

# Technical Data



EFXN533	DoP0448	18	EN54-7 Point Type Smoke Detectors
EFXN525	DoP0446	18	EN54-5 Point Type Heat Detectors
EFXN524	DoP0445	18	EN54-5 Point Type Heat Detectors
EFXN526	DoP0447	18	EN54-5 Point Type Heat Detectors
EFXN632	DoP0449	18	EN54-5 Point Type Heat Detectors
FXN922	DoP0405	12	EN54-7 Point Type Smoke Detectors

	Specification
Supply Voltage	15 to 30 Vdc
Cable size / Type	0.5mm <sup>2</sup> - 2.5mm <sup>2</sup> / FIRETUF, FP200 or MICC
Mounting Hole Centres	50 - 80mm
Allowable Alarm Current	25mA
Allowable Remote Indicator Current	25mA

### 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.

### General

If difficulty is experienced when mounting the detector, this may be due to the following:

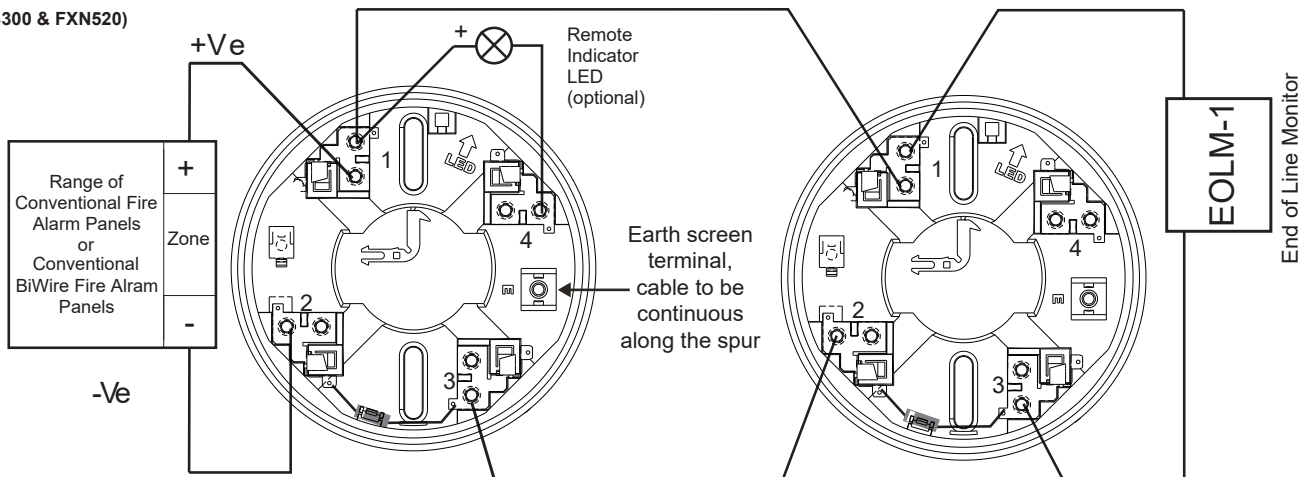
Wiring causing an obstruction - move or shorten wires. Although the base is tolerant to uneven mounting surfaces, a very uneven surface may cause the base to deform when the mounting screws are tightened down - loosen screws to reduce this or slide base to a more flat position.

**WARNING:** DO NOT USE HIGH VOLTAGE TESTERS WHEN DETECTORS OR CONTROL PANEL ARE CONNECTED TO THE SYSTEM.

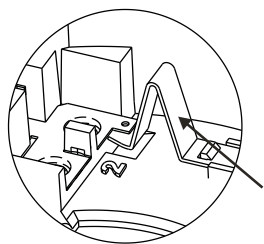
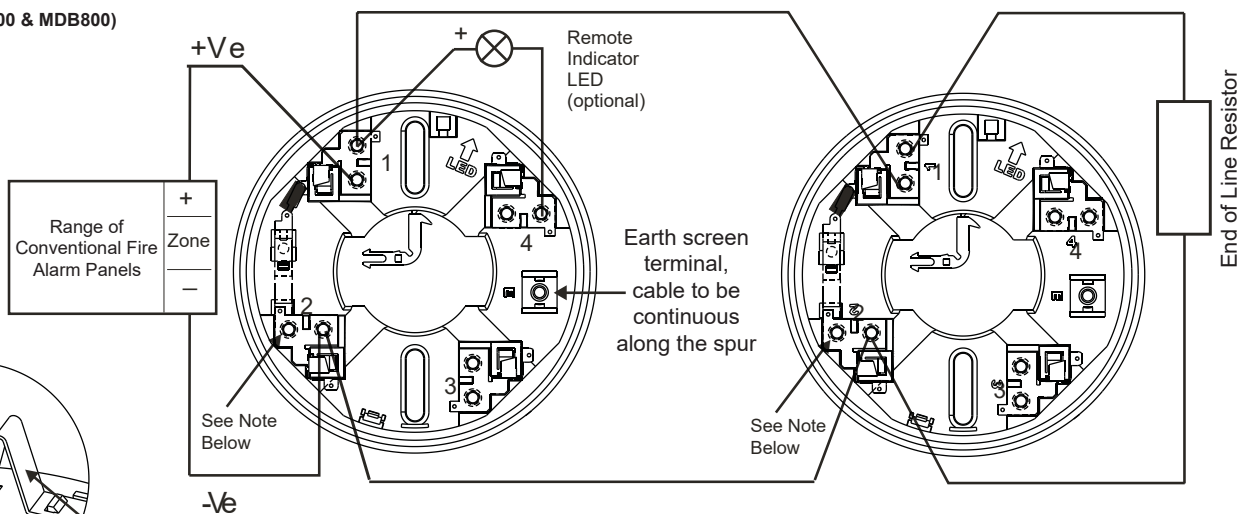
### Zener Diode Switch Action EFDB800 (CDB300 & MDB800)



EFXN520 (CDBB300 & FXN520)



EFDB800 (CDB300 & MDB800)



Attention: If using the outer connection on terminal 2, ensure the operation of the switch is not impeded and that there are no shorts between terminal 2 and the switch contact - use sleeves for end of line resistor. Ensure that cable or EOL resistor leg does not short onto the contact.

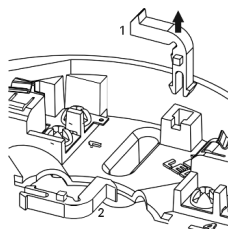
## Utilising Locking Tab

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 (eg a thin screwdriver) into the hole in the detector cover. Gently push the tool into the detector and rotate anti-clockwise.



	Base	Order Codes
Conventional Photoelectric Smoke Detector - Cooper	EFXN520 (CDBB300 / FXN520)	EFXN533
Conventional Heat Detector - Class A2R - Cooper		EFXN525
Conventional Heat Detector - Class BS - Cooper		EFXN524
Conventional Heat Detector - Class CS - Cooper		EFXN526
Conventional Photo/Thermal - Class A2S (Heat Performance) - Cooper		EFXN632
Bi-Wire Programmable Conventional Photoelectric, Photo/Thermal (A2S), Heat Detector (ATR, BS or CS) - JSB	EFXN520 (CDBB300 / FXN520)	FXN922

## Detector Features (Photoelectric & Photo/Thermal)

All Photoelectric and Photo/Thermal detectors, automatically compensate for gradual increases in the scatter signal due to contamination e.g. dust build up.

## Self-Check Features Of The Bi-wire Detector

The Self-Check feature monitors for the failure of the internal primary alarm circuitry. Under this condition, the detector will still register an alarm condition via the yellow LED. Following such a failure, the yellow LED will remain on following a reset, signaling a fault at the main panel and the detector must be replaced.

BiWire detectors, automatically compensate for gradual increases in the scatter signal due to contamination e.g. dust build up. If excessive dust occurs, the yellow LED will show continuously. If this occurs, the maintenance procedure should be conducted.

The yellow LED will also light continuously if the detectors optical sensor signal begins to reduce below its normal level (chamber monitoring).

In addition, the BiWire range has 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 BiWire compatible panel with Self Check features, the BiWire Detectors range of detectors 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.

## Detector 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 'Utilising Locking Tab' section.

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

## 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 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.

## 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.

Detectors that fail the testing procedure must be replaced.

	EFXN533	EFXN525	EFXN524	EFXN526	EFXN632	FXN922
Operating voltage	15 to 30 Vdc	15 to 30 Vdc	15 to 30 Vdc	15 to 30 Vdc	15 to 30 Vdc	15 to 30 Vdc
Standby current (max)	30µA	30µA	30µA	30µA	30µA	80µA
Start up current (max 20 sec)	340µA	N/A	N/A	N/A	340µA	340µA
Alarm current (max)	25mA	25mA	25mA	25mA	25mA	25mA
Ambient temperature (max)	60°C	45°C	60°C	75°C	45°C	Opto Mode 60°C Opto-Heat Mode 45°C ATR Rate of Rise Mode 45°C BS Fixed Temp Mode 60°C CS Fixed Temp Mode 80°C
Ambient temperature (min)	-20°C	-20°C	-20°C	-20°C	-20°C	-10°C
Alarm temperature (static)	N/A	60°C	77°C	90°C	60°C	Opto-Heat Mode 60°C ATR Rate of Rise Mode 60°C BS Fixed Temp Mode 77°C CS Fixed Temp Mode 92°C
Heat detector class –as defined by EN54-5:2000	N/A	A2R	BS	CS	A2S	See above
Relative humidity (non-condensing)	0 to 95%	0 to 95%	0 to 95%	0 to 95%	0 to 95%	0 to 95%
Height (without base)	34mm	43mm	43mm	43mm	43mm	43mm
Height (with base)	47mm	56mm	56mm	56mm	56mm	56mm
Diameter	100.5mm	100.5mm	100.5mm	100.5mm	100.5mm	100.5mm
Weight	78g	76g	76g	76g	78g	78g
Material	PC/ABS	PC/ABS	PC/ABS	PC/ABS	PC/ABS	PC/ABS
Colour	White	White	White	White	White	White
Bi-Wire compatible	No	No	No	No	No	Yes
Self check features	No	No	No	No	No	Yes