

Discovery UL

Heat Detector



Product overview

Product	Discovery UL Heat Detector
Part No.	58000-450
Digital Communication	XP95, Discovery and CoreProtocol® compatible

Compliance



Product information

The Discovery 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 with the XPERT 7 card
- 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

Technical data

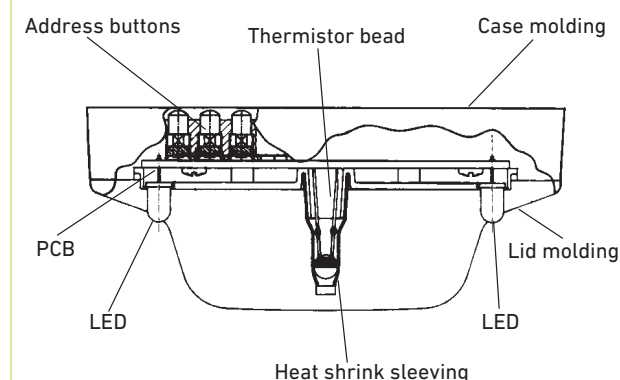
All data is supplied subject to change without notice. Specifications are typical at 24V, 73°F and 50% RH unless otherwise stated.

Sampling frequency	Continuous
Operating voltage	17 - 28 V dc
Modulation voltage	5 - 9 V peak to peak
Communication protocol	XP95, Discovery and CoreProtocol compatible
Supervisory current	500 µA
Surge current	1mA
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	UL, FM, CSFM, CCCf
Dimensions	3.93" diameter x 1.65" height
Weight	3.70 oz
Materials	Housing: White flame-retardant polycarbonate Terminals: Nickel plated stainless steel
Test method	Hair dryer
Spacing	Smooth ceiling 70 ft to wall or partition 35 ft

Operation

In the Discovery 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'.

Discovery UL Heat detector sectional view



Electrical description

The Discovery 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

Discovery 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.

Discovery UL Heat detector response modes

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

Discovery 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

Discovery 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.