LGA10 Series

270° Laser Scanner

- High precision
  Measurement accuracy can reach 30 mm.
- Measurement range can reach 20m.
- Compact structure and easy integration,
  62* 62*79mm.
- Multi-view customization,
  Meet different scene needs.
- Angular resolution less than 0.18°
- The object with low reflectivity can be identified

Application Case

AMR | Forklift | Robot | Robotic Arm

AGV | Safety Protection | Smart Traffic | Smart Port

LGA10 Laser Scanner

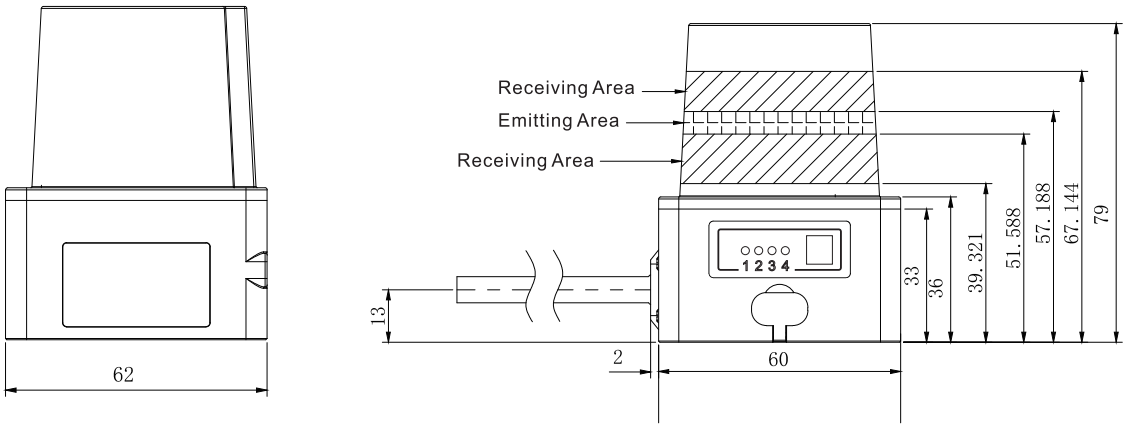
Product Parameter

Model	LGA10N1	LGA10P1
Detection Distance	0.1m~8m(reflectivity 10%)	
	0.1m~20m(reflectivity 90%)	
Detection Range	270°	
Working Principle	Pulse TOF	
Laser Class	Level I (IEC60825-1:2014, EN60825-1:2014)	
Laser Wavelength	905nm	
Sampling Rate	20KHz	
Scanning Frequency	10Hz, 20z (can be set)	
Angular Resolution	0.18°/0.36°(can be set)	
Response Time	100ms/50ms (can be set)	
Measurement Accuracy	±30mm	
Startup Time	8s	
Channel	15 channel (3 detection area in each channel)	
Working Current (DC24V)	⩽ 100mA (not IO output)	
Input	4	
Output	4 (2 NPN warning signal, 1 NPNOSSD safety output signal)	4 (2 PNP warning signal, 1 PNP OSSD safety output signal)
Interface	USB	
Protection Rate	IP65	
	100000Lux	
Weight	171g	
Size (max.)	62 mm *62 mm *83mm	
Sine Vibration Testing	10Hz~1000Hz, acceleration 5g, 10 time each at X,Y,Z	
Vibration Resistance	5Hz~250Hz, Gr.m.s=4.24g, 5 hours each at X, Y, Z	
Shock Resistance	196/(20G), 3000 times each at X, Y, Z directions.	
Electromagnetic Compatibility	EN IEC 61000-6-2:2019; EN IEC 61000-6-4:2019	
Indicator LED	4 (3 for area signals, 1 for faulty signal)	
Power Supply	DC9-28V	
Rated Capability	<2W (without load)	
Starting Power	<3W (without load)	
Ambient Working Temperature	-10℃~55℃	
Storage Temperature	-20℃~70℃	
Storage Temperature	Below 85% RH	
Cable Length	Power wire & IO signal wire in 1m, 1.2m USB wire.	

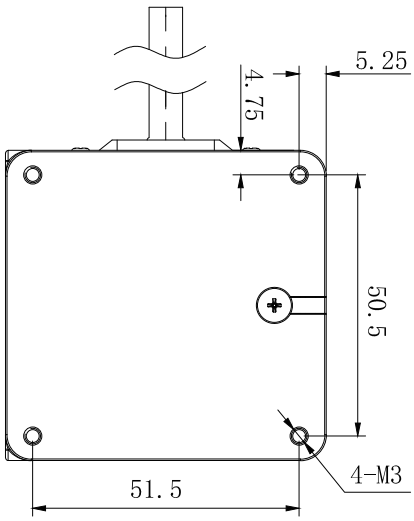
Laser Scanner Model Description (e.g.: LGA10P1-UB)

Series	Output	Communication		Bracket
LGA10	□	1	–	□
	N: NPN P: PNP	1: USB		No mark: No bracket UB: U type bracket HB: Horizontal bracket VB: Vertical bracket

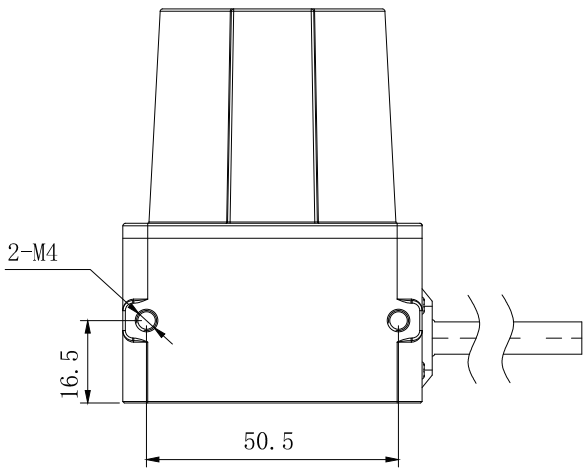
Product Size



Fixing Structure



Bottom Fixing Diagram



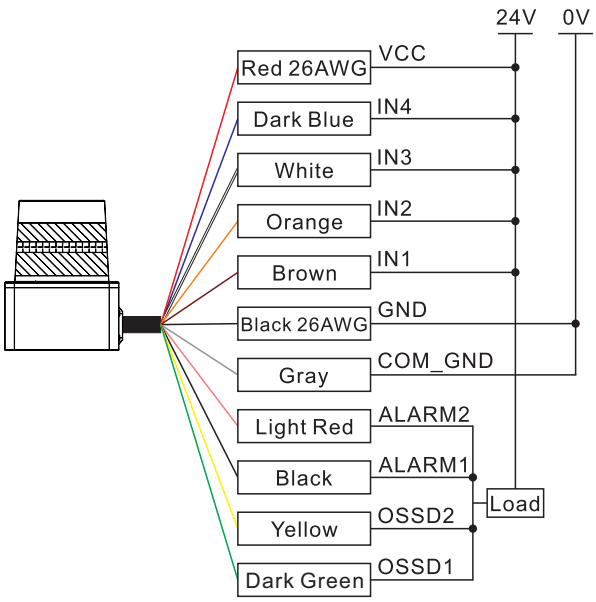
Side Fixing Diagram

LGA10 Laser Scanner

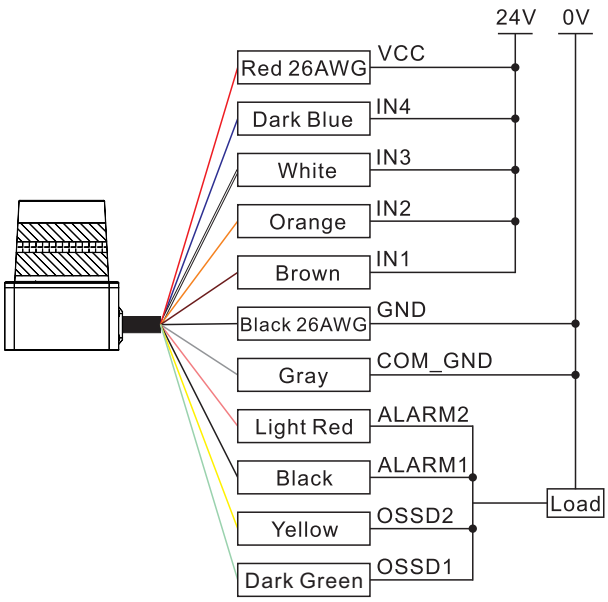
Wire Description

Wire Sequence & Related Function			
NO.	**Color**	**Signal Definition**	**Signal Description**
1	Red 26AWG	VCC	Power supply VCC
2	Black 26AWG	GND	Power supply GND
3	Light Red	ALARM2	2 independent NPN, ON state: maximum IOUT=200mA, VOUT≥COM_IN+-2V, OFF state: IOUT<1mA, VOUT<2V. ON state when nothing in warning area, OFF state when obstacles in warning area.
4	Black	ALARM1	
5	Yellow	OSSD2	2 independent NPN, ON state: maximum IOUT=200mA, VOUT COM_IN+-2V, OFF state: IOUT<1mA, VOUT<2V. ON state when nothing in warning area, OFF state when obstacles in warning area.
6	Dark Green	OSSD1	
7	Dark Blue	IN4	Selection signal in area group, to achieve switching between multiple protection areas through the changes of input signals IN1, IN2, IN3, and In4.
8	White	IN3	
9	Orange	IN2	
10	Brown	IN1	
11	Gray	COM_GND	Protection input/output GND
12	Purple	COM_IN+	Protection input/output power
13	Pink	OUT_RX+	Network interface input+
14	Transparent	OUT_RX-	Network interface input-
15	Light Green	OUT_TX+	Network interface output+
16	Light Blue	OUT_TX-	Network interface output-

NPN Wiring Diagram



PNP Wiring Diagram



Bracket Option

NO.	Bracket	Picture
1	UB Bracket	
2	HB Bracket	
3	VB Bracket