Advanced XP95A Smoke Detector

The Advanced XP95A Smoke Detector uses new sensing technology, Purelight®, to detect smoke particles entering the chamber. This reduces the possibility of false alarms whilst increasing the reliability of detection of a real fire. Detection uses photo-electric light scattering and the chamber has a surface-mount infrared emitter and prism, with a solid state integrated photo-diode and amplifier.

Electrical description

The Advanced XP95A Smoke Detector is designed to be connected to a two-wire loop circuit carrying both data and a 17 V - 28 V dc supply. The detector is connected to the incoming and outgoing supply via terminals L1 and L2 in the mounting base. A remote LED indicator may be connected between the +R and -R terminals. A ground connection terminal is also provided.

Operation

The low profile design is sleek and evolutionary, with a 360° LED indicator which illuminates red when in alarm.

At the heart of the 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

The smoke chamber of the detector is a unique cone shape which serves to reduce any stray reflection. This ultra dark internal light chamber also contains a high-intensity infrared LED that is highly sensitive to smoke particles. When smoke enters the chamber, infra-red light is scattered and registered by the photodiode and amplifier that are included in an application-specific integrated circuit (ASIC). This circuit ensures long term reliability, even in extreme conditions.

System compatibility

This detector has been designed to operate with XP95A detectors and loops and can operate on an approved XPERT intelligent mounting base. However, the eighth bit of the address will be ignored.

The device will compensate for drift internally and the fire panel will see this as an increase in analog value. When internal drift limits are reached a fault analog value will be generated.



Features

- Purelight® optical technology for enhanced smoke detection and false alarm management
- Internal drift compensation
- Easy installation
- Backwards compatible with XP95 systems
- Base locking mechanism (grub screw)
- Polarity insensitive wiring
- In-built self test
- XPERT card addressing

Listings and Approvals

- Approved to UL268 7th edition, ULC S529

This detector is a direct replacement for the 55000-650AEL XP95A smoke detector.

Maintenance and service

Maintenance has to be done in accordance with all applicable standards. Clean the detector externally using a soft damp cloth.

Specification

Digital communication protocol	XP95
Supply wiring	Two wire supply, polarity insensitive
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	340 µA
Switch-on surge current	1.0 mA
Alarm/operated current, LED on	4.0 mA
Status indicator	Alarm (red)
Additional remote LED current	5mA maximum
Product operating temperature	32° F to 131° F (0° C to 55° 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)
Dimensions	4" (100mm) diameter x 1.41" (36mm height) 1.88" (48 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.

Order Codes and Options

SA5050-250ADV	Advanced AX XP95A Smoke 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.