



## DF 503-MD Conventional multi sensor detector

### Description

DF 503-MD conventional photoelectric smoke/heat detectors are state-of-the-art detectors suitable for connection to conventional fire detection control and indicating equipment, or to addressable fire detection control and indicating equipment that can accept conventional type detectors.

Advanced electronics in conjunction with a photoelectric smoke sensing chamber and an electronic thermistor provide early detection of fire and high immunity against unwanted alarms. The heat sensor provides fixed temperature operation when the response threshold value is exceeded.

The DF 503-MD range of conventional detectors provides fire detection and alarm system designers with a Standards-compliant, economical fire detector for life safety and property protection applications.

### Features

The DF 503-MD smoke/heat detectors are available in a wide range of variants to suit many applications.

- Dual photoelectric smoke and heat sensors to detect either smoke, heat or a combination of the phenomena.
- Advanced algorithms provide excellent detection discrimination
- Ideal for both fast-flaming and slow smouldering fires.
- High immunity against unwanted alarms
- Stable smoke sensing chamber. No adjustment or replacement required
- Easy installation. No programming required
- Low maintenance
- Sleek low-profile housing design
- Surface-mount device (SMD) circuit board design
- Dual LEDs for 360° visibility
- Magnet-initiated alarm test function available with some models
- Base options include
  - Low profile 100 mm diameter base



High profile 100 mm base for mounting on hard surfaces with conduit cable entry

Low profile 150 mm diameter base

Sounder base

Recessed mounting for base mounting

- Connects to zone monitor for use with addressable control and indicating equipment

Specifications	
	DF 503-MD
Operating voltage	DC (9 ~ 33) V
Start-up current	≤ 170 μA
Start-up time	≤ 60 s
Standby current	≤ 50 μA
Alarm current (max)	90 mA
Sampling time	≤ 5 s
Reset voltage	≤ 1 V
Reset time	≤ 3 s
Alarm response threshold (smoke)	(1.90 ± 0.76) % / foot obscuration
Alarm response threshold (heat)	59 °C static temperature, and 11.1 °C/min rate-of-rise temperature
Operating temperature	-10 °C ~ +50 °C <sup>a</sup>
Operating humidity	0 % ~ 95 % RH, non-condensing
Storage temperature	-25 °C ~ +80 °C
Storage humidity	0 % ~ 98 % RH, non-condensing
Alarm indicator	Two continuous emitting red LEDs
Dimensions (excluding contacts)	Φ 100 mm × 37 mm
Ingress protection rating	IP-43
Ceiling spacing for heat sensor	≤ 15 m

<sup>a</sup> Can transit to higher temperatures for heat sensor operation.



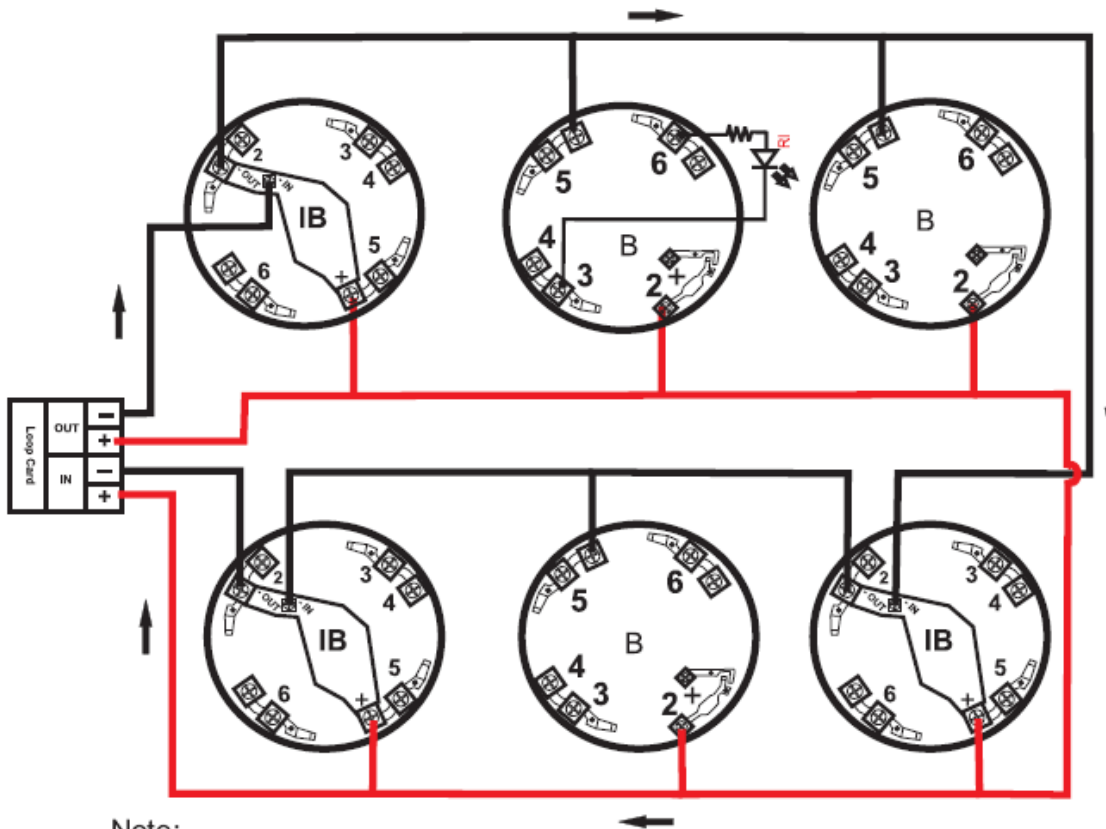


## DF 503-MD Conventional multi sensor detector

### Mechanical Specification

Height : 46 mm with base  
Diameter : 100 mm dia  
Weight : 130g with base  
IP Rating : IP - 42

### Wiring Diagram



### Note:

RI - Response Indicator  
B - Standard Base  
IB - Isolator Base

