



# SAFETY LIGHT CURTAIN

**N series Area sensor**

**F series Thin Area sensor**

**MS series Thin Area sensor**

**M series Thin Area sensor**

**LX series Thin Area sensor**

**EX series Diffusion reflection**



Official website



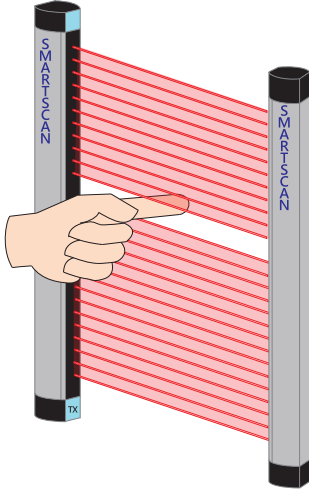
**SMARTSCAN TW LTD.**  
[www.smartscan.com.tw](http://www.smartscan.com.tw)



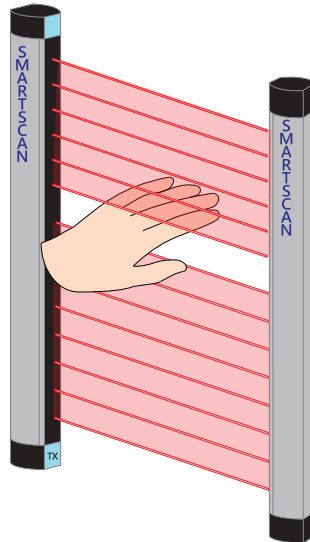
Certificate number : 79Q13722

# Area Sensors

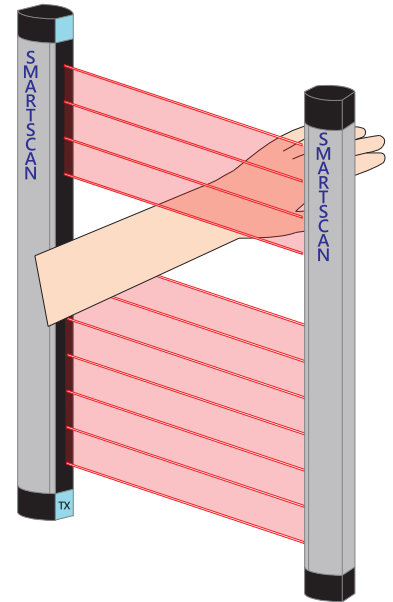
## 1 Select the light curtain through the required detection capability



Detection capability 14mm  
Detect finger



Detection capability 25mm  
Detect hand (palm)



Detection capability 45mm  
Detect wrist

Additional customized services  
Detection capability  $\geq 70$ mm

## 2 Select the light curtain through characteristics

### N series



P.2

Universal  
Various of detection capability

### M series

Slim design  
Indicator light  
Adjusting switcher



P.10

### LX series

Slim design  
Side installation



P.18

### F series

Slim design  
Anti-disturbance light



P.6

### MS series

Slim design  
Special range  
Anti-disturbance light



P.15

### EX series

Diffusion reflection  
Unilateral installation



P.21

# M series

## Thin Area sensor

### Applications

- Injection molding machine
- Packing Line Orientation Control
- Object sensing
- Automation industry sensing
- Parking equipment sensing
- Part picking detection
- Assembly line direction control

### Introduction

M series area sensing light curtain, price concessions, stable quality, variety of types, to meet customer needs, is the most suitable for regional use in the detection, protection, inspection and other diversified sensing. Instruction LVD requirements, with CE marking.



### Property

- Various type, 25mm(Unextendable) , 10mm , 20mm , 40mm.
- Detection zone:100mm ~ 940mm.
- Highly-Visible Indicator light(only MA series).
- Two frequency options(FREQ A and FREQ B)(only MA series).
- Provide NPN or PNP selection.
- Installation and calibration easy.
- Quality and stability, price concessions.

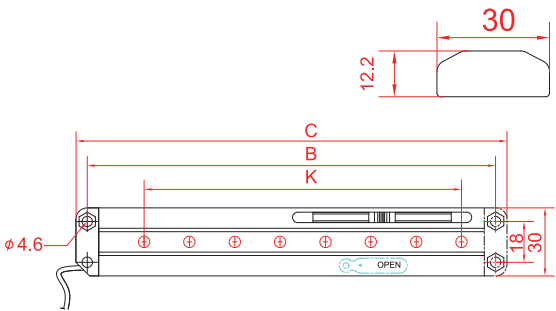
### General Specifications

Beam axis pitch	25mm	10mm	20mm	40mm
Detection zone	100mm	100mm ~ 540mm	140mm ~ 940mm	120mm ~ 920mm
Operating distance	0.3m to 3m (5m)			
Reaction time	20msec (It does not include relay switch time)			
Classification	CE LVD ; No safety certification (do not use in dangerous equipment)			
Power supply	24VDC $\pm$ 20%			
Power consumption	Basic 40mA ; 8mA more for each axis, up to 400mA			
Output mode	One set can be set to NPN or PNP(24V 20mA ; 0V 40mA)			
Frequency	FREQ A(standard) or FREQ B(Select)			
Indicator light	Flashing or steady			
Appearance	Aluminum ; Silver anode treatment(standard) ; Aluminum ; Orange anode treatment(select)			
Connector	Direct output(Single hole fixing) for C type ; M8 connector for T type			
Ambient temperature	0°C to +50°C			
Enclosure rating	IP62			

MA1-5 series      Detection Capability 30mm

Beam axis pitch : 25mm      Standard Operating distance 0.5m to 3m

Model	Beams	Detection Zone (K)(mm)	Overall Length (B)(mm)	Install Length (C) (mm)
MA1-5	5	100	130	140

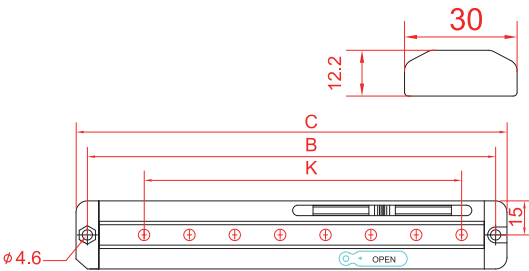


Standard type  
Dirct output ,double screw hole fixing

MA2 series      Detection Capability 25mm

Beam axis pitch : 20mm      Standard Operating distance 0.5m to 3m

Model	Beams	Detection Zone (K)(mm)	Overall Length (B)(mm)	Install Length (C) (mm)
MA2-8	8	140	180	190
MA2-12	12	220	260	270
MA2-16	16	300	340	350
MA2-20	20	380	420	430
MA2-24	24	460	500	510
MA2-28	28	540	580	590
MA2-32	32	620	660	670
MA2-36	36	700	740	750
MA2-40	40	780	820	830
MA2-44	44	860	900	910
MA2-48	48	940	980	990

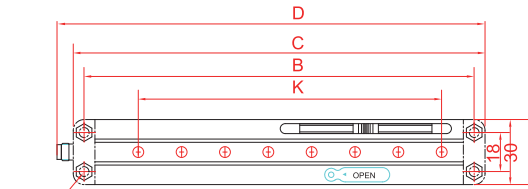


C type  
Dirct output ,Single screw hole fixing

MA3 series      Detection Capability 45mm

Beam axis pitch : 40mm      Standard Operating distance 0.5m to 3m

Model	Beams	Detection Zone (K)(mm)	Overall Length (B)(mm)	Install Length (C) (mm)
MA3-4	4	120	180	190
MA3-6	6	200	260	270
MA3-8	8	280	340	350
MA3-10	10	360	420	430
MA3-12	12	440	500	510
MA3-14	14	520	580	590
MA3-16	16	600	660	670
MA3-18	18	680	740	750
MA3-20	20	760	820	830
MA3-22	22	840	900	910
MA3-24	24	920	980	990

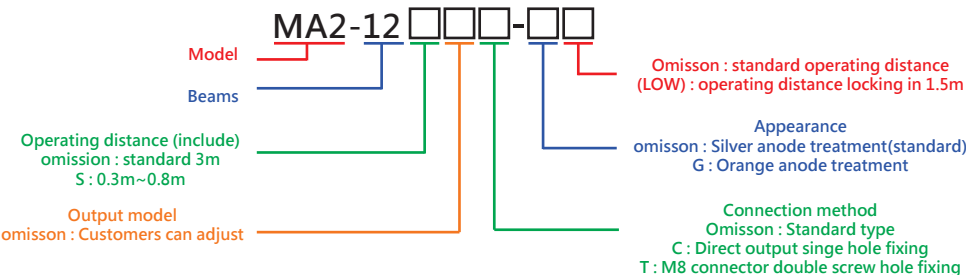


T type  
M8 connector ,Double screw hole fixing



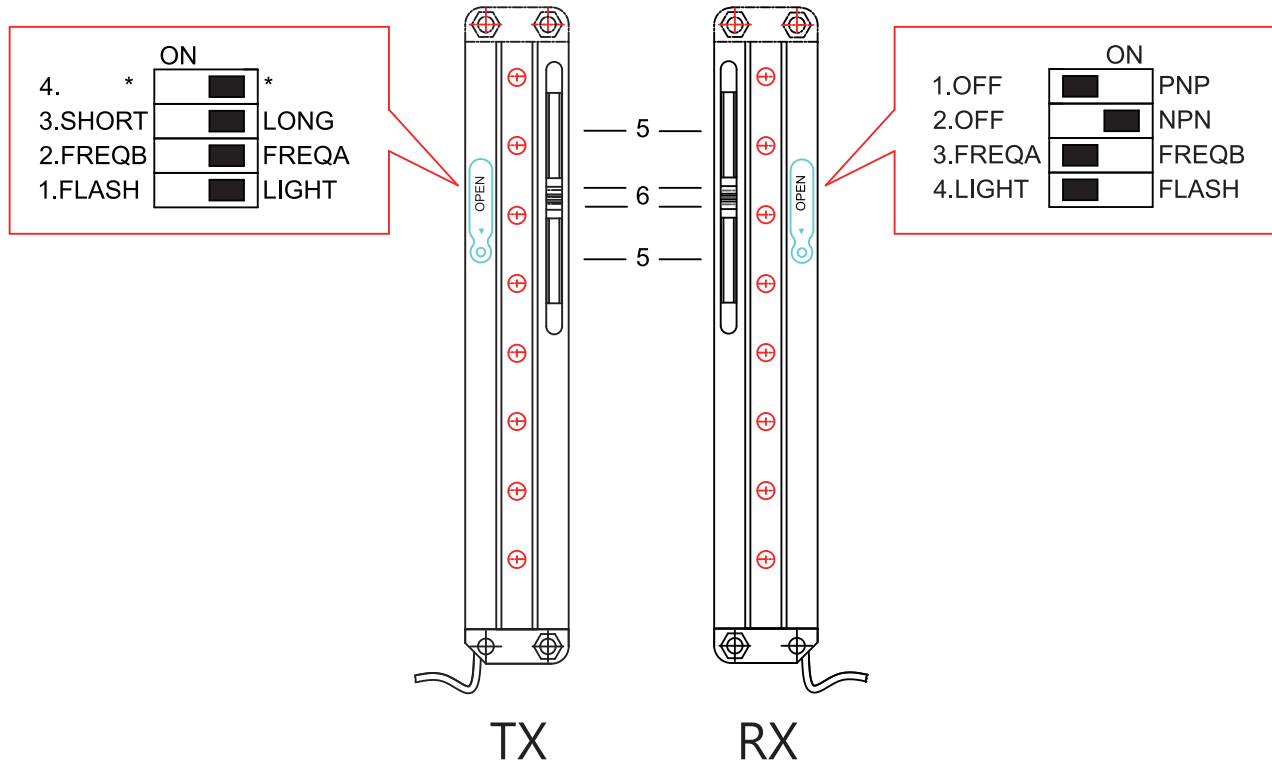
The assembly length of the T type is 7.5mm more than the C type.

Customized service description of M series :



※ SMARTSCAN provide customized services.  
Please connect with our sales.

# MA series Set up



		Description	Function	
TX	1	Indicator light mode	Flash	Hengliang
	2	Frequency (*1)	FREQ B (*1)	FREQ A (*1)
	3	Operating distance	Short (1.5m)	Long (standard)
	4	NO USED		
RX	1	PNP Output	OFF	ON ; PNP output (*2)
	2	NPN Output	OFF	ON ; NPN output (*3)
	3	Frequency (*1)	FREQ A (*1)	FREQ B (*1)
	4	Indicator light mode	Flash	Hengliang
5		Indicator light (orange)	Can choose to flash model or hengliang model	
6		Indicator light	TX:Yellow light ; RX:Normal=green , abnormal=red	

**\*1:Frequency must be consistent**

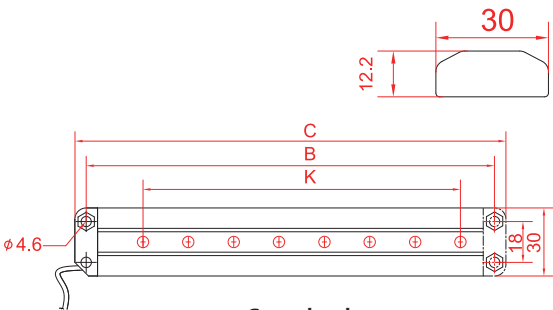
**\*2,\*3:NPN and PNP can only choose one**

MB1-5 series      Detection Capability 30mm

Beam axis pitch : 25mm      Standard Operating distance 0.5m to 3m

Model	Beams	Detection Zone (K)(mm)	Overall Length (B)(mm)	Install Length (C)(mm)
MB1-5	5	100	130	140

(NO Setting function and indicator light)



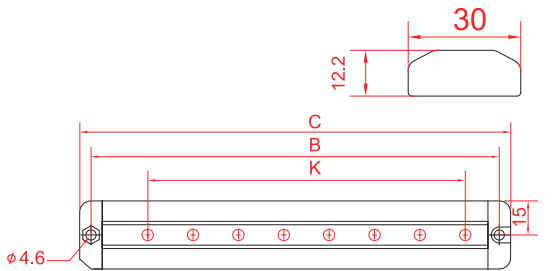
Standard type  
Dirct output ,double screw hole fixing  
(NO Setting function and indicator light)

MB2 series      Detection Capability 25mm

Beam axis pitch : 20mm      Standard Operating distance 0.5m to 3m

Model	Beams	Detection Zone (K)(mm)	Overall Length (B)(mm)	Install Length (C)(mm)
MB2-8	8	140	180	190
MB2-12	12	220	260	270
MB2-16	16	300	340	350
MB2-20	20	380	420	430
MB2-24	24	460	500	510
MB2-28	28	540	580	590
MB2-32	32	620	660	670
MB2-36	36	700	740	750
MB2-40	40	780	820	830
MB2-44	44	860	900	910
MB2-48	48	940	980	990

(NO Setting function and indicator light)



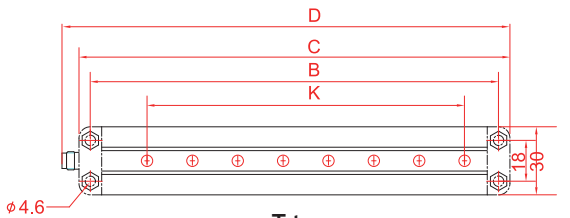
C type  
Dirct output ,Single screw hole fixing  
(NO Setting function and indicator light)

MB3 series      Detection Capability 45mm

Beam axis pitch : 40mm      Standard Operating distance 0.5m to 3m

Model	Beams	Detection Zone (K)(mm)	Overall Length (B)(mm)	Install Length (C)(mm)
MB3-4	4	120	180	190
MB3-6	6	200	260	270
MB3-8	8	280	340	350
MB3-10	10	360	420	430
MB3-12	12	440	500	510
MB3-14	14	520	580	590
MB3-16	16	600	660	670
MB3-18	18	680	740	750
MB3-20	20	760	820	830
MB3-22	22	840	900	910
MB3-24	24	920	980	990

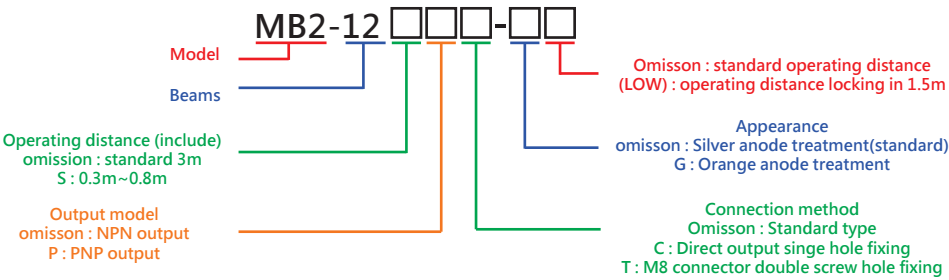
(NO Setting function and indicator light)



T type  
M8 connector ,Double screw hole fixing  
(NO Setting function and indicator light)

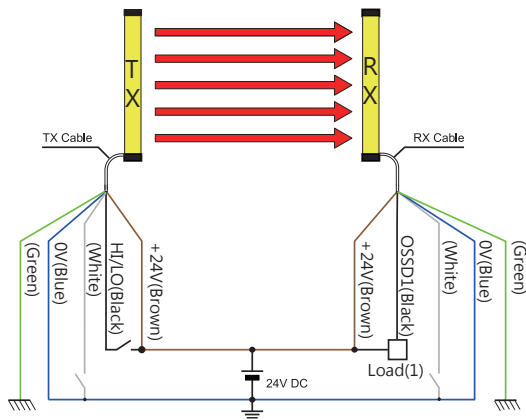


Customized service description of M series :  
(NO Setting function and indicator light)

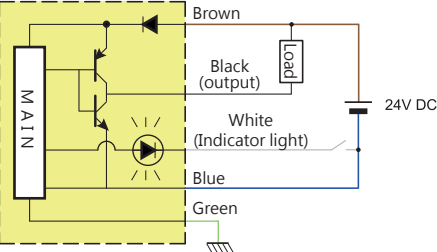


※ SMARTSCAN provide customized services.  
Please connect with our sales.

# Electric Connection



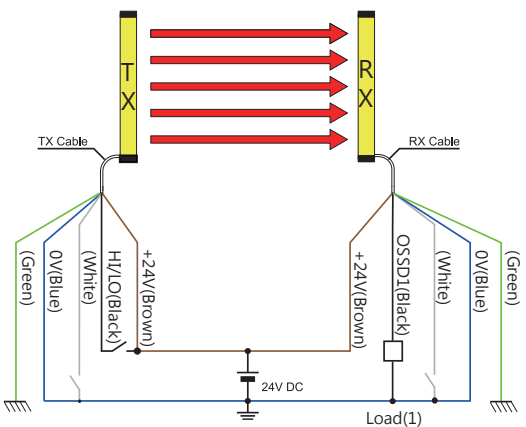
## Standard RX (NPN output)



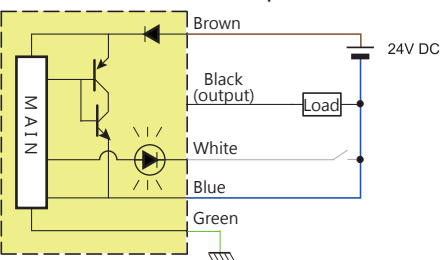
TX black line connect to +24V transmit power is short distance.

TX RX white line connect to 0V that Indicator light will light on.

※Because the line sync is used, the white line needs to be docked, so there is no indicator function.



## Select RX (PNP output)



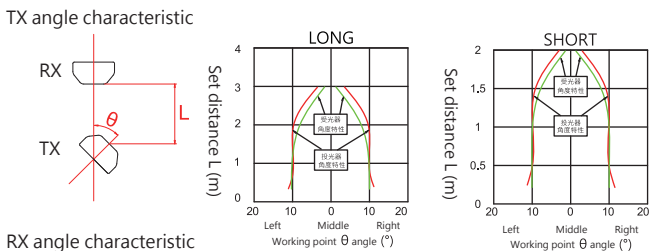
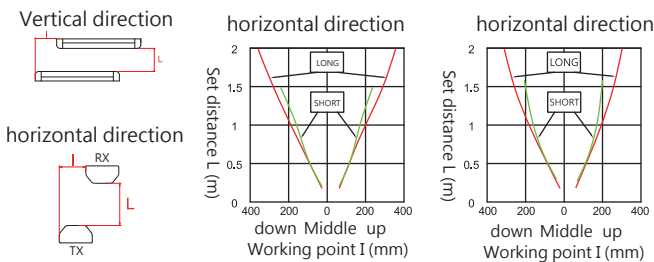
TX black line connect to +24V transmit power is short distance.

TX RX white line connect to 0V that Indicator light will light on.

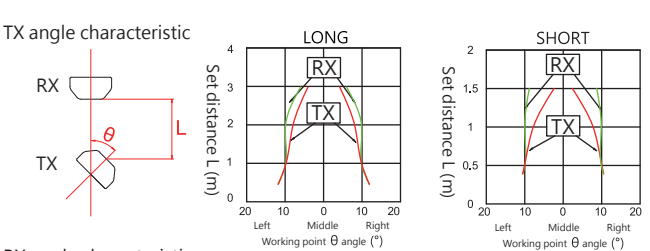
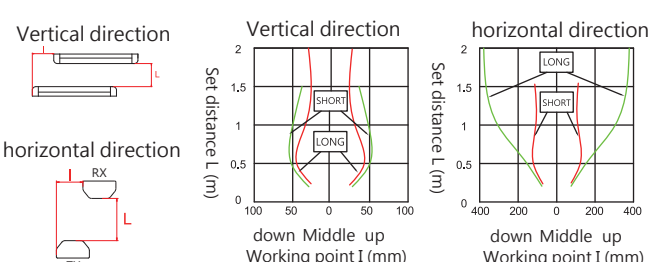
※Because the line sync is used, the white line needs to be docked, so there is no indicator function.

# Detection characteristics

## MA1 series



## MA2 series





Business Consulting



Customer service



**SMARTSCAN TW LTD.**  
[www.smartscan.com.tw](http://www.smartscan.com.tw)

2F., No. 5, Gongyequ 10th Rd., Xitun Dist.,  
Taichung City 407, Taiwan (R.O.C.)  
Tel : +886-4-2359-8885 Fax : +886-4-2359-9423  
E-mail: [Sales01.smartscan@gmail.com](mailto:Sales01.smartscan@gmail.com)  
[Sales02.smartscan@gmail.com](mailto:Sales02.smartscan@gmail.com)