

PÖLWAX

Sound Transmitter NoiseTrans50

Technical Datasheet

SOUND LEVEL TRANSMITTER Atmos SERIES - NoiseTrans50



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The Polwax Sound Level Transmitter Model NoiseTrans50 is an advanced noise monitoring device designed to measure and transmit real-time sound pressure levels (SPL) in decibels (dB) for industrial, environmental, and commercial applications. With its high-precision microphone and signal processing unit, the Decibel 50 ensures accurate and reliable noise measurements across a wide frequency range. Equipped with multiple output interfaces including 4-20mA, 0-10V, RS485 (Modbus RTU), and MQTT over Wi-Fi, the NoiseTrans50 seamlessly integrates with industrial automation systems, environmental monitoring platforms, and smart city infrastructure. Its robust IP65rated enclosure allows for deployment in both indoor and outdoor environments, making it suitable for factories, airports, traffic monitoring, hospitals, educational institutions, and more.

Features

- Easy to Install and suitable for Wall Mounting
- High Accuracy and Stability
- Wide Measuring Range
- Output Signal : 4 20 mA / 0 10 V
- High-sensitivity microphone
- Protection Rating: IP65 for outdoor and harsh environment use
- Low Power Consumption
- Compact and Durable Design
- User-Friendly Configuration
- Energy Efficient
- Easy Integration
- Ruggedized Enclosure
- Advanced Communication RS-485
- Compact Design



Installation & Configuration

- Wall or pole-mounted using standard brackets.
- Power and data connections via screw terminals or industrial connectors.
- Configurable via PC-based software or Modbus registers.
- Calibration options available for enhanced accuracy.



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Technical Details

Measurement Range	30 dB to 130 dB
Accuracy	±1.5 dB
Resolution	0.1 dB
Response Time	≤30 seconds
Microphone Type	Precision Electret Condenser Microphone
Output Options	4-20mA, 0-10V, RS485 (Modbus RTU)
Power Supply	12V-24V DC
Frequency Range	20 Hz - 20 kHz
Operating Temperature	-10°C to 60°C
Storage Temperature	-20°C to 80°C
Humidity Range	0-95% RH (non-condensing)
Protection Rating	Ip65 (water-resistant and dustproof)
Output Signals	Rs485 (Modbus RTU), 4-20mA, 0-5V, 0-10V
Mounting Options	Wall mount, Pole mount,
Communication Protocols	MODBUS RTU
Housing Material	Industrial-grade ABS
Process Connection	High-strength, dustproof, waterproof

Model Selection Chart

Polwax NoiseTrans50



Why Choose Polwax Sound Level Transmitter – Model NoiseTrans50?

When it comes to precise, real-time noise level monitoring, the Polwax NoiseTrans50 stands out as a reliable, industrial-grade solution designed to meet the needs of a wide range of applications. Here's why you should choose NoiseTrans50 for your sound level monitoring requirements:

1. High-Precision Noise Measurement

✓ Wide Measurement Range (30 dB – 130 dB): Accurately captures ambient noise levels in industrial, commercial, and environmental settings.

✓ High-Sensitivity Electret Condenser Microphone: Provides superior noise detection with \pm 1.5 dB accuracy, ensuring compliance with regulatory standards.

2. Versatile Output & Connectivity Options

✓ Multiple Industry-Standard Outputs:

- 1) 4-20mA & 0-10V for integration with existing industrial control systems.
- 2) Rs485 Modbus RTU for communication with SCADA, BMS, and PLCs.

✓ Seamless Integration: Works with smart city monitoring systems, environmental agencies, hospitals, factories, and more.

Dimensions

Polwax NoiseTrans50



Applications & Case Studies

Case Study 1: Smart City Noise Pollution Monitoring

Client: Municipal Environmental Protection Agency

Challenge: Urban noise pollution was increasing due to traffic congestion, construction activities, and nightlife. The city lacked a real-time monitoring system to assess the noise levels and implement noise control measures.

Solution: The Polwax NoiseTrans50 was deployed across multiple high-traffic areas in the city. The devices were connected via MQTT over Wi-Fi, enabling real-time monitoring through a centralized dashboard.

Results:

- ✓ Identified noise pollution hotspots, helping policymakers take action.
- ✓ Automated alerts for areas exceeding permissible noise levels.
- ✓ 25% reduction in citizen complaints related to noise pollution.

Case Study 2: Industrial Noise Monitoring for Worker Safety

Client: Automotive Manufacturing Plant

Challenge: Workers were exposed to high noise levels exceeding 90 dB in specific areas, leading to hearing issues and regulatory non-compliance. The plant needed an automated noise level monitoring system to ensure worker safety.

Solution:

The Polwax NoiseTrans50 was installed in high-noise areas. The 4-20mA output was integrated into the factory's PLC system, enabling automated safety measures such as triggering alarms and activating noise reduction mechanisms.

Results:

- ✓ 0% reduction in noise exposure complaints from workers.
- ✓ Improved compliance with OSHA noise regulations.
- ✓ Enhanced productivity with a safer work environment.



Applications & Case Studies

Case Study 3: Hospital Noise Level Management

Client: Multi-Specialty Hospital

Challenge: The hospital faced high noise levels in ICU and patient recovery areas due to constant staff movement, medical equipment, and external noise. This negatively impacted patient recovery.

Solution: Polwax NoiseTrans50 units were installed across ICU, corridors, and waiting areas to monitor noise levels. RS485 Modbus integration allowed real-time tracking through the hospital's building management system (BMS). **Results:**

- ✓ 30% reduction in noise levels in critical care areas..
- ✓ Enhanced patient recovery and improved hospital ratings.
- ✓ Real-time alerts helped staff maintain a quieter environment.





POLWAX Group has got an experienced, highly-qualified project team conducting extensive R&D operations. Owing to that, goods holding the POLWAX brand feature customer-tailored flexibility and meet requirements of various industries.

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