



Infrared Curtain Protective System of Elevator Door



Intelligent system solutions for
the elevator door protection
Meet the demands of variety and customized





Shanghai Lanbao Sensor Co.,Ltd.

Established in 1998, Shanghai Lanbao Sensor Co.,Ltd. is a leading supplier of electronic products in China. The company has been always dedicated in providing customers with individualized sensor products which are widely applied in industry and life area, engineering system, technical services and solutions.

Lanbao has successfully developed and produced over 3000 types of sensors: inductive sensors, capacitive sensors, photoelectric sensors, light curtains, magnetic sensors and solid state relays etc. All products have been certified according to CE, UL, CCC standards and meet the requirement of EU RoHS.

Focus on innovation, quality, service and global market, Lanbao insists on creating maximal value for customers.



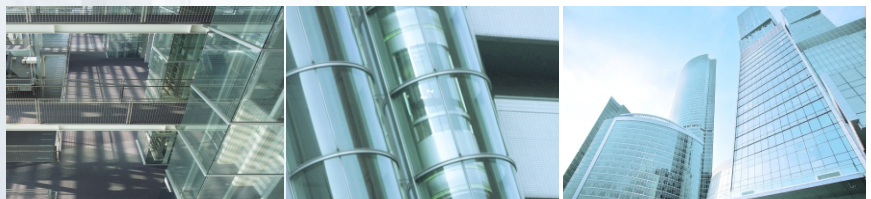
Sensing the dream

LANBAO SENSOR



The infrared curtain protective system of elevator door is composed by infrared emitter and receiver which are installed on the two sides of elevator car door, controller which is installed on the car and connect cable as well. The emitter will generate single beam infrared light and then successively scan from upper to the bottom. A protection light curtain was to be formed at the elevator door area.

Once any beam is blocked by passengers or objects, the elevator car door will be stopped immediately to protect passengers. The using of infrared curtain elevator protective system is not only used for protecting passengers or objects from hitting by the car door, but also reduce the frequently damage which caused by elevator itself. Thus, it is much enduring and will reduce traffic as infrared device is composed by no mechanical moving parts and no precious machinery sensor.



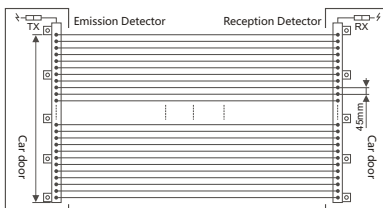


DT01

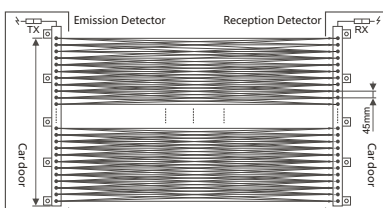
Infrared elevator light curtain

- Easy to detect and maintain due to exchangeable PCB.
- More reliable due to double infrared emitter tubes design.
- Modulated light from infrared emitter is with special frequency.
- Special electronic circuit design increases curtain density and decreases electronic interference.
- Auto compensation of infrared intensity enhances system sensitivity.

Schematic diagram



40beams schematic diagram
of parallel light beams infrared light curtain



194beams schematic diagram
of cross light beams infrared light curtain

Main technical parameters

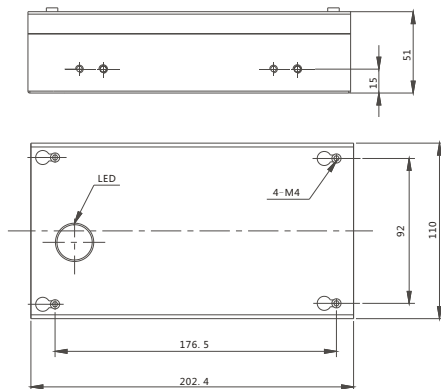
Item	Description	Remarks
Type	Emitter:DT01-L; Receiver:DT01-S	
Beams number	40beams infrared(parallel light)/194beams infrared(cross light)	
Tube quantity	80pcs of infrared emitter tubes, 40pcs of infrared receiver	
Tube distance	46mm	
Detection height	1782mm	
Detection width	>3m	
Installation tolerance	±10mm(up and down) ±4mm(left and right)	After close the door
Operation voltage	5VDC	
Consumption power	5W(with detector)	Including in emitter and receiver
Circuit protection	Reverse polarity, surge absorb	
Responses time	< 45ms(40beams) < 200ms(194beams)	Relation with the detector what in the scan circle
Scan method	Parallel scan(40beams) ; cross scan(194beams)	
Light immunity	50.000LUX	
Operating environment	-10°C ~ +65°C	
Indicator	Red LED: object passing	
Housing material	Aluminum	
Vibration resistance	Frequency range:10 ~ 55hz; Max displacement amplitude 1.5mm(full)	Mechanical vibration
Protection degree	IP54	
Connection	0.3m cable with connector	
Matching controller	PGA controller	
Accessory	3.5m connection cable(E13-Q5F3.5)(customized available)	



PGA Controller

- The center of main controller in infrared curtain is central processing unit which helps to have better control and detect performance.
- Buzzer will ring if the infrared curtain is activated or system fails.
- Time-delay function allowed 5 beams what non adjacent are by passed and the elevator could normal operation.
- Test mode is used for further detection for system working status and error position.

Dimensions



Mainly technical parameters

Item	Description	Remarks
Type	PGA-194	
Rated voltage	110VAC, 220VAC or 11-25VDC	
System power	5W	
Output	Relay output with NO+NC	
Responses time	45ms(40beams)	Relation with the detector what in the scan circle
Operating environment	-10°C~+65 °C	
Housing material	Aluminum	
Vibration resistance	Frequency range: 5 ~ 60hz; Max displacement amplitude 1.5mm(full)	Mechanical vibration
Protection degree	IP54	
Matching	DT01	

Code displayed of system detect function

LED code showed status of controller

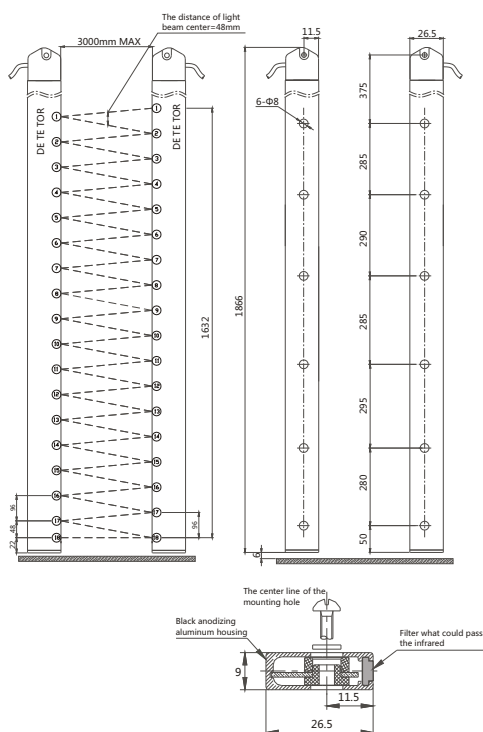


DT02-X35

Elevator light curtain

- Strong anti-interference ability of light, work in the different environments.
- Quickly responses, high sensitivity , strong protection performance.
- Easy to install, adjust and maintenance.

Dimensions



Main technical parameters

Item	Description	Remarks
Type	Emitter:DT02-X35L;Receiver:DT02-X35S	
Beams number	35beams Infrared	
Tube quantity	Emitter: 18pcs, Receiver:18pcs	
Tube distance	96mm	
Detection height	1632mm	
Detection width	>1.5m	
Installation tolerance	±10mm(up and down) ±4mm(left and right)	After close the door
Operation voltage	DC:12V	
Residual voltage	<2.5V	
Current consumption	<100mA	Including in emitter and receiver
Circuit protection	Reverse polarity, surge absorb	
Responses time	48~96ms	
Scan method	Cross Scan	
Light immunity	50.000LUX	
Operating environment	-10°C~+65°C	
Indicator	Red LED: Object passing	
Housing material	Aluminum	
Vibration resistance	Frequency range: 5 ~ 60Hz; Max displacement amplitude 1.5mm(full)	Mechanical vibration
Protection degree	IP54	
Connection	0.3m cable with connector	
Matching controller	PGB controller	
Accessory	3.5m connection cable(E13-Q5F3.5)(Customized available)	

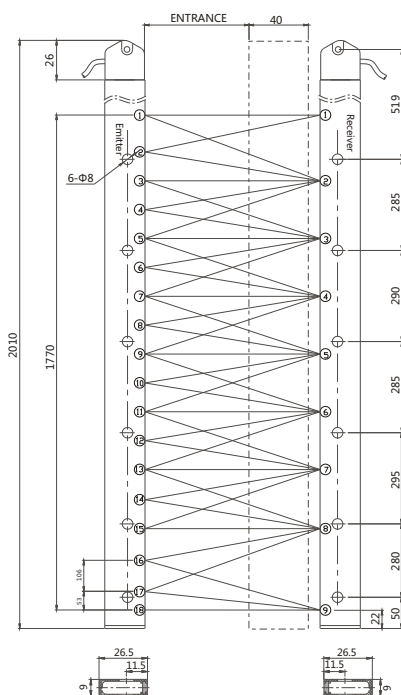


DT02-X40

Elevator light curtain

- Widely using in elevator door, economic cost.
- Reasonable design, stable performance.
- Special cable connector, high adaptability and long life.

Dimensions



Main technical parameters

Item	Description	Remarks
Type	Emitter:DT02-X40L;Receiver:DT02-X40S	
Beams number	40beams Infrared	
Tube quantity	Emitter: 18pcs, Receiver:9pcs	
Tube distance	265mm	
Detection height	1770mm	
Detection width	0.4~3m	
Min install distance	40 cm	The distance between Receiver and Emitter after closed door
Installation tolerance	±10mm(up and down) ±4mm(left and right)	After close the door
Operation voltage	DC: 12V	
Residual voltage	< 2.5V	
Current consumption	< 100mA	Including in emitter and receiver
Circuit protection	Reverse polarity, surge absorb	
Responses time	<60ms	
Scan method	Cross scan	
Light immunity	50.000LUX	
Operating environment	-10°C~+65°C	
Indicator	Red LED: object passing	
Housing material	Aluminum	
Vibration resistance	Frequency range: 5~60Hz; Max displacement amplitude 1.5mm(full)	Mechanical vibration
Protection degree	IP54	
Connection	0.3m cable with connector	
Matching controller	PGB controller	
Accessory	3.5m connection cable(E13-Q5F3.5)(customized available)	

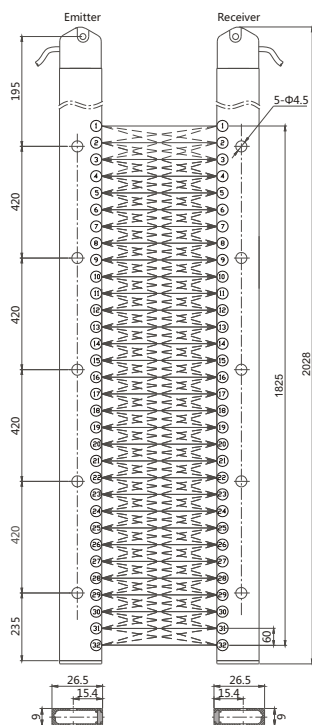


DT02-X128

Elevator light curtain

- Widely protection rang, strong interference ability.
- High dust properties performance, applied in different environment.
- Strict produce process control, stable quality.

Dimensions



Main technical parameters

Item	Description	Remarks
Type	Emitter:DT02-X128L;Receiver:DT02-X128S	
Beams number	128beams Infrared	
Tube quantity	Emitter:32pcs,Receiver:32pcs	
Tube distance	58mm	
Detection height	1860mm	
Detection width	2m	
Installation tolerance	±10mm(up and down) ±4mm(left and right)	After close the door
Operation voltage	DC: 12V	
Residual voltage	< 2.5V	Including in emitter and receiver
Current consumption	< 100mA	
Circuit protection	surge absorb	
Responses time	65ms	
Scan method	Interlaced Scan	
Light immunity	100.000LUX	
Operating environment	-10°C~+65°C	
Housing material	Aluminum	
Vibration resistance	Frequency Range: 5~60HzMax displacement amplitude 1.5mm(full)	Mechanical vibration
Protection degree	IP54	
Connection	0.3m cable with connector	
Matching controller	PGB controller	
Accessory	3.5m connection cable(E13-Q5F3.5)(Customized available)	

Naming Rules

Elevator light curtain

DT 01 — X 128 S — □□□□

1 2 3 4 5 6

1. Type Code

DT: Elevator light curtain

2. Shape Code

01: 35mm*15.4mm* L

02: 26.5mm*9.1mm*L

3. Beams Type

P: Parallel light; X: Cross light

4. Axes Number

08: 8Axes

16: 16Axes

18: 18Axes

24: 24Axes

5. Function

L: Emitter

S: Receiver

6. Special Request

Showed by four digits

Controller

PGA — A 220 K — □□□□

1 2 3 4 5

1. Shape Code

PGA: 202x110x51

PGB: 192x51x60

2. Input Method

A: AC Input D: DC Input

3. Power Voltage

220: 220VAC

110: 110VAC

024: 24VAC

012: 12VAC

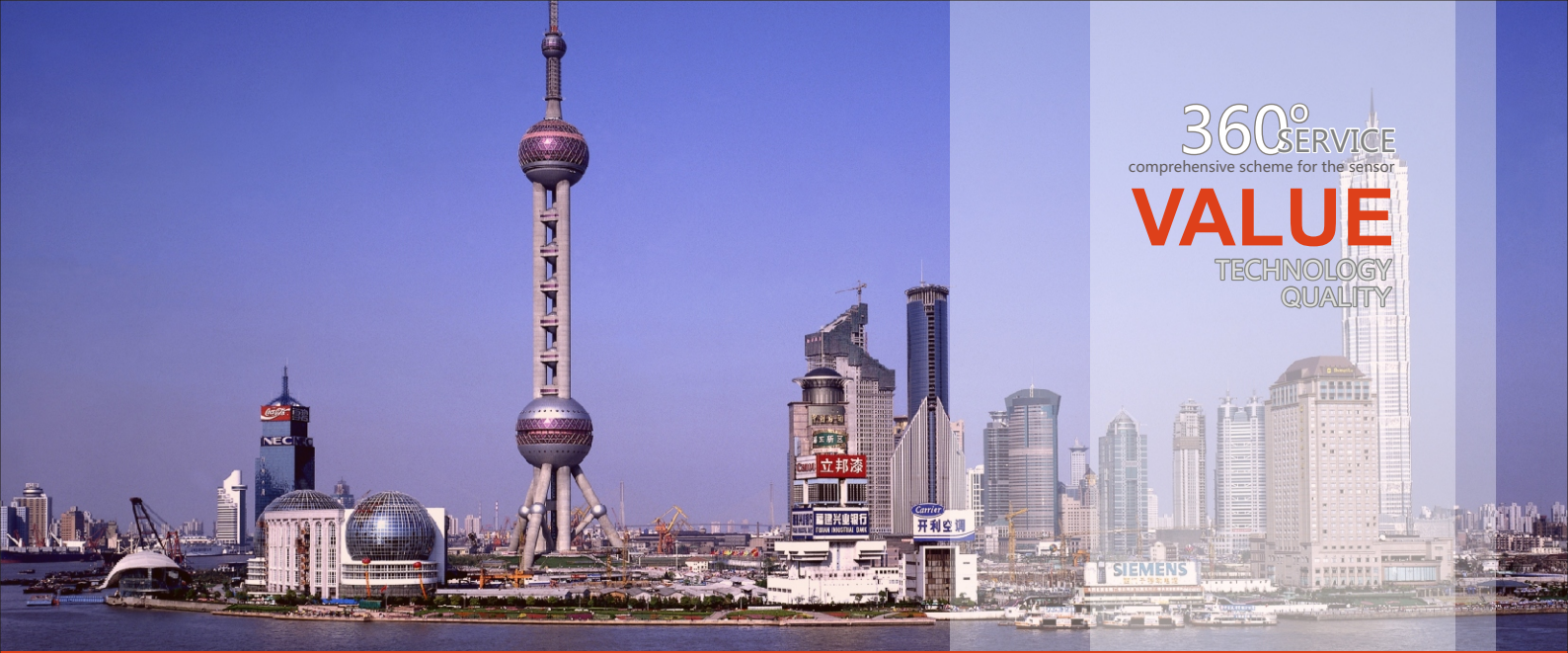
4. Signal Output

K : Relay output

N/A: Others

5. Special Function

Showed by four digits



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