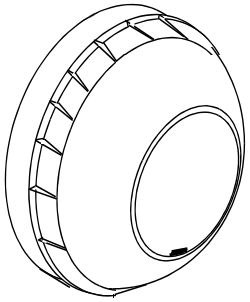
203-0003 Sita Multipoint Detector and 203-0001 Sita Multipoint Detector / Sounder

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 Sita200plus, Duonet and Quadnet ranges of control panels 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 to BS5839 Pt1 : 2002 + A2 : 2008.

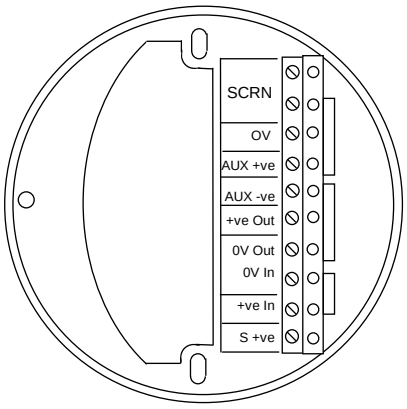
Spacing

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 source. For more specific information regarding detector spacing, placement and special applications please refer to BS5839 Pt1 : 2002 + A2 : 2008.

Detector Installation

Fix the base in a suitable position using the two screw slots provided, remembering to allow enough cable length for termination. 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 1.5mm^2 screened, fire resistant type, and is to be wired in the form of a screened 2-core loop returning to the control panel. The use of spurs on this system is not permitted.** Cables may be terminated into the connectors mounted in the base, as shown below. Care should be taken when terminating devices to ensure all cables are correctly sleeved and connections are secure. Improper connections will prevent a system from responding properly in the event of a fire.

Terminal	Description
SCRN	Screen
0V	Remote LED -ve
AUX +ve	Auxiliary +ve
AUX -ve	Auxiliary 0V
+ve Out	Loop +ve OUT
0V Out	Loop -ve OUT
0V In	Loop -ve IN
+ve In	Loop +ve IN
S +ve	*Not Used*



The Loop +ve (positive) IN and the Loop +ve (positive) OUT connections are split within the base. For cable continuity readings at the commissioning stage the supplied link must be fitted. Please remember that all high voltage testing must be carried out before the installation of the electronics, otherwise the electronics will be damaged. Please also note that the SCRN terminal should only be connected to the loop screen and NOT the building earth.

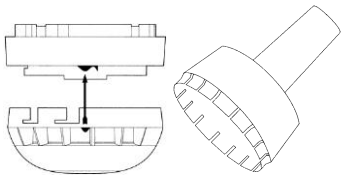
Once all testing has been carried out on the cabling and **continuity & insulation** has been proven, the Multipoint unit may be assembled.

Before installing the head remember to note the serial number of the device (located on the electronics module) on to your drawings or configuration sheets to enable you to prove its location later. The address allocation for the device is carried out automatically by the control panel whilst in initialisation mode, so addresses do not need to be set manually. See the system Installation and Operating Instructions for further details.

The Multipoint unit may then be assembled. To insert the Electronics Module, locate the pins and gently push it home.

The Optical Chamber may then be fitted. Locate the plastic guides into the base and gently twist clockwise until the unit locks in place. Remember not to force this item: if the Electronics Module is correctly located then the Optical Chamber should locate with very little force. The Optical Chamber may be removed with the Head Removal Tool.

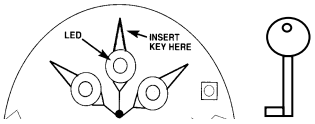
Tamper Resistance and Head Removal



OPTICAL CHAMBER & HEAD REMOVAL TOOL

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 attached over 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.



ELECTRONICS MODULE & REMOVAL KEY

Device Settings

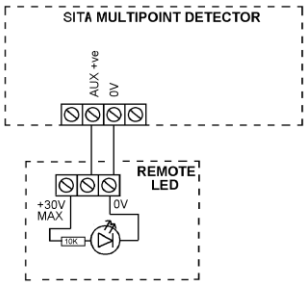
The detection and sounder modes may be configured using the relevant panel software configuration package.

	Type	Description
Detection Off:	OFF	No smoke or heat detection
Smoke Modes:	SM1	Highly thermally enhanced optical detector. Used where ionization detectors are normally fitted, especially where there are high ceilings or a risk of free burning fires.
	SM2	Thermally enhanced optical. General purpose smoke detector, to be used where optical detectors are normally fitted, where there is a risk of a smouldering fire and for escape routes.
	SM3	Thermally enhanced optical with smoke pulse rejection. Used where optical detectors are normally used in positions exposed to brief concentrations of water vapour or smoke e.g. from a bathroom, kettle, etc.
Heat Modes:	HM1	Rate of rise to 58^{o}C. Used where a standard rate of rise detector would be fitted, e.g. not kitchens.
	HM2	Low fixed temperature 58^{o}C. Used where a standard fixed temperature heat detector would normally be fitted, e.g. suitable for domestic kitchens, etc.
	HM3	High fixed temperature 90^{o}C. Used where a high fixed temperature heat detector would normally be fitted, e.g. suitable for boiler rooms, commercial kitchens, etc.
Sound Patterns	SP0	Sounder off
	SP1	Single tone, 970 Hz continually
	SP2	Pulsed UK alert signal, 970 Hz 1s on, 1s off
	SP3	Dual tone UK evacuate signal, 970 Hz 0.25s, 800 Hz 0.25s
	SP4	Sweep up, 800 Hz to 970 Hz over 1s
	SP5	Slow whoop up, 500 to 1200 Hz over 3s, 0.5s off
	SP6	Sweep down, 1200 Hz to 500 Hz over 1s
	SP7	Dual tone French warble, 550 Hz 0.1s, 440 Hz 400ms
	NOTE	Sound Patterns SP4 and SP6 are not compatible with the detector I/O facility
Sound Volume:	L/M/H	Low, medium and high settings are available. See the Control Panel Engineering and Commissioning Instructions for further details

Auxiliary Input / Output

Where Input or Output functionality is required other than at the control panel, it is recommended that a separate Sita Loop I/O Module is fitted to the addressable loop as a dedicated I/O module. Where this is not possible, a limited auxiliary I/O facility is available from the detector via the auxiliary I/O terminals with the addition of a separate Sita Multipoint Boxed Auxiliary I/O Module (Fike part no. 803-0005) or Sita Multipoint Base Auxiliary I/O Module (Fike part no. 803-0003). Either an input or an output may be used or controlled respectively through the additional I/O module which shares the address of the detector to which it is connected. Please see the relevant panel programming manual for details of the options available for different modes of operation. Note that the detector auxiliary I/O feature can only be used with the Sita Multipoint Boxed or Base Auxiliary I/O Module. No other input/output components or equipment may be connected directly to the detector otherwise damage may occur. Note also that sound patterns SP4 and SP6 may not be used if the detector I/O facility is used.

Remote LED



The remote LED terminals may be used to connect a separate external LED unit (Fike part no. 600-0092) to the detector that will activate only when the device to which it is connected enters an alarm condition. The Fike LED unit incorporates the necessary 10k Ohm current limiting resistor. No other components or equipment may be connected to the detector remote LED terminals. Connection of other components or equipment may damage the detector.

Head Contamination Warning

Warning of head contamination is in two stages. Firstly in the form of a ‘Quiescent optical level high or low’ event recorded into the event log and fault or warnings list (depending on the control panel being used), and secondly in the form of a ‘Smoke sensor failed; signal high event, recorded into the event log and fault list.

If the smoke detection mode is set to SM0 (off) the head contamination may still be monitored at the detector depending on the smoke mode, but not by the panel. If contamination is present then the result will be an LED flash every five seconds at the detector, but the panel will show no fault. Thus, if a device is being re-programmed to re-enable a smoke detection mode which has been turned off, check the LED status of the device first and ensure that a clean optical chamber is present. If this is not checked and the smoke detection mode is re-enabled, the device could signal a fire alarm when re-configured.

Replacing Contaminated Optical Chambers

When an optical chamber becomes contaminated we recommend replacing it with a new replacement item. Cleaning an old chamber will not give satisfactory results and the reassembly may very easily result in misalignment of the optical path.

Simply remove the old optical chamber with the head removal tool and replace with a new unit. Once the unit has been replaced the detector will automatically re-calibrate the optical level for the new chamber

Replacing Multipoint Electronics

If an electronics module requires replacement after the system has been programmed and tested then proceed as follows:

Stop the loop at the control panel before replacing the module with a new one, noting its serial number onto the configuration sheets. Initialise the loop from the control panel and re-configure the loop devices using the **Re-config** command. This will send the programmed settings from the control panel to the loop devices. The panel should then be reset and the device tested for all programmed modes of operation.

Testing

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 a smoke test there is no additional heat present to cause the sensitivity to be enhanced.

Please note some makes of heat detector test equipment will not operate with these devices due to the position of the thermistor.

Technical Data

Dimensions:	Diameter	105mm
	Depth	62mm
Operating temperature:		-10°C to +50°C
Voltage Range:		24 to 42V DC
LED Indication:	Normal	50ms on / 20s interval
	Fault	0.1ms on / 5s interval
	Fire	50ms on / 400ms interval
Flammability		UL94-V2
IP Rating		IP 21C

System Compatibility: MPS - Sita200plus V2.00 onwards.
MP - Sita200plus V2.30 onwards.
Duonet and Quadnet V1 onwards.

PRODUCT DESCRIPTION			VOLUME LEVEL (dB)		
Type	Product Code	Name	Low	Medium	High
MP	203 0003	Multipoint Mk3 (25/11/09 Onwards)	-	-	-
MPS	203 0001	Multipoint with Sounder Mk3 (25/11/09 Onwards)	65+	83	88

			LOOP CURRENT (mA)				
Type	Product Code	Name	Quiescent	SP0 - Off	Low	Medium	High
MP	203 0003	Multipoint Mk3 (25/11/09 Onwards)	0.12	0.96	-	-	-
MPS	203 0001	Multipoint with Sounder Mk3 (25/11/09 Onwards)	0.12	1.00	1.48	4.03	5.84

			BATTERY CURRENT (mA)				
Type	Product Code	Name	Quiescent	SP0 - Off	Low	Medium	High
MP	203 0003	Multipoint Mk3 (25/11/09 Onwards)	0.12	2.00	-	-	-
MPS	203 0001	Multipoint with Sounder Mk3 (25/11/09 Onwards)	0.12	2.00	3.01	8.37	12.04

			DLU RATING			
Type	Product Code	Name	SP0 - Off	Low	Medium	High
MP	203 0003	Multipoint Mk3 (25/11/09 Onwards)	1	-	-	-
MPS	203 0001	Multipoint with Sounder Mk3 (25/11/09 Onwards)	1	1.5	4.5	6

N.B. All specified volume and current readings, unless otherwise stated are taken using sound pattern SP3.

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.

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