

KIDDE

CDX FIRE DETECTORS CONVENTIONAL SMOKE AND HEAT DETECTION

- Twin alarm LEDs on the head for 360° viewing
- Electronics-free mounting base
- Low current consumption
- Ease of installation
- Low profile, stylish appearance
- Photoelectric detector has removable chamber for easy cleaning and replacement simplifying maintenance
- LPCB approved to EN54 Parts 5 and 7
- Complies with EMC directive 89/336/EEC (CE marked)

The CDX fire detector range consists of Photoelectric and Ionisation Smoke Detectors and five grades of Heat Detector. The patented Photoelectric Detector incorporates "Flat Response Technology", enabling it to be equally sensitive to a wider range of combustible materials, thus removing the need for Ionisation Detectors in the majority of applications.

CDX Photoelectric Detector

The detection chamber consists of an LED and photodiode arrangement. The chamber is designed so that light emitted by the LED cannot normally reach the photodiode. When smoke particles enter the chamber the light is scattered and some of this light falls on the photo-diode. This is converted into an electronic signal,



filtered and then used to trigger the internal latching circuit.

The chamber is easily removed or replaced for cleaning and utilises a unique baffle design which allows smoke to enter the chamber while keeping out the ambient light. Twin fire alarm indicators, which are clear in quiescent state, change to red in alarm; the light from the LEDs is transmitted via unique light guides - the LEDs are sealed on the pcb for increased protection and reliability.

Part No: 23903-K067

CDX Ionisation Detector

A single radioactive source ionises two chambers which allows a

small DC current to flow between the electrodes in each chamber. Smoke can freely enter the outer chamber, whilst the inner chamber is virtually sealed. Smoke entering the outer chamber causes a reduction in the DC current. The imbalance between the two currents is proportional to the smoke density, which is converted, filtered and then used to trigger the internal latching circuit.

Part No: 23903-K068

CDX Heat Detector

The heat detector incorporates a highly linear thermistor circuit, with the thermistor being mounted externally. A voltage is

produced proportional to temperature. This is scaled, linearised and then used to trigger the internal latching circuit. Different colour fire LEDs are used to distinguish between the fixed temperature and rate of rise versions. Combined heat detectors are designed to detect a fire as the temperature increases. They also have a fixed upper limit at which the detector will go into alarm if the rate of temperature increase has been too slow to trigger the detector earlier. Fixed temperature detectors only change to the alarm state at a preset temperature.

Combined heat detector – Grade 1

Part no: 23903-K073

Combined heat detector – Grade 2

Part no: 23903-K074

Combined heat detector – Range 1

Part no: 23903-K075

Fixed temperature detector (60°C)

Part no: 23903-K071

Fixed temperature detector (90°C)

Part no: 23903 K072

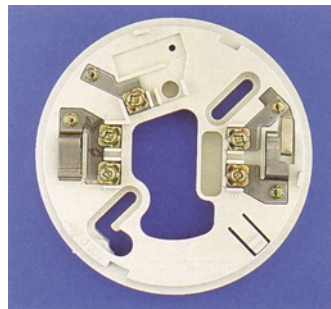
NB: Grade 1, Grade 2 and Range 1 as defined by BS5445 Part 5



**Removable chamber
(Photoelectric smoke detector)**

CDX mounting bases

All mounting bases allow easy detector interchange. The simple base is electronics-free and has a rugged design with clamping screw terminals for cable connection.



Mounting base

A simple anti-tamper locking mechanism is provided, which is enabled by removing a small plastic lug on the back of the detector. Once locked, the head can only be removed using a special head removal tool.

The Remote Indicator base allows the operation of a remote indicator to mimic the twin fire LEDs on the detector.

The line continuity base uses a Schottky Diode and has a built in facility for remote indicators.

Simple mounting base

Part No: 23903-K076

Remote Indicator base

Part No: 23903-K077

Schottky base

Part No: 23903-K078

Head removal Cup

Part No: 23903-K065

Flat Response Technology

The CDX Range Photoelectric Detector has been designed with a unique “Flat Response Technology”, enabling the detector to be equally sensitive to a much wider range of combustible materials. The graph overleaf shows the response of the CDX Range Photoelectric Detector to EN54 test fires, when compared to current technology detectors. The overall flat response of the CDX Range Photoelectric Detector eliminates the need to use ionisation detectors in the majority of applications. This makes system design easier and overcomes the cleaning and disposal problems associated with ionisation detectors. “Flat Response Technology” has also enabled the threshold level to be increased, thereby improving the signal to noise ratio and reducing susceptibility to false alarms. This revolutionary design has been achieved without the need for the addition of costly heat elements and is part of the standard product range.

Ancillary Items

Duct Probe Unit Housing

This unit allows the CDX detector to be used to monitor ventilation ducts - requires detector, base and tubes.

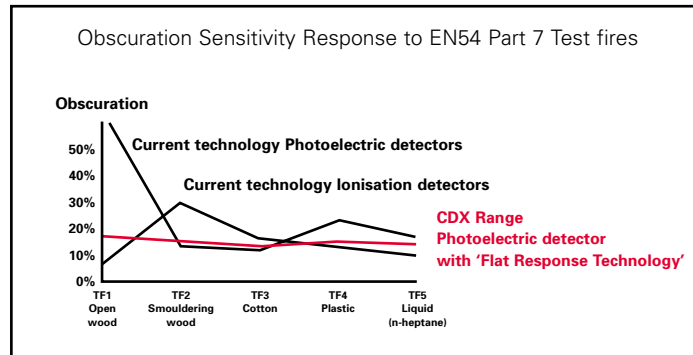
Part No: 23903-K019

Duct Probe Tubes

Comprises one 1.2m inlet tube and an exhaust tube for the duct probe housing.

Part No: 23903-K079

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CDX DETECTOR SPECIFICATION SUMMARY

Typical at 23°C and 24 VDC	Ionisation	Optical	Gd.1 Heat 60°C	Gd.2 Heat 65°C	Range 1 heat	Fixed temp 60°C	Fixed temp 90°C
Detector Part No.	23903-K068	23903-K067	23903-K073	23903-K074	23903-K075	23903-K071	23903-K072
Base Part No.	23903-K076	23903-K076	23903-K076	23903-K076	23903-K076	23903-K076	23903-K076
Size of Detector in Base (Height x Diameter (mm))	46x100	46x100	47x100	47x100	47x100	47x100	47x100
Supply Voltage	15 – 30V	15 – 30V	15 – 30V	15 – 30V	15 – 30V	15 – 30V	15 – 30V
Maximum Quiescent current at 24V	35 µA	35 µA	35 µA	35 µA	35 µA	35 µA	35 µA
Alarm Current at 24V	40mA	40mA	40mA	40mA	40mA	40mA	40mA
Normal Operating Temperature (no icing)	-10°C / +50°C	-10°C / +50°C	-10°C / +50°C	-10°C / +50°C	-10°C / +50°C	-10°C / +50°C	-10°C / +50°C
Humidity (no condensation)	95%	95%	95%	95%	95%	95%	95%

The CDX range of smoke and heat detectors has been tested and approved by the Loss Prevention Certification Board to EN 54 Part 5 and Part 7.



Kidde Fire Protection

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