

# WxS 880-021FS

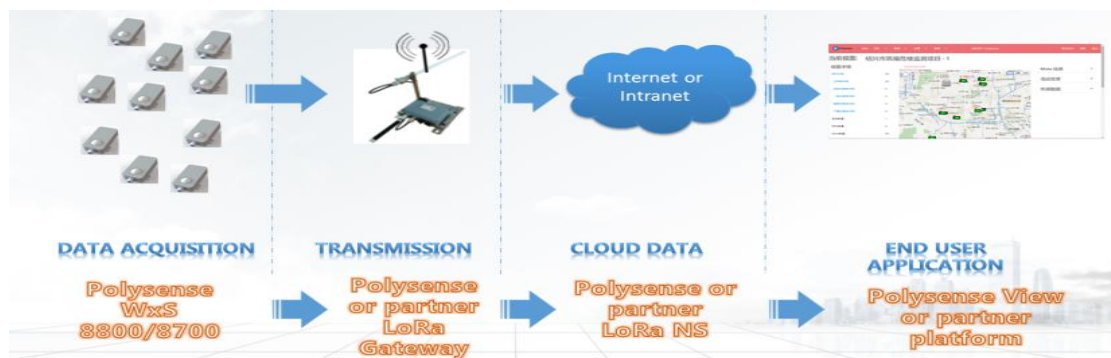
Fire smoke sensor

## Product Highlights



- ✓ Fire smoke sensor
- ✓ Accurate detection, sensitive response, 5 seconds alarm
- ✓ Mphotoelectric sensor, the anti-interference
- ✓ Metal mesh window design, dust, insects
- ✓ Suction mounting
- ✓ Cross-threshold report, plus periodic report every 2 hours (the threshold and the periodic report cycle are both user-configurable)
- ✓ OTA (Over The Air) firmware upgrade, including to upgrade loader and application images
- ✓ Analog and digital interface for external sensor connectivity and pulse counting (MPI)
- ✓ Low power consumption, 5 – 10 years of battery operational life with 2 x AA Li-SOCI2 Battery
- ✓ Optional DC 5V power source
- ✓ Integrated internal antenna, or optional external SMA/IPEX antenna
- ✓ Up to 5km reach in NLoS (Non-Line-of-Sight) and up to 18km LoS (Line-of-Sight) environments
- ✓ IP67 enclosure rating



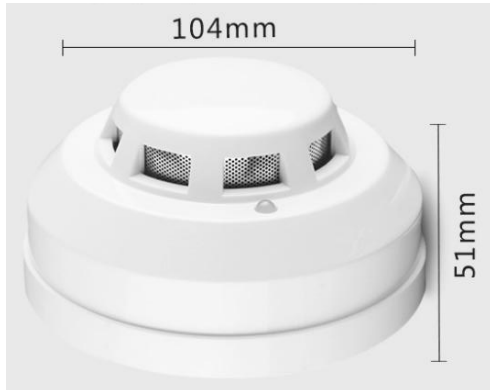
## Application Architecture



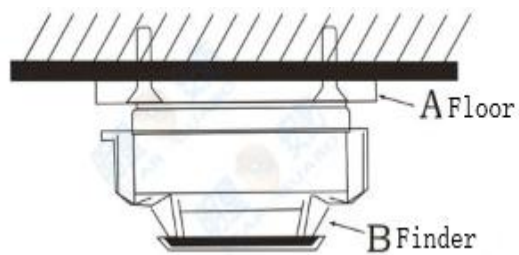
## Specifications

Parameter	Value
<b>Sensor</b>	
Inductive approach	Photoelectric/ionic
Operating voltage	9V~36V DC
Operating temperature	-10°C~50°C
Detection area	20 square meter
Static current	≤2mA
Alarm current	≤10mA
Alarm output	Normally open/normally closed (optional)
Data Report	Cross-threshold report, plus periodic report every 2 hours (the threshold and the periodic report cycle are both user-configurable)
<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 30mm (WxS8800)
IP rating	IP67 (WxS8800)
Operating Temperature	-40C to +85C (WxS8800);
Cable length	0.5 meters
Total Weight	120 g
<b>Electrical</b>	
Supply Voltage	3.0 – 3.8 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(European Union): B1810246 ROHS(European Union): R2BJ180927F0664E

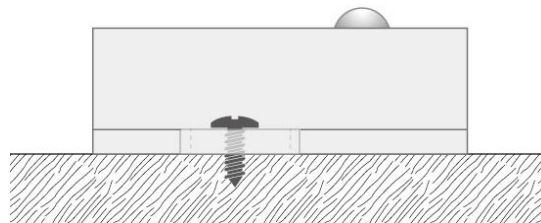
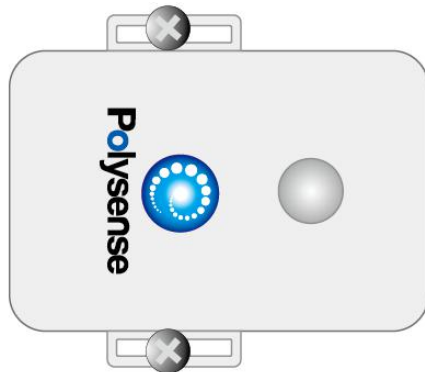
**Installation Guide**



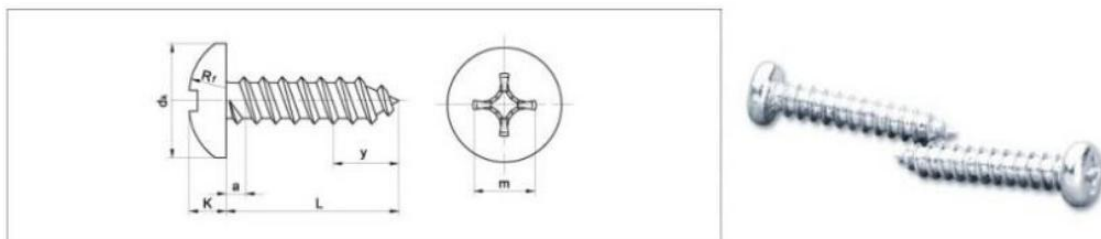
Floor A is bolted to the ceiling,  
Product B can be rotated clockwise  
on the bottom plate



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:

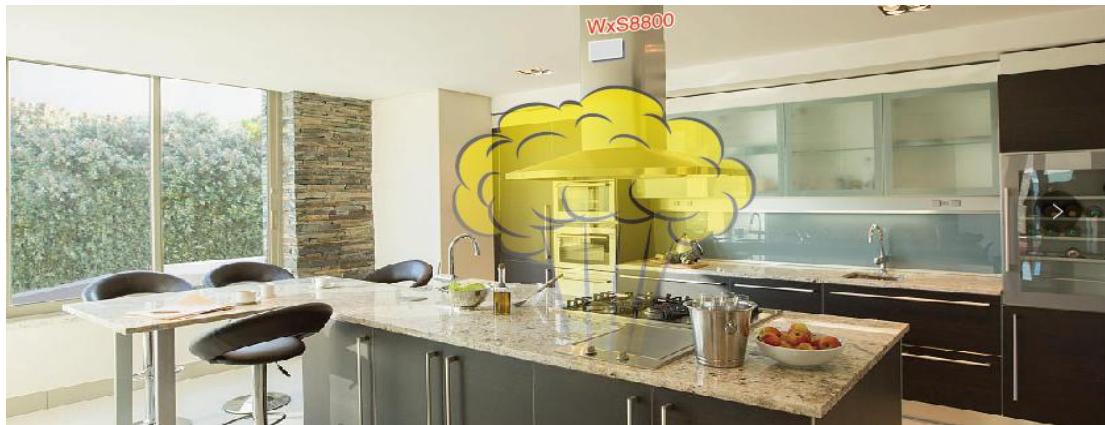


螺纹规格		ST2.2	ST2.9	ST3.5	ST4.2	ST4.8	ST5.5	ST6.3
dk	min	3.7	5.3	6.64	7.64	9.14	10.57	11.57
K	min	1.4	2.15	2.35	2.8	3.4	3.7	4.3
m		1.9	3	3.9	4.4	4.9	6.4	6.9
L		4.5mm-100mm						

## The Sample Application

- **Family**

Ion type smoke detection method, compared with the photoelectric more sensitive, more sensitive, can effectively detect the area of 20 square meters, with alarm buzzer, alarm loudness can reach 85 db. Easy to install, sensitive, alarm volume enough to remind users at home.



- **School**

In schools with dense students, photoelectric smoke sensors are installed to detect smoke and give an alarm in time. Teachers and students can evacuate safely as soon as possible to ensure the safety of teachers and students and the normal operation of facilities.



- **Warehouse**

For warehouses with different types of goods, smoke alarm can be installed to monitor the changes of the internal environment of the warehouse in real time, with sensitive induction and timely treatment.



- **Stores & Convenience Stores**

Detect combustible gas to ensure the safety of goods in the store.





# Polysense Technologies

## About Polysense

Polysense develops products and solutions for Industrial IoT and smart homes, including distributed fiber sensing, LPWAN LoRa and NB-IoT based wireless IoT sensors, Passive Optical Network (PONs) and cloud based data management and analytic platform.

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