

# X-Series UL Heat Detector



## Product Overview



**CAUTION: System compatibility**  
The X-Series UL Heat Detector, Part No S-A5013 should only be used with compatible fire control panels.

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

Product Overview	
Product	X-Series UL Heat Detector
Part No.	S-A5013
Digital Communication	Discovery and CoreProtocol® Compatible

## Product information

The X-Series UL Heat detector monitors temperature by using a single thermistor which provides a voltage output proportional to the external air temperature.

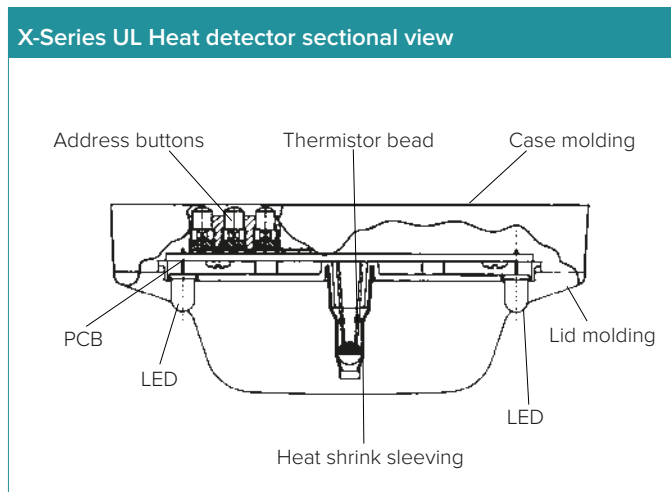
- Electronic temperature sensing
- Alarm flag for fast alarm responding
- Automatic addressing
- Easy installation
- Elegant design
- Unaffected by wind or atmospheric pressure
- Ideal for environments that are dirty or smoky under normal circumstances
- Well suited to warehouses, loading docks and parking garages

Sampling frequency	Continuous
Operating voltage	17 - 28 V dc
Modulation voltage	5 V - 9 V peak to peak
Communication protocol	Discovery and CoreProtocol compatible
Supervisory current	500 µA
Surge current	1.0 mA
Alarm LED current	3.5 mA
Operating temperature range	32 °F to 151°F
Heat element rating	135 °F to 210 °F
Humidity	0% to 95% RH (no condensation or icing)
Standards & approvals	UL521, S25420
Dimensions	3.93" diameter x 1.65" height
Weight	3.70 oz
Materials	Housing: White flame-retardant polycarbonate Terminals: Tin plated stainless steel
Test method	Hair dryer
Spacing	Smooth ceiling 70 ft to wall or partition 35 ft
Coverage	600sq ft



## Operation

In the X-Series UL Heat Detector, the five response modes correspond to the five 'classes' as defined in UL 268. The classes in this standard correspond to different behaviour, each of which is designed to be suitable for a range of application temperatures. All modes incorporate 'fixed temperature' response, which is defined in the standard by the 'static response temperature'.



## Electrical description

The X-Series UL Heat Detector is designed to be connected to a two wire loop circuit carrying both data and a 17 V to 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 requiring not more than 4 mA at 5 V may be connected between the +R and -R terminals. An earth connection terminal is also provided.

## Features

### Response modes

X-Series UL Heat Detectors can be operated in any one of five UL approved response modes, which can be selected through the fire control panel. Each mode corresponds to a unique response behaviour, which is related to sensitivity to fire. Mode 1 gives a higher sensitivity to fire than Mode 5.

X-Series Heat detector response	
Mode	UL heat classification @ 55 counts alarm
1	135°F fixed temperature with rate of rise
2	150°F fixed temperature and rate of rise
3	150°F fixed temperature
4	200°F fixed temperature and rate of rise
5	200°F fixed temperature

### Flashing LEDs

X-series UL Heat detectors have two integral LED indicators, which can be illuminated at any time by the fire control panel to indicate detectors in alarm. A flashing LED mode can also be programmed to activate each time a detector is polled.

## Remote test feature

The remote test feature is enabled from the fire control panel. On receipt of the command signal from the fire control panel, the detector is forced electrically into alarm. An analogue value of 85 is returned to the fire control panel to indicate that the detector is working correctly.

## Rejection of transient signals

X-Series UL detectors 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, resulting in fewer false alarms.

## Compatible Bases

Part Number	Product Name
S-A5001	X-Series UL Base-4"

	Smoke	Multi-Criteria	Heat
For existing X-series UL and new installations choose:	S-A5011 X-series UL Smoke Detector	S-A5014 X-series Multi-Criteria Detector (Smoke/ Heat)	S-A5013 X-series UL Heat Detector

Built-in isolators for X-Series UL Smoke and X-Series UL Multi-Criteria Detectors only.