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IoT-Enabled

Addressable

Sounder Beacon

Model-**AA-IoT-SBS-104**

Revolutionary 3-in-1 Smart Safety Solution

The Airlight AA-IoT-SBS-104 is an IoT-enabled addressable sounder beacon designed to provide comprehensive audio-visual alarm notifications with cloud-connected monitoring capabilities. This specialized device combines a distinctive dual-tone sounder (90dB at 1m) with high-intensity visual beacon, transmitting real-time operational status to the fire alarm control panel which is seamlessly uploaded to the cloud via internet connectivity. Designed in full compliance with NBC 2016 Part 4 Clause 4.9-D regulations for visual alarm systems, this device prioritizes fire safety compliance while offering user-friendly operation. The addressable capability enables targeted activation of specific sounder beacons, automatically triggering audio-visual alarms in desired zones while leaving other areas undisturbed. Operating on loop-powered two-wire technology with ultra-low current consumption, it incorporates device integrity monitoring, electrical supervision, and transient voltage protection (2.4KV) for enhanced system reliability. IoT connectivity enables remote monitoring, testing, and diagnostics, empowering facility managers to verify device functionality and receive instant alerts from any location worldwide.

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Core Features

- ➢ IoT Connectivity
- ➢ Dual-Tone Audio
- ➢ Targeted Activation
- ➢ Soft Addressing

- ➢ Cloud Monitoring
- ➢ Visual Beacon
- ➢ Loop-Powered
- ➢ Electrical Supervision

- ➢ NBC 2016 Compliant
- ➢ Addressable Control
- ➢ Low Current
- ➢ Surge Protection

IoT & Smart Monitoring Capabilities

Real-Time Status Monitoring & Cloud Upload

Continuously transmits operational status, activation events, and device health data to the control panel which automatically uploads to the cloud via internet connection. Monitor sounder beacon performance and activation history from any location.

Intelligent Event Alerts

Instant cloud-based notifications for device activation, connectivity issues, electrical faults, and maintenance requirements. Multi-channel alerts ensure rapid awareness of alarm events and system health status. Enhanced Situational Awareness

Remote Testing & Verification:

Conduct remote functional tests of audio and visual components without physical site access. Verify sound levels, beacon operation, and addressable communication from centralized control center.

Proactive Device Health Monitoring

IoT-based device integrity monitoring continuously tracks electrical circuits, speaker functionality, and beacon performance. Predictive maintenance alerts identify potential issues before they affect emergency response capability.

System Integration & Analytics

Compatible with Building Management Systems (BMS) for unified monitoring. Cloud-based analytics provide activation patterns, response time tracking, and system performance metrics for continuous improvement.

Protection & Reliability Features

Device Integrity Monitoring: Continuous monitoring of device health and connectivity ensures system reliability. Instant fault detection for wiring issues, component failures, or communication problems with automatic reporting to control panel and cloud.

Transient Voltage Protection: Incorporates 2.4KV surge protection to safeguard against electrical transients, lightning strikes, and power surges. Enhanced durability ensures long-term reliability in harsh electrical environments.

Electrical Supervision: Built-in electrical supervision continuously monitors circuit integrity. Detects open circuits, short circuits, and wiring faults, ensuring the device is always ready for emergency activation.

Soft Addressing: Digital soft addressing enables easy configuration and reconfiguration without physical DIP switches. Each device can be assigned unique IDs remotely through the control panel for flexible system design.

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Advanced Capabilities

Loop-Powered Operation: Operates on two-wire loop-powered system, enabling device monitoring, alarm signaling, and power transmission through the same wires. Simplified wiring reduces installation complexity and material costs.

NBC 2016 Compliance:
Specifically designed to meet NBC 2016 Part 4 Clause 4.9-D regulations for visual alarm systems, ensuring full regulatory compliance for fire safety installations in buildings across India.

Targeted Zone Activation: Addressable capability enables selective activation of specific sounder beacons in designated zones. During fire detection, only intended devices are triggered while other areas remain undisturbed, preventing unnecessary panic.

Intelligent Dual-Tone Audio: Generates distinctive attention-grabbing dual-tone sound at 90dB (at 1m). Carefully chosen tones provide effective alerts while avoiding panic among occupants, ensuring calm and orderly emergency response.

Coordinated Audio-Visual Alerts: Automatically triggers synchronized audio alarms accompanied by flashing light beacons during fire events. Dual-mode notification ensures alerts reach all occupants including those with hearing impairments.

Ultra-Low Current Operation:

Operates on very low quiescent current (200µA), ensuring energy efficiency and minimizing power consumption. Extended battery backup capability during mains power failure.

Operating Principle

- ➢ **Addressable Communication:** Two-way digital communication with control panel enables individual device identification, targeted activation, and continuous status monitoring

- ➢ **Loop-Powered Design:** Draws power from the two-wire loop circuit while simultaneously transmitting activation signals and status data, eliminating need for separate power wiring

- ➢ **Fire Event Response:** Upon fire detection, control panel sends activation command to specific sounder beacon IDs, triggering synchronized audio-visual alarm in designated zones only

- ➢ **Cloud Data Transmission:** All activation

events, operational status, and fault conditions are transmitted to control panel and automatically uploaded to cloud servers for remote monitoring

- ➢ **Dual-Mode Alert:** Sounder produces carefully designed dual-tone audio while beacon flashes high-intensity light, ensuring effective notification for all occupants

- ➢ **Selective Muting:** Audio component can be muted while visual beacon continues operation, allowing investigation while maintaining visual warning indication

- ➢ **Continuous Self-Monitoring:** Device performs ongoing integrity checks of electrical circuits, speaker functionality, and beacon operation, reporting any anomalies to control panel and cloud.

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Technical Specifications

Electrical Specifications

Parameter	Specification
Operating Voltage	18-24V
Quiescent current	200uA
Alarm current	60mA

Mechanical Specifications

Dimensions	Weight	
120x120x45mm	Without Base	178g
	With base	242g

General Specifications

Parameter	Specification
Operating temperature	-10ºC to 55ºC
Storage temperature	-10ºC to 60ºC
Humidity	0-95% RH (Non condensing)
Colour	Red
Housing	ABS
Compatibility	AU101X Protocol

sounder beacon

120mm

120mm

30mm
11mm
41mm

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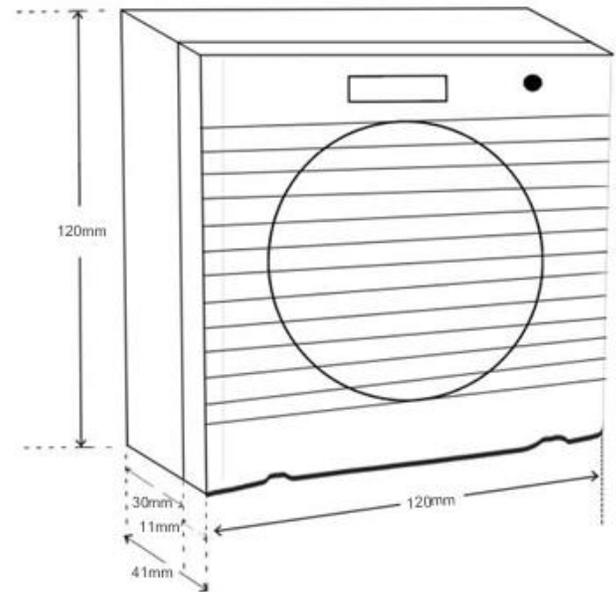
Compliance &Standards

| NBC 2016 Part 4 | Clause 4.9-D | Visual Alarm System |

The AA-IoT-SBS-104 Sounder Beacon is specifically designed to meet NBC 2016 (National Building Code) Part 4 Clause 4.9-D regulations for visual alarm systems. Ensures full regulatory compliance for fire safety installations in commercial, residential, and industrial buildings across India.

Ideal Applications

- **Commercial Buildings:** Offices, retail spaces requiring NBC-compliant audio-visual alerts
- **High-Rise Residential:** Apartments and condominiums with zone-specific alarm requirements
- **Healthcare Facilities:** Hospitals, clinics needing visual alerts for hearing-impaired patients
- **Educational Institutions:** Schools, colleges requiring targeted zone activation

- **Hotels & Hospitality:** Properties requiring coordinated audio-visual emergency alerts
- **Industrial Facilities:** Noisy environments where visual beacons enhance audio alerts
- **Shopping Malls:** Large retail complexes with zone-based alarm activation needs
- **Transportation Hubs:**Airports, metro stations requiring comprehensive notification

Why Choose AL-FAPATB-IOT -101L

- **Cloud-Connected Intelligence:** IoT connectivity enables remote monitoring, testing, and diagnostics from any location worldwide
- **NBC 2016 Compliant:** Specifically designed to meet National Building Code visual alarm system regulations for full compliance
- **Targeted Zone Control:** Addressable capability activates only specific beacons, preventing unnecessary panic in unaffected areas
- **Dual-Mode Notification:** Combined audio-visual alerts ensure effective communication for all occupants, including hearing-impaired individuals
- **Panic-Free Alert Tones:** Carefully designed dual-tone audio provides effective warnings without creating excessive panic among occupants
- **Loop-Powered Simplicity:** Two-wire operation eliminates separate power wiring, reducing installation complexity and costs
- **Ultra-Low Power Consumption:** 200µA quiescent current ensures energy efficiency and extended battery backup capability
- **Enhanced Reliability:** Device integrity monitoring, electrical supervision, and 2.4KV surge protection ensure dependable operation
- **Remote Maintenance:** Cloud-based monitoring and remote testing capabilities reduce on-site maintenance visits and associated costs

- **Flexible Muting:** Audio can be muted during investigation while visual beacon continues operation for safety verification
- **Soft Addressing:** Easy configuration and reconfiguration without physical switches, enabling flexible system design and modifications
- **Durable Construction:** High-impact ABS housing with surge protection ensures long service life in demanding environments
- **Future-Ready Platform:** IoT connectivity ensures compatibility with emerging smart building technologies and centralized monitoring systems

Contact Information

AIRLIGHT Naveen alarm systems

Web: www.airlight.in

Product Information

For detailed technical documentation, installation guides, and product support,

Please visit our website or contact your local Airlight representative