

# Technical Data



FXN922 Specification	
Operating voltage	15 to 35Vdc
Standby Current (max)	80uA
Start-up Current for 20 seconds max	340A
Alarm Current (max)	25mA
Alarm temperature (static)	60°C A1R 77°C BS 92°C CS
Heat detector class as defined by EN54-5:2000	A1R/BS/CS Programmable
Relative Humidity (non-condensing)	0 to 95%
Height (without base)	43mm
Height (with base)	56mm
Diameter	100.5mm
Weight (without base)	78g
Material	PC/ABS
Colour	White
Ambient temperature (max)	Opto mode 60°C Opto-Heat mode 45°C 60°C Rate of Rise mode 45°C 77°C Fixed Temp mode 60°C 92°C Fixed Temp mode 80°C
Ambient temperature (min)	-10°C
Compatible base	EFXN520 (FXN520)

## Choosing the right detector function

The FXN922 is a conventional detector. It can be configured to operate as either an optical smoke detector, opto/heat multi sensor detector or in 1 of 3 heat detector modes using the four position switch located at the back of the detector (see table for switch settings).

**Optical smoke detector.** This detector is suitable for most applications giving the fastest response to slow burning or smouldering fires which give rise to large visible smoke particle. Opto-heat detector. This will respond better to fast clean burning fires yet maintain the advantage of optical detectors when detecting smouldering fires. The thermal enhancement of this detector allows a higher alarm threshold which provides a greater rejection of false alarms. The detector will also give an alarm at temperatures above 60°C.

**Rate of Rise heat detector.** This detector will detect a rapid increase in temperature or temperatures above 60°C and should be used in environments where the ambient conditions might cause false alarms if smoke detection were to be used, for example where there is a high level of dust, fumes, steam or smoke under normal conditions.

**Fixed (77°C) heat detector.** This detector will detect temperatures above 77°C and should be used in environments where the ambient conditions might cause false alarms if smoke detection were to be used, for example where there is a high level of dust, fumes, steam or smoke under normal conditions.

**Fixed (92°C) heat detector.** This detector will detect temperatures above 92°C and should be used in environments where the ambient temperature is likely to be high i.e. boiler rooms. In the Optical and Opto-Heat mode the detector automatically compensates for gradual increase in the scatter signal due to contamination e.g. dust build up. If excessive dust occurs, the yellow LED will show continuously. In these circumstances remove the detector head and vacuum around the outside of the mesh. If this fails to solve the problem the detector should be replaced.

All detector modes have an isolator that opens if the internal power fails in the detector, giving rise to a zone fault at the main panel.

When used with a Self-Check compatible panel, this detector can be instructed to blink their yellow LED every 2 seconds by a command from the main panel, to aid the search for a break in the zone cabling or an open detector isolator.

## Testing

All detectors must be tested following installation or routine service and maintenance. It is recommended that these tests are carried out by a competent person. Authorised personnel must be informed that the fire system will be temporarily out of service before commencing testing. To prevent unwanted alarms, ensure that the panel is in test mode and it may be appropriate to disable some or all of the sounder circuits. When all tests are complete, restore panel to normal operation and notify authorised personnel that the system is operational.

### Smoke Detectors:

Subject the detector to be tested to a controlled amount of an approved synthetic smoke aerosol via a smoke detector test pole. Suitable products are available for example, from No Climb Products Ltd.

Check that the red LED on the detector latches into alarm within 30 seconds. If an optional remote LED is fitted, check that this also lights.

Ensure that the control panel activates into alarm.

Reset the detector from the control panel unless automatically reset by the panel in test mode.

This procedure will test the smoke sensing circuitry of the Photo/Thermal Detector.

### Heat Detectors:

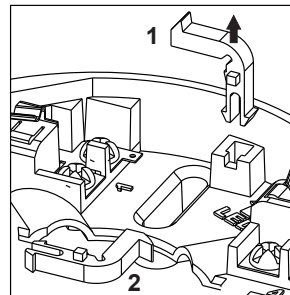
Using a heat gun or hair dryer capable of generating temperatures of up to 95°C, direct the heat source towards the heat sensing elements, visible through the side of the outer cover, from a distance of 15 to 30cm. Care should be taken not to allow the plastic surface temperature to exceed 110°C otherwise damage may occur.

When the temperature reaches the 'Alarm Temperature' (see Specifications above), check that the red LED on the detector latches into alarm. If an optional remote LED is fitted, check that this also lights. Ensure that the control panel activates into alarm.

Reset the detector from the control panel unless automatically reset by the panel in test mode.

This procedure will test the heat sensing circuitry of the Photo/Thermal Detector.

## Utilising Locking Tab



The mounting base includes an optional feature to prevent the removal of the detector without the use of a tool.

1. Remove the standard fit retaining clip.
2. Insert the locking clip which is located at the centre of the base as shown.

Mount the detector onto the base as described in Detector Installation (see over) and rotate fully clockwise until it finally clicks. The detector is now locked into position. Remove by utilising a suitable tool (e.g. a thin screwdriver) into the hole in the detector cover.

Gently push the tool detector and rotate anti-clockwise.

## Installation

Fit detector to mounting base and rotate clockwise until the detector drops into place. Continue to rotate clockwise until the detector clicks into place and no further rotation is possible.

If the detectors are required to be locked into position, refer to the mounting base installation instructions (see above).

3 Smoke detectors are supplied fitted with dust covers for general protection against airborne contaminants. These must be removed from all detectors before the fire system is commissioned.

NB. These dust covers do not provide adequate protection against quantities of dust generated by building work, sanding etc. Therefore, detectors should not be installed until this type of work has been completed.

## Maintenance

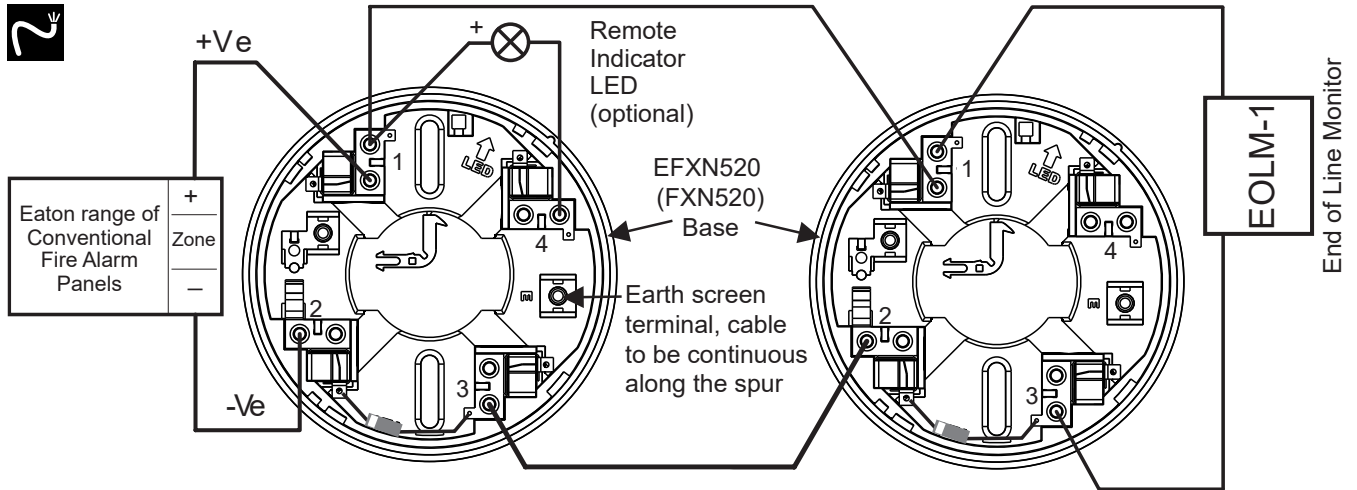
Only minimal maintenance can be performed on this range of detectors as they do not contain any site serviceable parts. The frequency of maintenance and will depend on the environment to which the detector is exposed but should be at least annually. Dusty or damp environments will demand more frequent maintenance.

Remove the detector from its mounting base.

Use a vacuum cleaner to remove dust build up from around the smoke entry apertures of a smoke detector, or from around the heat sensing element of a heat detector.

For smoke detectors, visually inspect the insect mesh for blockages. If these can not be cleared by vacuuming, the detector must be replaced.

Re-fit detector to its mounting base and test as described above.



### Wiring Hints

Each terminal is suitable for clamping up to 2 wires  
Clamping of 2 wires of very different diameters under one screw is not recommended.  
**DO NOT USE A POWER TERMINAL DRIVER.**  
Suitable for mounting to mounting boxes with 50-80mm fixing centres.

Description	SW1	SW2	SW3	SW4
Opto	N/A	OFF	OFF	OFF
Opto/heat	N/A	OFF	OFF	ON
Rate of rise heat A1R	N/A	ON	OFF	OFF
Fixed heat BS	N/A	ON	OFF	ON
Fixed heat CS	N/A	ON	ON	OFF
Non latching alarm (auto reset)	ON	N/A	N/A	N/A
Latching alarm	OFF	N/A	N/A	N/A

