

WxS 8800-004C

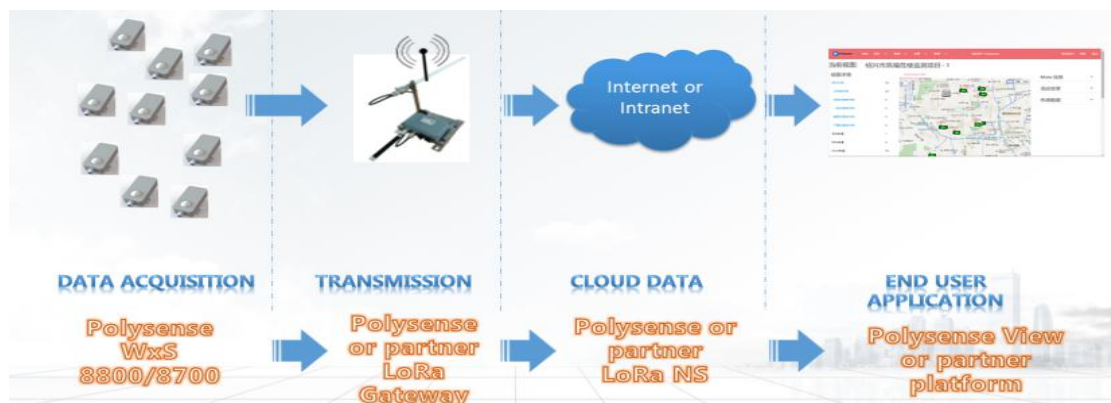
Sound Smart IoT Terminal

Product Highlights

- ✓ Industrial-grade noise meter high-precision sensor; excellent acoustic performance: measuring range is 30dB~120dB
- ✓ Cross-threshold report, regular report every 2 hours (threshold and periodic report period can be configured by the user)
- ✓ OTA (Over The Air) firmware upgrade, including upgrade loader and application image
- ✓ Analog and digital interface for external sensor connection and pulse counting (MPI)
- ✓ DC 5V-12V power supply
- ✓ Integrated built-in antenna or optional external SMA/IPEX antenna
- ✓ Transmission reaches 5km in NLoS (non-line of sight); transmission reaches 18km in LoS (line of sight) environment
- ✓ Anti-corrosion aluminum alloy material, strong moisture resistance



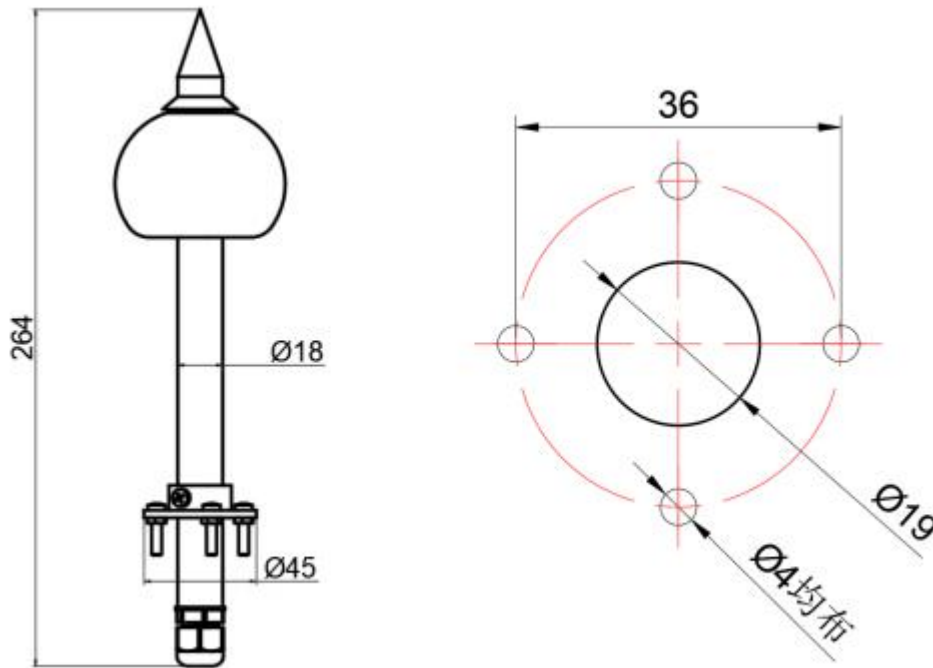
Application Architecture



Industrial environment noise collection; smart city noise collection;
 Animal husbandry wearable accessories; smart home sensor hub/cluster;
 IoT acoustic sensor node; digital camera/camcorder;

Game console/controller;



Size:



Note: The unit is mm.

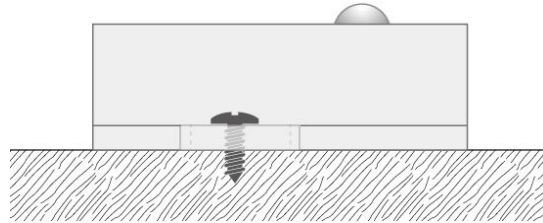
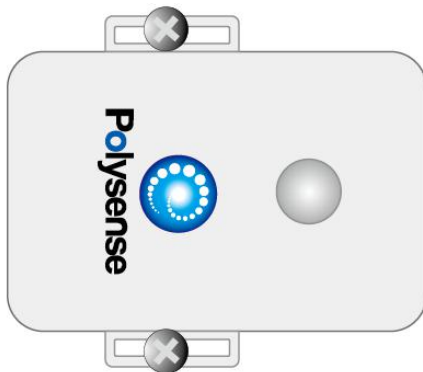
Specifications

Parameter	Value	
Sensor		
Range	30~120dB	
Frequency	20Hz~12.5kHz	
Resolution	0.1dB	
Noise accuracy	±0.5dB, Calibrate under the condition that the output signal is 94dB (1kHz).	
Power	0.1W	
Output signal	TTL output	Output voltage: ≤0.7V at low voltage, 3.25~3.35V at high voltage Input voltage: ≤0.7V at low voltage, 3.25~3.35V at high voltage
	RS485 output	ModBus-RTU communication protocol

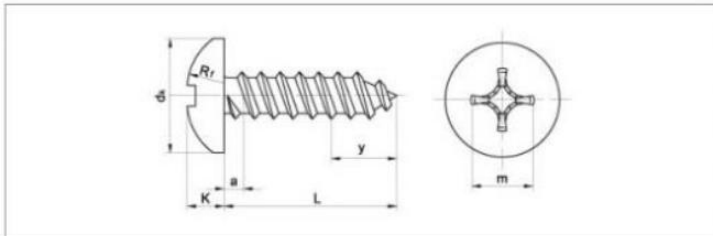
UART or RS-485 communication parameters	N 8 1
Response time	≤3s
Transmitter circuit operating temperature	air temperature: -20~+60°C;0%RH~80%RH
Data Report	Cross-threshold report, plus periodic report every 2 hours (the threshold and the periodic report cycle are both user-configurable)
Wireless	
ISM Band	EU 863 – 870MHz; US 902 – 928MHz China 779 – 787MHz; EU 433MHz AS 923MHz; CN 470 – 510MHz
Maximum Link Budget	168dB
Distance	Up to 5km in NLOS; up to 18km in LOS
Antenna	Integrated internal antenna or external 1/2 wavelength whip antenna (SMA)
Mechanical	
Dimension	60mm x 100mm x 35mm (WxS8800)
IP rating	IP67 (WxS8800)
Operating Temperature	-40C to +85C (WxS8800);
Cable length	0.5 meters
Total Weight	120 g
Electrical	
Power Type	10~30V DC
Compliance/Certification	
 LoRa Alliance	LoRaWAN 1.0.2
	FCC(America): 2A07W-WXS8000, IC(Canada): 23701-WXS8000 CE(European Union): B1810246 ROHS(European Union): R2BJ180927F0664E

Installation Guide

Below diagram shows the general installation guide for WxS8800, it can be installed on any flat and solid surface, the lid is contacted with the surface and fixed via 2 self-tapping screws:



Below is the recommendation of the self-tapping screw and its sizes:



螺纹规格		ST2.2	ST2.9	ST3.5	ST4.2	ST4.8	ST5.5	ST6.3
dk	min	3.7	5.3	6.64	7.64	9.14	10.57	11.57
K	min	1.4	2.15	2.35	2.8	3.4	3.7	4.3
m		1.9	3	3.9	4.4	4.9	6.4	6.9
L		4.5mm-100mm						

The Sample Application

Smart City

According to the ISO survey, it has worked in an environment with a noise level of 85 decibels and 90 decibels for 30 years. The probability of hearing loss is 8% and 18%, respectively. In an environment with a noise level of 70 decibels, conversation is difficult.



Polysense

Polysense Technologies



Intelligent industry

ISO recommends that workers work in a noisy environment for 8 hours a day, but never exceed 115 decibels.



Preventive maintenance of motors

Industrial motors have different noise limits based on factors such as rated power and working load. In the interval of 70 to 110 decibels.



About Polysense

Polysense Technologies Inc., Located in Santa Clara, California, with offices in St. Paul, Brazil, Beijing, Luo Yang ,Shanghai and Guangzhou, China, develops Universal Sensing and communicating Solutions with Distributed Data Analytic for IoT.



Polysense Technologies

Polysense focuses on fiber and wireless IoT products, solutions, and engineering services for service providers, enterprises, government agencies, and consumers, including 3G/4G LTE based WxS 6x00, Wi-Fi/BLE based WxS 7x00, LoRa based WxS 8x00, and NB-IoT/eMTC based WxS 9x00, enabling a rich array of applications such as Smart City, Industrial Internet of Things, Smart Retail and SMB, Precision Agriculture, Water Treatment, Environmental Protection, Energy and Power. Polysense currently supports over 100 sensing parameter, iEdge edge computing turnkey software, iView data visualization cloud PaaS platform, and iServer scalable Network Server, with a goal to offer the industry's broadest portfolio of sensors over 140 sensing parameters, including temperature, humidity, light, pressure, acoustic, accelerometer, tilt, vibration, displacement, environmental and industrial gases, water quality, PIR/IR motion, ultrasonic, soil sensors, thermal imaging, and 18 types gases with flammable, explosive, poisonous, or bad odor attributes.

Contact Polysense

Silicon Valley Office

Address : 3000 Scott Blvd, Suite 108
Santa Clara, CA 95054
Telephone : +1 408 980 9466
Mailbox : info@polysense.net



Sao Paulo, Brazil Office

Address : Rua Bela Cintra 746 3rd Floor
01415-002 Sao Paulo Brazil
Telephone : + 54 9113644-385
Mailbox : Latam_Rep@Polysense.net
mauricioj@artimar.com.br



Beijing Office

Address : 26 Shangdi Xinxu Road. Room 0820
Haidian Dist. Beijing China 100085
Telephone : +8610 6060 7008





Polysense Technologies

Mailbox : info@polysense.net

Shanghai Office

Address : 88 Shengrong Road, Building 1,
Room 416, Pudong Dist, Shanghai,
China 200120

Mailbox : info@polysense.net



Guangzhou Office

Address : No. 100, keyun north road, tianhe
district, Guangzhou ChuangJin
entrepreneurial industrial park h7-101

Mailbox : info@polysense.net



Luoyang Office

Address : 2 Chongqing Road, 6/F CITIC Marketing
Building, Jianxi Dist. Luoyang, Henan
Province, China 471039

Telephone : +86379 6222 0518

Mailbox : info@polysense.net

