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Smart Equipment Monitoring and Resolution System

SENSORS
DATA SHEET

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Sensors

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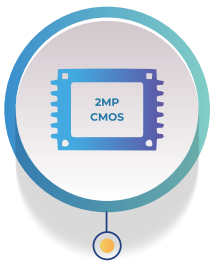**Contacts :** info@semarsdigital.com | https://semarsdigital.com

01

Noise Detection Sensor

Noise detection sensors are devices designed to monitor and measure sound levels in an environment. They typically operate within a range of 30 dB to 120 dB, making them suitable for detecting ambient noise in urban areas, industrial sites, and smart city applications. These sensors use advanced acoustic technology to capture sound intensity and transmit data over NB-IoT networks, ensuring long-range connectivity and low power consumption.

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Its features and applications are as follows:

1.1 Key Features:

2MP CMOS	H.265 H.264			
Measures environmental noise levels	**NB-IoT connectivity with excellent penetration and coverage**	**Protocol stack: IPv4/IPv6, UDP, CoAP, LwM2M, DTLS, TCP, MQTT**	**Long battery life (5–10 years)**	**IP67-rated enclosure**
(30 dB ~ 120 dB)	**3GPP NB-IoT frequency bands**	**OTA firmware upgrade capability**	**With 2×AA Li-SOCl₂ cells**	**For outdoor use**

1.2 Applications:

- **Urban Noise Monitoring**
- **Industrial Safety**
- **Traffic & Transport**
- **Smart Buildings**
- **Public Spaces**

- **Healthcare**
- **Environmental Research**
- **Security & Surveillance**

This type of sensor is particularly suitable for industrial or commercial environments requiring precise monitoring and integration with existing systems.

1.3 Specifications

SL No.	Specification	Value
1	Noise Measurement Range	30 dB ~ 120 dB
2	Noise Sensitivity	±0.5 dB
3	NB-IoT Module Sensitivity	-129 dBm ±1 dB
4	Frequency Bands	3GPP NB-IoT bands
5	Protocol Support	IPv4/IPv6, UDP, CoAP, LwM2M, DTLS, TCP, MQTT
6	OTA Upgrade	Supported
7	Ingress Protection	IP67
8	Power Supply	5–12 V DC input
9	Battery	2×AA Li-SOCl$_2$ cells (5–10 years life)

1.4 Note:

Operating and storage conditions :

- -20 to 60 °C; 10–90% RH (non-condensing); indoor use
- Dry, dust-free; 15–30 °C; avoid moisture and direct sun

Attention :

- Mount at breathing zone height; avoid vents/direct sunlight; periodic calibration for CO2/TVOC if applicable

Certifications :

- CE Certified
- RoHS Compliant
- IPV6 Packing
- ISO 9001 Manufacturing Standards