# Gemini

## Gemini® Instruction Booklet

Addressable & Conventional versions

VdS

GE-IB-12/19-1

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**Information**
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Gemini is a registered product name of Project Fire Products Ltd.
Zonecheck is a registered product name of Project Fire Products Ltd.
European patent No. 0907833.
Zonecheck Addressable is a registered product name of Project Fire Products Ltd. Patent pending number PCT/GB2017/050995

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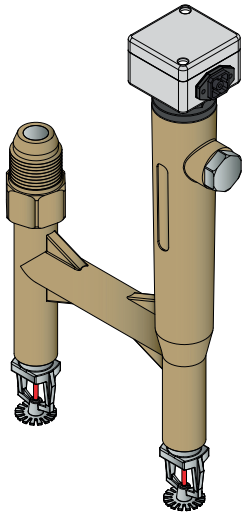
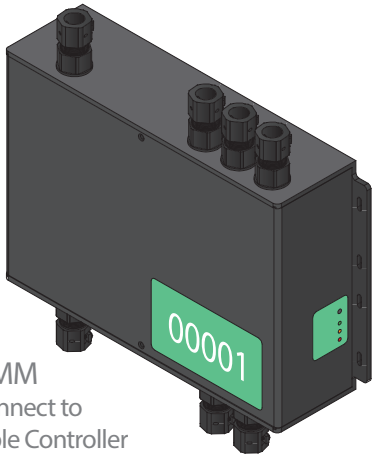
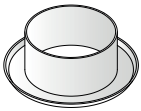
# Typical Components - Addressable version



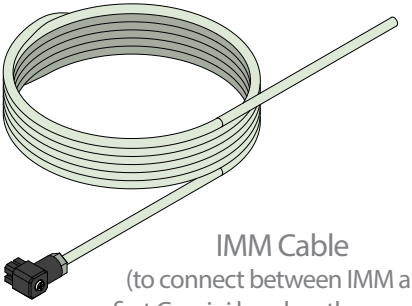
Gemini
(pre-action sprinkler head)



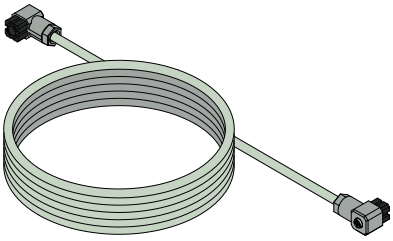

IMM
(to connect to
Addressable Controller
via loop wiring)



Rosette
(for installation with ceilings)



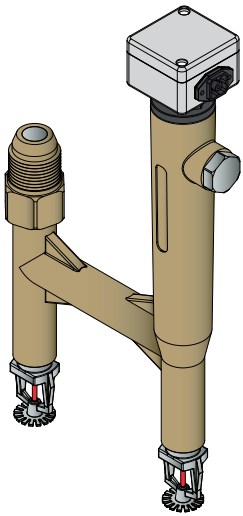
IMM Cable
(to connect between IMM and
first Gemini head on the run, 8m)



Interconnecting Cable
(to connect between Gemini heads, 4m)

End-of-line Resistor Block
(fitted into last Gemini head in run)

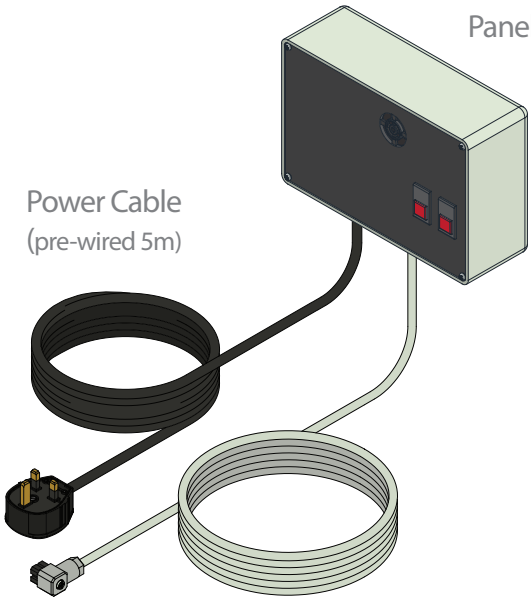
# Typical Components - Conventional version



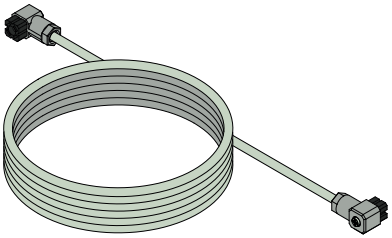
Gemini
(pre-action sprinkler head)

Monitoring Panel

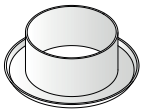
Power Cable
(pre-wired 5m)



Panel Cable
(to first Gemini head - pre-wired 8m)



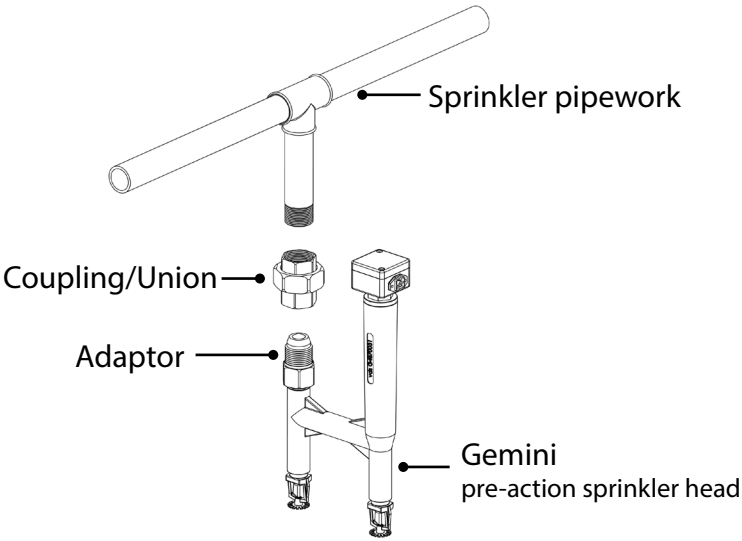
Interconnecting Cable
(to connect between Gemini heads, 4m)

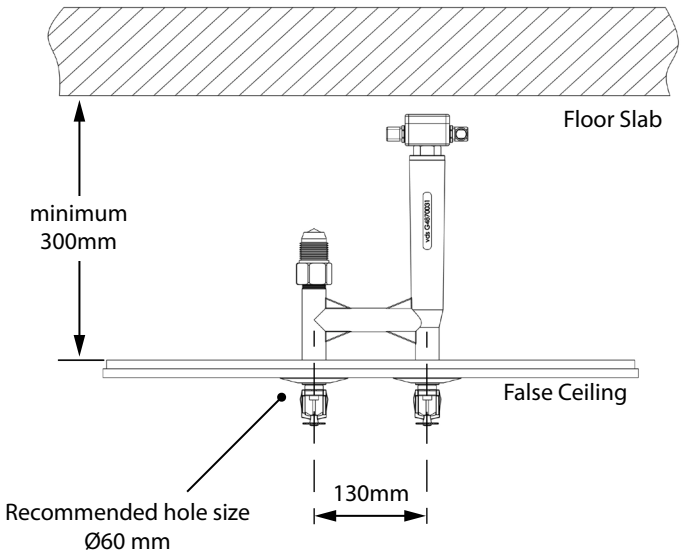


Rosette
(for installation with ceilings)

End-of-line Resistor Block
(fitted into last Gemini head in run)

# Mechanical Installation



**Pre-installation Checks**

- Ensure you have a minimum of 300mm of clear space above any false or suspended ceiling.
- Ensure heads are positioned in accordance with sprinkler design drawing.
- Recommended Ø60mm hole size for fitting into plasterboard or suspended ceilings.
- Ensure all necessary permissions and pre-cautions have bee taken before connecting heads to sprinkler pipework.

**Connecting Gemini Head to Sprinkler Pipework**

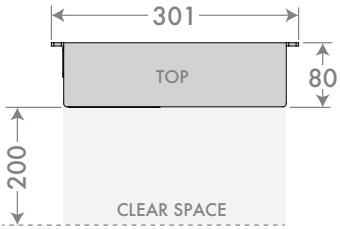
The Gemini® sprinkler head connects to the pipework via a 1¼" (32mm) screwed coupling/union. The coupling is to be screwed onto the adaptor using a wrench or spanner on the hexagon of the adaptor, never at the sprinklers! Repeat this task for all heads to be fitted.

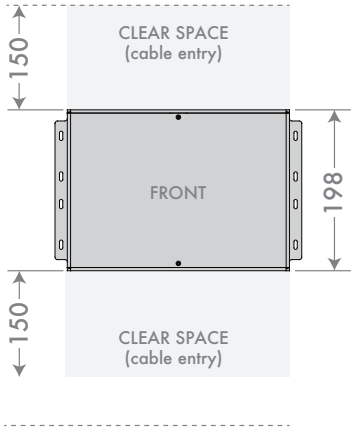
**Mounting Monitoring Panel (conventional installations)**

Mount monitoring panel to a wall in a suitable location. The panel should be located at a convenient visible height, easily accessible and preferably adjacent to any fire alarm panels. Panel provides audible and visual signal when either (or both) of the twin Gemini sprinkler heads are triggered.

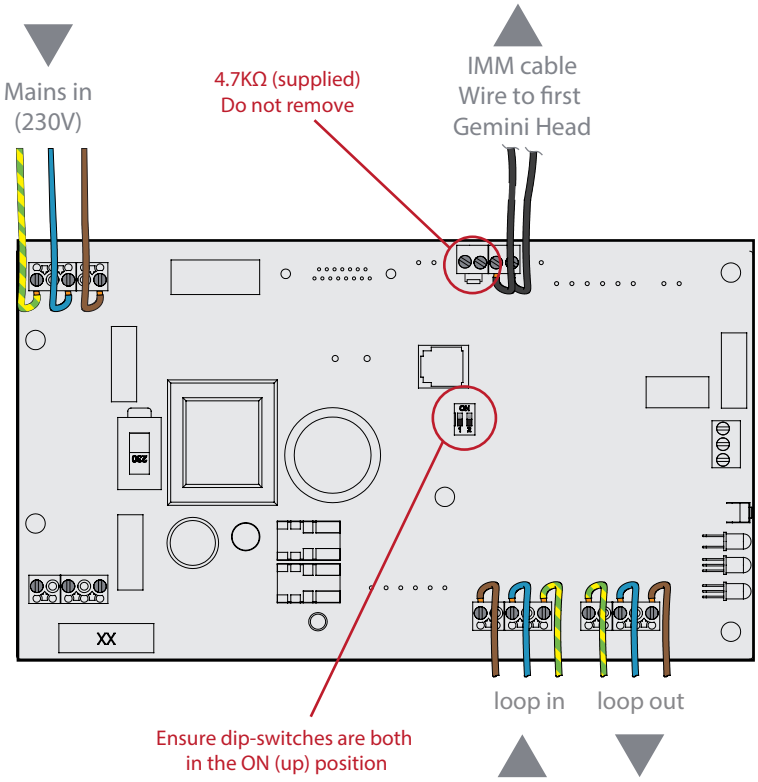
**Mounting IMM (Addressable installations)**

The IMM can be mounted to a wall or pipe (using the appropriate fittings) with access for maintenance. See diagram below for clear space requirements. An audible and visual fault signal is generated on the Zonecheck Addressable Controller when either (or both) of the twin Gemini sprinkler heads are triggered.



# Electrical Installation (Addressable)

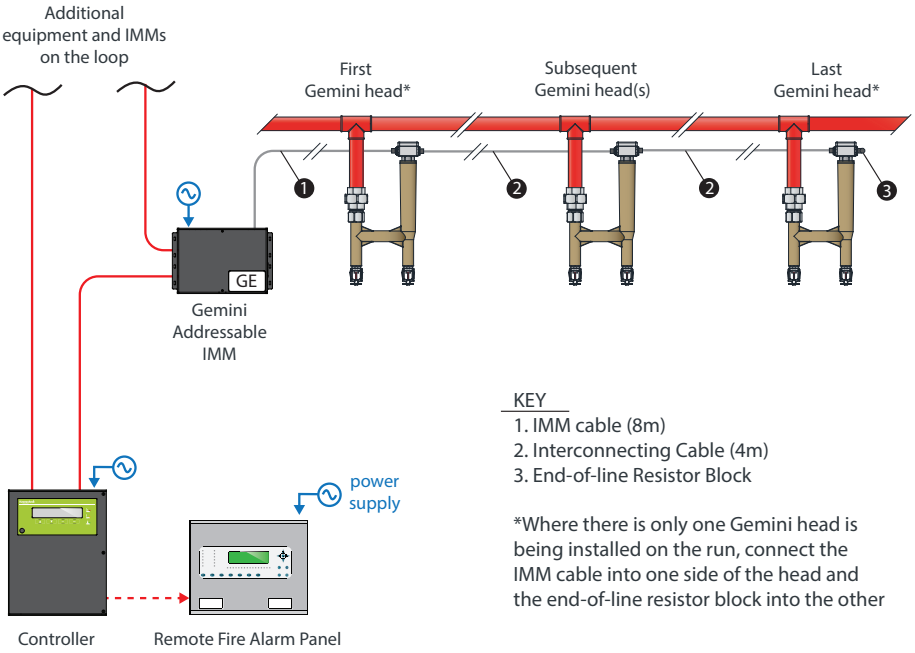



## IMM Wiring

Wiring into the IMM must be completed by a suitability experienced and competent electrician. For a list of approved Zonecheck Addressable installers, please contact Project Fire Products ltd.

For more information on wiring for Zonecheck Addressable see other relevant documentation supplied with Zonecheck Addressable components or available from Project Fire Products ltd.

# Electrical Installation (Addressable)




KEY

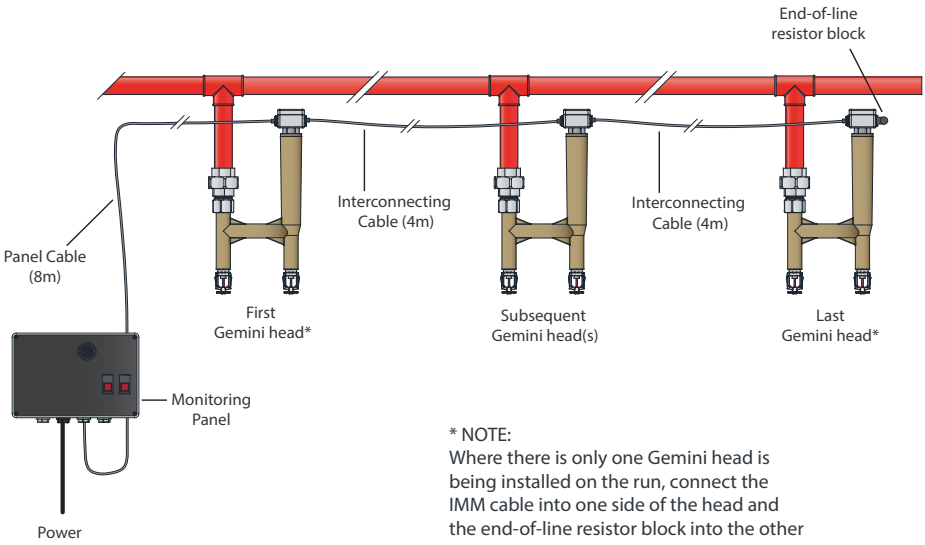
1. IMM cable (8m)
2. Interconnecting Cable (4m)
3. End-of-line Resistor Block

*Where there is only one Gemini head is being installed on the run, connect the IMM cable into one side of the head and the end-of-line resistor block into the other

## System Overview

Wiring connections into the Gemini heads uses simple plug-and-play cables.

# Electrical Installation (Conventional)




*Note

Where there is only one Gemini head is being installed on the run, connect the pre-installed panel cable into one side of the head and the end-of-line resistor block into the other.

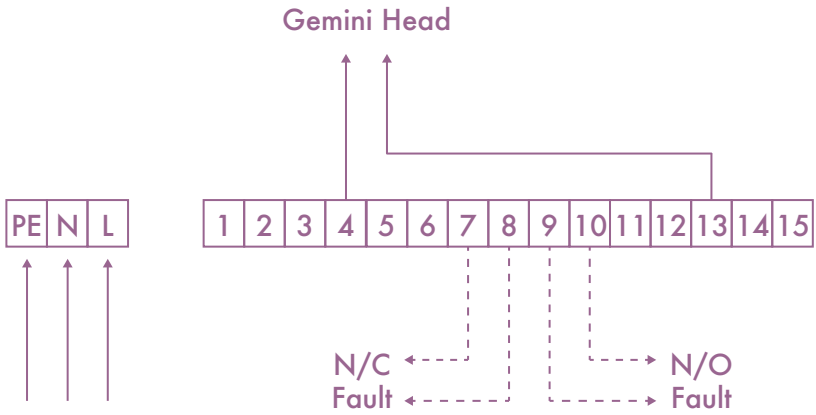
IMPORTANT

Provided only supplied equipment is used with no alterations or additions, a qualified electrician is not required to electrically install Gemini.

However, adding an optional "signal out" relay to the monitoring panel to additional monitoring devices (see opposite page) should only be carried out by a suitably experienced and competent electrician.

# Electrical Installation (Conventional)

## Monitoring Panel




## Relays

Relay is triggered when either (or both) of the twin sprinkler heads on the Gemini unit are triggered. Signal from monitoring panel is typically wired as "fault".

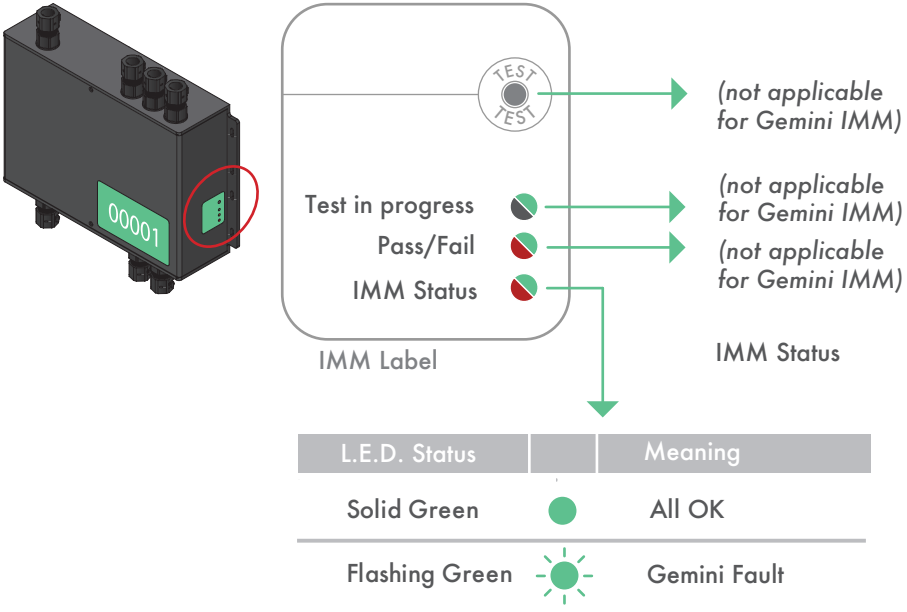
Use contacts 7&8 for wiring to normally closed relay switches.
Use contacts 9&10 for wiring to normally open relay switches.

# Testing and Operation (Addressable)

Once the complete Addressable system is fully commissioned, a simple test can be carried out to check the fault output of the Gemini units. Unplugging any of the interconnecting cables should result in a fault signal being received by the IMM unit and will display a fault on the LED side panel. This fault signal is relayed to the main Addressable Controller. The fault signal can be cleared by plugging the cable back in and performing a reset on the main Addressable Controller.

There is no requirement for ongoing testing but the test described above can be repeated and included as part of the regular sprinkler servicing routine.

For more information, see other Zonecheck Addressable documentation.

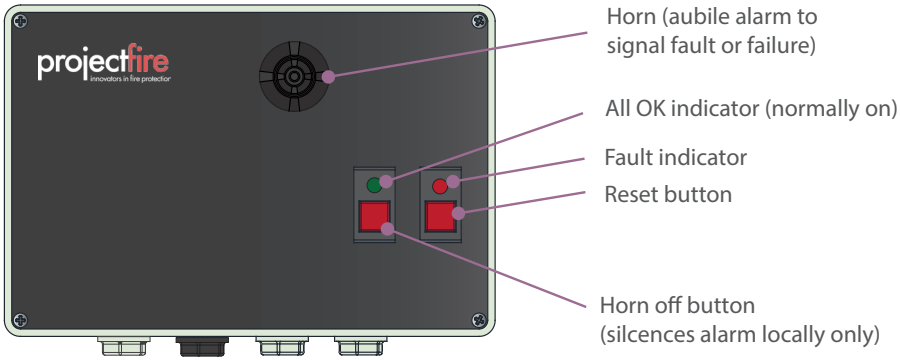


# Testing and Operation (Conventional)

Once the panel is connected to mains power and all Gemini heads have been connected, a green "all OK" LED should be illuminated on the front of the Monitoring panel. A simple test can be carried out to check the fault output of the Gemini units. Unplugging any of the interconnecting cables should result in the horn sounding and the fault indicator LED illuminating on the monitoring panel. The fault signal can be cleared by plugging the cable back in and pressing the "reset" button on the front of the monitoring panel.

There is no requirement for ongoing testing but the test described above can be repeated and included as part of the regular sprinkler servicing routine.

For more information, see other documentation included with the monitoring panel.



# Important Information

- The sprinklers are manufactured and tested to comply with the rules and specifications of international insurers and code standards. Any modification of the sprinkler in the form of painting, coating or ornamentation applied after leaving the production factory will seriously affect its operation. Sprinklers modified as above will not be guaranteed by the manufacturer and with be non-compliant.

- Sprinkler (brass and chrome plated) may only be installed in areas with normal atmospheric conditions.

- Sprinklers should only be installed by fully trained personnel.

- Never install defective or damaged sprinklers.

- All threads (fittings/sockets) must be clean and free of grease and burrs.

- When screwing the coupling onto the adaptor ensure the wrench/spanner sits on the hexagon of the adaptor, never at the sprinklers!

- When connecting the coupling to the pipework do not exceed the maximum torque of 20 NM. Exceeding this value will cause the warranty to be void should any leaks occur.

- A maximum clockwise turn of 180° is permitted for alignment of the sprinklers (for sprinkler alignment turn sprinklers clockwise only).

# Frequently Asked Questions (FAQs)

What is Gemini®?
Gemini is a device used with automatic sprinkler systems which includes twin sprinkler heads. The device gives "double knock" protection, i.e. both sprinkler heads have to be triggered in order for water to be discharged (out of one head only). If a single head is triggered, an alarm will sound but no water will be discharged.
For more information, please contact Project Fire Products Ltd.

What is the distance between the two sprinkler heads on each Gemini®?
130mm

What is the RTI of the Gemini® sprinkler head?
The Gemini is fitted with fast response, VdS approved, sprinkler heads with 3 mm bulbs and the RTI of less than 50.

What is the approved spacing for the Gemini® sprinklers?
9 meter square spacing.

How many Gemini® sprinkler heads can be installed in one area?
There is no specified maximum number.

Do the Gemini® heads require power?
Power is required for monitoring purposes only at the panel/IMM. The heads operate mechanically and will discharge water in the event of a fire even without power.

In the event of sprinkler heads being triggered (either accidentally, maliciously or in the event of a fire) operation, can new heads be installed on site?
No. On activation the whole Gemini® unit must be replaced. The Gemini® is only approved when sprinkler heads are fitted at the factory.

What is the recommended procedure for replacing the Gemini® sprinkler?
It is recommended to have one additional Gemini® on site with the normal sprinkler spare box.

What on going maintenance is associated with the Gemini®?
There is no specific routine maintenance on the mechanical mechanism on the Gemini sprinkler head. The electrical alarm signal can be tested by breaking the circuit i.e. Unplugging one of the monitoring connections, however the approval does not stipulate such routine testing.

# Troubleshooting

## Addressable Installations

*Addressable Installations should be troubleshooted by a competent fire sprinkler installer and wiring checked by a qualified electrician. For other IMM faults, please refer to Zonecheck Addressable Controller information.*

| | |
|---|---|
| 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. |
| Gemini fault signal is not reported or fault is incorrectly displayed. | Ensure that label on front of IMM states it is for Gemini.<br><br>Check wiring and dip-switch positions against the information on page 5 of this booklet. |

## Conventional Installations

*Any wiring issues should be troubleshooted by a competent fire sprinkler installer and wiring checked by a qualified electrician. For other IMM faults, please refer to Zonecheck Addressable Controller information.*

| | |
|---|---|
| No power to monitoring panel | Check power is available at the socket/terminal.<br><br>Check internal wiring against page 8 of this booklet. |
| Gemini fault signal is not displayed on the monitoring panel. | Check wiring against diagram on page 7 and ensure end-of-line resistor is installed in the last Gemini head on the run. |

# One Year Warranty

Project Fire Products warrants its enclosed Gemini device (and additional supplied equipment included with the Gemini head) to be free from defects in materials and workmanship under normal use and service for a period of one year from date of dispatch. Project Fire Products makes no other express warranty. 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 Gemini device (and additional supplied equipment included with the Gemini head) 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 installation.

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.

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