

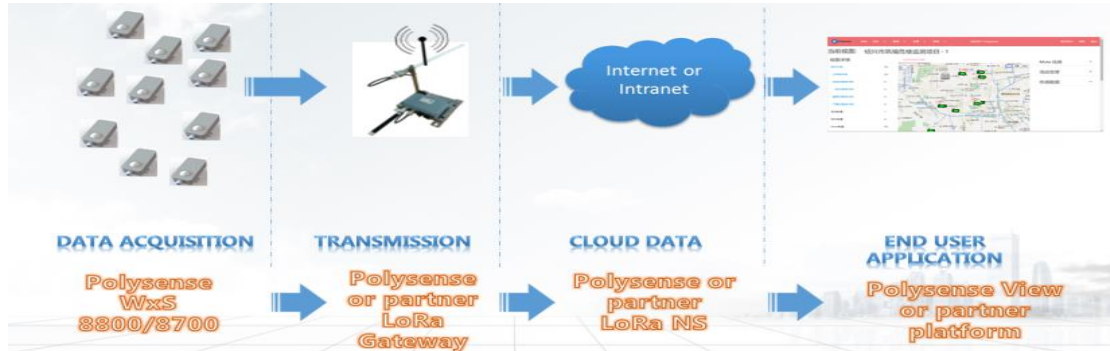
# WxS Ext-021FG

Combustible gas sensor

## Product Highlights



- ✓ Combustible gas sensor
- ✓ Gas sensitive electrode, sensitive to induction
- ✓ Intelligent self-check, indicator light color indicates status
- ✓ ABS fire material, good flame retardant corrosion resistance and high temperature characteristics
- ✓ Micro-processing control, effective detection of combustible gas
- ✓ Special horn for alarm, the alarm sound can be heard at a distance of 5-20 meters
- ✓ Simple and easy to install
- ✓ Strong anti-interference ability, the service life of up to 5 years
- ✓ Cross-threshold reporting, periodic reporting every 2 hours (both threshold and periodic reporting cycles can be configured by the user)
- ✓ OTA (Over The Air) firmware updates, including upgrade loader and application images
- ✓ Analog and digital interfaces for external sensor connections and pulse counting (MPI)
- ✓ Low power consumption, 2 x AA li-soci2 battery, battery life is 5-10 years
- ✓ Optional DC 5V power supply
- ✓ Integrated built-in antenna or optional external SMA/IPEX antenna
- ✓ Transmission reaches 5km in NLoS (non-line-of-sight);The transmission range in the LoS environment is up to 18km.
- ✓ IP67 protection level

## Application Architecture



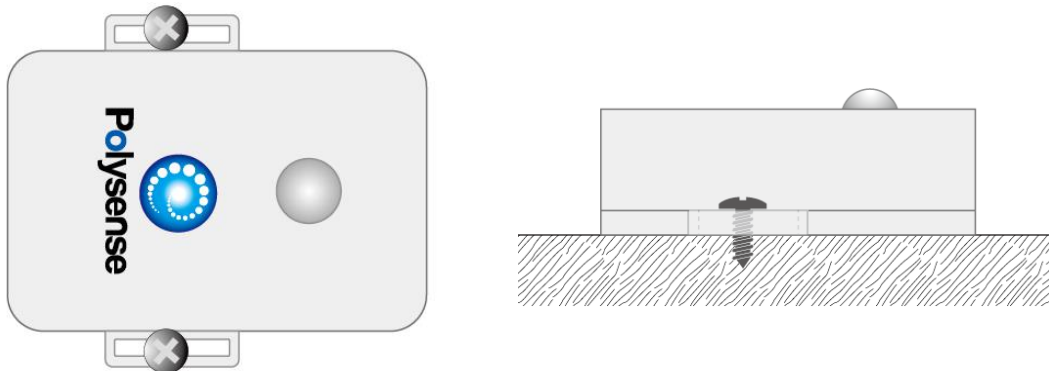
## Specifications

Parameter	Value
<b>Sensor</b>	
working voltage	220V DC9V-24V
operating temperature	-10℃~55℃
Alarm concentration	6%LEL
Solenoid valve signal	DC12V 300ms
Data submission type	switching value
data report	Cross-threshold reporting, periodic reporting every 2 hours (both threshold and periodic reporting cycles can be configured by the user)
<b>Wireless</b>	
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 NLOS; up to 18km LOS
Antenna	Integrated internal antenna or external 1/2 wavelength whip antenna (SMA)
<b>Mechanical</b>	
Dimension	60mm x 100mm x 35mm (WxS8800)
IP rating	IP67 (WxS8800)
Operating Temperature	-40℃ to +85℃ (WxS8800);
Cable length	0.5 meters
Total Weight	120 g
<b>Electrical</b>	

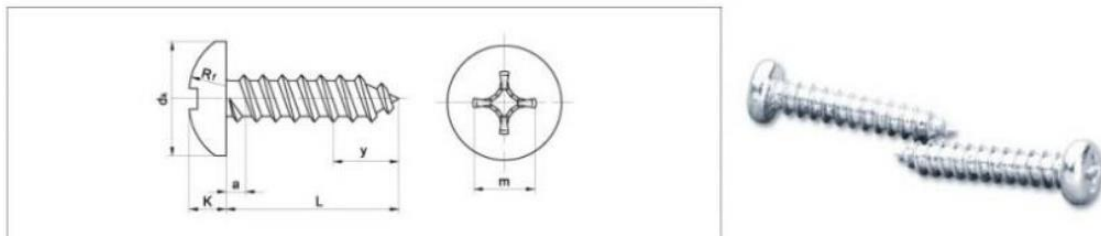
Supply Voltage	3.0 – 3.66 VDC
Power Type	Replaceable 1 or 2 AA 3.6V Li-SOCI2 Battery; DC 4.5V – 12V optional
Battery Life	5 – 10 years (assume one motion event one day)
<b>Compliance/Certification</b>	
 <b>LoRa Alliance</b>	LoRaWAN 1.0.2
	FCC(America): 2A07W-WXS8000, IC(Canada): 23701-WXS8000 CE(EU):B1810246 ROHS(EU): R2BJ180927F0664E

## Installation Guide

The following figure shows the general installation guide for the WxS8800, which can be mounted on any flat and solid surface, with the cover in contact with the surface and fixed by two 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

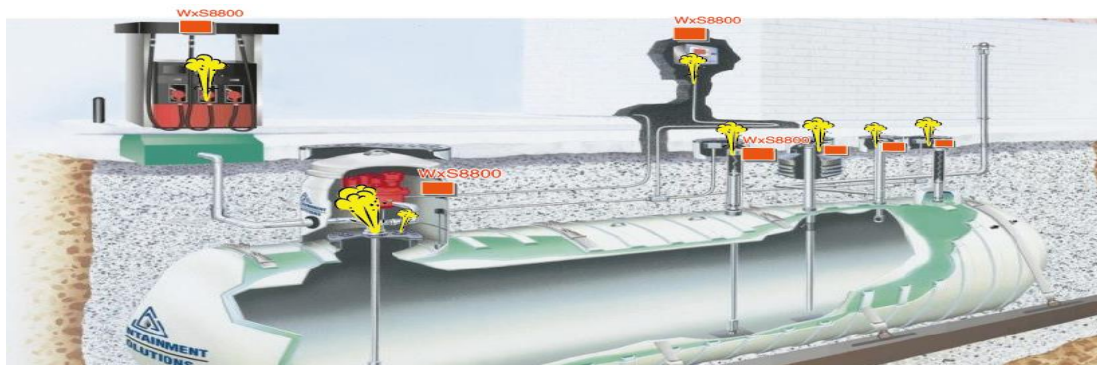
- **Carbon monoxide gas detection**

Based on CO gas detection, it can detect the concentration of dangerous gas CO exposed to the environment, such as underground garage, and clearly read the peak gas concentration and alarm level of high and low concentration.



- **natural gas liquefied gas petroleum gas detection**

For the detection of combustible gas in petrochemical industry, sensors are placed in the connection of valves and pumps to detect the leakage of combustible gas and give an alarm in time.



- Methane gas detection





## Polysense Technologies

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### 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 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.

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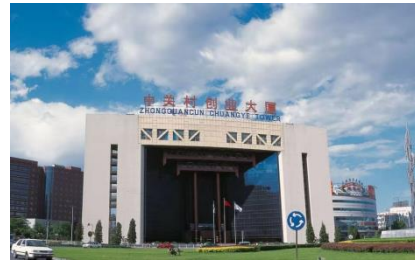




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