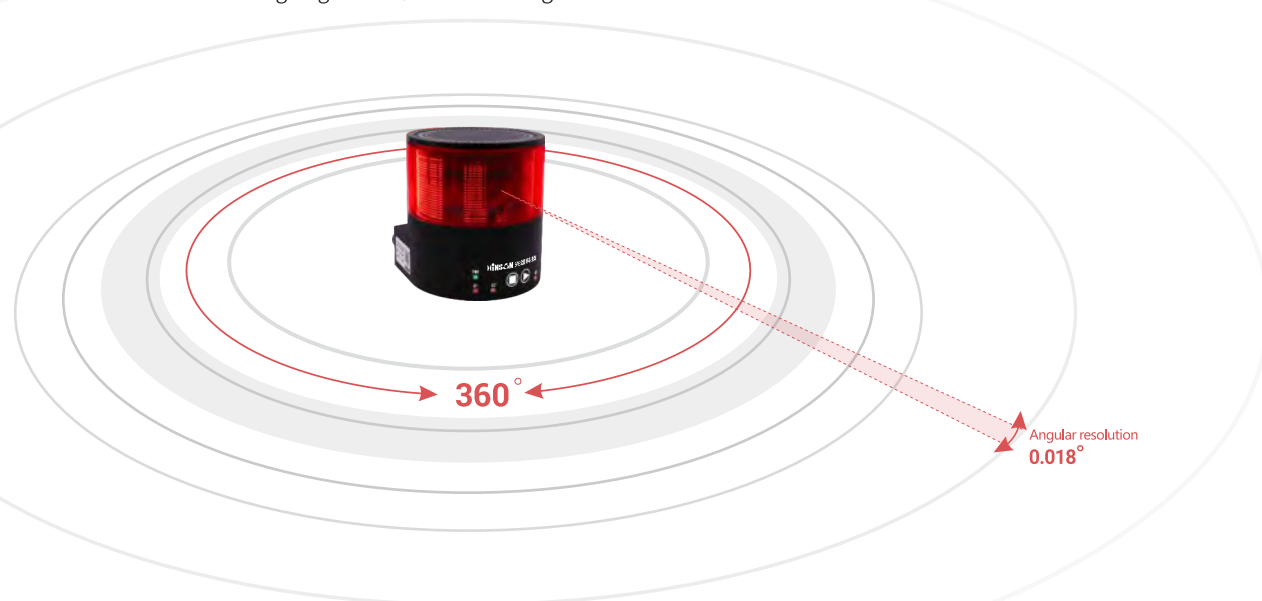


LE Series 360° TOF laser sensor

360° two-dimensional detection and 50-meter detection radius can cover most applications. The use of high-speed optical communication technology can achieve fast and stable data transmission, 600KHZ industry-leading measurement frequency, up to 0.018° angle resolution, based on innovative object surface smoothing algorithm and support for noise jitter filtering level design can feedback the true contour of the current measured environment, friendly debugging interface, navigation and obstacle avoidance two-in-one, is the best choice for contour scanning.

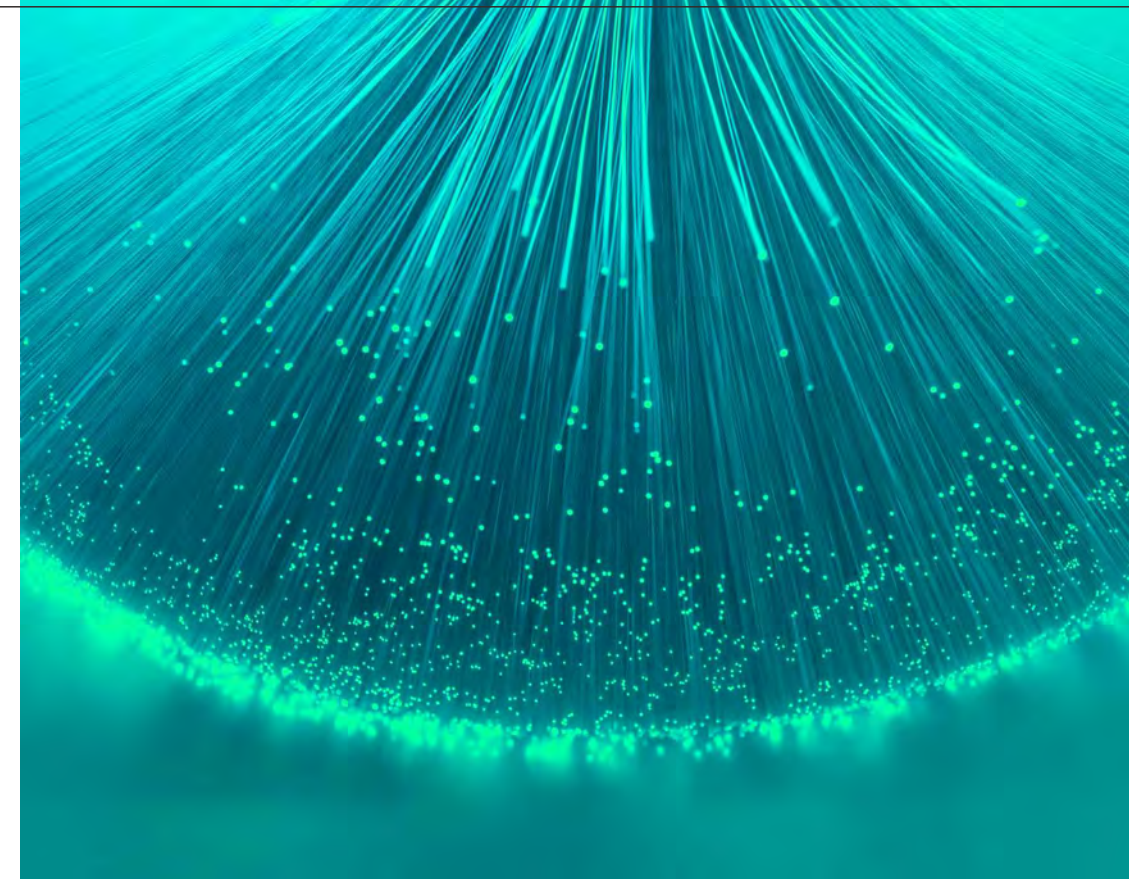
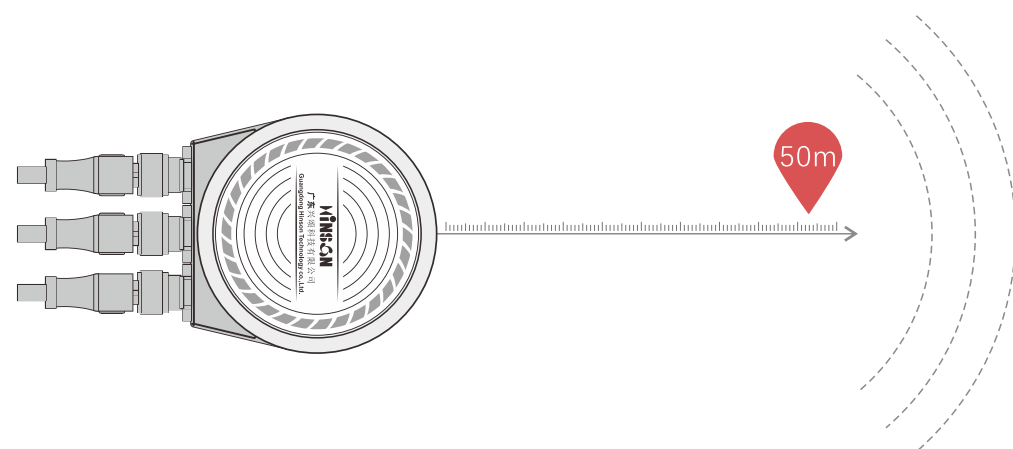
360° all round scan

Maximum scanning angle:360°, minimum angle resolution:0.018°



Scan radius:50m

Detection distance: minimum 0.1m, maximum 50m (90 reflectivity)



Noise filter level

Close, simple, middle,strict can be set

Motor speed

10Hz、15Hz、20Hz、25Hz、30Hz

Measurement frequency

50KHz、100KHz、150KHz、200KHz、600KHz

Low power consumption

<7W

High speed optical communication technology

Hinson embedded high-speed optical communication technology has wide transmission frequency, large communication capacity, low transmission loss, strong insulation and anti-electromagnetic interference ability, which fully meets the requirements of accurate, reliable, high-speed transmission measurement of large amounts of data, data processing, integrated wireless power supply and high-speed transmission. The communication technology completely solves the mechanical wear caused by physical contact, making the lidar more stable and has a longer service life.

Wireless power

The new "wireless power supply" technology, no main line power supply and brushless motor, greatly reduces the mechanical friction failure during operation, the motor runs more smoothly, and the noise is almost zero.

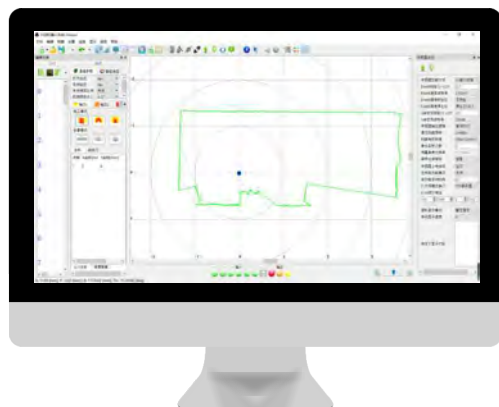
Scan window LED display

Support scan window LED data display, which can be set to current IP, motor speed, scan frequency, etc., and also supports scrolling/static display of arbitrary font alphanumerics. More intuitive and convenient display of status information.



Friendly operation interface

The software UI provides a variety of quick debugging functions, whether it is to quickly draw the sensing range or software simulation, HINSON configuration software can help you complete complex debugging and settings



Hinson software visual operation interface

Noise filter

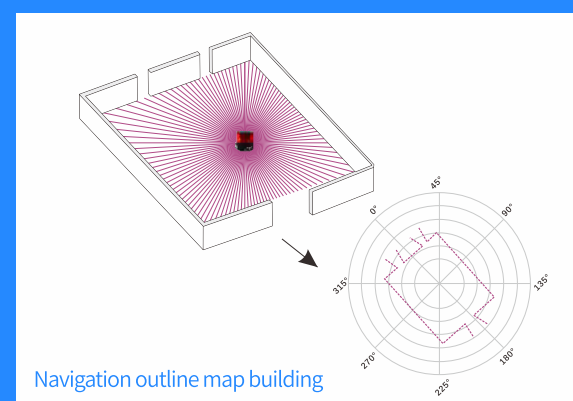
Supports Hinson's unique smoothing filtering algorithm, with extremely low noise and jitter



Before use the algorithm



After use the algorithm

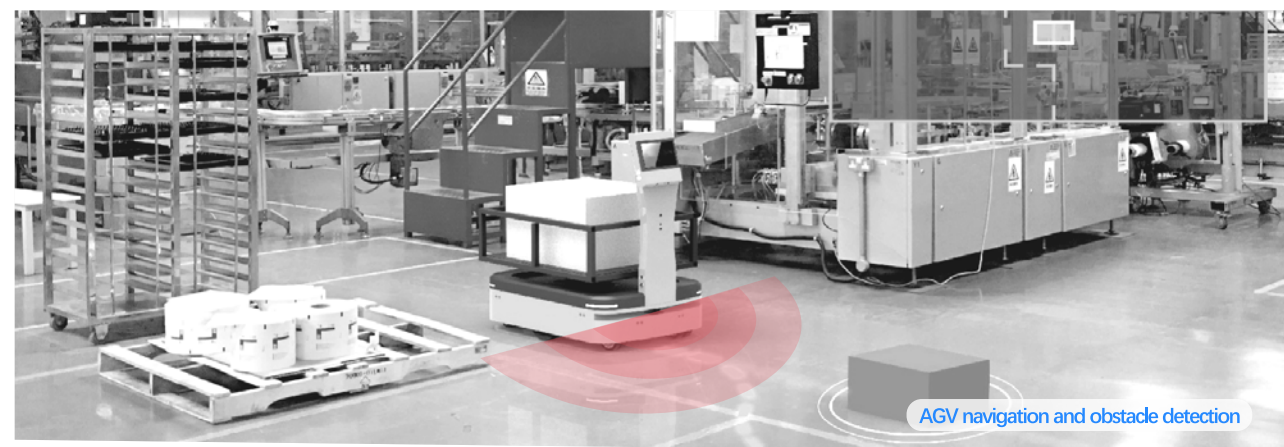


Navigation outline map building

With the non-stop rotation of the motor, the sensor emits laser light with a minimum angular resolution of 0.018° , and measures the distance of the emission point in a 360° area with a high sampling rate of up to 200Khz. The sensor has built-in multiple algorithms and multiple configurations. The parameters can exert excellent performance in complex environments, and the unique noise filtering algorithm allows the surrounding environment to be truly restored to meet the needs of complex application scenarios.

Application

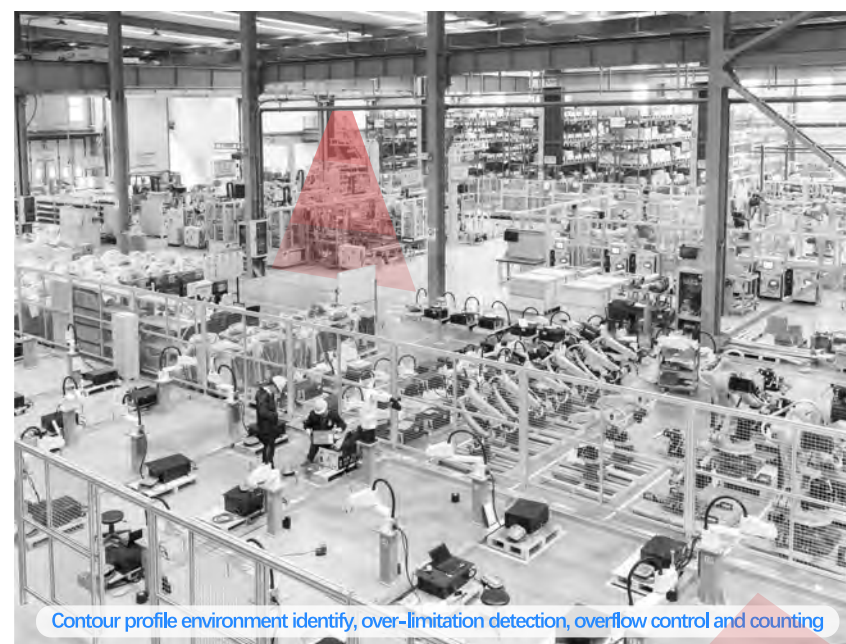
Products are widely used in: AGV vehicle navigation, obstacle avoidance, safe area protection, contour profile environment identify, over-limitation detection, overflow control and counting



AGV navigation and obstacle detection



Safe area protection

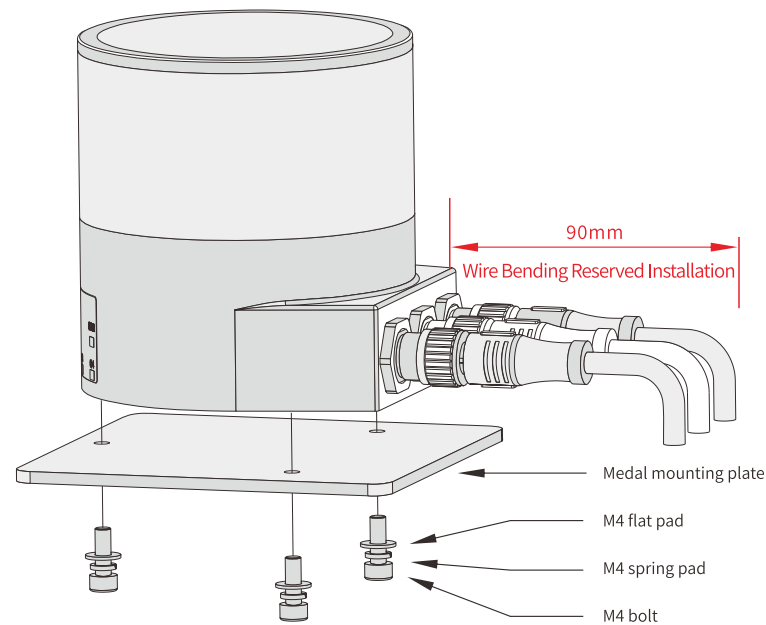
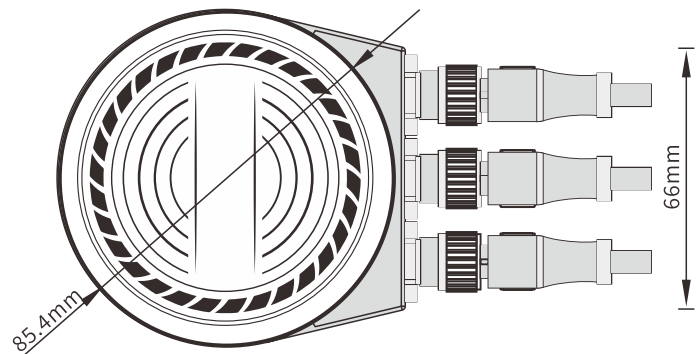
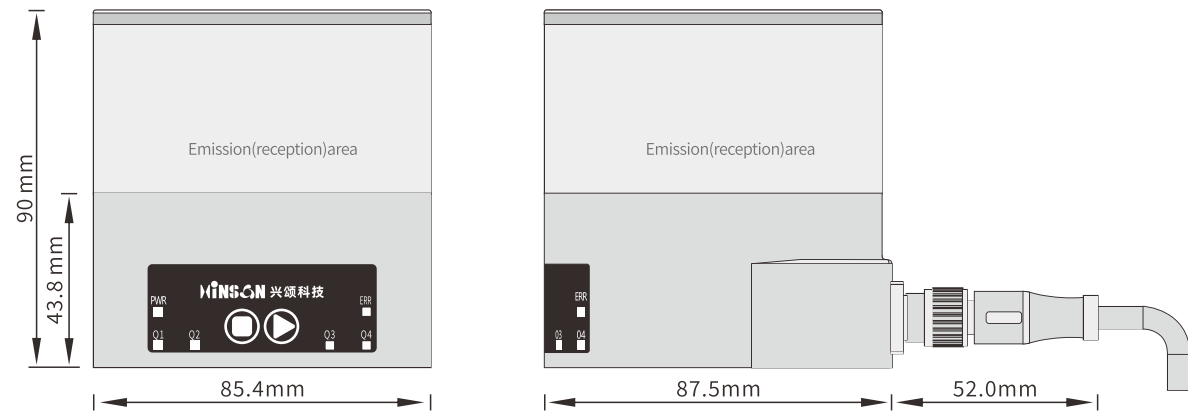


Contour profile environment identify, over-limitation detection, overflow control and counting



Service robot self-positioning and navigation





Note: 1. The bolt length can be adjusted by itself

2. The laser sensor can better dissipate heat by using the metal mounting plate



Product Model	LE-50621	LE-50821	LE-50711	LE-50621F	LE-50821F	LE-50711F	LE-50621FA	LE-50821FA	LE-50711FA
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Features

Detection distance	0.05~50m (≥ Reflevtivity 90%)	
	0.05~20m (≥ Reflevtivity 10%)	
Detection angle	360°	
Measurement Frequency	50K、100K、150K、200K	600K
Scanning motor speed	10Hz、15Hz、20Hz、25Hz、30Hz	
Single point sampling	1~50(settable)	
Angle resolution	Minimum 0.018°	
Identify shape	Any shape, reflectivity calculated by detection distance	
Measurement resolution	1mm	
Absolute accuracy	±20mm	
Repeat accuracy	< 10mm	
Measure noise	±40mm(Unfiltered)	

Interfaces

Switch input	6*NPN	6*NPN	—	6*NPN	6*NPN	—	6*NPN	6*NPN	—
Switch output	4*NPN	4*NPN	—	4*NPN	4*NPN	—	4*NPN	4*NPN	—
RS485 (Modbus RTU)	●	—	●	●	—	●	●	—	●
CAN OPEN	●	—	●	●	—	●	●	—	●
Ethernet port	TCP/UDP								
Protecting areas	—	—	—	—	—	—	3		

Mechanics/electronics

Operating voltage	DC 18V~60V								
Rated power	< 7W								
Light source	905nm								
Laser class	3R (GB 7247.1-2012)								
Indicator light	Red, Yellow, Orange, Orange								
Windows display light	24*252 Pixel(Red)								
Connection port	M12-4 Female cable, Ethernet port								
	M12-6 Female cable, power and communication port								
	M12-12 Female cable, IO port								
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