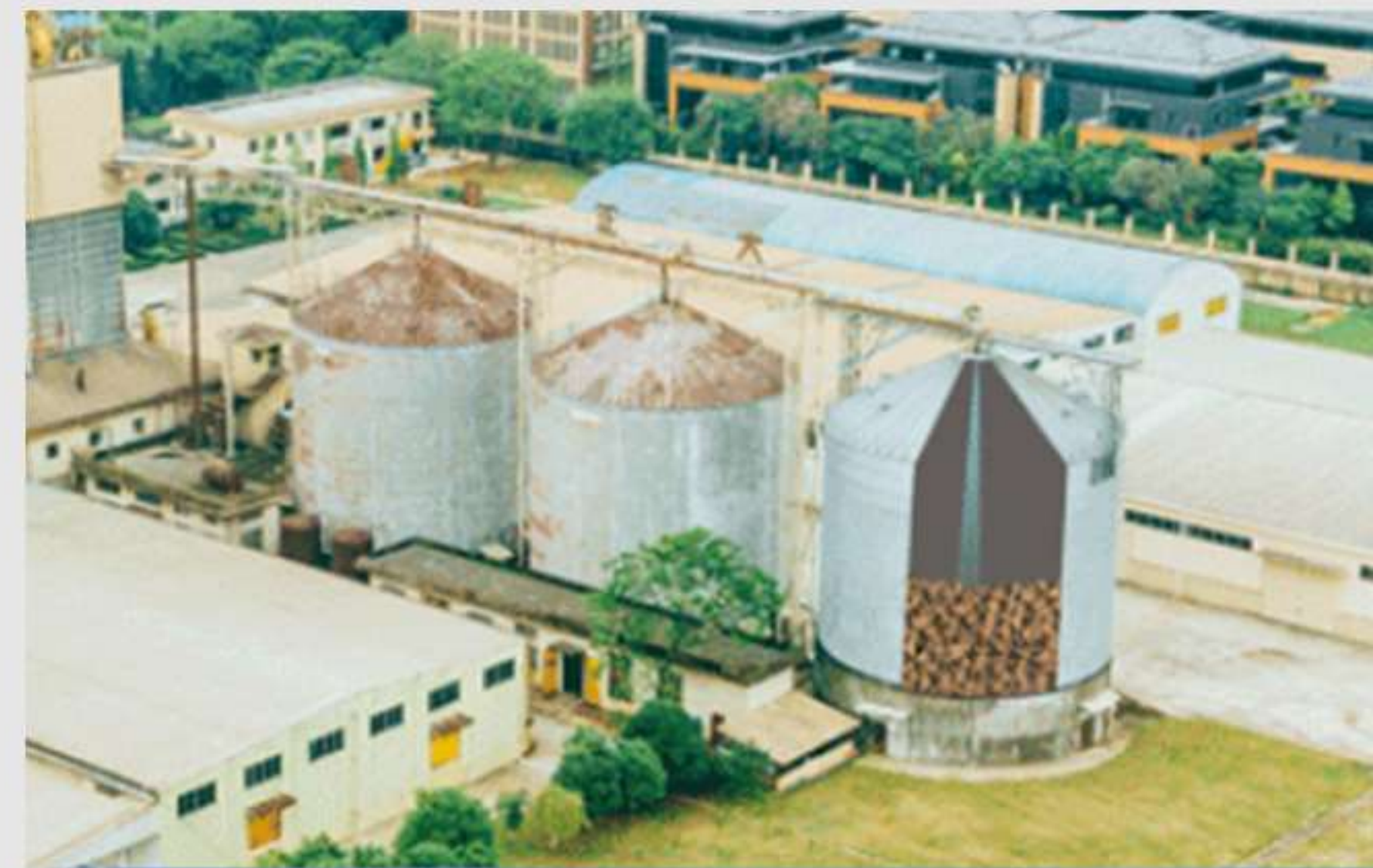# netvox®

LoRaWAN™

Wireless Liquid / Material Level Sensor

R718PE

Netvox's R718PE series provides three non-contact level sensors, which can satisfy water level and material level detection.

R718PE/R718PE01 is an ultrasonic sensor. R718PE02 is a LiDAR sensor with the function of a dust removal wiper.
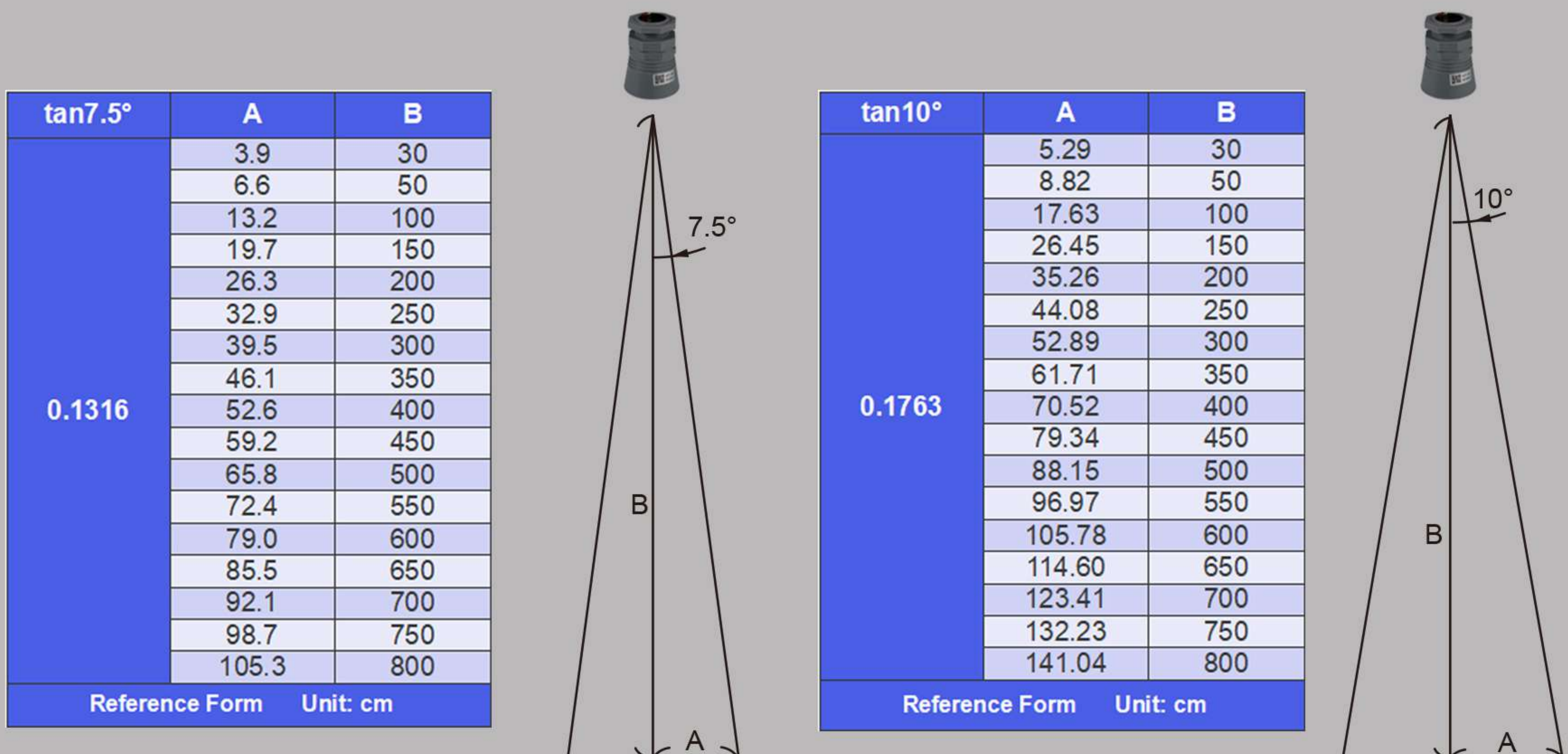
Applicable scenarios are as follows:

R718PE	R718PE01	R718PE02
• Suitable for liquid-level detection.	• Suitable for plane and material level detection.	• Suitable for material detection
Note: It is not suitable for scenarios where the liquid level fluctuates greatly or the measured object is uneven, nor is it suitable for high temperature, high pressure, and vacuum environments.		Note: Susceptible to dust, and steam. Unable to measure transparent liquids.
• Report: Battery Voltage (Unit: 0.1v) Distance (Unit: 1mm) Fill Level (Unit: 1%) Status (on/off)		• Report: Battery Voltage(Unit: 0.1v) Distance(Unit: 1mm) Fill Level (Unit: 1%) Sensor Strength

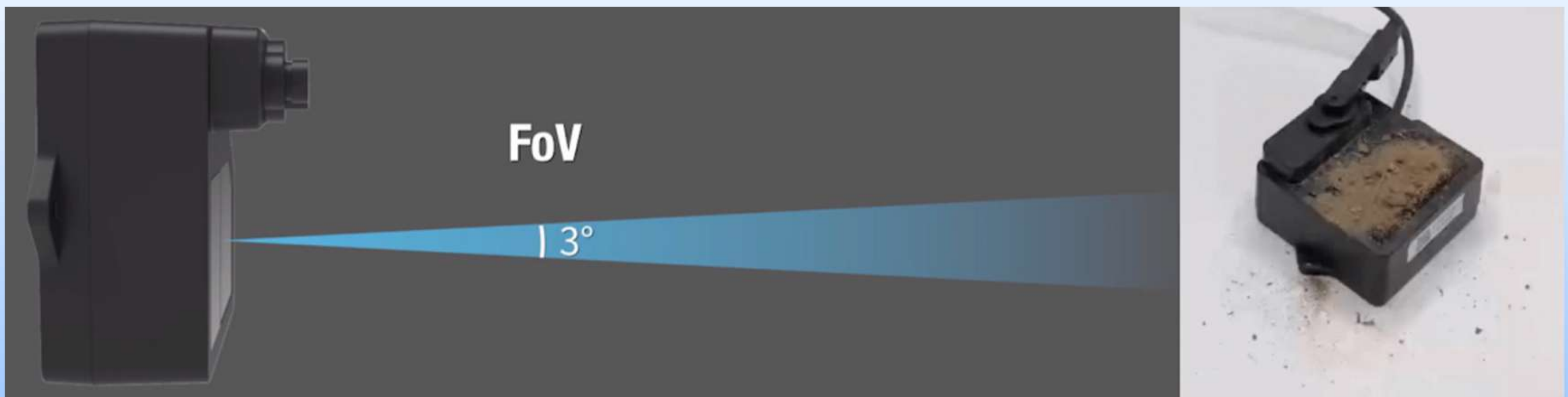# When selecting a device, please check whether the container is suitable.
The following are the container length and width restrictions for R718PE and R718PE01:

tan7.5°	A	B
	3.9	30
	6.6	50
	13.2	100
	19.7	150
	26.3	200
	32.9	250
	39.5	300
	46.1	350
0.1316	52.6	400
	59.2	450
	65.8	500
	72.4	550
	79.0	600
	85.5	650
	92.1	700
	98.7	750
	105.3	800
Reference Form	Unit: cm	

tan10°	A	B
	5.29	30
	8.82	50
	17.63	100
	26.45	150
	35.26	200
	44.08	250
	52.89	300
	61.71	350
0.1763	70.52	400
	79.34	450
	88.15	500
	96.97	550
	105.78	600
	114.60	650
	123.41	700
	132.23	750
	141.04	800
Reference Form	Unit: cm	

Taking R718PE as an example, if a water tower with a height of 250 cm is used, the width must be greater than the radius of 32.9 cm and the detection area must be unobstructed.

R718PE02 is a device for the material level detection industry that uses LiDAR for single-point ranging. Based on the ToF (Time of Flight) principle, the R718PE02 provides stable, accurate, and reliable ranging performance by optimizing the optical system. It is not easily affected by the surface state of the detected object, and the ranging performance can reach up to 25 m.
The sensor is equipped with a unique dust-removal wiper structure, it can maintain the accuracy of distance measurement in an environment with severe dust pollution and dust accumulation.

	R718PE	R718PE01	P718PE02
Sensor Type	Ultrasonic Level Sensor	Ultrasonic Level Sensor	LiDAR Material Level Detection Sensor
Measurement Range	0.25-8m	0.25-8m	90% Reflectivity 0Klux，0.1-25m； 10% Reflectivity 0Klux，0.1-12m； 90% Reflectivity 100Klux，0.1-25m； 10% Reflectivity 0Klux，0.1-12m；
Measurement Dead Zone	0-0.25m	0-0.25m	0-0.1m
Detect Angle	about 15°	about 20°	3°
Measuring Accuracy	±(1+S*0.3%) cm (S is the current measured length) (The measured object is a plane or a static horizontal plane.)	±(1+S*0.3%) cm (S is the current measured length) (The measured object is in a flat state)	±6 cm（0.1-6m） ±1%（6-25m）
Main body Waterproof Level	IP65 / IP67 (Optional)	IP65 / IP67 (Optional)	IP65 / IP67 (Optional)
Sensor Waterproof Level	IP67	IP67	IP5X Not waterproof

LoRa Alliance™ Member