

# Conventia Optical Smoke Detector EDC-20

Instruction Sheet  
R10081GB0



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# 1 Conventia Optical Smoke Detector EDC-20

Conventia operates on the well established light scatter principle. The remarkable optical design of the Conventia optical smoke detector allows it to respond to a wide spectrum of fires.

The sensing chamber of the Conventia optical smoke detector contains an optical sensor which measures back-scattered light as well as the more usual forward-scattered light. Sensitivity to black smoke is greatly improved.

The detector is calibrated so that it is highly reliable in detecting fires but is much less likely to generate false alarms than earlier smoke detectors.

The stability of the detector—high reliability, low false alarm rate—is further increased by the use of algorithms to decide when the detector should change to the alarm state. This removes the likelihood of a detector producing an alarm as a result of smoke from smoking materials or from another non-fire source.

The sensing chamber has been designed to keep out dust and other airborne contaminants.

## 1.1 Conventia Smoke Detectors

Conventia comprises an optical smoke detector and a mutisensor smoke detector. Conventia product family also comprises a TimeSaver base and a Relay base.

The Conventia products are compatible with the FX-CLC loop interface.

## 1.2 Features

Conventia incorporates entirely new designs, both mechanical and electronic. The aim has been to increase the attractiveness of the detector, make installation quicker, enhance the reliability of detection and reduce the incidence of false alarms. Conventia features:

- a wide voltage and operating temperature ranges
- StartUp for fast commissioning
- DustDefy housing which limits ingress of dirt into detector
- new optical sensor for high reliability and reduced false alarm incidence
- new mutisensor smoke detector for detecting fast-burning fires
- algorithms for transient rejection
- chamber designed to inhibit dirt penetration and thus reduce false alarms
- automatic drift compensation with DirtAlert warning

- FasTest which reduces the time taken to test detectors
- optional flashing LED to indicate normal operation
- SensAlert which indicates that the detector is not operating properly

### 1.3 LED Status

Feature	Description of Feature	Red LED Status	Yellow LED Status
StartUp	Confirms that the detectors are wired in the correct polarity	Flashes once per second	No Flash
FasTest	Maintenance procedure, takes just 4 seconds to functionally test and confirm detectors are functioning correctly	Flashes once per second	No Flash
DirtAlert	Shows that the drift compensation limit has been reached	No Flash	Flashes once per second in StartUp (Stops flashing when StartUp finishes)
SensAlert	Indicates that the sensor is not operating correctly	No Flash	Flashes every 4 seconds (Flashes once per second in StartUp)
Normal Operation	At the end of StartUp and FasTest (without flashing LED as standard)	No Flash	No Flash
Flashing LED Version	Detector's red LED flashes in normal operation (at the end of FasTest)	Flashes every 4 seconds	No Flash

### 1.4 Product Codes

Product	Product codes
EDC-20 Optical Detector	FFS0672 4620
EBC-10 Time Saver Base	FFS0672 4010
EBC-20 Relay Base	FFS0672 4020