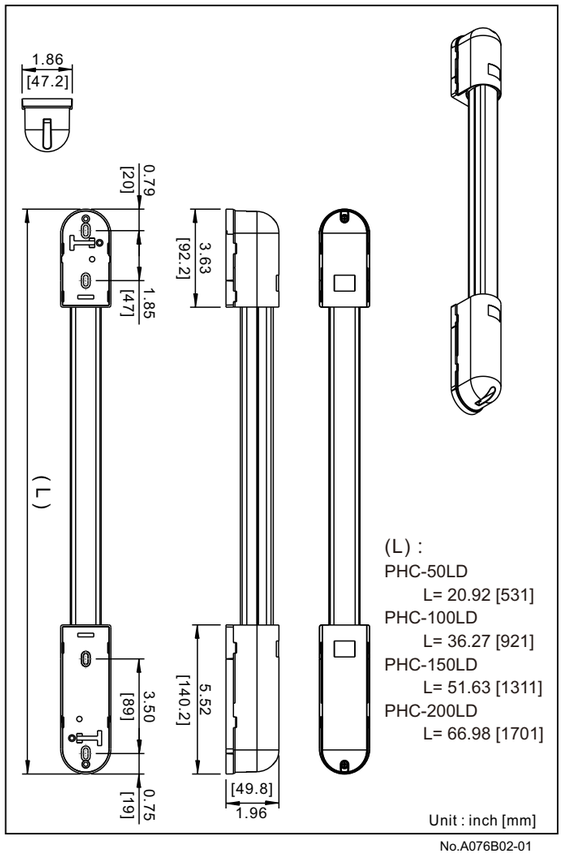
5.TROUBLE SHOOTING

Problem	Possible Cause	Corrective Action
Power LED does not light. (Transmitter)	1.No power supply. 2.Bad wiring connections, short or broken wire.	1.Check the supply voltage and turn on the power. 2.Check the wiring.
Buzzer no sound	1.Does not put on JP1 buzzer jumper.	1.Put on JP1 jumper. 2.Bad connections, change parts.
Red LED Flashing	1.Improper Tx IR power setting. (low power) 2.Improper power supply voltage. 3.Tx/Rx beam alignment is out. 4.The distance of installation is out of detection range.	1.According to the manual instruction and reset the power. 2.Check the power supply voltage. 3.Make the alignment again. 4.Check the distance of installation.
Receiver Alarm LED continues to light.	1.The transmitter is not illuminated. 2.Improper Tx IR power setting. (low power) 3.The distance of installation is out of detection range.	1.Check the Tx power supply. 2.According to the manual instruction and reset the power. 3.Check the distance of installation.
Alarm LED does not light when the beam is broken. (Receiver Unit)	1.Deviation angles between Tx and Rx too large makes beams reflect. 2.Improper Tx IR power setting. (high power)	1.Make the alignment again, readjust the angles. 2.According to the manual instruction and reset the power.
Intermittent alarm	1.Improper Tx IR power setting. (low power) 2.Tx/Rx beam alignment is out.	1.According to the manual instruction and reset the power. 2.Make the alignment again.
Tamper SW no output	1.Bad wiring connections. 2.The handle of the tamper switch does not touch the cover.	1.Check the wiring. 2.Bend the handle of the tamper switch up to touch the cover.

6.SPECIFICATIONS

MODEL		PHC-50LD	PHC-100LD	PHC-150LD	PHC-200LD
Detection Range		Outdoor 10m / Indoor 20m			
Power Supply		DC 10.5V~18V			
Transmitter Current	4m	11 mA	16 mA	21 mA	26 mA
	10m	14 mA	18 mA	22 mA	28 mA
Receiver Current		24 mA	26 mA	28 mA	30 mA
No. of beams		2 dual 6 beams	4 dual 12 beams	6 dual 18 beams	8 dual 24 beams
Photoelectric		IR LED pulsed beam (wavelength:940nm)			
Detection		Breaking off 1 dual 3 beams			
Response Time		200 ms			
Alarm Output		Dry connect relay : NC./ NO. 0.2A / 28VDC Contact action: >1.5 sec. (Rx)			
Tamper Output		Dry connect Micro-SW : NC. 0.2A / 28VDC			
LED		1. Red LED ON: When an alarm is initiated (Rx). 2. Red LED OFF: Normal (Rx) 3. LED Flashing (Rx):When receiver signal is weak. 4. Green LED ON: Power on (Tx)			
Buzzer		1.First time on/Alarm >1.5 sec.(Rx)			
Functions		1. IR Power Set: 4 Level (Tx) 2. LED Flashing (Rx):When receiver signal is weak. 3. Horizontal angles > ±90° 4. The buzzer sound function is optional (Rx).			
Angles adjustment		Horizontal angles > ±90°			
Temperature		-13°F to +131°F (-25°C ~ +55°C)			
Mounting		Window / Sliding Door			
Wiring		Terminals			
Weight		730g	1100g	1460g	1830g
Dimensions		W 47.2 x D 49.8 mm			
		L=531 mm	L=921 mm	L=1311 mm	L=1701 mm
Accessories		Screws (4x20mm) x4			

7.DIMENSIONS



No.A076B02-01

NOTE :

1. This unit is designed to detect an intruder and activate an alarm control panel. Being only a part of complete system, we cannot assume responsibility for theft or damages, should it occur.
2. Specifications and design are subject to change without prior notice.
3. Careful to install the product to prevent the damage.

SENGATE

Photoelectric Curtain Beam Sensor

PHC-50LD 2 Dual 6 Beams / PHC-100LD 4 Dual 12 Beams

PHC-150LD 6 Dual 18 Beams / PHC-200LD 8 Dual 24 Beams

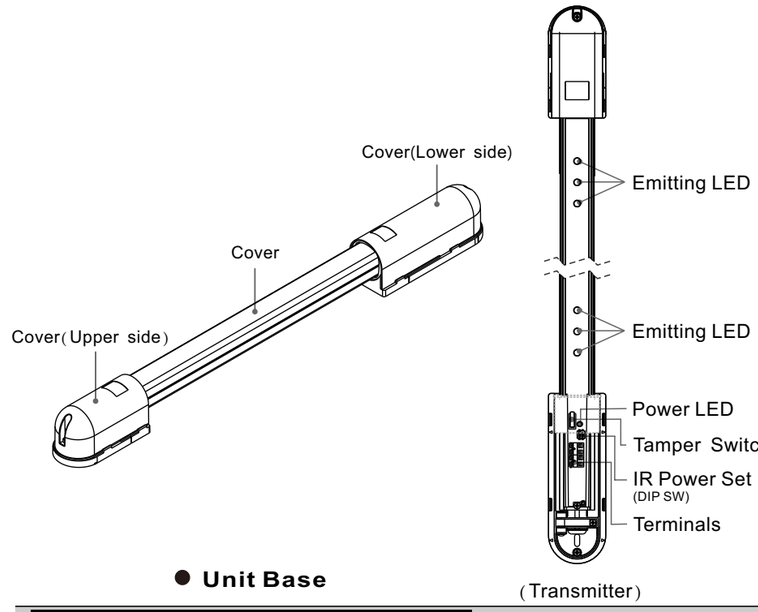
Installation Manual

Thanks for purchasing **SENGATE** product . Please read this installation manual carefully for correct use and achieve best performance.

Features

- 2/4/6/8 defense lines, different length models choices.
- High density infrared sensors.
- Horizontal alignment angles > ±90°
- Light curtain sensors are suitable for detecting large windows.

1.PARTS DESCRIPTION

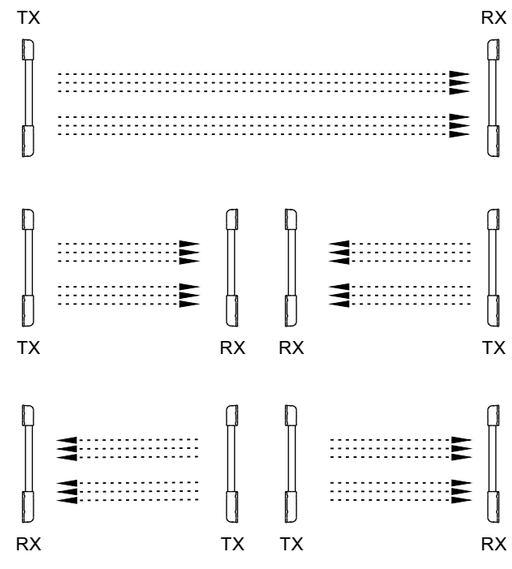


Accessories	Q'ty
Screw 4x20	4

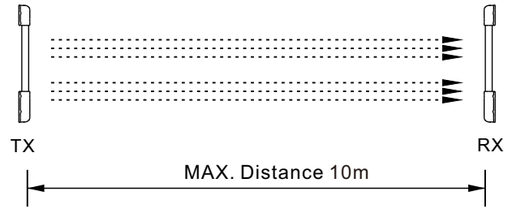
● **Unit Base**

(Transmitter) (Receiver)

2.CAUTIONS ON INSTALLATION

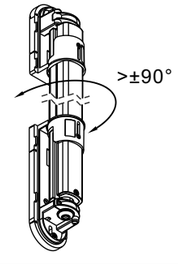


Detection Range



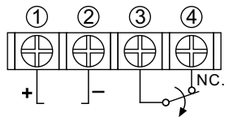
Alignment Angle

Horizontal angles > ±90°



3.WIRING

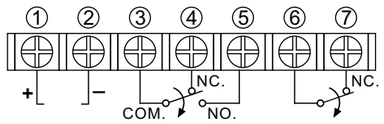
Transmitter



Power
10.5V to 18VDC

Tamper output
Dry connect Micro SW. Output NC.
28VDC / 0.2A

Receiver



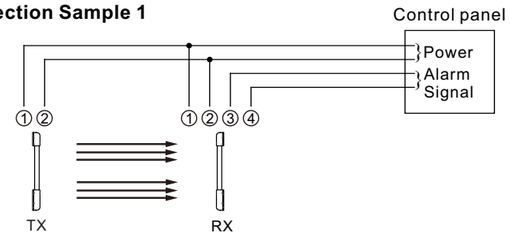
Power
10.5V to 18VDC

Alarm output
Dry connect relay
Output NC./NO.
28VDC / 0.2A

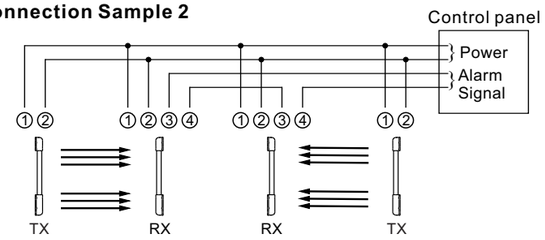
Tamper output
Dry connect Micro SW.
Output NC.
28VDC / 0.2A

Connection

Connection Sample 1



Connection Sample 2

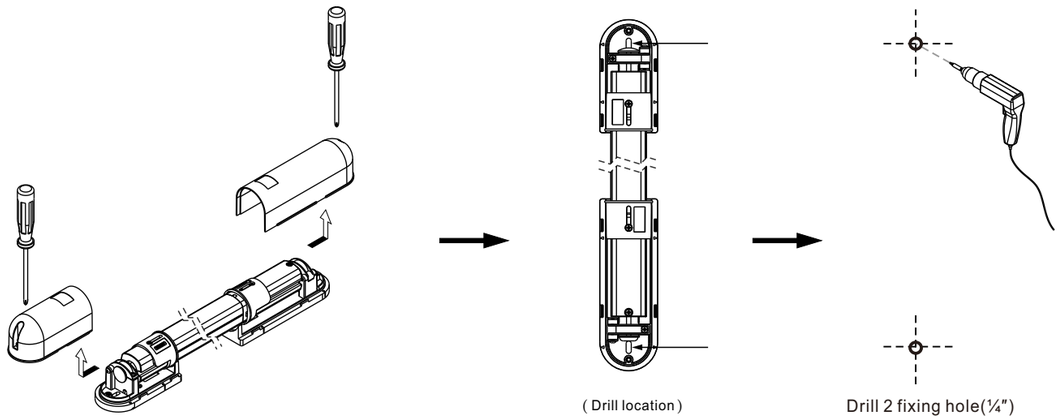


4.INSTALLATIONS

4-1. Loosen the screws and taking off the case cover from the both up/down side.

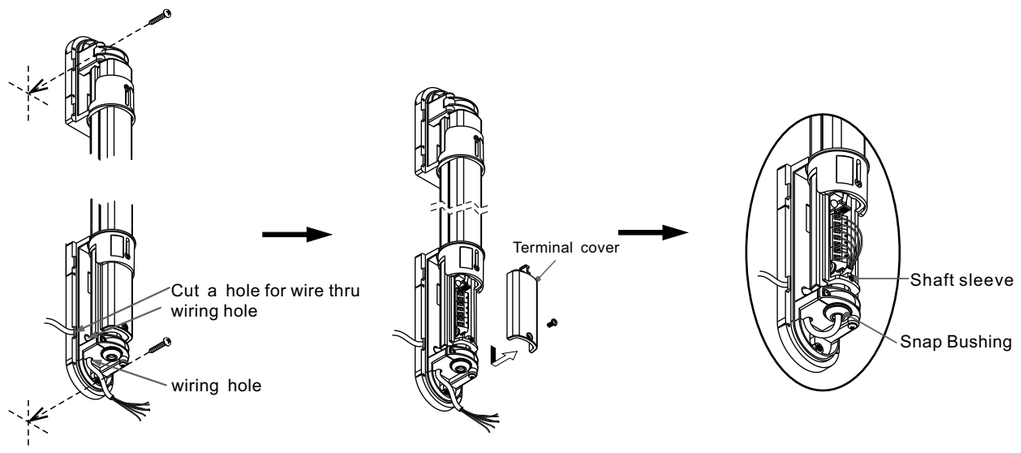
4-2. Put products on the wall and mark the drill location.

4-3. Drill 2 fixing hole 3mm(¼〃) at the mark.



4-4. Taking off the seal piece and wiring thru, use screws 4x20mm to fix the mounting plate on the wall.

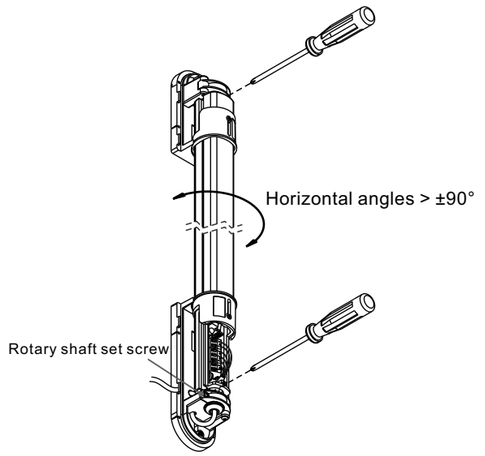
4-5. Taking off the terminal cover, pull out the wire through shaft sleeve and snap bushing for connections.



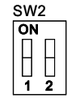
4.INSTALLATIONS (count.)

4-6. After wiring, loosen both upper/lower rotary shaft set screws to make beam alignment.

4-7. Setting up proper IR power on the Transmitter according to the distance requirement (Table). Setting up IR power "EN" to lower the IR power for optical alignment.



● SW2 IR power set :



	OFF	ON
1	L-P	H-P
2	EN	WK

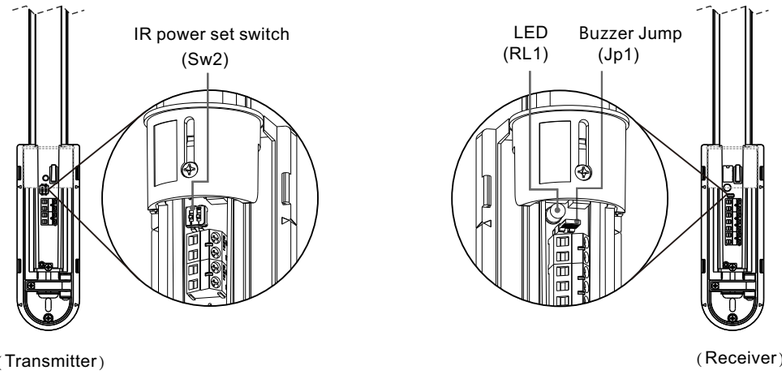
(Table)

- L-P : Low power for detection range less than 4m.
- H-P : High power for detection range less than 10m.
- EN : Lower the IR power for easier alignment.
- WK : Back to normal IR power.

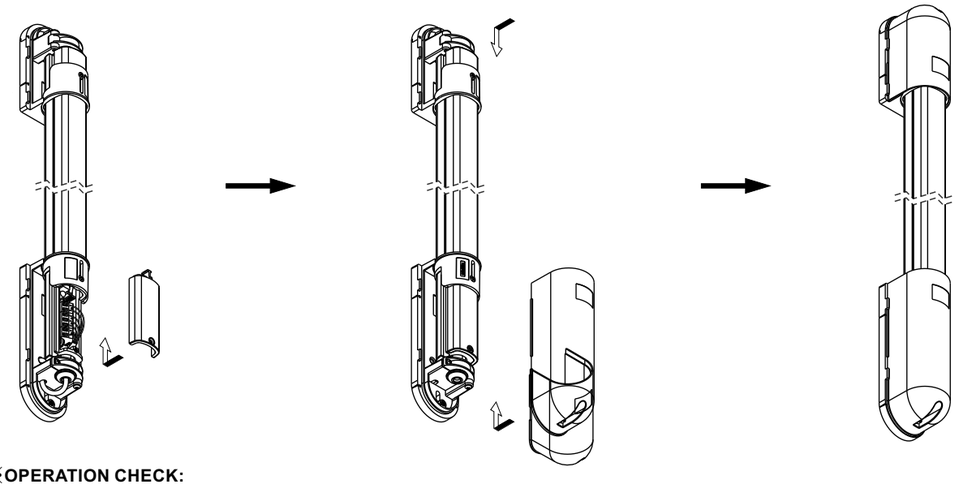
4-8. To supply the power, if the red LED flashing, that means alignment is improper. Please adjust the position(angle)again.

4-9. After alignment, fasten both upper/lower rotary shaft set screw tightly. Test if the action is in normal situation.

4-10. Setting up IR power to "WK" for normal detection after testing. Turn Buzzer JUMP sound off (put JP1 into OFF)



4-11. Put on the terminal cover and screw it tightly. Screw back the case covers for both up /down side carefully.



※OPERATION CHECK:

Monthly check is required, operation testing by blocking the beam to see if alarm and LED (receiver) are initiated.