

LSPD mini Safety Laser Scanner

The world's smallest safety laser scanner

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Miniaturization

- The world's smallest functional safety scanner, with dimensions of 8cm × 8cm × 9.5cm;

Safety reliable

- EU safety certification, industrial quality;
- Meets safety requirements of IEC61496 Type 3 and ISO13849 PL d;
- Class 1 laser product, safe for human eyes;
- Window dirty detection, when the actual detection distance is less than the declared protection distance, cut off the output and lead to safety;

Easy and fast operation

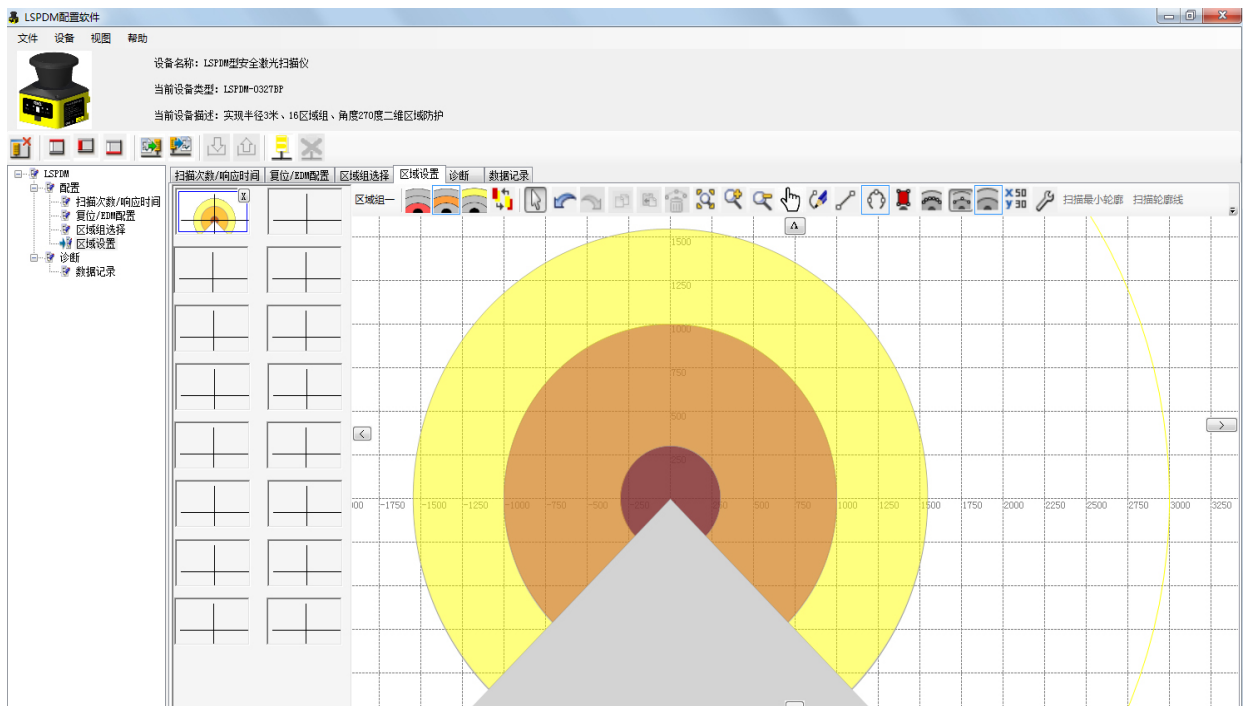
- The protection zone includes a protective zone and a warning zone. The radius of the protection zone is 3 meters@1.8% reflectance;
- Zones can be configured into complex, irregular shapes according to user needs;
- Up to 16 zone groups, 3 protection zones in each group;
- Self-developed operating software, simple and practical;



Product introduction

The LSPD mini safety laser scanner can realize two-dimensional area detection and contour scanning with a range of 270 ° and a radius of 3 meters. It is compact, flexible, accurate, reliable, and cost-effective. It is ideal for obstacle avoidance and navigation of mobile robots.

Configuration software



Easily settings of complex area

- (1) Applicable to Windows system, requiring less memory and hard disk ;
- (2) Friendly interface, easy operation and quick user introduction ;
- (3) Up to 16 zone groups available, and each zone group can set up to three zones ;
- (4) The protection area is simple to draw and easy to modify. Any complex and irregular protection area can be set by using drawing tools and automatic scanning of the environmental contours ;
- (5) Real-time monitoring of surrounding environment contours ;
- (6) Window dirty detection, when the actual detection distance is less than the declared protection distance, cut off the output and lead to safety.

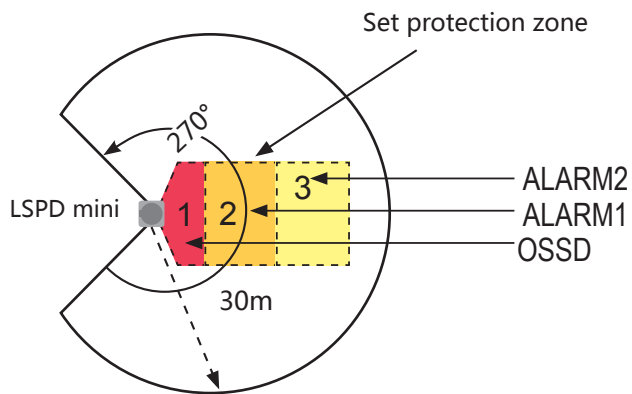
Application scenario



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Area configuration



Identification	Meaning	Description
3	warning zone 2	ALARM2 will enter OFF state when obstacle is detected
2	warning zone 1	ALARM1 will enter OFF state when obstacle is detected
1	protective zone	OSSD1 / OSSD2 goes OFF when an obstacle is detected

Specifications model

Product Series	Detection Radius	Scanning Angle	Output form	resolution	Angle resolution	installation method
LSPDM —	□□	27 (270°)	□□/	□	□□/	□□

Type	Specifications model	Detection Radius	Output form	Resolution	Angle resolution	Frequency	Mounting bracket
LSPDMobstacle avoidance type	LSPDM-0227BP/M05	2m@1.8% reflectivity	PNP	Standard type, ±4cm@1sigma	0.5°	28Hz	SZ / CZ / FZ optional, horizontal / vertical / protective cover installation optional
LSPDMobstacle avoidance type	LSPDM-0327BP/M05	3m@1.8% reflectivity	PNP	Standard type, ±4cm@1sigma	0.5°	28Hz	protective cover installation optional

Note: If the above products do not meet your needs, they can be customized according to your needs. Please contact your local sales manager for details.

Technical parameters

Safety level	Type 3 (IEC61496) , PL d (ISO13849)			
Optical characteristics	Laser light source	Wavelength of 905nm, Class 1 laser product		
	Maximum detecting radius	3m@1.8% reflectivity		
	scanning angle range	270°		
	Angle resolution	0.5°		
	measurement error	±4cm		
Environmental characteristics	Environment temperature	Operating	-10°C~55°C (No frost or fog)	
		Storage	-40°C~70°C	
	Environment humidity	Operating	35%RH~85%RH	
		Storage	35%RH~95%RH	
	Anti-light interference	15000 Lux		
	Vibration resistance	Frequency10Hz~55Hz; amplitude: 0.35±0.05 mm; number of scans: three axes, 20 times per axis		
	Shock resistance	Acceleration 10g; pulse duration: 16 ms; number of collisions: three axes, 1000±10 times per axis		
	Implementation standards	2006/42/EC(Machinery Safety Directive), 2004/108/EC(EMC Directive), IEC61496-1, IEC61496-3, ISO13849-1		
		GB/T19436.1, GB19436.3, GB4208(IP65), EN60825-1(Class 1 laser product)		
	Zone Group Switch	4 sets of external input signals (Z1, Z2, Z3, Z4) to realize switching of 16 zone groups		
Protection level	IP65			
Dimension	8cm×8cm×9.5cm			
Electrical characteristics	Power supply	DC9V~ DC30V	Consumption	<5W (no load at the output terminal)
	Output	PNP		
	Response time	40ms/r adjustable		
	Power-on time	Typical value: 8s		

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