

Operation Instructions

Make your choice...

M-905 Laser Safety Sensor



Exposed Installation



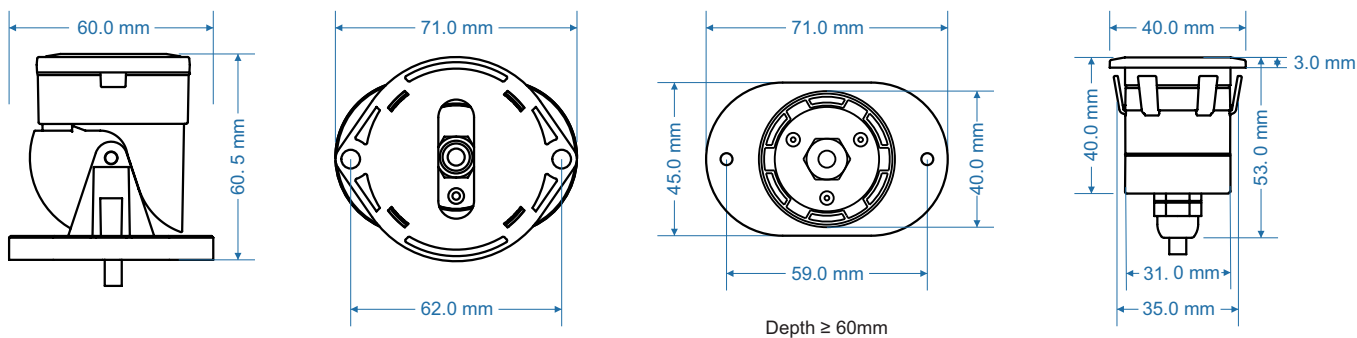
Hidden Installation

1 Safety Instructions

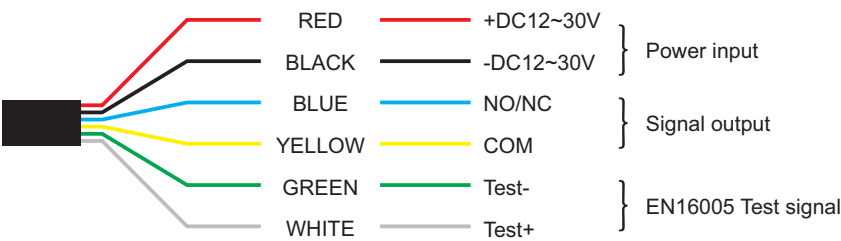


Thank you for your purchase, in order to use this product correctly, please read this manual carefully before use.

2 Product Dimension



3 Wiring Diagram



4 Remote Function Setting



NOTE

1. After the sensor is powered on, it can be set through the remote control within 30 minutes. If over 30 minutes, the remote control will be limited, please re-start and then set.
2. Please press the "UNLOCK" key, and then other function keys before each setting.
3. After pressing the "UNLOCK" key, the remote control can run for 25 seconds, timeout or press the "LOCK" key to exit the setting.



LOCK

NO

NO output

NC

NC output



UNLOCK



Sensitivity



Anti-interference



Factory reset



Output time



TEST high input effective



TEST low input effective



Background self-learning



Distance setting



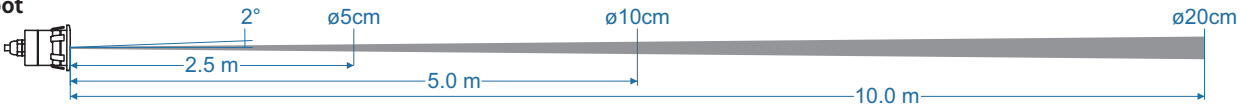

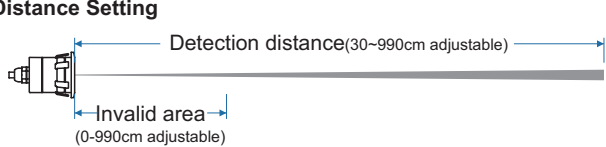
Turn ON














































Turn OFF



Invalid area

Light Spot 	
Background Self-learning 	Distance Setting 

Function Setting	
NO NO output	NOTE: In the standby state, it outputs the Normally Open signal. (The factory default is Normally Open Output.) Operation:  Sensor's RED light flashes slowly → NO Sensor's RED light flashes quickly → NO Sensor's RED light always on
NC NC output	NOTE: In the standby state, it outputs the Normally CLOSE signal. Operation:  Sensor's RED light flashes slowly → NC Sensor's RED light flashes quickly → NC Sensor's RED light always on
 Sensitivity	NOTE: Sensitivity is total of 9 levels, each level is 10cm. The detection distance is adjustable from 10 to 90cm away from the background. The smaller the number, the closer the detection range is to the background, the easier it is to be triggered. (Factory default is level 3, only valid in automatic background mode) Operation:  Sensor's RED light flashes slowly →  Sensor's RED light flashes quickly → X (Press the number 1-9 to select the level) Sensor's RED light always on
 Anti-interference	NOTE: Anti-interference is total of 9 levels. The bigger the number, the stronger the anti-interference ability, the detection will be relatively slow. (Factory default is level 1.) Operation:  Sensor's RED light flashes slowly →  Sensor's RED light flashes quickly → X (Press the number 1-9 to select the level) Sensor's RED light always on
 Factory reset	NOTE: Quickly restore each parameters to factory defaults. Operation:  Sensor's RED light flashes slowly →  Sensor's RED light flashes quickly →  Sensor's RED light always on
 Output time	NOTE: After triggering the sensor, the output holding time. The total of 9 levels, each 0.5 seconds. The output time is adjustable from 0.5 to 4.5 seconds. The smaller the number, the shorter the output time. (Factory default is level 1) Operation:  Sensor's RED light flashes slowly →  Sensor's RED light flashes quickly → X (Press the number 1-9 to select the level) Sensor's RED light always on
 TEST high input effective	NOTE: EN16005 signal high input is valid. (The factory default is "TEST high input effective", if the test signal is not connected, it must be set in "TEST high input effective") Operation:  Sensor's RED light flashes slowly →  Sensor's RED light flashes quickly →  Sensor's RED light always on
 TEST low input effective	NOTE: NOTE: EN16005 signal low input is valid. Operation:  Sensor's RED light flashes slowly →  Sensor's RED light flashes quickly →  Sensor's RED light always on
 Background self-learning	NOTE: In the factory defaulted mode of background self-learning, the sensor automatically self-learns the background every time when powered on. During the self-learning, the sensor's RED light flashes quickly, and the RED light keeps on after the learning is completed. Operation:  Sensor's RED light flashes slowly →  Sensor's RED light flashes quickly →  Sensor's RED light always on
 Distance setting	NOTE: The detection distance is set between the values of 03-99, and the corresponding distance is the value multiplied by 10cm. After setting the distance, the sensor's RED light keeps on when powered on, no longer automatically self-learn the background. Operation:  Sensor's RED light flashes slowly →  Sensor's RED light flashes quickly → X X (The Number 03-99) Sensor's RED light always on

 Invalid area	Note: An invalid distance from the sensor (as shown). Set between 00 and 99 values, the distance represented is the value multiplied by 10cm. (Default is 00)
	Operation:  Sensor's RED light flashes slowly →  Sensor's RED light flashes quickly →   (The Number 00-99) Sensor's RED light always on
 Turn ON	NOTE: Only the sensor is turned ON, it can be triggered normally. (The factory default is turn ON)
	Operation:  Sensor's RED light flashes slowly →  Sensor's RED light flashes quickly →  Sensor's RED light always on
 Turn OFF	NOTE: When the sensor is turned OFF, it will no longer be triggered by detection.
	Operation:  Sensor's RED light flashes slowly →  Sensor's RED light flashes quickly →  Sensor's RED light always on

5 Troubleshooting

Failures	Possible reasons	Improvements
When powered on, the indicators don't work and no signal output	No power on	Check the power and re-connect
Indicators keeps on, no response after detection	Check whether the remote control is switched to the Turn OFF state	Switch the remote control to the Turn ON state
The power on indicator light is on and then off, the door keeps open	Check whether the distance setting is further than the background	Reduce the distance setting
	Check whether the Test signal is correct	If don't connect the Test signal, it must be set to "TEST high input effective"
The power on indicator light is normal, the door keeps open, door closed after detection	The remote control's NO and NC setting is wrong	Switch the NO and NC setting

6 Technical Parameters

LED indicator:	Power on (Auto background mode) - RED light flashes; Standby state - RED light keeps on; Action state - RED OFF
Background learning time:	About 8 secs
Working voltage:	DC 12-30V
Standby current:	62.5mA(DC 12V power)
Action current:	65mA(DC 12V power)
Detection distance:	30cm ~ 990cm adjustable
Distance error:	1%
Resistance to ambient light:	100k lux
Optical source:	VCSEL
Center wavelength of optical source:	905nm
Launch angle:	<2°
Laser safety class:	Class I Eye-safe
Waterproof grade:	IP55
Working temperature:	-20°C~60°C
Exposed mounted angle:	Pitch angle 0~90° adjustable(5° each level)Yaw angle 360° adjustable
Installation distance:	≥5cm (The distance between the mounted position and the edge of the door frame)

7 Packing List

NO.	Part	QTY	Remark
1	Sensor	1	
2	Exposed mouned bracket	1	
3	Hidden mouned bracket	1	
4	Screw bag	1	
5	Instructions	1	