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Focus on high-end quality

CE ISO9001:2015
RoHS IP65

Technology changes the future

COMPREHENSIVE CATALOG OF SENSORS **Safety light curtain**

Safety light curtain/Safety laser scanner/safety mat/safety edge/safety relay/Photoelectric switch



Model-QSMT QSMT vehicle separation light curtain

- International IP67 waterproof stainless steel housing
- Automatic heating, automatic control of low temperature and humidity
- Ultra-fast response speed (less than 15ms)
- Can effectively shield 99% of interference signals

It is widely used in other occasions such as intelligent transportation system, non-stop toll collection system, highway weighing system, highway toll collection system, overrun detection system, etc.



QSMT Series Vehicle Separation Curtain

◆ Product configuration

Product configuration:

1. Transmitters and receivers: Transmitters have linearly arranged high-energy light-emitting elements, receivers have the same number of receiving elements as transmitters. The corresponding optoelectronic elements of transmitters and receivers are triggered synchronously in sequence to detect whether the light path is on or not. When the car passes through the scanning area, some or all of the beams are occluded and thus detected.

2. Control Unit: Read and process the synchronous scanning signal of transmitter/receiver, detect the working state of the light screen, and provide a variety of output signals, such as switching output, serial output or analog output. Considering the reliability of the system and the convenience of installation, the vehicle separating light curtain commonly used in the market is a two-box product built in the controller, but there is no independent external controller.

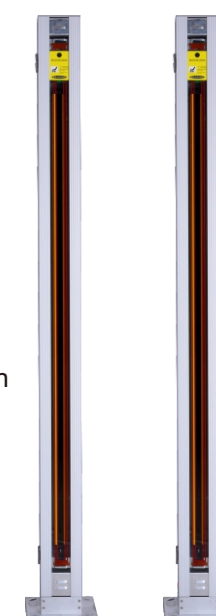
3. Cable: Connect the cable between transmitter/receiver and controller. The default length is 5m.

4. Protective cover: for stainless steel or aluminium alloy materials, to provide protection for separators, built-in electric heating glass, temperature controller, humidity controller, when the humidity is too high, the temperature is too low to realize automatic heating, in order to ensure the reliable use of vehicle separators in wet areas, rain and snow weather, cold season.



◆ Product characteristics

1. Integrated design, no controller required, simple and easy to use;
2. The height of the light curtain: 60mm-2840mm;
3. Light curtain spacing: 7 kinds of 10, 14, 20, 25, 30, 40, 80mm, other spacing can be customized;
4. Detection distance: 0-5m, 0-10m, 0-30m
5. The LED indicator can display the working status and fault status of the light curtain;
6. Double NPN output:
 - #Output 1: Vehicle detection signal output;
 - #Output 2: Light curtain failure alarm output;
7. Using a unique algorithm, the light curtain can only detect objects above 150mm with a resolution of 1mm, which can not only avoid misoperations caused by sunlight, birds, mosquitoes and sludge, but also reliably detect vehicle hooks;
8. Automatically detect faults, and ignore (shield) the problematic beam, and still maintain normal operation, Simultaneously output an alarm signal;
9. The use of high-energy, high-transmittance photoelectric tube is convenient for installation and maintenance;
10. It can realize the automatic separation, counting, presence detection, classification detection, and determination of the headway of the vehicle;
11. Completely eliminate the phenomenon of car following, and reliably separate semi-trailers, full trailers and bicycles;
12. The special protective shell is made of sturdy aluminum profile to ensure that the vehicle separation light curtain can be reliably used in the harsh outdoor environment;
13. Operating temperature: -10°C--55°C; ambient temperature: RH≤85°C (20°C).



◆ Working principle

The working principle of the vehicle separation light curtain is to realize synchronous scanning of the vehicle through linearly arranged infrared light transmission and reception, and convert the optical signal into an electrical signal, thereby realizing comprehensive detection of vehicle data, compared with other detection technologies. Infrared vehicle detection products are mature in technology, easy to install, high-speed response, strong anti-interference, can output a wealth of vehicle technical information, and can reliably detect various special vehicles. Infrared vehicle scanning system is mainly used for: general road toll station, non-stop toll collection system (ETC), automatic vehicle classification system (AVC), highway weight collection system (WIM), fixed over-limit detection station, customs vehicle management system, etc. .



◆ Technical parameters of protective cover

Heating power supply	24V 10A
Main thermostat	Disc package Closing temperature 4℃ Disconnecting temperature 29℃
Standby thermostat	Closure temperature of disc packaging 55℃ and disconnection temperature 36℃
Humidity switch	Relative humidity of mechanical nylon membrane trigger switch is 20-80%.
Status indicator	Red LED light in front of heater when starting.
temperature range	Normal operating temperature - 20℃+70℃.
structure	Shell: stainless steel or aluminium alloy, window: heated glass
Protection level	NEMA 3R (IEC IP54)

◆ Protective cover

Spraying materials for stainless steel and cold steel plates to provide protection for the light curtain, built-in electric heating glass, temperature controller, humidity controller, automatic heating when the humidity is too high, the temperature is too low, to ensure that the vehicle separates the light curtain in a humid area , Rain and snow weather, reliable use in cold seasons.

It is widely used in intelligent transportation systems, highway toll collection systems, non-stop toll collection systems, highway weighing systems, over-limit detection systems and other traffic control systems.



- ◆ It is specially used for detecting the light curtain when it is installed outdoors to protect the light curtain from impact damage.
- ◆ Built-in electric heating glass can be automatically heated.
- ◆ Internal temperature automatic control, when wet or heavy rain and fog vapor, automatic removal of snow and rain on the glass surface;
- ◆ Box material: stainless steel, cold rolled steel plate, aluminum alloy, etc.
- ◆ Antifogging glass: electric heating wire plus wire safety tempered glass, power 200W/set, power supply 24VDC;
- ◆ Start heating when humidity is below 0℃ (can be set on site); start heating when humidity is above 96% (can be set on site);
- ◆ Overheat protection control: disconnect heating when humidity is higher

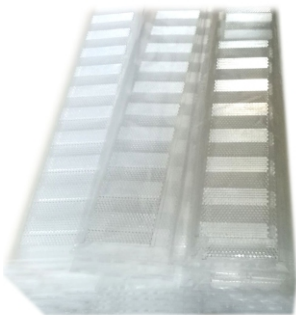


Serial number	Model	Shape length	Window length	Matching light curtain
1	QLVF-1.6	1660mm	1280mm	Detection height below 1280mm light screen
2	QLVF-1.8	1800mm	1600mm	Detection height below 1440mm light screen

◆ Photoelectric reflector (reflector)



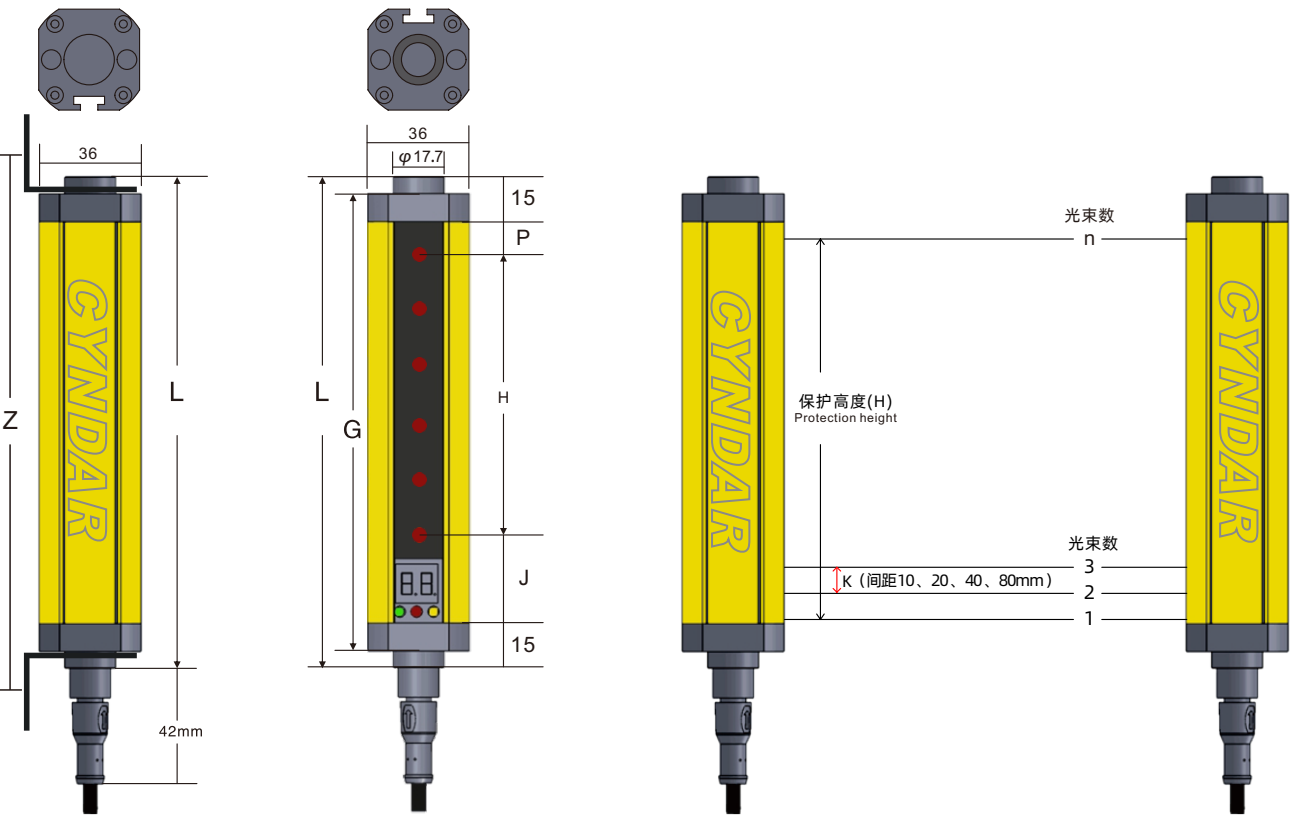
45 × 310mm



55 × 350mm

The company's reflectors (reflective sheets) have a complete range of specifications (55×300, 55×350, 55×arbitrary length, 45×310, 45×arbitrary length, reflective film 1.22m×arbitrary length, etc.), all materials are used Imported materials, quality assurance (if there are quality problems, three guarantees, the transportation costs incurred will be borne by us). We are a supplier of photoelectric sensors and photoelectric materials with complete specifications. The products are widely used in special places. This product is used in Japan's "Riken" and "Komori" photoelectric protectors and Keli and Lion's domestic protector reflectors.

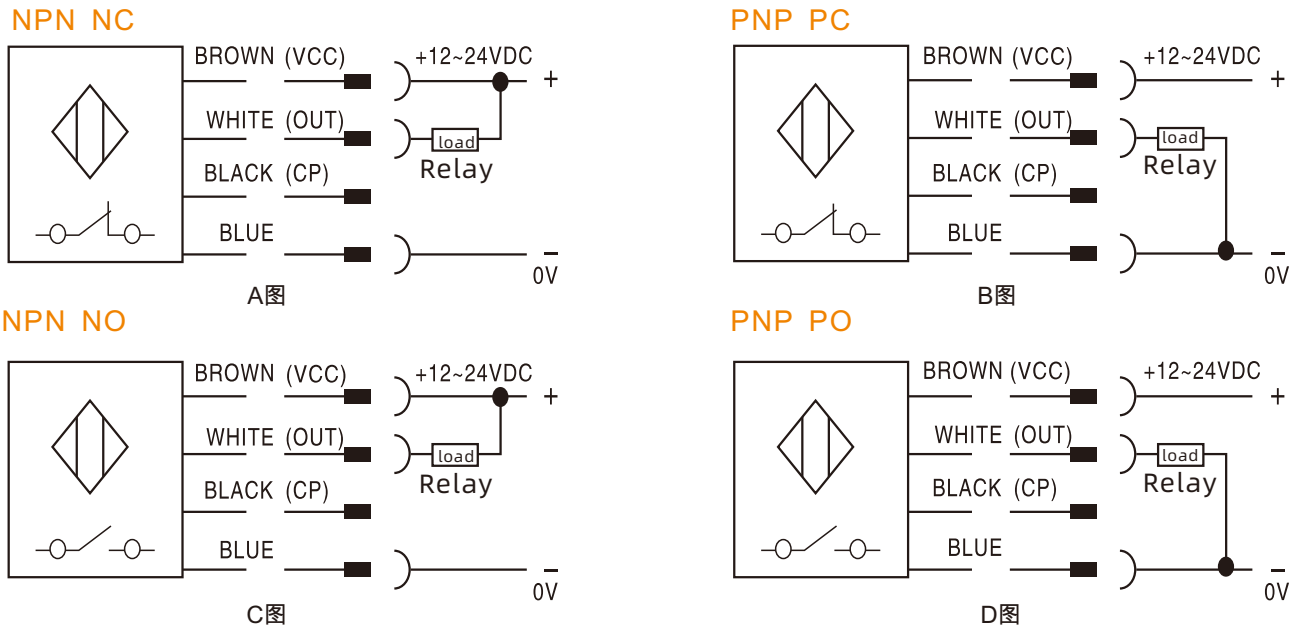
◆ Dimensions



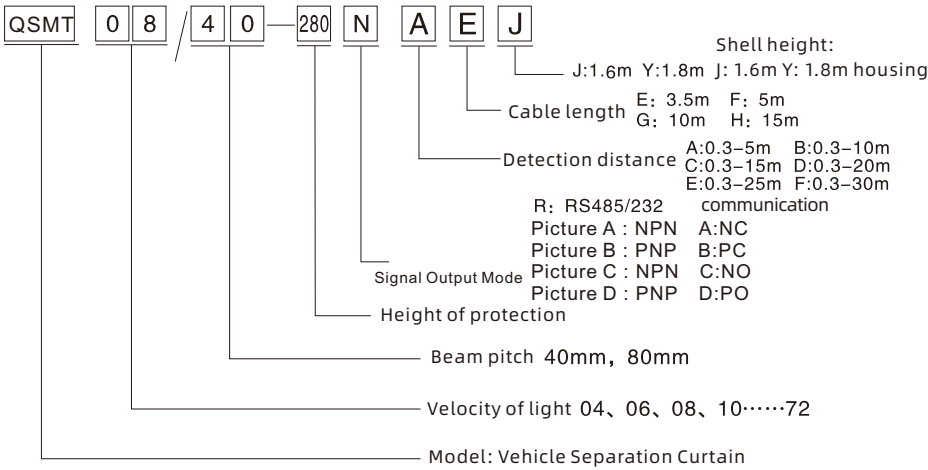
Remarks
 $H = (n-1) * K =$ Detection height
K: Optical axis spacing
L: Total length of light screen
n: Optical axis number
 $Z = L + 30mm =$ Center Distance of Fixed Mode of Upper and Lower Right Angle Frames
 $L = P + H + J + 15mm + 15mm$

K (mm)	10	20	40	80
P (mm)	5	10	10	10
J (mm)	28	33	33	33

◆ QSMT signal output selection (actual output of transistor working normally)



◆ Specification



◆ Specification List

Beam pitch	Light beam	Protection height	Screen height	Product model	Signal output mode					Detection distance
					RS485	NPN	PNP	NPN	PNP	
10mm (K)	8	70	133	QSMT08/10-70	R	A	B	C	D	0.3-5m
	10	90	153	QSMT10/10-90	R	A	B	C	D	0.3-5m
	12	110	173	QSMT12/10-110	R	A	B	C	D	0.3-5m
	14	130	193	QSMT14/10-130	R	A	B	C	D	0.3-5m
	16	150	213	QSMT16/10-150	R	A	B	C	D	0.3-5m
	18	170	233	QSMT18/10-170	R	A	B	C	D	0.3-5m
	20	190	253	QSMT20/10-190	R	A	B	C	D	0.3-5m
	22	210	273	QSMT22/10-210	R	A	B	C	D	0.3-5m
	24	230	293	QSMT24/10-230	R	A	B	C	D	0.3-5m
	26	250	313	QSMT26/10-250	R	A	B	C	D	0.3-5m
	28	270	333	QSMT28/10-270	R	A	B	C	D	0.3-5m
	30	290	353	QSMT30/10-290	R	A	B	C	D	0.3-5m
	32	310	373	QSMT32/10-310	R	A	B	C	D	0.3-5m
	34	330	393	QSMT34/10-330	R	A	B	C	D	0.3-5m
	4	60	133	QSMT04/20-60	R	A	B	C	D	0.3-5m
20mm (K)	6	100	173	QSMT06/20-100	R	A	B	C	D	0.3-5m
	8	140	213	QSMT08/20-140	R	A	B	C	D	0.3-5m
	10	180	253	QSMT10/20-180	R	A	B	C	D	0.3-5m
	12	220	293	QSMT12/20-220	R	A	B	C	D	0.3-5m
	14	260	333	QSMT14/20-260	R	A	B	C	D	0.3-5m
	16	300	373	QSMT16/20-300	R	A	B	C	D	0.3-5m
	18	340	413	QSMT18/20-340	R	A	B	C	D	0.3-5m
	20	380	453	QSMT20/20-380	R	A	B	C	D	0.3-5m
	22	420	493	QSMT22/20-420	R	A	B	C	D	0.3-5m
	24	460	533	QSMT24/20-460	R	A	B	C	D	0.3-5m
	26	500	573	QSMT26/20-500	R	A	B	C	D	0.3-5m
	28	540	613	QSMT28/20-540	R	A	B	C	D	0.3-5m
	30	580	653	QSMT30/20-580	R	A	B	C	D	0.3-5m
	32	620	693	QSMT32/20-620	R	A	B	C	D	0.3-5m
	4	120	193	QSMT04/40-120	R	A	B	C	D	0.3-5m
40mm (K)	6	200	273	QSMT06/40-200	R	A	B	C	D	0.3-5m
	8	280	353	QSMT08/40-280	R	A	B	C	D	0.3-5m
	10	360	433	QSMT10/40-360	R	A	B	C	D	0.3-5m
	12	440	513	QSMT12/40-440	R	A	B	C	D	0.3-5m
	14	520	593	QSMT14/40-520	R	A	B	C	D	0.3-5m
	16	600	673	QSMT16/40-600	R	A	B	C	D	0.3-5m
	18	680	753	QSMT18/40-680	R	A	B	C	D	0.3-5m
	20	760	833	QSMT20/40-760	R	A	B	C	D	0.3-5m
	22	840	913	QSMT22/40-840	R	A	B	C	D	0.3-5m
	24	920	993	QSMT24/40-920	R	A	B	C	D	0.3-5m
	26	1000	1073	QSMT26/40-1000	R	A	B	C	D	0.3-5m
	28	1080	1153	QSMT28/40-1080	R	A	B	C	D	0.3-5m
	30	1160	1233	QSMT30/40-1160	R	A	B	C	D	0.3-5m
	32	1240	1313	QSMT32/40-1240	R	A	B	C	D	0.3-5m
	4	240	313	QSMT04/80-240	R	A	B	C	D	0.3-5m
80mm (K)	6	400	473	QSMT06/80-400	R	A	B	C	D	0.3-5m
	8	560	633	QSMT08/80-560	R	A	B	C	D	0.3-5m
	10	720	793	QSMT10/80-720	R	A	B	C	D	0.3-5m
	12	880	953	QSMT12/80-880	R	A	B	C	D	0.3-5m
	14	1040	1113	QSMT14/80-1040	R	A	B	C	D	0.3-5m
	16	1200	1273	QSMT16/80-1200	R	A	B	C	D	0.3-5m
	18	1360	1433	QSMT18/80-1360	R	A	B	C	D	0.3-5m
	20	1520	1593	QSMT20/80-1520	R	A	B	C	D	0.3-5m
	22	1680	1753	QSMT22/80-1680	R	A	B	C	D	0.3-5m
	24	1840	1913	QSMT24/80-1840	R	A	B	C	D	0.3-5m
	26	2000	2073	QSMT26/80-2000	R	A	B	C	D	0.3-5m
	28	2160	2233	QSMT28/80-2160	R	A	B	C	D	0.3-5m
	30	2320	2393	QSMT30/80-2320	R	A	B	C	D	0.3-5m

Note: If there is no special requirement, the detection distance defaults to A chart. If the detection distance is more than 5 meters, please specify in advance.

Counting type and measuring type vehicle separation light curtain, please contact us for parameters