becomes inactive	IMM	Flow-switch is no longer activating.	Determine why flow-switch inactive. When system operational, reset alarm condition (action menu 2).
44	Fault Mon Valve	Monitored Valve exhibits a fault condition	IMM	There is a faulty valve.	Note the IMM serial number & location. Call your servicing company to investigate.
45	Clear Mon Valve	Monitored Valve comes out of a fault condition	IMM	The faulty valve has been fixed.	Make sure valve is left open. When system operational again, reset alarm condition (action menu 2).
46	Fault Flowswitch	Flow-switch exhibits a fault condition	IMM	There is a faulty flow-switch.	Note the IMM serial number & location. Call your servicing company to investigate.
47	Clear Flowswitch	Flow-switch comes out of a fault condition	IMM	The faulty flow-switch has been fixed.	When the system is operational again, reset the alarm condition (action menu 2).
48	Fault Right Short	Short on the Right Hand side (loop out) on the IMM	IMM	Electrical fault with IMM.	Note the IMM serial number & location. Electrical fault. Call electrical engineer.
49	Clear Right Short	Short clears on the Right Hand side (loop out) on the IMM	IMM	Electrical fault with IMM has been resolved.	When the system is operational again, reset the alarm condition (action menu 2).
50	Fault Left Short	Short on the Left Hand side (loop in) on the IMM	IMM	Electrical fault with IMM.	Note the IMM serial number & location. Electrical fault. Call electrical engineer.
51	Clear Left Short	Short clears on the Left Hand side (loop in) on the IMM	IMM	Electrical fault with IMM has been resolved.	When the system is operational again, reset the alarm condition (action menu 2).

! ?

👍

🔥

👍

! ?

👍

! ? ⚡

👍

! ⚡

👍

! ⚡

👍

Alarm Code	Displayed Text	Situation	Source
52	Fault Right Lamp	Low voltage detected at the Right Hand side of an UMU	UMU
53	Clear Right Lamp	Low voltage fault clears at the Right Hand side of an UMU	UMU
54	Fault Left Lamp	Low voltage detected at the Left Hand side of an UMU	UMU
55	Clear Left Lamp	Low voltage fault clears at the Left Hand side of an UMU	UMU
56	Fault +5V PSU	Fault in the +5V from the UMU PSU	UMU
57	Clear +5V PSU	Fault clears in the +5V from the UMU PSU	UMU
58	Fault +24V PSU	Fault in the +24V from the UMU PSU	UMU
59	Clear +24V PSU	Fault clears in the +24V from the UMU PSU	UMU
60	Fault Data Switch	Fault on the UMU's data switch [this may impede communication]	UMU
61	Clear Data Switch	Fault clears on the UMU's data switch	UMU
62	Fault Switch Open	Loop switch has to be opened due to a fault on this UMU	UMU
63	Clear Switch Closed	Loop switch has to be re-closed due to a clearing of a fault on this UMU	UMU
68	Test UMU.ZC	Flow-switch test on this UMU has completed	UMU

Alarm Code	Icon	Description	Action
52		Electrical fault with UMU.	Note the UMU serial number & location. Electrical fault Call electrical engineers.
53		Electrical fault with UMU has been resolved.	When the system is operational again, reset the alarm condition [action menu Z].
54		Electrical fault with UMU.	Note the UMU serial number & location. Electrical fault Call electrical engineers.
55		Electrical fault with UMU has been resolved.	When the system is operational again, reset the alarm condition [action menu Z].
56		Electrical fault with UMU.	Note the UMU serial number & location. Electrical fault Call electrical engineers.
57		Electrical fault with UMU has been resolved.	When the system is operational again, reset the alarm condition [action menu Z].
58		Electrical fault with UMU.	Note the UMU serial number & location. Electrical fault Call electrical engineers.
59		Electrical fault with UMU has been resolved.	When the system is operational again, reset the alarm condition [action menu Z].
60		Electrical fault with UMU.	Note the UMU serial number & location. Electrical fault Call electrical engineers.
61		Electrical fault with UMU has been resolved.	When the system is operational again, reset the alarm condition [action menu Z].
62		Electrical fault with UMU.	Note the UMU serial number & location. Electrical fault Call electrical engineers.
63		Electrical fault with UMU has been resolved.	When the system is operational again, reset the alarm condition [action menu Z].
68		Flow-switch test completed.	No action.

Alarm Code	Displayed Text	Situation	Source	Description	Action
110	Fault BMW Comm	Communications timeout with an UHM	Controller	Electrical fault with UHM.	Make the UHM serial number fit location. Electrical fault. Call electrical engineers.
111	Clear BMW Comm	Communications restored with UHM	Controller	Electrical fault with UHM has been resolved.	When the system is operational again, reset the alarm condition [action menu 2].
114	Fault General PSU	General PSU fault	Controller	Electrical fault	Call electrical engineers.
115	Clear General PSU	General PSU fault cleared	Controller	Electrical fault resolved.	When the system is operational again, reset the alarm condition [action menu 2].
116	Fault Input PSU	Input PSU fault	Controller	Electrical fault	Call electrical engineers.
117	Clear Input PSU	Input PSU fault cleared	Controller	Electrical fault resolved.	When the system is operational again, reset the alarm condition [action menu 2].
118	Fault Battery	Battery condition fault	Controller	Battery problems.	Call service engineers. Must likely be a complete battery replacement.
119	Clear Battery	Battery condition fault cleared	Controller	Battery problems resolved/replaced.	When the system is operational again, reset the alarm condition [action menu 2].
120	Fault Charging	Charging circuitry fault	Controller	Controller electrical issue.	Call electrical engineers.
121	Clear Charging	Charging circuitry fault cleared	Controller	Controller electrical issue resolved.	When the system is operational again, reset the alarm condition [action menu 2].
122	Fault Interval	Interval Controller fault (non-diagnosable)	Controller	Controller fault	Call service engineers/ manufacturers.
123	Clear Interval	Interval Controller fault cleared	Controller	Controller fault resolved.	When the system is operational again, reset the alarm condition [action menu 2].

Alarm Code	Displayed Text	Situation	Source	Description	Action
124	Fault Lamp Short	Short on the lamp	Controller	Short on the lamp.	Note the IMM serial number & location. Electrical fault. Call electrical engineers.
125	Clear Lamp Short	Short on the lamp cleared	Controller	Short on the lamp resolved.	When the system is operational again, reset the alarm condition (action menu 2).
126	Fault Lamp Opens	Open circuit on the lamp	Controller	Open circuit on the lamp.	Note the IMM serial number & location. Electrical fault. Call electrical engineers.
127	Clear Lamp Opens	Open circuit on the lamp cleared	Controller	Open circuit on the lamp resolved.	When the system is operational again, reset the alarm condition (action menu 2).
128	Fault Initialization	Initialization problem	Controller	Initialization problem	Call service engineer/ manufacturer.
129	Clear Initialization	Initialization problem cleared	Controller	Initialization problem cleared	When the system is operational again, reset the alarm condition (action menu 2).
130	FIRE Condition	Fire Alarm, Red Alarm condition recognized.	Controller	Fire-switch has activated.	Evacuate your normal fire response procedures.
132	Analyzer Condition	Analyzer Alarm Condition recognized	Controller	There is a fault on the system.	[R] Use action menu 4 - identify alarm codes [R] Reset fault. [R] Use action menu 2. [R] Repeat until healthy (green) condition achieved.
134	Test FSG Activated	Flour-switch group test activated	Controller	Flour-switch group test activated.	No action.
136	Test FSZ Activated	Flour-switch zone test activated	Controller	Flour-switch zone test activated.	No action.
140	Test FS Complete	Flour-switch test complete	Controller	Flour-switch test complete.	Flour-switch test complete.
144	Trigger Main Valve C	External Main Valve input active	Controller	Main valve issue.	Call servicing engineer.
145	Re-set Main Valve C	External Main Valve input inactive	Controller	Main valve issue resolved.	When the system is operational again, reset the alarm condition (action menu 2).

Service

The Zonecheck Addressable system is an important testing and monitoring device and as such should be maintained as a matter of importance. To ensure correct operation the Zonecheck Addressable system should be serviced at regular intervals at a period of no more than six months. Zonecheck Addressable must be serviced by a certified engineer. For a full list of certified engineers please visit our website at www.projectfire.co.uk or call Project Fire Products Ltd to ensure system compliance.

As part of every service visit and call out our specially trained engineers are able to perform full system health checks using specialist software and tools to access the controller and IMMs. Each service engineer has undergone tailored training which allows them to access the controller using bespoke software. Fully trained and kitted out, our engineers are able to check, update and fully test the entire system to ensure that the system is in compliance with life-safety requirements. Performing regular routine maintenance is essential for ensuring the system remains in compliance with life-safety standards.

- ✓ **Test Compliance**
- ✓ **Unique Closed Protocol System**
- ✓ **Manufacturer's Expertise**
- ✓ **Addressable Specific Software**
- ✓ **Manufacturers Firmware Updates**
- ✓ **Specialist Technicians**

Specification

Controller

Power Supply Specification

Mains power supply.....	120 - 240 VAC 50/60 Hz- 250w max
Internal PSU.....	36 v D.C. nominal
PCB voltage rating.....	36 v D.C. nominal
Supply and battery charger status monitored for failure.....	Yes
Batteries monitored for disconnection or failure.....	Yes
Maximum battery size and type.....	7 Ahr, 2 x Yuasa NP7-12 1 x NP7-6

Loop Driver Specification

Number of loop drivers.....	1
Loop monitored for short and open circuit faults.....	Yes
Auto-polling from each side.....	Yes
Loop current limit during a fault.....	2.8A Automatic Disconnection
Number of IMM's per loop.....	1000
Maximum voltage on loop.....	30v max

Outputs

Type.....	Relays, volt free, single pole, changeover.
Max switching current.....	3A resistive
Max switching voltage.....	230VAC, 30VDC
Fire Relay.....	Active when a flow-switch is triggered (not under soft testing).
Fault Relay.....	Active when any fault is triggered.
Event Details Storage.....	SD Card
SCADA.....	Modbus RTU
UOM.....	Relay, volt-free, N/O
Kentec.....	RS485
Printer.....	RS485

PIN codes

Configuration menus.....	5678
Action menus.....	0000

Fuses

Charger Circuit.....	3A non-resettable 5mm x 20mm
Battery In line fuse.....	3A non-resettable 5mm x 20mm
Relay 1.....	3A non-resettable 5mm x 20mm
Relay 2.....	3A non-resettable 5mm x 20mm

Panel Indicators and Controls

Menu access and event scrolling.....	UP, DOWN, ENT & ESC
LCD, (Liquid Crystal Display).....	4 line x 40 characters.
Other indicators OK - Green.....	3 LED System: OK - Green Fault - Amber Fire condition - Red

Physical Dimensions

Approx Dimensions (WxHxD).....	287 x 375 x 118 mm
Approx Weight.....	5.0 Kg

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 switching current.....	3A resistive
Max switching voltage.....	230VAC, 30VDC
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
Addressable loop IN.....	-
Addressable loop OUT.....	-
Flow-switch Input.....	Monitors a flow-switch
Monitored valve input.....	Monitors an external valve source

Physical Dimensions

Approx Dimensions (WxHxD).....	301 x 198 x 78 mm
Approx Weight.....	2 Kg

Cable Requirements

Type of Cable.....	Fire-resistant screened cable (FP200 or an equal equivalent)	
Size of Conductors.....	1.5 mm ²	2.5 mm ²
Maximum Length of cable per loop.....	3 km	4.5 km

Zonecheck

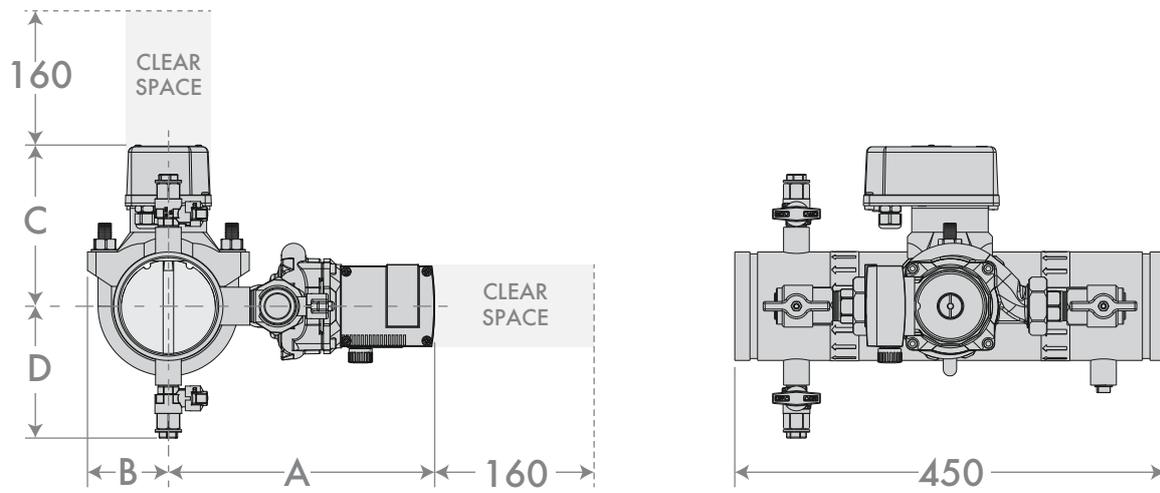
Zonecheck Pump

Approvals.....	LPCB, UL, FM and VdS
Operating Voltage.....	240v 50Hz
Full Load Current.....	0.93 A
Power Rating.....	195 watts
IP Rating.....	IP43
WP Rating.....	12 bar (175 psi)

Flow-switch

Contact Rating.....	10A @ 125/250 AC
Triggering Flow Rate.....	20-57 litres per minutes
Static Pressure.....	17.25 bar (250 psi)
Operating Temperature.....	0°C – 49°C (32°F – 120°F)

Zonecheck Dimensions



in	Ø	A	B	C		D	Weight (Kg)
				P Potter	System Sensor		
2	50	256	58	142	150	116	14.0
2½	65	264	58	150	157	124	14.2
3	80	271	66	157	165	131	15.3
4	100	283	86	169	175	143	17.1
6	150	309	113	195	205	168	22.1
8	200	336	148	222	243	195	28

Important Information

1. BATTERY ADVICE

Dispose of batteries according to local regulations. In the event of a battery leak, avoid contact with the skin or eyes, if contact is made flush immediately with water, or seek medical help. To replace batteries please contact your certified Addressable Engineer.

2. CUSTOMER CARE

Your device is a product of superior design and craftsmanship and should be treated with care. The following suggestions will help you further protect your product. Keep the device dry. Precipitation, humidity, and all types of liquids or moisture can contain minerals that will corrode electronic circuits. If your device does get wet, remove the power source, and allow the device to dry completely before replacing it. Do not store the device in hot areas. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics. Where possible avoid storing the device in cold areas. When the device returns to its normal temperature, moisture can form inside the device and damage electronic circuit boards. Do not attempt to open the device other than as instructed in this guide. Do not drop, knock, or shake the device. Rough handling can break internal circuit boards and fine mechanics. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the device. Do not paint the device.

3. ENVIRONMENTAL CONDITIONS

IMMs and Controllers are intended for dry indoor use only.

4. TRANSPORT HANDLING AND STORAGE INSTRUCTIONS

All items are dispatched fully assembled, and are protected against corrosion and packed for transport by normal road, rail and sea carriers.

5. CRUSHING HAZARD

When lifting the unit, take the appropriate care and use suitable lifting equipment.

6. STORAGE

If the unit is not to be used immediately, it should be stored carefully, vertically, in a sheltered, dry location. If storing the module without use for longer periods; A proprietary moisture absorbent should be placed within the packaging and removed during commissioning.

7. COPYRIGHT

This instruction booklet is property of Project Fire Products Ltd and must not be used or copied without its written permission.

8. 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.

9. INTELLECTUAL PROPERTY

Zonecheck is a registered product name of Project Fire Products Ltd. Zonecheck Addressable is Patent Pending PCT/GB2017/050995. Fire Edge is a registered trademark.

10. SERVICE

The Zonecheck Addressable system is an important testing and monitoring device and as such should be maintained as a matter of importance. To ensure correct operation the Zonecheck Addressable system should be serviced at regular intervals at a period of no more than six months. All batteries must be replaced at intervals of no longer than 3 years. Zonecheck Addressable must be serviced by a certified engineer. For a full list of certified engineers please visit our website at www.projectfire.co.uk

11. MANUFACTURER'S DETAILS

Project Fire, Pasturefields Industrial Estate, Pasturefields Lane, Hixon, Staffordshire, ST18 0PH, UK

t: +44 (0)1889 271 271;
e: info@projectfire.co.uk;
w: www.projectfire.co.uk;

For up-to-date information on Zonecheck® Addressable please visit our website.

12. VENTILATION GUIDELINES

The Controller must be mounted on flat surface without any protrusions using the correct fixings, also making sure not to cover the air vents and the rear of the unit.

13. INCOMING ELECTRICAL SUPPLIES

Any incoming electrical supplies to be installed in accordance to the most recent version of BS7671.



Project Fire Products Limited
Pasturefields Industrial Estate
Pasturefields Lane
Hixon
Staffordshire
ST18 0PH
UK

t +44 (0)1889 271 271

www.projectfire.co.uk