Schneider Electric

Conventia Heat Detector
EDC-50/A1S

Instruction Sheet
R10086GB3

Schneider Electric

www.se.com/buildings

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Contents

Safety Information

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.

Related Information

For technical specifications, please refer to the Product Datasheet for FFS06724651 on se.com.

1   Conventional Heat Detector EDC-50/A1S

The Conventia range incorporates seven heat detector classes to suit a wide variety of operating conditions in which smoke detectors are unsuitable. The Conventia Heat Detector (FFS06724651) is compatible with the CLC loop interface (FFS00702512).

The European standard EN54-5:2000 classifies heat detectors according to the highest ambient temperature in which they can safely be used without risk of false alarm. The classes are identified by the letters A (Class A is subdivided into A1 and A2.) In addition to the basic classification, detectors may be identified by a suffix to show that they are rate-of-rise (suffix R) or fixed temperature (suffix S) types.

All heat detectors in the Conventia range are tested as static or rate-of-rise detectors and are classified as A1R, A1S and A2S.

1.1   Conventia heat detectors features

-     a wide voltage and operating temperature ranges

-     StartUp for fast commissioning

-     algorithms for transient rejection

-     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

Conventia heat detectors have an open-web casing which allows air to flow freely across a thermistor which measures the air temperature every 2 seconds. A microprocessor stores the temperatures and compares them with pre-set values to determine whether a fixed upper limit–the alarm level–has been reached.

In the case of rate-of-rise detectors the microprocessor uses algorithms to determine how fast the temperature is increasing.

Static heat detectors respond only when a fixed temperature has been reached. Rate-of-rise detectors also have a fixed upper limit but they also measure the rate of increase in temperature. A fire might thus be detected at an earlier stage than with a static detector so that a rate-of-rise detector is to be preferred to a static heat detector unless sharp increases of heat are part of the normal environment in the area protected by the heat detector.

1.2 Heat detector classes

Class (EN54–5:2000)	Application Temperature °C		Static Response Temperature °C		
	Typ	Max	Min	Typ	Max
A1R	25	50	54	57	65
A1S	25	50	54	57	65
A2S	25	50	54	61	70

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
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
DirtAlert	Shows that the drift compensation limit has been reached	No Flash	Flashes once per second in StartUp. (Stops flashing when StartUp finishes.)

1.4 Product Codes

Product codes	
EDC-50/A1S	FFS06724651
Bases	
EBC-10 Timesaver Base	FFS06724010
EBC-20 Relay Base	FFS06724020