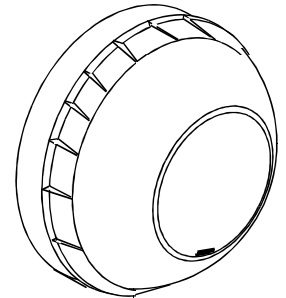


202-0003 Twinflex Multipoint Detector
202-0001 Twinflex Multipoint Detector
with Sounder

General Description

The Multipoint is a plug-in type smoke detector that utilises a photo-electric sensing chamber to make a measurement corresponding to smoke density. The device also incorporates a thermistor sensing circuit to allow for accurate heat measurement. These elements allow the device to be configured to a smoke, heat or combined setting. Digital communication technology to the control panel is implemented allowing for accurate data transfer at high transmission speeds. This device is only compatible with the Twinflex control panels (and their associated detection and alarm equipment) and may also incorporate a sounder (ignore all references to sounders if your device has no sounder).



Before Installation

The detector must be installed in compliance with the control panel installation manual. The installation must also meet the requirements of any local authority. For maximum performance the detector should be installed in compliance with BS5839 Pt1 : 2002 + A2 : 2008.

Spacing

Fike recommends spacing detectors in accordance with BS5839 Pt1. Due to the effects of IR and possible magnetic interference, detectors should not be fitted any closer than 500mm (preferably 1000mm) to a light fitting or any other source of IR or EMI. In addition to this recommendation the device should be mounted so that the indication LED is facing towards the light fitting. For more specific information regarding detector spacing, placement and special applications please refer to BS5839 Pt1 : 2002 + A2 : 2008.

Note: As with other optical detectors, this device should not be located where subjected to high levels or pulses of light or infra red light, as this may cause false alarms or faults.

Detector Installation

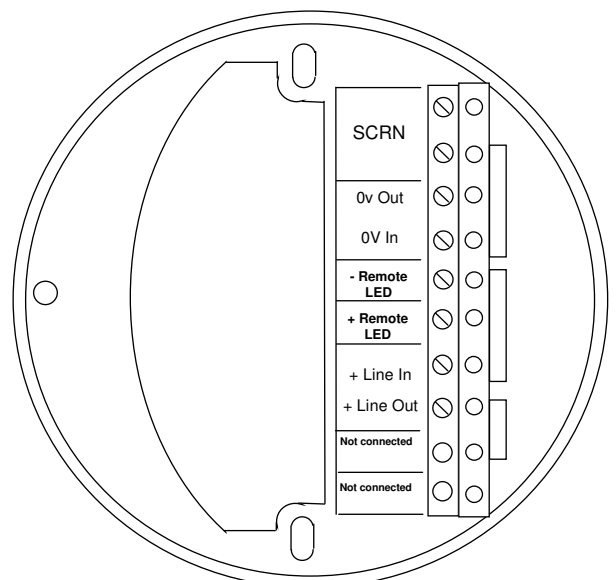
All wiring must be installed in compliance with the recommendations laid out by BS5839 Pt1 : 2002 as well as any special recommendations documented in the control panel installation manual. The cabling used should be of a 2-core 1.5mm² screened, fire resistant type (e.g. MICC or FP200 equivalent), and is to be wired in the form of a screened 2-core radial circuit (with no spurs) from the control panel, terminating at the last (“End of Line”) device.

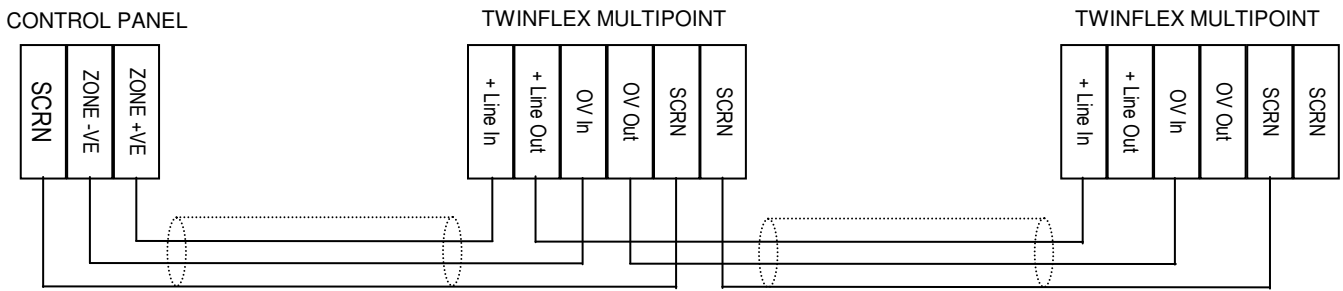
Fix the detector base in a suitable position using the two screw slots provided, remembering to allow enough cable length for termination. You may then terminate your cables directly into the terminal block according to the terminal labels. It is important to maintain the screen continuity in order to protect against data corruption from interference.

Connections

Terminal	Description
SCRN	Screen
0V Out	Zone -ve out to next device
0V In	Zone –ve in from panel (or previous device)
– Remote LED	Remote LED output -ve
+ Remote LED	Remote LED output +ve
+ Line In	Zone +ve in from panel (or previous device)
+ Line Out	Zone +ve out to next device

Note: The “+ Line Out” and “0V Out” terminals must not be used on the last device in the zone.





Twinflex Multipoint Detectors can be mixed on the same zone as other types of Twinflex device (eg. Twinflex Callpoints). The above diagram shows how to make the zone positive, zone negative and screen connections between the control panel and Twinflex Multipoint Detectors. Refer to the instruction leaflets supplied with other Twinflex devices for their equivalent wiring/terminal labelling details.

Please note that the SCRN terminal on the detector bases should only be connected to the zone cable screen and NOT to the building earth. The cable screen is connected to earth at the panel end only, via the zone “SCRN” terminal (or EARTH terminal on the Twinflex V3 2/4/8 Zone panels). It is important to maintain the screen continuity in order to protect against data corruption from interference.

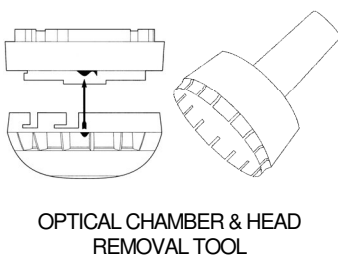
Once all testing has been carried out on the cabling and ‘continuity & integrity’ has been proven, the Multipoint unit may be assembled.

Program the onboard DIL switches as required before inserting the Electronics Module. Then locate the pins and gently push home the module.

Remember that the device at the end of the line must have its EOL signal activated using the relevant DIL switch. Do not use a resistor or capacitor (or another manufacturer’s End of Line device) as the end of line, as this may prevent correct operation of the zone.

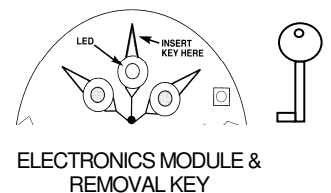
The Detector Head may then be offered up and twisted to locate until the catch operates. Remember not to force this item. If the Electronics Module is correctly located then the Detector Head should locate with very little force.

Tamper Resistance and Head Removal



The Multipoint detector incorporates a tamper resistant locking mechanism that prevents its removal from the base without the use of a special tool. To remove the device the tool should be offered up to the detector and turned anti-clockwise allowing the detector to be removed from the base.

If required the Electronics Module may be removed by inserting the Key into the triangular slot adjacent to the LED and then pulling to ease the Module out. Do not pull on the optical transmitter and receiver pair as you may misalign them.

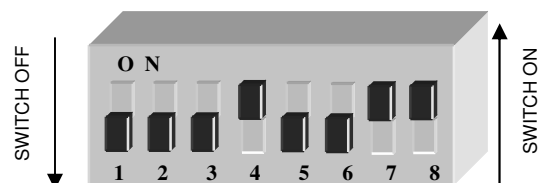


DIL Switch Settings

The detector DIL switches may be used to program the operation of the Multipoint Detector. They may be altered when the device is removed from the base.

If a heat detection mode is selected then use the ‘HEAT’ labels supplied to label the base of the detector clearly.

The last device on the circuit must have the EOL signal enabled (switch number 1 in the ‘ON’ position).



		DIL SWITCH SETTINGS							
		1	2	3	4	5	6	7	8
EOL Signal	Disabled (no end of line signal)	OFF							
	Enabled	ON							
Detection Mode	Disabled (no detection)			OFF	OFF	OFF			
	Smoke 1 – Standard optical with high thermal enhancement			ON	OFF	OFF			
	Smoke 2 – Standard optical with normal thermal enhancement			OFF	ON	OFF			
	Smoke 3 – Low sensitivity optical with transient rejection			ON	ON	OFF			
	Heat 1 – Rate of Rise 58°C, general use in normal, stable environments			ON	OFF	ON			
Logical Link *	Heat 2 – Low fixed 58°C, Domestic kitchens etc			OFF	ON	ON			
	Heat 3 – Hi Fixed 90°C, Commercial kitchens, boiler rooms			ON	ON	ON			
	Smoke 2 / Heat 2 Combined			OFF	OFF	ON			
	Logical link disabled		OFF						
Sound Pattern	Logical link enabled		ON						
	Disabled (no sound)						OFF	OFF	
	Sound 1 (Continuous tone at 970 Hz)						ON	OFF	
	Sound 2 (Alternating tone at 800/970 Hz)						OFF	ON	
Sounder vol	Sound 3 (Sweep up tone at 800 to 970 Hz)						ON	ON	
	Low								OFF
	High								ON

* For use with Twinflex Checkpoint Plus Control panels only. The setting will be ignored on standard systems. With Logical Link enabled the sounder in that device only will operate during the Alarm Confirmation period, and with the Logical Link disabled all the sounders in the same zone as the device in alarm will operate during the Alarm Confirmation period.

Power Up

The Multipoint detector requires approximately one minute on power up to boot up its processor and settle down to normal operation. Do not test the detector during this time. Ensure that the Detector Head is installed when the system is powered up otherwise a fault condition will be present.

Head Contamination Warnings

If a smoke detector becomes dusty, its operation is affected, either making it more prone to false alarms, or in rare cases reducing its sensitivity. The Multipoint LED will flash once approximately every 1.3 seconds. At the control panel, the common 'Fault' LED will flash, the buzzer will sound and the relevant 'Zone Fault' LED will flash at approximately twice the rate of the buzzer.

Replacing Contaminated Detector Head

The Detector Head contains the optical chamber. When an optical chamber becomes contaminated we recommend replacing it with a new item. Cleaning an old chamber will not give satisfactory results. Firstly investigate the control panel indications as above, then check the devices in the relevant zone to locate the Multipoint detector indicating 'Fault'.

Remove the Detector Head with the Head Removal Tool and replace it with a new one. The fault indication should clear in 30-45 seconds and return to normal.

Testing

We recommend the use of suitable smoke test equipment such as the 'No Climb' SOLO 300 tester or an equivalent product. Due to the fact that the smoke detection modes are all 'thermally enhanced', it may be noticeable that on test the devices respond more slowly than may be expected. This is perfectly normal and is due to the fact that during test there is no additional heat present to cause the sensitivity to be enhanced.

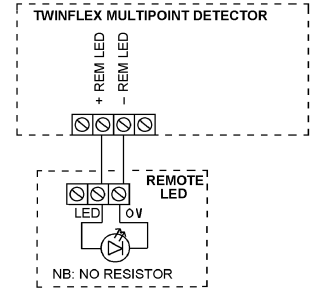
Smoke mode 3 requires that the concentration of smoke is kept up for a longer period to trigger the device into alarm, so patience is required. Small regular applications of test smoke are best in order to avoid drenching the detector as this may result in sticky residues being left behind.

Remote Indicator

The remote LED terminals ('Remote LED + / -') may be used to connect a separate LED (Pt No. 600-0092). The LED functions are as follows:

- 5ms every 5 seconds: End of Line
- 5ms every 1.3 seconds: Fault
- 350ms every 0.7 seconds: Fire detected by detector
- Continuous: Fire detected by detector and processed at panel

Note that the LED does not require a resistor.



Technical Data

Dimensions	105mm diameter x 62mm
Operating temperature	-10°C to +50°C
Voltage Ranges	DC Output from Mains Powered Panel ...	25.5 to 35V DC
	DC Output from Battery Powered Panel..	20 to 26V DC
Operating Current	Quiescent	114 uA (Typical)
	End of line ON if applicable	50 uA (Typical)
	<i>(in addition to Quiescent)</i>	
	Alarm Sounding – Sounder High	8 mA (Typical)
	Alarm Sounding – Sounder Low	3.5 mA (Typical)
	Alarm Sounding – Sounder Off	1.5 mA (Typical)
	Alarm Activated	48.5 mA (Typical)
	<i>(in addition to Alarm Sounding)</i>	
LED Operation	Detector in Normal State	Flash at 20 second intervals
	Detector at EOL	Flash at 5 second intervals
	Detector in Fault	Flash at 1.3 second intervals
	Detector Detecting Fire	Flash at 0.7 second intervals
	Detector in Fire (once processed at panel)	Continuous
Loading Units		V3 Panel: Pro Panel:
	Max Loading Units per zone	27 SLU 160 DLU
	Sounder High	1.5 SLU 8.0 DLU
	Sounder Low	1.0 SLU 3.5 DLU
	No Sounder	0.5 SLU 1.5 DLU
Volume Level	Sounder High	89+ dB(A)
(@ 1m anechoic, Dual Tone)	Sounder Low	65+ dB(A)
Flammability	UL94-V2
IP Rating	IP 21C
Part Codes	No Sounder	202 0003
	With Sounder	202 0001

Technical Support

Contact your supplier for technical support on this product.

Due to the complexity and inherent importance of a life risk type system, training on this equipment is essential, and commissioning should only be carried out by competent persons. Fike cannot guarantee the operation of any equipment unless all documented instructions are complied with, without variation. This unit complies with the EMC directive.

Fike's policy is one of continual improvement and the right to change a specification at any time without notice is reserved. Whilst every care has been taken to ensure that the contents of this document are correct at time of publication, Fike shall be under no liability whatsoever in respect of such contents. E&OE.

 0832
Fike Safety Technology Ltd, 31 Springvale Ind Est, Cwmbran, UK. NP44 5BD (Manufactured Date on Product Label) 0832-CPD-1572 0832-CPD-1573
EN54-3 Fire Alarm Device – Sounder Type A – Indoor Use EN54-5 Fire Alarm Device – Heat detector EN54-7 Fire Alarm Device – Smoke detector Sounder Technical Data: See 26-0747