
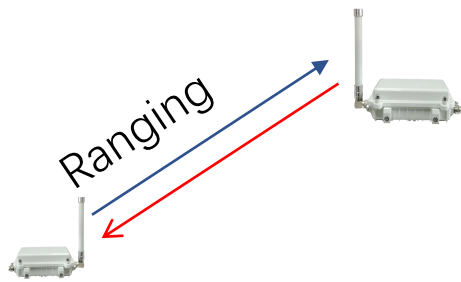


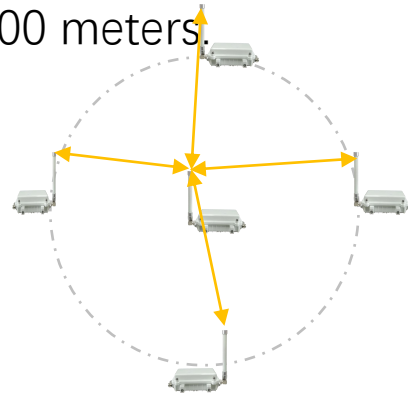
Introduction to the Application of Wireless Pulse Ranging Anticollision Base Station

 Application one: for precise ranging

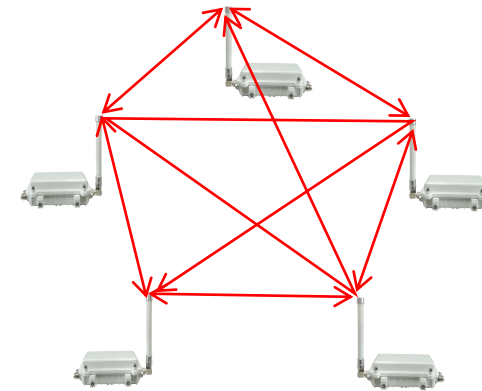
The pulse ranging base station can be used to achieve precise ranging of point to point or point to multi-point, or multi-point to multi-point, and to measure the real-time relative distance between objects. The ranging precision is as much as 10 cm, and the effective ranging distance is more than 500 meters.



Point to point



Point to multi-point

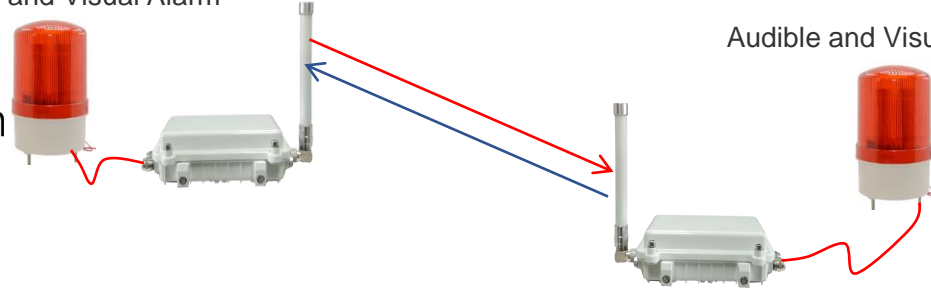


Multi-point to multi-point



Application two: for anticollision

Audible and Visual Alarm



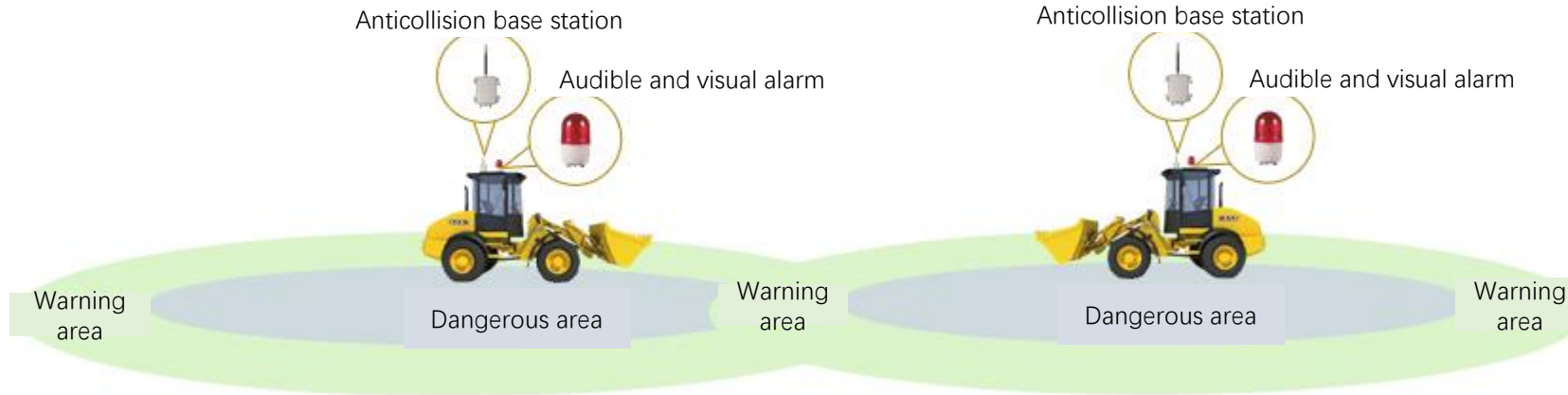
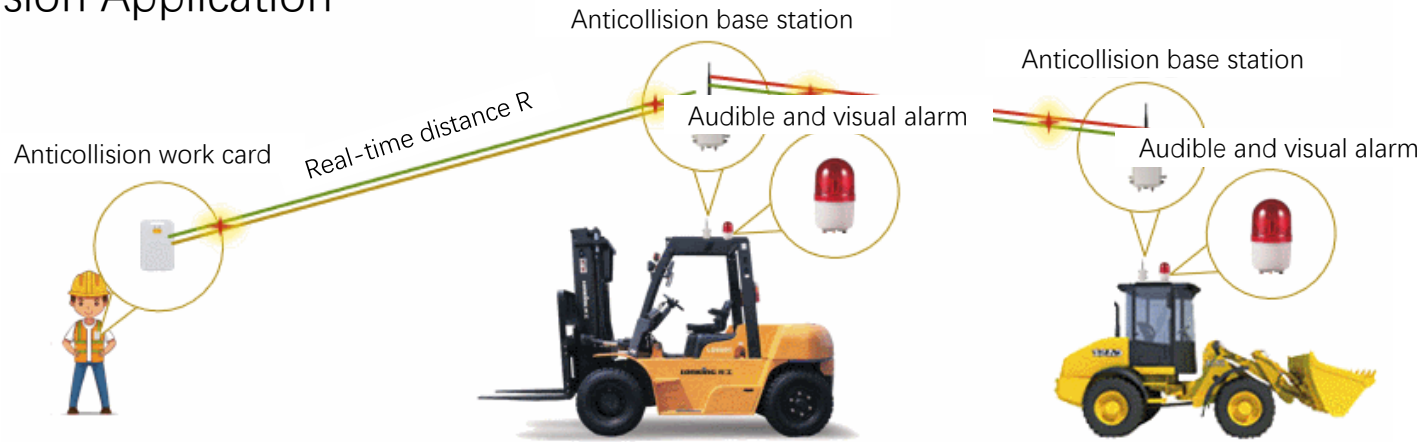
Audible and Visual Alarm

Pulse ranging base station can be used for anticollision among equipment like vehicles, excavators, overhead cranes, railcars, forklifts, gantry cranes.





Anticollision Application





Introduction to the Ranging Principle

Our wireless pulse ranging base station adopts the two-way ranging technology, which uses the time of flight (TOF) of the signal between two ranging base stations to measure the distance between them. TOF ranging technology is TDOA ranging, we adopt the reverse measurement method, that is, the remote base station sends data packets, the local base station receives data packets and automatically responds. By calculating the average value obtained in the forward and reverse directions, we can reduce the impact on any clock offset so as to obtain the precise distance between two base stations.



Ranging base station A

Ranging base station B

Received Message Analysis

Range Info.	No. 39	tag ID1	Basestation ID4	Distance 62 cm
Range Info.	No. 40	tag ID1	Basestation ID4	Distance 63 cm
Range Info.	No. 41	tag ID1	Basestation ID4	Distance 63 cm
Range Info.	No. 42	tag ID1	Basestation ID4	Distance 63 cm
Range Info.	No. 43	tag ID1	Basestation ID4	Distance 63 cm
Range Info.	No. 44	tag ID1	Basestation ID4	Distance 63 cm
Range Info.	No. 45	tag ID1	Basestation ID4	Distance 63 cm
Range Info.	No. 46	tag ID1	Basestation ID4	Distance 63 cm
Range Info.	No. 47	tag ID1	Basestation ID4	Distance 63 cm
Range Info.	No. 48	tag ID1	Basestation ID4	Distance 63 cm
Range Info.	No. 49	tag ID1	Basestation ID4	Distance 63 cm
Range Info.	No. 50	tag ID1	Basestation ID4	Distance 63 cm
Range Info.	No. 51	tag ID1	Basestation ID4	Distance 63 cm
Range Info.	No. 52	tag ID1	Basestation ID4	Distance 63 cm
Range Info.	No. 53	tag ID1	Basestation ID4	Distance 63 cm
Range Info.	No. 54	tag ID1	Basestation ID4	Distance 63 cm
Range Info.	No. 55	tag ID1	Basestation ID4	Distance 63 cm



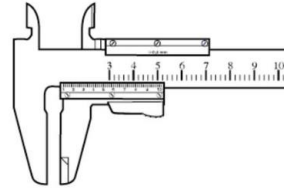
Features of Wireless Pulse Ranging Base Station



IP67 waterproof & dustproof



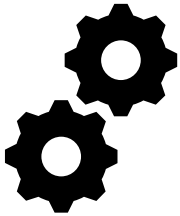
>500 meters ultra-long distance



Ranging precision up to 10 cm



Free from impact of rain, snow, fog and dust



Industrial design



Supporting 485 set, output



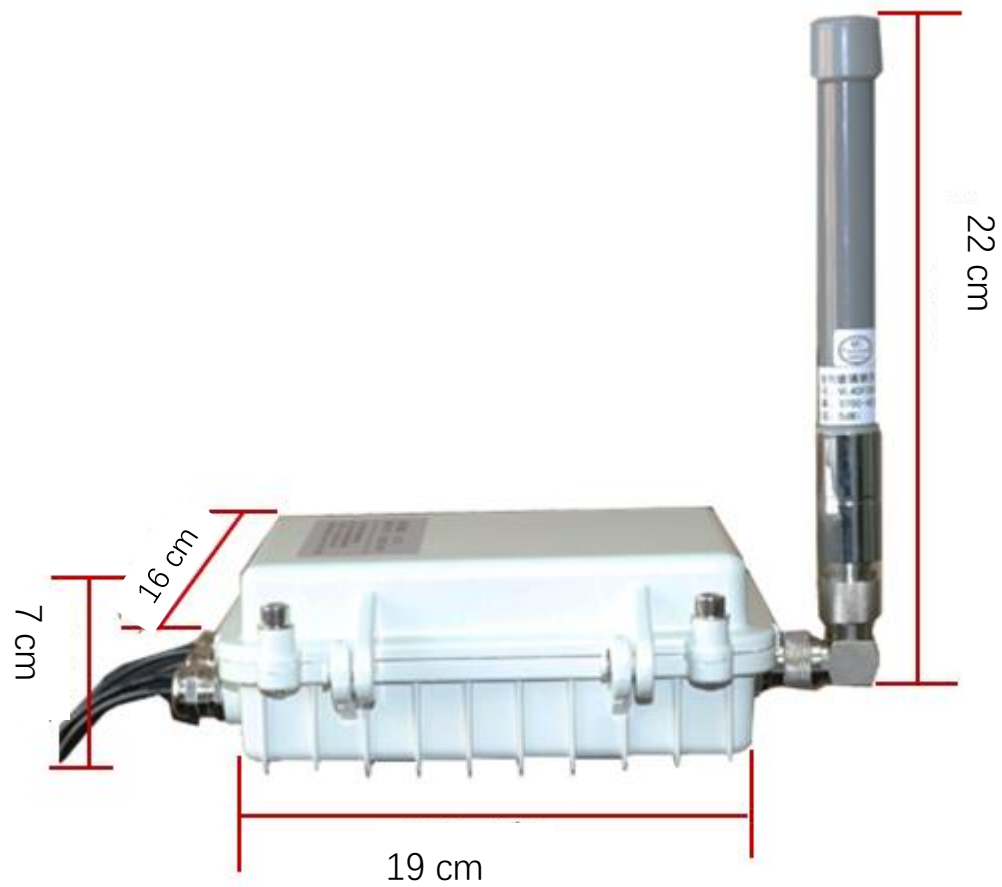
Quick installation



No accumulated errors



Outline Dimension

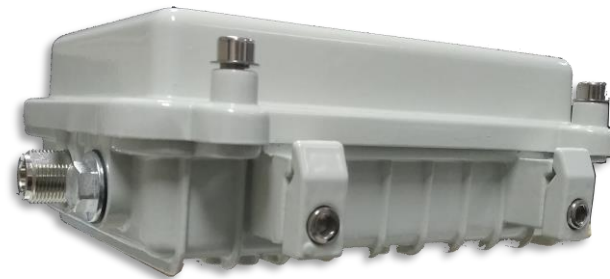




Support external extension feeder to place the equipment in the car or indoors, which is more conducive to install.



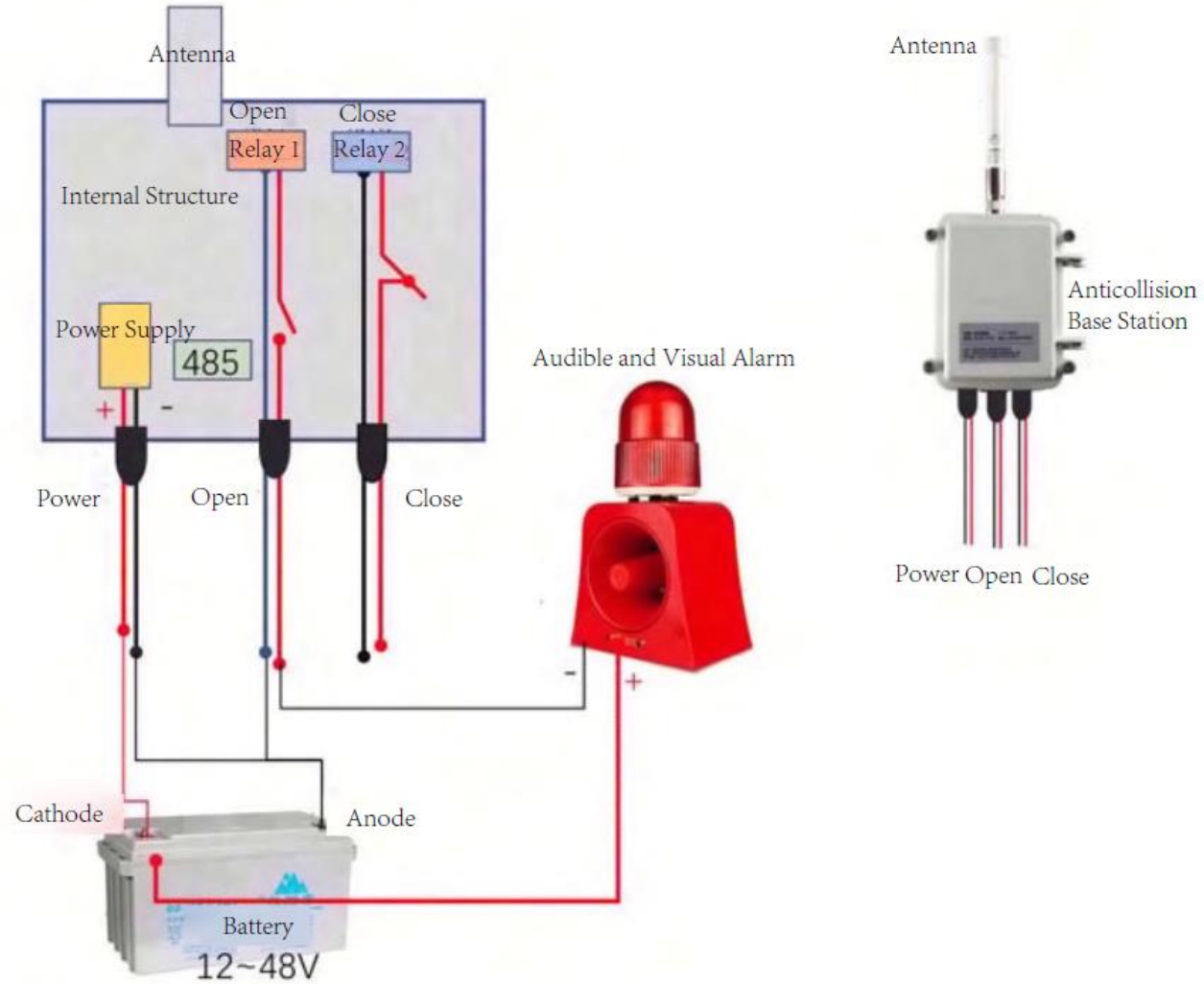
Antenna and feeder with sucker



Ranging anticollision base station



Wiring Method of Audible and Visual Alarm for Anticollision





Equipment Parameters

Equipment Parameters	
Product Name	Anticollision Ranging Base Station
Model	HXZK-FZCJ
Related Specification	802.15.4a/802.1.4a
Input Voltage	DC 12 ~24V
Instantaneous Power Consumption	<2W
Working Frequency	3.25GHz ~6.75GHz
Output Power(25°C)	-21dBm/MHz
Channel Width	500MHz
Ranging Distance	>500 meters
Anticollision Distance	0-500 meters adjustable
Ranging Precision	10 cm (no shielding)
Configuration and Data Output Mode	RS485
Working Voltage/Circuit	250V @10A
Relay	2 circuit normally open; 2 circuit normally close
Response Time	fastest 1 second
Dimension(cm)	19 x 16 x17
Weight(g)	1200g
Ranging Frequency	1-100Hz adjustable
Storage Temperature	-40°C to 90 °C
Working Temperature	-25°C ~ 75 °C
Working Humidity	0% ~ 90% no condensation
Storage Humidity	0% ~ 90% no condensation
Protection Grade	IP67



Installation Notes

1. The antennas shall be installed at the same elevation;
2. There shall be no shielding between antennas;
3. The installation position shall not be less than 1 m from the ground.

