

## Addressable intelligent Multisensor Detector

Model - **AU101MD**



### Features:

- ✓ Real time smoke and temperature info
- ✓ Soft addressing
- ✓ Electrical supervision
- ✓ Corrosion protection
- ✓ Contamination alarm
- ✓ Sensitivity alteration from the panel
- ✓ Remote test facility from the panel
- ✓ Dual bi-colour LED indication for 360° viewing angle
- ✓ Transient voltage protection up to 2.4KV

### Complied with:

**UL** 268-6th Edition  
521-7th Edition

**EN** 54-Part 7 & 5

**IS** 11360 & 2175

### Overview:

This device intended to be used for addressable automatic fire detection system to detect presence of smoke, smoke density and abnormal temperature for fire alarm. This combined function of smoke and heat sensor (Multisensor detector) detects abnormal level smoke & heat and raises an alarm which continuously interacts with control panel to update the real time smoke and temperature exists at reported location.

This sensor measures the smoke/temperature level in protected areas and analyses the level of smoke/temperature and verify with alarm level setting. When smoke/temperature level crosses the set level, it communicates to fire warning system control panel along with its ID. This smoke sensor works on photoelectric principle. It consists of special LED to illuminate the smoke chamber. This LED illumination level gets reduced due to its aging. Hence its sensitivity may go out of sensitivity range. Therefore it requires a periodical calibration to ensure its functional objective. Refer IS 2189 for more details.

## Smoke & temperature sensitivity settings

Standard smoke level and temperature level for alarm is set at factory. According to area of protection, this setting can be changed from control panel by the user.

### Soft addressing:

Based on order, address of the sensor is configured at factory. If any alteration in the address is required, it can be changed from control panel. No extra special tools are required.

### Remote testing

The various functional validations manually from remote control panel can be done for maintenance and trouble shooting. If the control panel is connected to the cloud, it can be accessed through internet/mobile app.

### Environmental type testing

The detector environmental type tested, as per IS 11360, UL 264N with NABL India and NABL USA.

### Detachable detector

A detector designed to be easily removed from its normal operating position for maintenance and servicing purposes.

### Detector calibration

As per IS 2189/ NBC 2016 Smoke detector being measuring instrument and the sensitivity is vulnerable to get reduced, hence periodical calibration required. Our factory located at Chennai, India. We undertake calibration services for our make sensors and certify

them. The certificate is mandatory to be maintained for the government and third party audit.

## Specifications

### Electrical specifications

Operating voltage	17-27V DC
Quiescent current	200uA
Alarm current	1mA

### Indication

Normal	Green LED (Blinks during scan)
Alarm	Red LED (Glows steady)

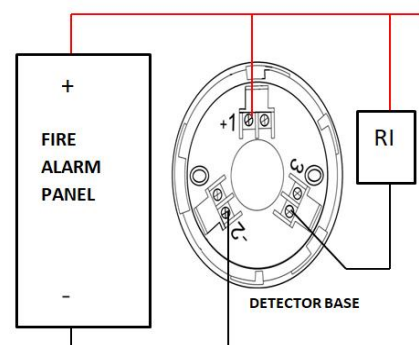
### Mechanical specifications

Dimensions(DxH)		Weight	
Without Base	100x34mm	Without Base	73g
With Base	100x46mm	With Base	113g

### General specifications

Smoke sensitivity	0.5 - 3.5 %obs/foot
Thermal sensitivity	20°C to 60°C
Operating temperature	0°C to 49°C
Storage temperature	5°C to 40°C
Humidity	0-95% RH (Non-condensing)
Colour	White
Housing	Polycarbonate
Compatibility	AU101X Protocol
Contact Clamp	Stainless steel

### Termination diagram:



## Multisensor detector functional limitations

Objective of installing multisensor detector to detect smoke and abnormal temperature and pass the signal for automatic fire alarm system to alert the occupants and rescue professionals to save life and property against fire. The multisensor detector may not deliver its function due to various reasons.

Smoke detector detects smoke only when smoke enters smoke chamber of detector.

Smoke may not reach the detector due to inadequate smoke; ceiling height may be high; obstruction due to higher size beam; wind flow from HVAC. Heat may not reach the detector due to inadequate temperature level; ceiling height may be high, wind flow from HVAC.

When smoke particle comes out of fire, it will be hot. As long as it is hot, it is lighter than air. When smoke particle gets cool, it will be heavier than air. Then the smoke particle will come down and it may not reach the ceiling/smoke detector. As a result it fails to detect smoke. Consult professional before placement of detector.

Smoke detector entry is covered with fine mesh to prevent entering of insect. This fine mesh hole may get choked due to large size dust and foreign particles. Hence, based on environmental conditions, care should be taken to maintain the detector. (Refer IS 2189)

Smoke detector is low voltage and low current and digital data signalling device, hence proper protection shall be provided, while laying the cable and it shall not share high voltage cables on cable tray/conduit. Otherwise it may affect the circuit board of detector /signalling.

Smoke detector works on photo electric principle. Smoke chamber LED and its allied circuit gets deteriorate due to aging, hence the sensitivity of smoke detector losses its sensitivity. Out of range sensitivity detector may not deliver its function. Hence the smoke detector requires periodical calibration. (Refer IS 2189)

Adequate number of detector shall be placed to cover protected area based on height, size, fire load etc. (Refer IS 2189 or professional)