

FE Series

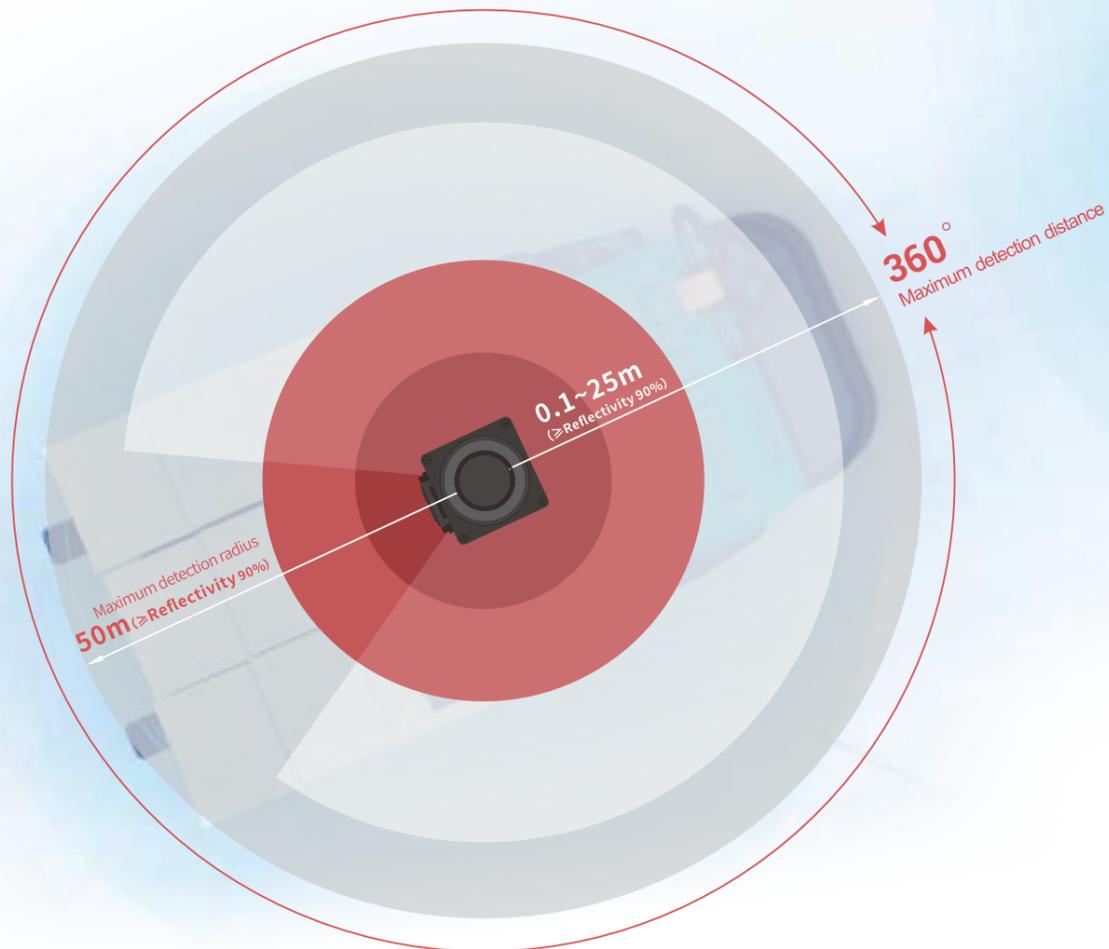
360°-50m/312°-35m PRT LIDAR Sensor

LIDAR Sensor uses PRT technology (Pulse Ranging Technology) to measure the distance between the sensor and the object being measured very accurately. During the inspection process, precise and reliable measurement results can be achieved with high repeatability and short response times, even in the face of harsh environmental conditions and very difficult to inspect surfaces.

This advanced measurement principle enables LIDAR Sensor to achieve true time-of-flight measurement in various industrial automation applications. (Insensitive to the surface color of the object being measured, even if the black and white difference is very small and the target object can be stably detected at a long detection distance, and the influence of the background can be reliably eliminated)

Maximum scanning range: 360°, scanning radius: 50m (optional scanning range: 312°, scanning radius: 35m)

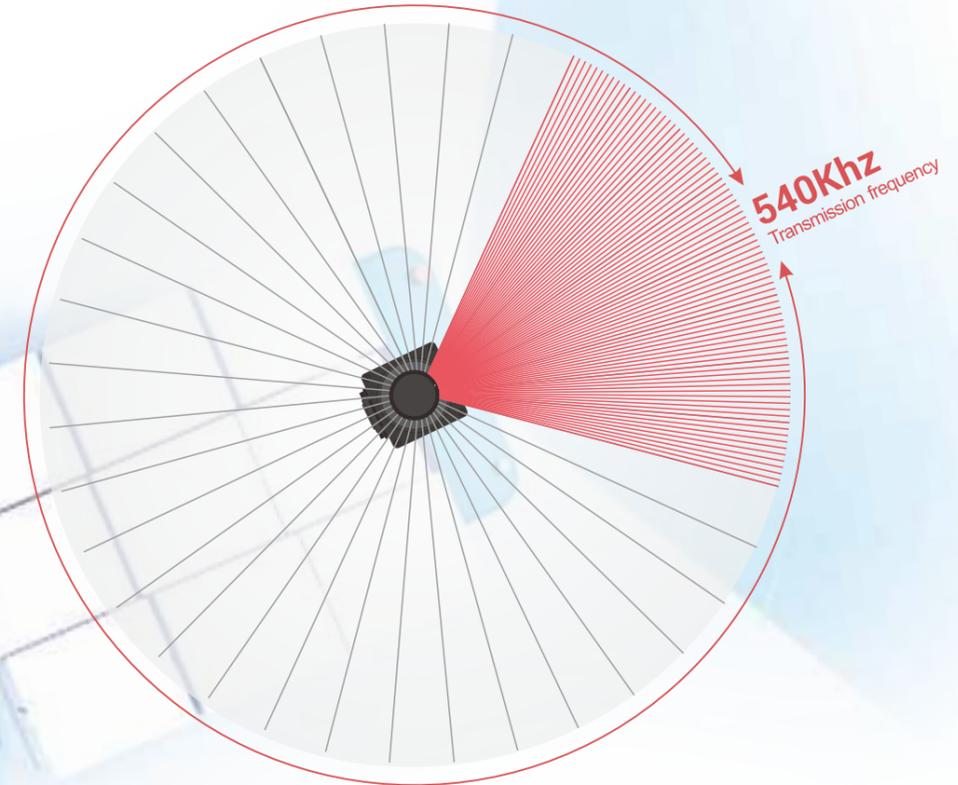
Maximum scanning angle: 360°, minimum angle resolution: 0.025°, detection distance: 50m (@90% reflectivity), optional scanning range: 312°, scanning radius: 35m (@90% reflectivity).



PRT pulse measurement technology

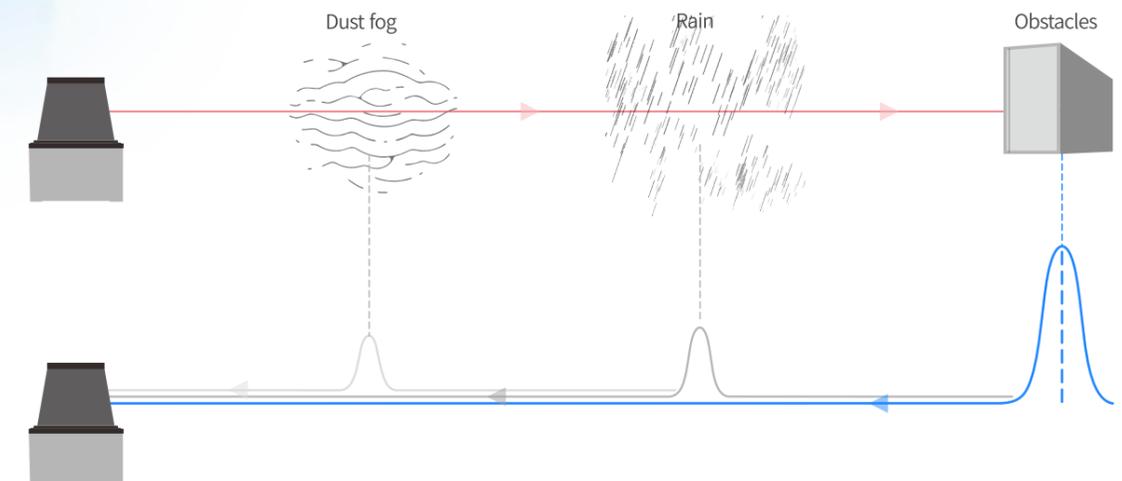
High transmission frequency

The transmission frequency is as high as 540Kz. The high transmission resolution can better output the dense point cloud data of the detected object, and better realize mapping, navigation and obstacle avoidance.



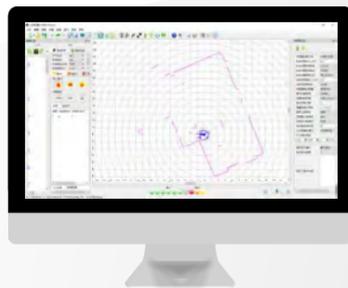
Multiple echo technology

Multiple echo technology can detect multiple echo signals for each measuring beam, so that echoes caused by rain, dust, fog, complex structure objects, etc. in the middle of the transmission beam operation cycle can be identified and filtered and suppressed when necessary.



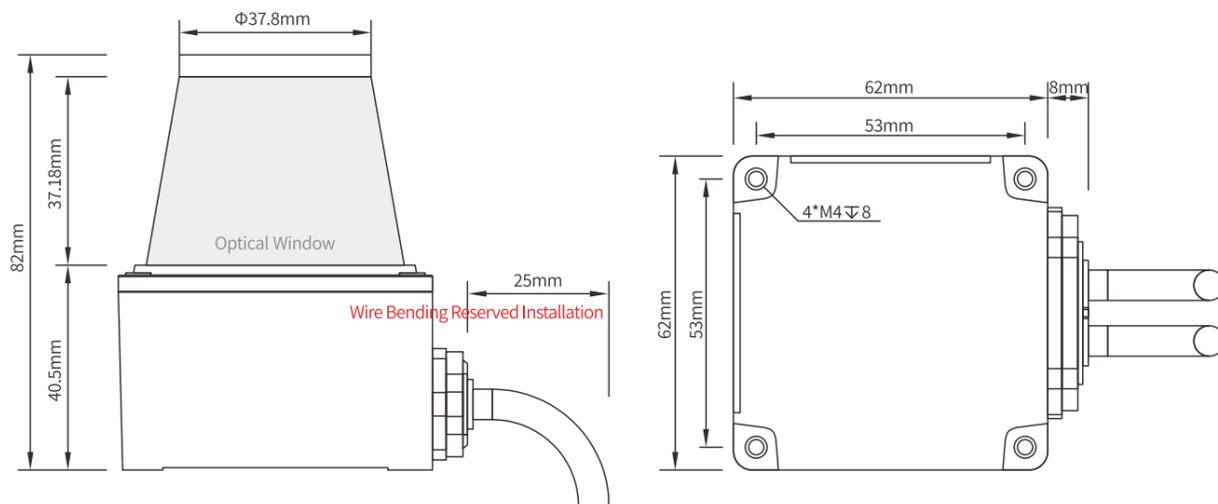
Support 64 channel selection

Configured through Hinson software, up to 64 channel selections are provided (each channel provides 3 independent detection ranges).



Hinson software visual operation interface

Technical parameters



Product Model	FE50FA-01000	FE35FB-01000
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Features

Detection distance	0.05~50m (\geq Reflvivity90%)	0.05~35m (\geq Reflvivity90%)
	0.05~10m (\geq Reflvivity2%)	0.05~5m (\geq Reflvivity2%)
Detection angle	360°	312°
Measurement Frequency	540Khz	
Measurement method	PRT	
Scanning motor speed	12.5Hz: 750r/min (0.025°、0.05°、0.1°、0.25°、0.5°)	
	25.0Hz: 1500r/min (0.05°、0.1°、0.25°、0.5°)	
	50.0Hz: 3000r/min (0.1°、0.2°、0.5°)	
Identify object shape	Any shape, reflectivity calculated by detection distance	
Measurement resolution	1mm	
Absolute accuracy	$\pm 20\text{mm}$	
Repeat accuracy	$\pm 10\text{mm}$	
Measure noise	$\pm 20\text{mm}$	

Interfaces

Switch input	4*NPN	4*NPN
Switch output	4*NPN	4*NPN
CAN	●	●
Ethernet port	●	●
Protecting areas	3	
Output raw test data	●	●
Protecting areas	3	
Obstacle-avoidance channels	16	64

Mechanics/electronics

Operating voltage	DC 10V~30V
Rated power	< 3.4W
Light source	905nm
Laser class	1 (IEC 60825-1:2014)
Indicator light	4*LED (Green, Yellow, Orange, Red)
Material	Base: aluminium alloy; Scanning window: PMMA
Protection level	IP65

Ambient data

Object reflectivity	2~1000%
Ambient light	< 80000Lux
Working environment	Indoor -10~50°C <80% RH (No condensation, No frost)

● Support – Not Supported