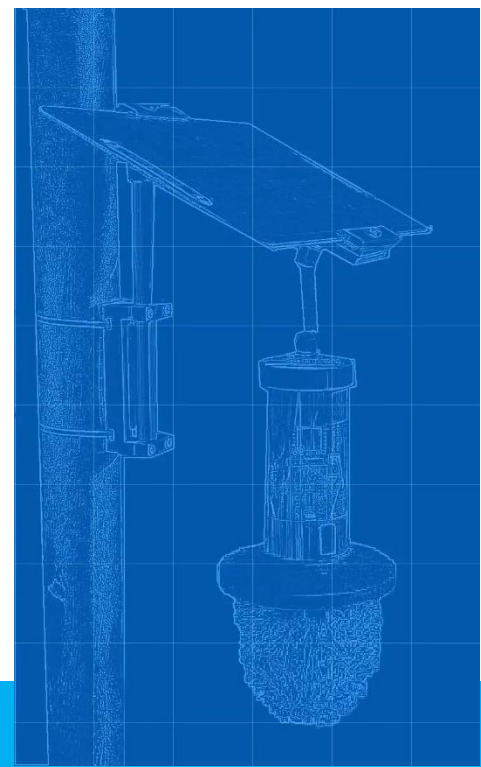


# SMART NOISE MONITORING

## NOISEQX - Jaleometro02

Stand-alone environmental noise sensor

PATENT PENDING



### Model Jaleometro02

Based on an outdoor noise microphone Specially designed to capture only the relevant frequencies to assess the ambient noise level.

This Environmental Noise Monitoring Station is a IoT solution that helps cities and communities' sense accurate noise level data. The Station operates autonomously without requiring external power source or any type of manual data gathering.

### Features

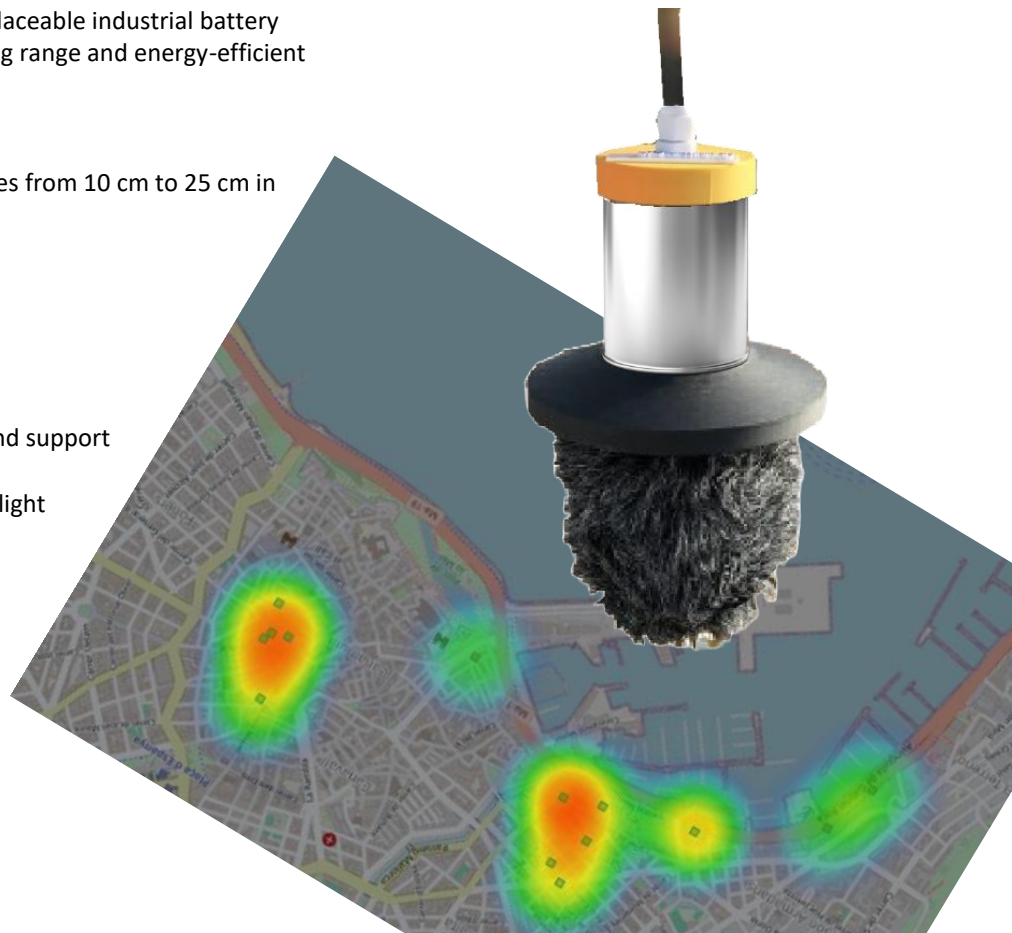
- + Built-in outdoor microphone designed for consistent and accurate noise sensing
- + Protected with a moisture-resistant replaceable windshield
- + Design to avoid vibration interference.
- + Omnidirectional reading
- + Noise classification with AI
- + Powered by a rechargeable and replaceable industrial battery
- + Uses LoRaWAN technology for a long range and energy-efficient communications
- + Waterproof
- + Charged by an efficient solar panel.
- + Mast mounting kit included (for poles from 10 cm to 25 cm in diameter)

### Benefits

- + Fast and easy to install, maintain, and support
- + Easy integration
- + Four days of autonomy without sunlight

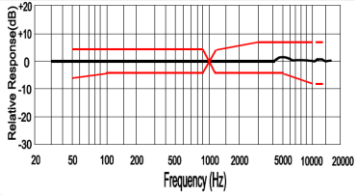
### Applications

- + Smart Cities
- + Event and crowd monitoring
- + Compliance with Low Emission Zone (LEZ) regulations
- + Critical environment surveillance support



Electronic  
Circuit Design

## Technical specifications

	Measuring units	Sensitivity*	Measuring range	Resolution
<b>A-weighted sound levels</b>	dB(A)	- 46 ± 2.0 ( 0 dB = 1V / Pa ) at 1K Hz	20 dB(A) to 120 dB(A)	0.1 dB(A)
<b>Sound frequency range</b>	Hz		Regulatory mode: 100 Hz to 5K Hz Vibration mode: 100 Hz to 200 Hz Human mode: 100 Hz to 8K Hz	5 Hz

\*All the accuracies indicated in this technical datasheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions.

## General features

<b>Measuring element</b>	Omni-Directional Foil Electret Condenser Microphone Class 2
<b>Housing</b>	ABS-PC and Aluminum, IP67**
<b>Power supply</b>	Solar panel 6V 500mA Battery 2900 mAh / 10.5 Wh (Replaceable)
<b>Consumption</b>	25 to 50mA – Average 38mA (Working). 110 mA (Transmission). <1mA (Stand-By).
<b>Communication</b>	*LoRaWAN
<b>Dimensions</b>	Panel solar: 145x145mm Body: long 150mm, diameter 50mm / Wired: long 3mm
<b>Operating conditions</b>	Temperature -15 to 55 °C. Humidity: 0 ~ 100% RH
<b>Weight</b>	350 g
<b>Time acquisition</b>	Sound analysis every second. Data transmission every 10 minutes.

\* International bands available: AU923, EU868, US915, IN865, AS923

## Downlink payload decoded

```

"decoded_payload": {
  "period": 600,
  "gps": {
    "altitude": 6,
    "latitude": 43.3235,
    "longitude": -1.9853
  },
  "noise": {
    "LAeq": 41,
    "LAFmax": 56,
    "LAFmin": 39,
    "identifications":
    [{"car"}, {"crowd"}, {"dog"}, {"plane"}, {"motorbike"}]
  },
  "telemetry": {
    "battery": 3.2,
    "cycle": 96,
    "temp": 21
  }
}
    
```

**LAeq** Level A-weighted equivalent

**LAFmax** Level A-weighted fast maximum during the measurement period.

**LAFmin** Level A-weighted fast minimum during the measurement period.

**identifications** With AI-based noise classification techniques. Different types of noise are automatically classified, allowing users to quickly and easily identify sources of excessive noise and take appropriate actions.

Non-contractual document – We reserve the right to modify the characteristics of this product without prior notices.

### Electronic Circuit Design SL - B16504821

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