

Smart Fill Level Monitoring Sensor

Featuring LoRaWAN®

WS201



WS201 is a wireless fill-level monitoring sensor that securely monitors a small container's fill level especially tissue boxes. Equip with the ToF technology with a high-focusing detecting range, WS201 is best suited for close-range sensing applications with great accuracy. Its ultra-low power consumption and standby mode ensure a durable battery life.

With a special structure design and damp-proof coating, WS201 can work stably in the metal environment and multiple scenarios. Built-in NFC makes it more operable and easy to configure. Compatible with Milesight LoRaWAN® gateway and IoT Cloud solution, users can know the containers' status and fill level in real-time and manage them effectively and remotely.

◆ Features

- High-focusing detection ranges from 1 to 55 cm with great accuracy based on Time-of-Flight technology
- Non-contact detection with wireless deployment
- Allow reporting the remaining amount by percentage with pre-set alarm thresholds
- Ultra-low power consumption with standby mode, ensuring a durable battery life
- Easy to install with its ultra-compact size and equip with NFC configuration
- Highly adaptive to most tissue boxes with a stable signal
- Damp-proof coating inside the device to ensure it works well in various conditions of bathrooms and other scenarios
- Function well with standard LoRaWAN® gateways and network servers
- Compliant with Milesight IoT Cloud

◆ Specifications

Wireless Transmission	
Protocol	LoRaWAN®
Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
Tx Power	16 dBm (868 MHz)/22 dBm (915 MHz)/19 dBm (470 MHz)
Sensitivity	-132dBm@300bps
Mode	OTAA/ABP Class A
Distance Measurement	
ToF FoV	25 °
FoV Accuracy	± 5 °
Detection Range	1 ~ 55 cm
Detection Accuracy	± 1cm
Detection Resolution	①1mm (1.0≤X≤15.0cm) ②2mm (15.0<X≤35.0cm) ③3mm (35.0<X≤55.0cm) X = Detection Distance
Others	
Button	1 × Reset Button (Internal)
LED Indicator	1 × Indicator (Internal)
Configuration	Mobile App (via NFC)
Physical Characteristics	
Power Supply	1 × 590mAh CR2450 Lithium Battery
Battery Life ¹	2 Years
Operating Temperature	-10°C ~ +60°C
Relative Humidity	0 ~ 95% (Non-condensing)
Color & Material	White, ABS + PC (Flame Retardant)
Ingress Protection	IP30
Dimension	66 × 38 × 12 mm (2.60 × 1.50 × 0.47 in)
Installation	On the flat surfaces with 3M tapes
Warranty ²	2 Years

¹ Tested under laboratory conditions and for guideline purposes only.