Airlight
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IoT-Enabled

Addressable Multisensor

Cloud-Connected Smoke &

 Heat Detection with Real-Time Monitoring

Model-**AU-IoT-MD-101**

Smart Fire Detection with IoT Integration

The Airlight AU-IoT-MD-101 IoT-enabled addressable multisensor continuously monitors and transmits real-time temperature and smoke density data to the fire alarm control panel, which is then seamlessly uploaded to the cloud via internet connectivity. Designed for advanced fire detection, this intelligent sensor combines dual-sensing technology with cloud-based monitoring, issuing instant alerts for fire incidents, Abnormal environmental conditions, connectivity issues, and maintenance needs such as sensor contamination requiring cleaning. Leveraging IoT technology, it empowers fire safety personnel to respond quickly and efficiently from any location, significantly Improving hazard mitigation, system reliability, and enabling proactive maintenance for enhanced situational awareness.

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Key Features

- ❖ Ultra sensitivity
- ❖ Real-Time Monitoring
- ❖ Corrosion Protection
- ❖ Bi-Colour LED Status

- ❖ IoT Connectivity
- ❖ Dust Discrimination
- ❖ Remote configuration
- ❖ 360Degree DuaL LED

- ❖ Cloud Data Upload
- ❖ Soft Addressing
- ❖ Remote Test Facility
- ❖ Events Alerts

IoT & Smart Monitoring Capabilities

Real-Time Sensing & Cloud Upload

Continuously measures temperature and smoke density with high accuracy. Data is transmitted to the control panel and automatically uploaded to the cloud via internet connection for remote access.

Remote Access & Monitoring

Supports off-site monitoring and response by fire safety personnel from any location. Access real-time sensor data, system status, and alerts through web-based platforms.

Intelligent Event Alerts

Detects and notifies for fire conditions, abnormal environmental changes, device connectivity status, and sensor faults. Instant notifications enable rapid emergency response.

Proactive Maintenance Monitoring

Identifies contamination levels and alerts when cleaning or servicing is required. Predictive maintenance reduces downtime and ensures optimal performance.

Enhanced Situation Awareness

Real-time temperature and smoke-level display provides critical information for rescue support staff and emergency responds, enabling faster and more informed decision-making.

System Integration

Compatible with Building Management Systems (BMS) and smart building platforms for unified monitoring and control across all safety systems.

Advanced Detection Features

Dual-Sensing Technology

Combines smoke and heat detection in a single device. The smoke sensor monitors smoke presence while the thermal sensor continuously tracks temperature. Both sensors activate independently when thresholds are crossed.

Configurable Alarm Thresholds

Users can define pre-alarm and main alarm settings for both smoke and temperature based on specific site requirements, ensuring optimal detection for any environment.

Dust Contamination Discrimination

Advanced algorithms distinguish between harmless dust contamination and actual smoke particles, significantly reducing false alarms while maintaining detection sensitivity.

Unique Device Identification

Real-time temperature and smoke data transmitted with unique device IDs enable precise location identification for rapid emergency response.

Remote Sensitivity Control

Sensitivity levels, control functions, and device settings can beadjustedremotely through the control panel without physical access to the detector.

360° Visual Indication

Bi-colour LED provides instant visual feedback for normal and alarm conditions. Dual LED design ensures status visibility from any angle for easy inspection.

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Operating Principle

- **Continuous Monitoring:** Smoke and thermal sensors operate 24/7 with minimal power consumption, providing constant environmental surveillance.

- **Threshold Based Activation:** Each sensor activates independently when pre-configured thresholds are crossed, ensuring accurate and reliable detection

- **Intelligent Data Transmission:** Real-time temperature and smoke data transmitted to control panel with unique device ID for precise location identification

- **Cloud Based Data Management:** Control panel automatically uploads sensor data to cloud servers via internet connection for remote access and analysis

- **Digital Communication:** Addressable functionality enables two-way communication between control panel and detector for advanced diagnostics and remote configuration.

- **Contamination Alert System:** Automatically sends alerts when smoke sensor exceeds contamination tolerances, indicating maintenance requirements

Ideal Applications

- **Commercial Buildings:** Offices, retail spaces requiring cloud-based monitoring

- **Industrial Facilities:** Manufacturing plants, warehouses with remote over sight needs

- **High-Rise Residential:** Apartments and condominiums with centralized monitoring

- **Healthcare Facilities:** Hospitals requiring 24/7 remote surveillance

- **Educational Institutions:** Schools and universities with multi-site management.

- **Data Centers:** Server rooms requiring precise environmental monitoring

- **Hospitality Sector:** Hotels with remote facility management

- **Transportation Hubs:** Airports and metro stations with centralized control

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## Technical Specifications

Electrical Specifications

Parameter	Specification
Operating Voltage	18-24V DC
Quiescent Current	200 μA
Alarm Current	20 mA

Mechanical Specifications

Dimensions		Weight	
Without base	100x34mm	Without base	73g
With Base	100x46mm	With Base	113g

General Specifications

Parameter	Specification
Smoke Sensitivity	0.5 - 3.5 %obs/foot
Thermal Sensitivity Range	20°C to 60°C
Operating Temperature	-10°C to 55°C
StorageTemperature	-10°C to 60°C
Humidity	0-95% RH (Non-condensing)
Housing	Polycarbonate
Contact Clamp	StainlessSteel
Colour	White
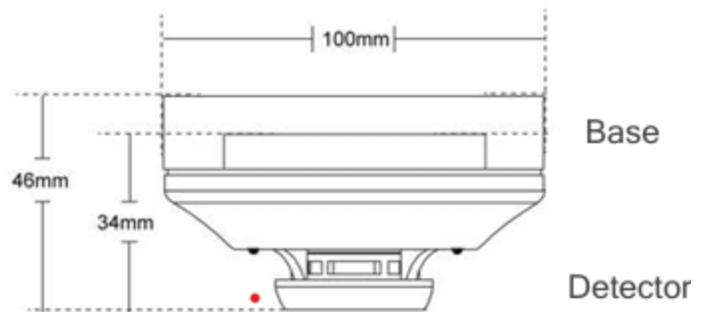
Weight :

Detector weight-73g

Detector base weight-40g

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Compliance &Standards

| UL 268 - 6th Edition | UL 521 - 7th Edition | EN54 - Part 7 &5 | IS 11360 |

| IS 2175 |

The AU-IoT-MD-101 Multisensor is fully compliant with international and national fire safety standards including UL(Under writers Laboratories), EN (European Norms), and IS (Indian Standards) certifications, ensuring reliable performance and regulatory compliance across global markets.

WhyChooseAU- IoT-MD-101

➢ **Cloud-Connected Intelligence:** Real-time data upload enables remote monitoring and faster response from any location worldwide

➢ **Dual Detection Technology:** Combined smoke and heat sensing reduces installation costs while improving detection accuracy

➢ **Proactive Maintenance:** IoT-based contamination alerts and predictive diagnostics reduce downtime and extend sensor life

➢ **Enhanced Response Capability:** Instant event alerts and real-time data enable faster, more informed emergency decision-making.

➢ **Reduced False Alarms:** Intelligent dust discrimination and configurable thresholds minimize nuisance alarms

➢ **Remote Management:** Adjust sensitivity, test devices, and monitor status without physical site access

➢ **360° Visibility:** Dual LED design ensures status indication is visible from any angle

➢ **Global Certification:** UL, EN, and IS approvals provide confidence and regulatory compliance

➢ **Low Power Consumption:** Efficient operation extends system battery backup and reduces energy costs

➢ **Future-Ready Platform:** IoT connectivity ensures compatibility with emerging smart building technologies.

Contact Information

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Product Information

For detailed technical documentation, Installation guides, wiring diagrams, IoT integration support, and product information, please visit our website or contact your local Airlight representative.