Operation Instructions

Make your choice...

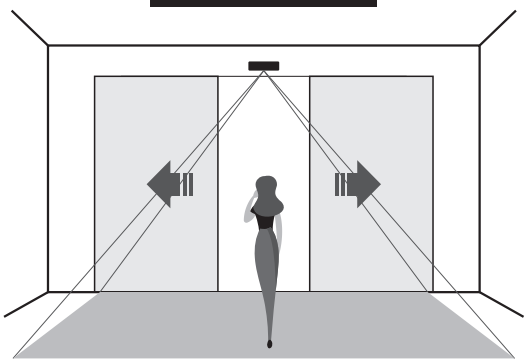
M-507X Motion & Safety Infrared Combined Sensor (3-in-1 type)

1 Safety Instructions

The device must be protected with safety insulation at low voltage. All adjustment and maintenance work must be carried out by a professional engineering installer.

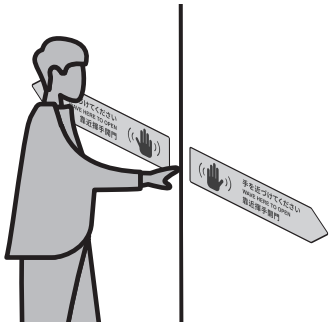
2 Function Introduction

Normal mode



Dynamically open the door + presence safety

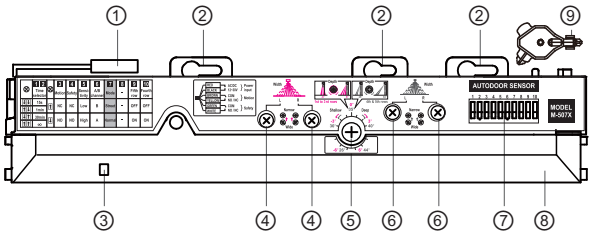
Street mode

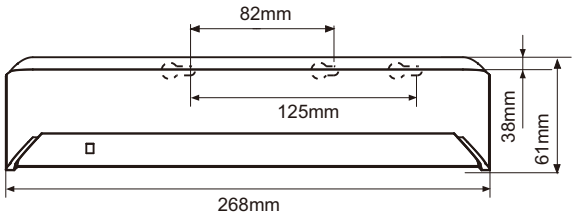


Approach the door and wave to open + presence safety

3-in-1 type sensor: Dynamically open the door + Approach the door and wave to open + presence safety

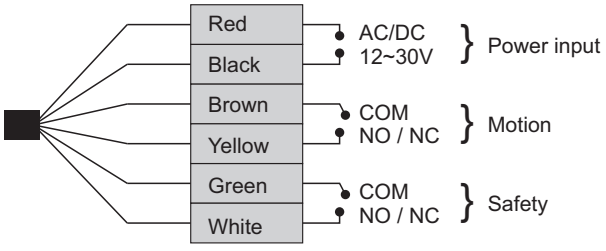
3 Product Overview





① Connector ② Installation hole ③ Action indicator light ④ Inner 3 rows in normal mode/width adjusting screws in street mode
⑤ Depth angle adjustment screw ⑥ Outer 2 rows width adjusting screws in normal mode ⑦ DIP switch ⑧ Detecting window ⑨ Adjustment tool

4 Wiring Diagram



Note: 1, When connecting the wire, please don't tear the protection cover, as this may cause a electric leakage hazard or sensor failure.

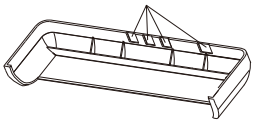
2,Check whether the sensor is properly connected to the door controller. power the sensor and adjust its detection range.

3,Please don't enter the detection area after power on and during the green LED light flashes.

5 Installation

1, Measure and mark the positions of the installing holes,according to the installation diagram.
2, Drill two fixing screw holes of ø3.5mm.
3, And drill one wiring hole of ø8mm.
4, Fix the sensor tightly by 2 screws.

NOTE: Please install the sensor on the door head as low as possible, but make sure the sensor is not lower than the bottom of the door head.

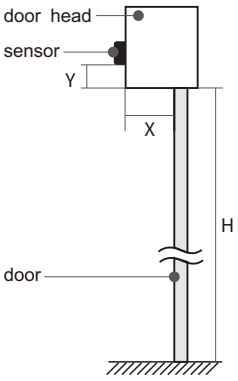


If wiring with surface-mounted way, please cut the concealed holes of outter shell for wiring.

H. Distance from the ground to the bottom of the door head.
X. Distance from the door to the fix surface.
Y. The maximum distance from the bottom of door head to the sensor.

(mm)

Y / H / X	2000	2200	2500	3000	3500
50	200	200	200	200	200
100	180	180	180	180	200
150	100	100	120	150	170
200	50	80	100	120	140



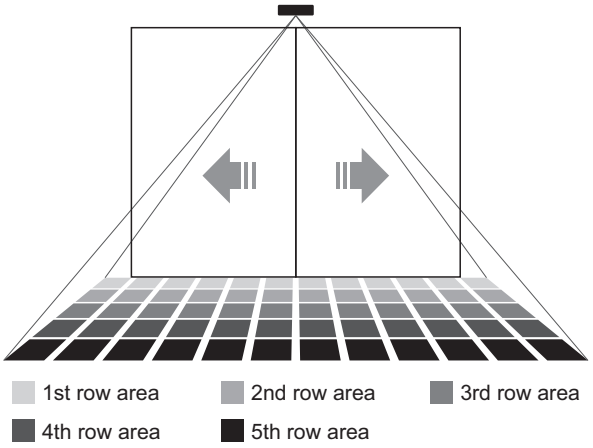
6 DIP Switch

1 2 Safety background update time	3 Motion	4 Safety	5 Sensitivity	6 A/B channel	7 Mode	8 -	9 Fifth row	10 Fourth row
↓↓ 15s	↑ NC	↑ NC	↑ Low	↑ B	↑ Street	-	↑ OFF	↑ OFF
↑↓ 1min								
↓↑ 30min	↓ NO	↓ NO	↓ High	↓ A	↓ Normal	-	↓ ON	↓ ON
↑↑ Not update								

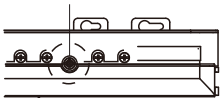
NOTE: If the fourth row OFF, please turn OFF the fourth and fifth row at the same time, otherwise it will be invalid (NO. 9&10 DIP switch is only available in normal mode).

7 Detection range

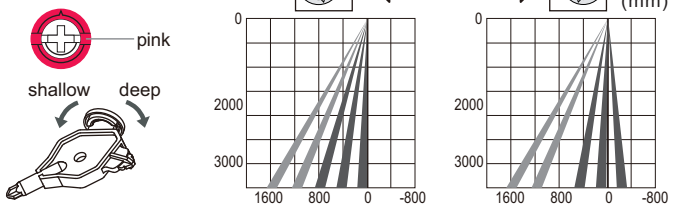
Normal mode



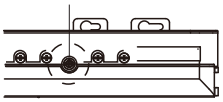
Depth adjusting screw



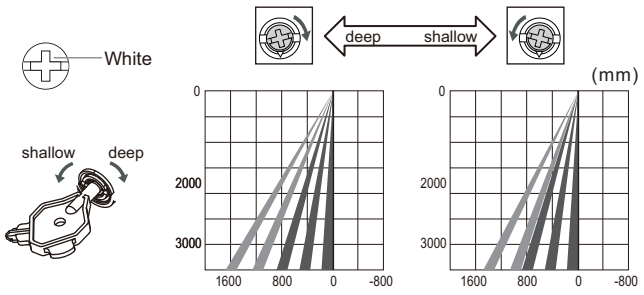
The pink screw is used to adjust the depth of infrared safety induction. Turn clockwise will away from the door. Turn counterclockwise will close to the door.

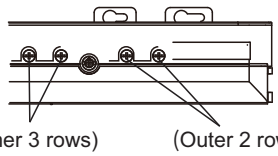


Depth adjusting screw



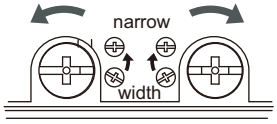
The white screw is used to adjust the depth of motion induction. Turn clockwise will away from the door. Turn counterclockwise will close to the door.



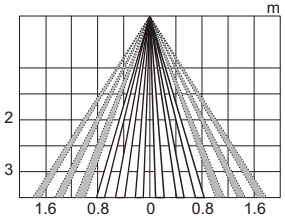


(Inner 3 rows)
Safety detection
Width adjusting

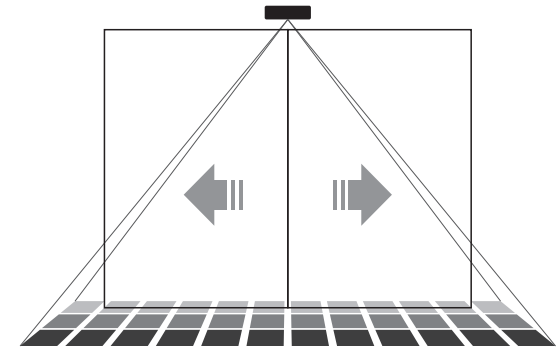
(Outer 2 rows)
Motion detection
Width adjusting

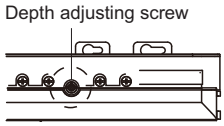


The left & right width screws is used to adjust the induction width, with narrow and wide two levels.

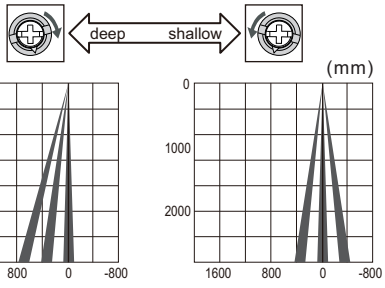


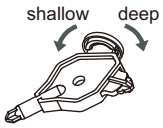
Street mode

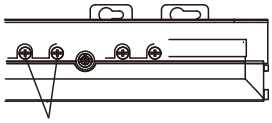


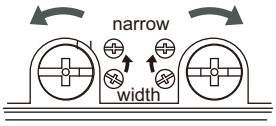


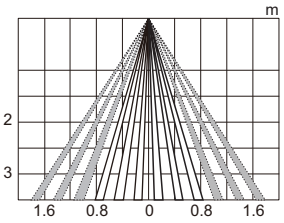
The pink screw is used to adjust the depth of induction. Turn clockwise will away from the door. Turn counter clockwise will close to the door.





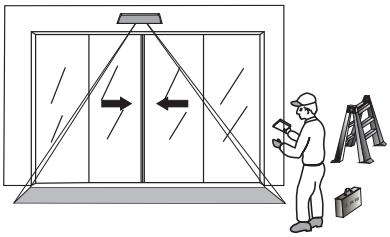

Width Adjustment





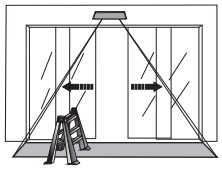
The left & right width screws is used to adjust the induction width, with narrow and wide two levels.

8 Attentions

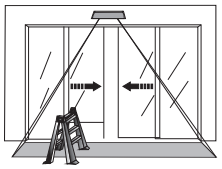


Normal mode	When the sensor is powered, the green light flashes and output the door opening signal. When the sensor detects the stable background for 8 consecutive seconds, self-learning is successful. Green light is on and not output the door opening signal, sensor will enter the standby state.
Street mode	When the sensor is powered, the green light flashes and output the door opening signal. When the sensor detects the stable background for 8 consecutive seconds, door opening background self-learning is successful. Yellow light is flashes and not output the door opening signal, start door closing background self-learning, when detects the consecutive stable background, door closing background self-learning is successfull. Green light is on and the sensor will enter the standby state.

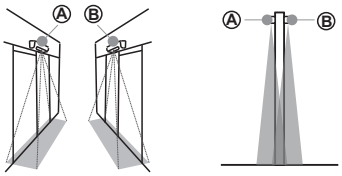
NOTE: During the self-learning process, all irrelevant background objects must be removed from the detection range, such as workers, ladders, toolboxes, etc.



When put one static object in the safety presence detection range, the sensor will trigger the door opening signal in time. (As the picture shows)



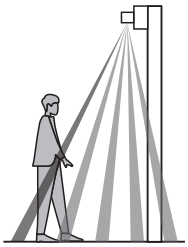
After continuously hold for 15s(15s, 1min, 30min are optional), no other objects or human bodies appear in the detection range, the system will automatically learn the static object as the new background. And it will no longer trigger the door opening signal, and automatic door will close back automatically(As the picture shows).



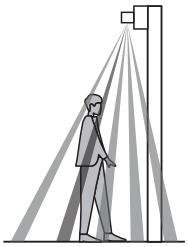
When the two sensors are relatively installed, instaled on the door inside and outside or adjacent installation, and there may be interference because the distance is too close, please set the A,B frequency.

9 Output diagram

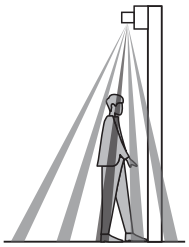
Normal mode



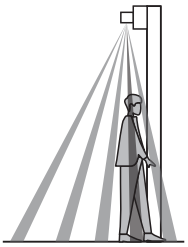
Fifth row ON:
Motion relay output, yellow light is on
Fifth row OFF:
No induction



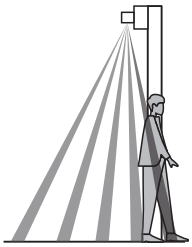
4th, 5th row ON:
Motion relay output, yellow light is on
4th, 5th row OFF:
No induction



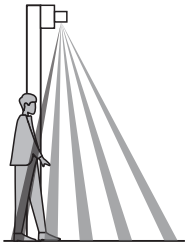
Motion and safety relay output, red light is on



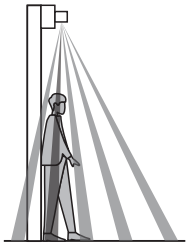
Safety relay output, red light flashes



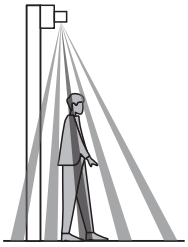
Safety relay output, red light flashes



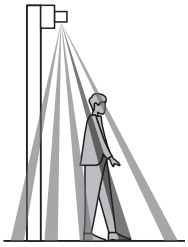
No induction



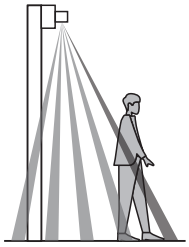
No induction



Motion and safety relay output, red light is on

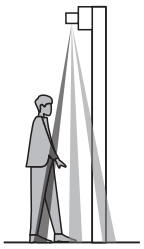


4th, 5th row ON:
Motion relay output, yellow light is on
4th, 5th row OFF:
No induction

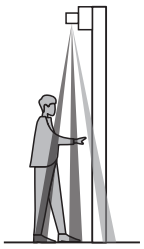


4th, 5th row ON:
Motion relay output, yellow light is on
4th, 5th row OFF:
No induction

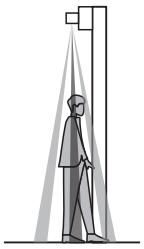
Street mode



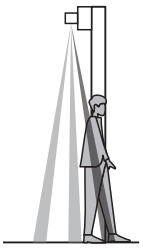
No induction



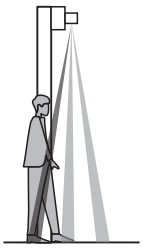
Motion relay output, Red light is on



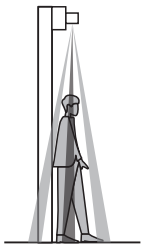
Safety relay output, red light flashes



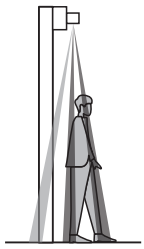
Safety relay output, red light flashes



No induction



No induction



Motion relay output, red light is on

10 Parameters

Power Input:	AC/DC 12~30V(±10%)
Cable length:	2.5m
Signal output:	Relay, 1 way motion, 1 way safety (NO/NC optional)
Max installation height:	3000mm
Static current:	39mA(DC 12V power)
Action current:	105mA(DC 12V power)
Material:	Optical surface with PMMA, shell with ABS
Ray type:	Infrared modulated light
Ray source:	infrared 940nm
Light beam(Normal mode):	2 way safety, 6 transmitting, 24 light spot; 1 way motion and safety, 3 transmitting, 12 light spot; 2 way motion, 6 transmitting, 24 light spot
Light beam(Street mode):	2 way safety, 6 transmitting, 24 light spot; 1 way pre-motion, 3 transmitting, 12 light spot
Self-learning time:	Dynamic stability learning for 8s
Temperature:	-25°C~55°C
Detection range:	Maximum width 2500mm, hand wave to open distance 80~170mm (Mounted height=2.5 meters)
Output maintain time:	safety 1.2s, motion 2s
Respond time:	≤150ms
Background update time:	15s, 1min, 30min, not update, 4 levels optional
Operation display (Normal mode):	Learning background: Green LED flashes; Standby state: Green LED is always on; Motion: Yellow LED is on; 1st&2nd row safety: Red LED flashes; 3nd row safety: red light is on.
Operation display (Street mode):	Learning door opening background: Green LED flashes; Learning door closing background: Yellow LED flashes; Standby state: Green LED is always on; Motion: Red LED is on; 1st&2nd row safety: Red LED flashes
Dimension:	268(L)x61(W))x38(H)mm(exclude bottom shell)

11 Packing List

NO.	PART	QTY	REMARK
1	Sensor	1	
2	Operating instructions	1	
3	Screws bag	1	
4	6-pin line	1	2.5m
5	Bottom shell	1	
6	"Wave to open" stickers	2	one each for the left and right door