Axis AX UL Multicriteria Detector

The Axis AX UL Multicriteria Detector (Smoke/Heat) is our most advanced detector offering suitable for a wide range of applications. It uses Purelight® high-tech smoke sensing technology to detect smoke particles entering the chamber and is fitted with two thermistors for detecting heat. It can be switched to detect smoke, heat or a combination of both, offering greater flexibility, fast detection and advanced false alarm management.



Operation

The low profile design of the Axis AX UL Multicriteria Detector (Smoke/Heat) is sleek and evolutionary, with a 360º LED indicator which illuminates red when in alarm.

At the heart of the smoke smoke sensor is Purelight® Sensing Technology which incorporates:

- Cone technology combined with a high-intensity infrared LED to provide stability and accurate sensitivity to smoke.
- A sophisticated dynamic algorithm, providing transient rejection and compensation for drift whilst maintaining accurate sensitivity.

Signals from the smoke smoke chamber and temperature sensors are independent and represent the smoke level and air temperature respectively in the vicinity of the detector; the detector's micro-controller processes both signals. The temperature signal processing extracts only rate-of-rise information for combination with the smoke signal.

The optical sensor will trigger an alarm at 1.2 %/ft and the heat sensor at 69.8 ºF (21 ºC) rise. Minimum time to alarm is ten seconds.

The detector will not respond to slow increases in temperature, but a large, sudden change can cause an alarm without the presence of smoke.

The sensor will respond to smoke or heat, or a combination of both.

System compatibility

Axis AX detectors have been designed to operate on Discovery protocol loops. This allows for Axis AX detectors and bases to operate on existing systems.

Maintenance and service

Axis AX detectors have been designed with a comprehensive set of features to support maintenance and service, from self-test capabilities to drift compensation warnings on dirty detectors.

Features

- Built-in isolator
- Purelight® optical technology for enhanced smoke detection and false alarm management
- Drift compensation
- Backwards compatible with Discovery
- Base locking mechanism (grub screw)
- In-built self test
- XPERT card addressing
- Dual heat sensors

Listings and Approvals

- Approved to UL268 7th edition, UL 521, ULC S529, ULC S530

Operating modes

Axis AX multisensor detectors give the choice of five operating modes which respond as follows:

- Modes 1, 3 and 4 - multicriteria response
- Mode 2 - optical response only
- Mode 5 - heat response only

Specification

Digital communication protocol	Discovery
Supply wiring	Two wire supply, polarity sensitive
Sensitivity	1.2-2.1%/ft
Supply voltage (Vmin-Vmax)	17-28 Vdc
Sampling frequency	Once per second
Modulation voltage	5-9V peak to peak
Supervisory current	500 µA
Switch-on surge current	1.0 mA
Alarm/operated current, LED on	4.0 mA
Status indicator	Alarm - Red Fault - Flashing yellow Isolate - Yellow Poll - Flashing green
Additional remote LED current	5mA maximum
Product operating temperature	32° F to 131° F (0° C to 55° C)
Heat element rating (Mode 5 only)	115° F (47° C)
Effect of atmospheric pressure	None
Air velocity	0-300 fpm
Humidity	0% to 95% RH (no condensation or icing)
IP rating	IP44
Weight	2.93 ounces (83g)
Mzximum spacing (Mode 5 only)	50 ft (15.24m)
Dimensions	4" (100mm) diameter x 1.51" (38.5mm height) 1.98" (50.5 mm) height with XPERT8 Intelligent Mounting Base
Materials	Housing: White flame-retardant polycarbonate. Terminals: Tin-plated stainless steel

All data is supplied subject to change without notice. Specifications are typical at 24 V, 73° F and 50% RH unless otherwise stated.

Isolated detector data

Maximum loop current (1c max; L1 in/out)	1A
Maximum series resistance (Z c max; L1 in/out)	100 mΩ

Order Codes and Options

SA5150-750ADV	Axis AX UL Multicriteria Detector
SA5000-210ADV	Axis AX UL Base - 4"
SA5000-230ADV	Axis AX UL Base - 6"

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As our policy is one of constant product improvement the right is therefore reserved to modify product specifications without prior notice.