

XP95A

Multi-Criteria Detector (Smoke/Heat)



Product overview

Product	XP95A Multi-Criteria Detector (Smoke/Heat)
Part No.	SA5050-350
Digital Communication	XP95 protocol

Approvals



Product information

The XP95A Multi-Criteria Detector (Smoke/Heat) uses new photoelectric sensing technology, Purelight®, to detect smoke particles entering the chamber. It reduces the possibility of false alarms whilst increasing the reliability of detecting a real fire.

- Approved to UL 268 7th edition and UL 521
- Purelight® optical technology provides enhanced smoke detection and false alarm management
- Internal drift compensation
- Compatible with XP95A systems
- Easy installation
- XPERT card addressing
- Base locking mechanism (grub screw)
- Polarity insensitive loop wiring
- In-built self-test
- Dual heat sensors

Technical data



CAUTION: System compatibility
The XP95A Multi-Criteria Detector (Smoke/Heat), Part No SA5050-350 can only be used on systems operating with XP95 protocol

This detector is a direct replacement for 55000-886 XP95A Multisensor Detector (Smoke/Heat)

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

Detection principle	Smoke	Smoke light scattering
	Heat	Thermistor
Sensor configuration	Smoke	Chamber with surface-mount infrared emitter and prism. Solid state integrated photo-diode and amplifier.
	Heat	Dual exposed heat sensing elements
Digital communication protocol	XP95 protocol	
Supply wiring	Two wire supply, polarity insensitive	
Sampling frequency	Once per second	
Sensitivity	1.2 - 2.1 %/ft	
Supply voltage (Vmin-Vmax)	17 V - 28 V dc	
Modulation voltage	5 V - 9 V 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	5 mA maximum	
Product operating temperature	32 °F to 131 °F (0°C to 55°C)	
Humidity	0% to 95% RH (no condensation or icing)	
Effect of atmospheric pressure	None	
Air velocity	0 - 300 fpm	
IP rating	IP44	
Standards and Approvals	UL 268 7th Edition, ULC S529, FM 3230	
Dimensions	4 in.(100 mm) diameter x 1.50 in. (38mm) height (2in. (50) mm height with XPERT Intelligent Mounting Base)	
Weight	2.93 oz. (83 g)	
Materials	Housing: White flame-retardant polycarbonate Terminals: Tin plated stainless steel	

Electrical description

The XP95A Multi-Criteria Detector (Smoke/Heat) 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 of the XP95A Multi-Criteria Detector (Smoke/Heat) is sleek and evolutionary, with a 360° LED indicator which illuminates red when in alarm.

At the heart of the photoelectric 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 photoelectric smoke chamber and temperature sensors are independent and represent the smoke level and air temperature respectively in the vicinity of the detector; the detectors 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 °F (21 °C) 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

This XP95A detector has been designed to operate with XP95A detectors and loops. This XP95A detector 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 but will not report drift values to the fire alarm control panel. When internal drift limits are reached a fault analog value will be generated.

Maintenance and Service

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

Compatible Bases

Part Number	Product Name
SA5000-210	Soteria UL Base - 4"
SA5000-230	Soteria UL Base - 6"
SA5300-800	Soteria UL CO Sounder Base - 6" High Frequency
SA5300-802	Soteria UL Sounder Base - 6" High Frequency
SA5300-805	Soteria UL CO Sounder Base - 6" Low Frequency
SA5300-806	Soteria UL Sounder Base - 6" Low Frequency

	Smoke	Multi-Criteria	Heat
For existing XP95A installations choose:	SA5050-250 XP95A Smoke Detector	SA5050-350 XP95A Multi-Criteria Detector (Smoke/Heat)	SA5500-450 XP95A Heat Detector

This datasheet is to be used for marketing purposes only. Please do not use it for installation purposes. For more information, please refer to the product installation guide or contact your sales manager. All information on this datasheet is subject to change without notice.