Intellia Multisensor Detector

EDI-30

Instruction Sheet

R10074GB2

Schneider Electric

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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 FFS06720230 on se.com.

1 Intellia Multisensor Detector EDI-30

The Intellia Multisensor Detector EDI-30 (FFS06720230) comprises optical smoke and thermistor temperature sensors whose outputs are combined to give the final analogue value. As a result, the multisensor is useful over a wide range of applications and is highly immune to false alarms.

The way in which the signals from the two sensors are combined depends on the response mode selected. The five modes provide response behaviour which incorporates pure heat detection, pure smoke detection and a combination of both.

Mode 5 has no smoke sensitivity at all but gives a pure heat detector response. If the multisensor is used in mode 5, heat detector spacing and coverage should be applied.

The signals from the optical smoke sensing element and the temperature sensor are independent and represent the smoke level and the air temperature respectively in the vicinity of the detector.

1.1 Intellia Fire Detectors

Intellia is a range of high-specification, intelligent fire detectors developed to meet the requirements of sophisticated systems. Intellia gives you total reassurance in installations where adaptability to changing conditions and protection against unwanted alarms are paramount. Intellia uses a digital communications protocol.

The Intellia series of products are all compatible with the ALC-board of Esmi Sense FDP and FX panel.

1.2 Features

1.2.1 Response setting

Each detector in the Intellia range can operate in one of five response modes, any of which can be selected from the Esmi Sense FDP and FX control panel. Each mode corresponds to a unique response behaviour, which can be broadly related to sensitivity to fire.

For ionisation and optical smoke detectors, the modes relate to different combinations of smoke response threshold and response time. For the heat detector, the mode relates to the fixed temperature setting and the sensitivity to rate-of-rise of temperature. For the multisensor, the mode relates to the levels of smoke and heat sensitivity and to the way in which the responses of the two sensors are combined.

The response characteristics of the detectors have been carefully set so that detectors will comply with the requirements of the relevant part of EN54 in all response modes. The mathematical algorithms embedded in the detectors are used to carry out changes in characteristics between modes.

1.2.2 Rejection of transient signals

All Intellia detector algorithms are designed to give low sensitivity to very rapid changes in the sensor output, since these are unlikely to be caused by real fire conditions. This is achieved by digital low-pass filtering of the sensor values which optimises the rejection of false alarm sources while maintaining the response to fire.

1.2.3 Drift compensation

All Intellia smoke detectors include compensation for sensor drift as part of the internal signal-processing algorithm. The algorithm will compensate for changes in sensor output caused, for example, by dust in the chamber, and will therefore hold the sensitivity at a constant level even with severe chamber contamination. This increased stability is achieved without significantly affecting the detector's sensitivity to fire.

1.3 Product Codes

Product	Product codes
EDI-30 Multisensor Detector	FFS06720230
EBI-10 Standard Mounting Base	FFS06720010
EBI-12 Deep mounting base	FFS06720012
EBI-20 Relay Base	FFS06720020