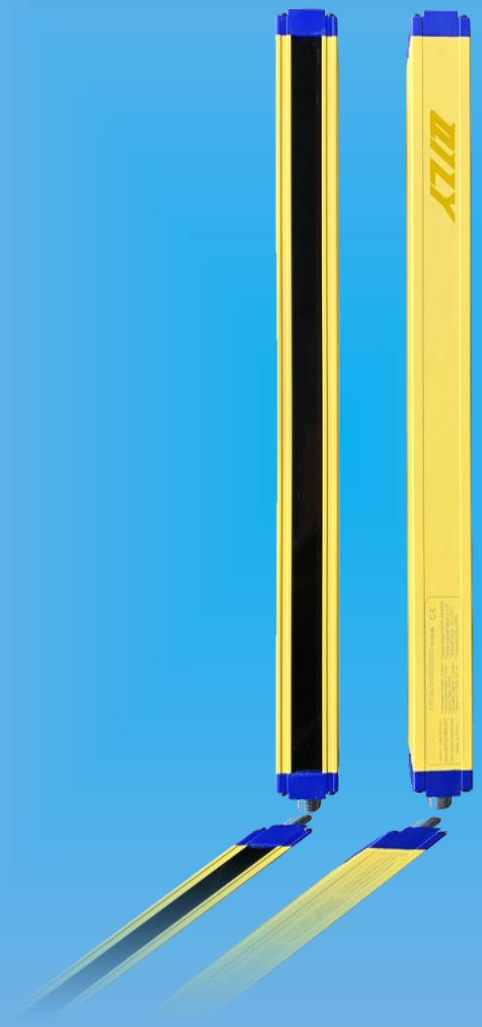
PRODUCT CATALOG



- Safety light curtain
- Measuring light curtain

Qily Sensor Technology (Dongguan) Co.,Ltd

Company introduction

Qily sensor technology (Dongguan) Co.,Ltd is a professional engaged in industrial automation sensors series products and instrumentation research and development, manufacturing, promotion, application and technical services in one of the high-tech enterprises. All the products of our company are completed by the foreign expert team in the studio, and the domestic assembly production. Company was founded in 2009, the company was founded in early follow market new technologies and new applications, play its technical advantages, and constantly introduce new products to meet market demand. At the same time, pay attention to the construction of manufacturing capacity and quality control and improving the ability, has a professional management team, research team and production team, advanced production equipment and testing equipment, with an annual production capacity of about 1000000 sets of sensors. To provide all kinds of advanced technology, reliable performance, industrial automation product quality is stable, and can be customized according to customer's special requirements, the maximum to meet the requirements of customers safety protection or other use.

Company established a nationwide marketing network, has a number of dealers in the main city of Xi'an, Chengdu, Zhengzhou, Changchun etc.; can provide timely pre-sale, sale and customer service service. Company customers throughout the country's major manufacturers of automation equipment, such as: Foxconn, Hans laser, Midea Group, etc.. Some products are exported overseas with machinery and equipment and won unanimous praise from overseas customers.

Company staff will continue to adhere to the "rigorous, independent design, made social services, cooperation and win-win" concept of the company, to provide satisfactory service to customers with high quality products and preferential prices, and strive to look forward to working with our customers, mutual benefit and win-win and common prosperity together to create a better future.

Catalog

- Safety light curtain 6
- Measuring light curtain 49
- Vehicle separation light curtain 60

Partial cooperative customers

FOXCONN 富士康科技集團 · MERIDA · HKD 和科達

Ronshen 容声 · 美菱集团 MESTON · GREE 格力

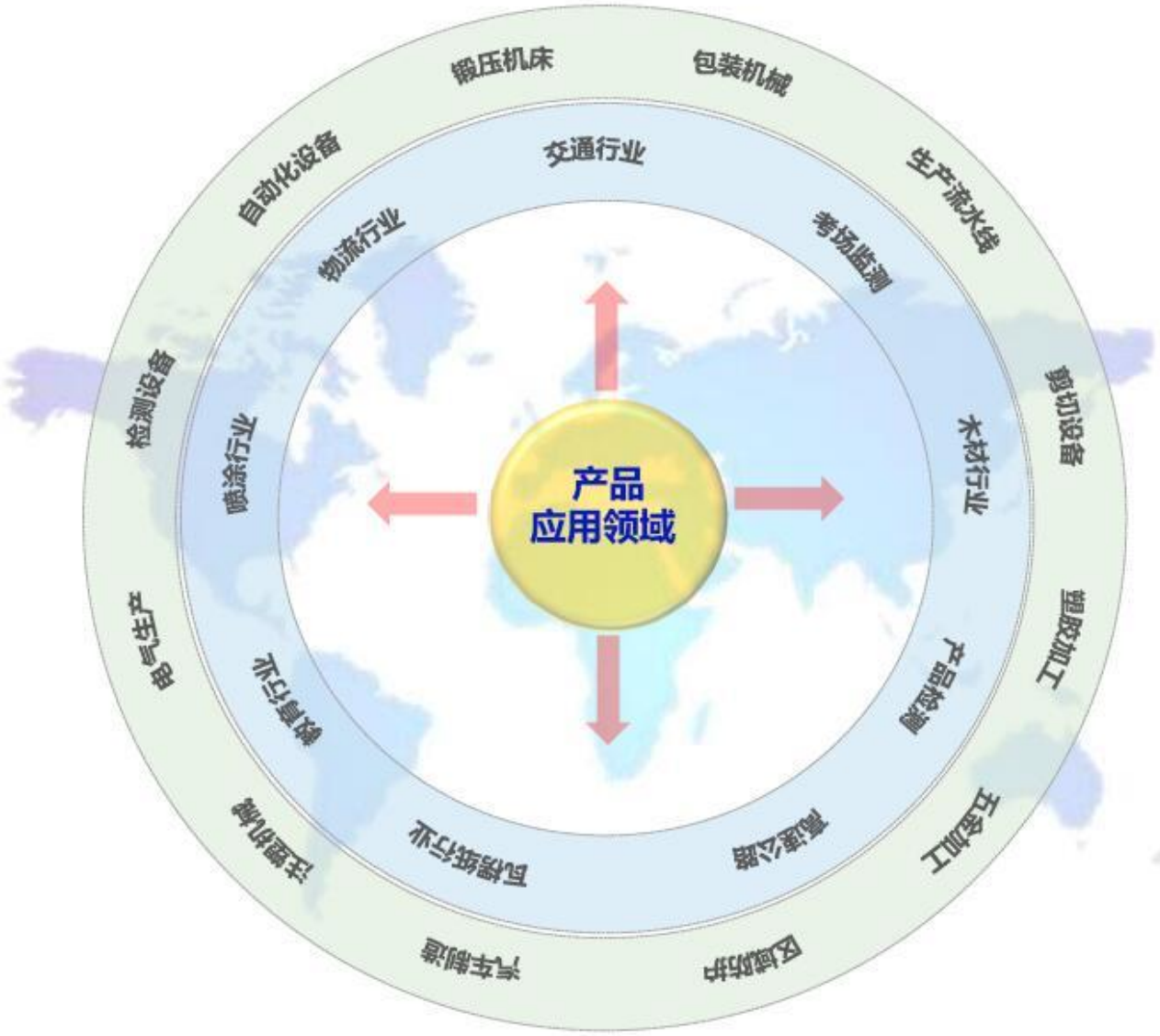
KELON · vatti 華帝 · 美的 Midea

大族激光 HAN'S LASER · FLEXTRONICS Network Services · second 世椿

VEICHI 伟创电气 · HUAWEI · HONBRO 鸿宝科技

SZ series safety light curtain and measurement light curtain

——Pure safety / measurement products from market leaders



As a leading manufacturer of safety, we launched a new generation of safety light curtain. With the development of new technology, we pay

Safety light curtain

Set up a new benchmark

Our products have a high cost performance, can be more convenient to protect the danger zone and entry point. SZ series safety light curtain efficient integration, quick installation and very safe in daily operation,SZ series type safety light curtain is the leader in their respective fields.

10 years of experience precipitation

After more than and 10 years of practice, research and development, Safety light curtain and measurement light curtain has become our core competitiveness.Our products are long-tested, widely used in various industries around the world. In addition to security, economic factors are also important considerations for products. In addition, user oriented optimization of security technology design is the key factor to improve efficiency.Therefore, we have decided to use an open system to ensure high investment security.

SZ series safety light curtain:
—— Price economy, reliable operation

SZ series safety light curtain price is very favorable,Is the perfect solution for the protection of dangerous places and unilateral access protection, always help users to easily achieve security protection.

Combination of safety and efficiency

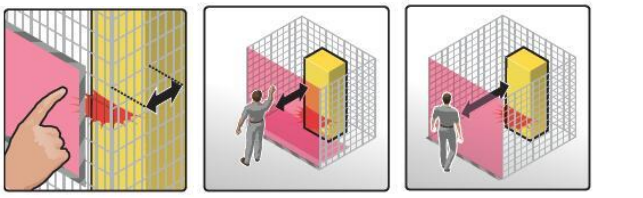
-- the best practical

In various industries, the cost-effective of SZ series safety light curtain day after day to ensure the safety of personnel, production machines and systems.

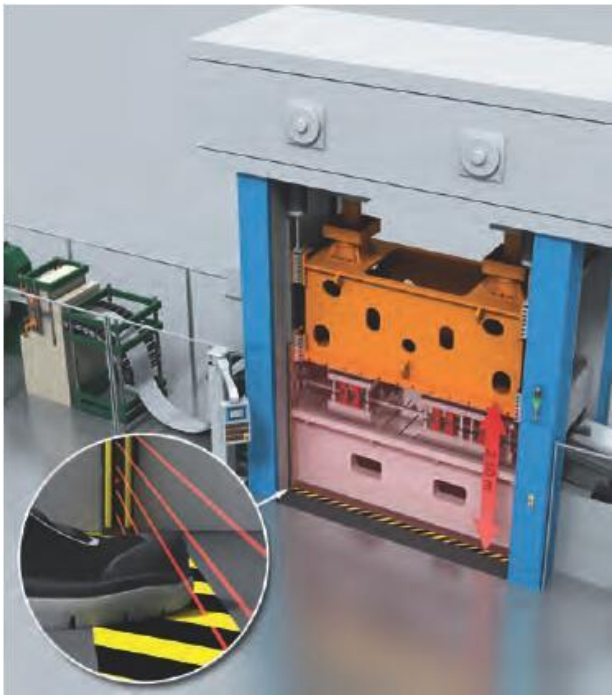
Typical applications include：

- Machine tool industry
- Punch industry
- Automobile manufacturing industry
- Carry and Storage system
- Welding equipment
- Consumer goods and packaging industry
- Area protection

SZ type safety light curtain is widely used in various security applications



Fingers&palms Arms and body Unilateral Getinto



Compact design for quick installation

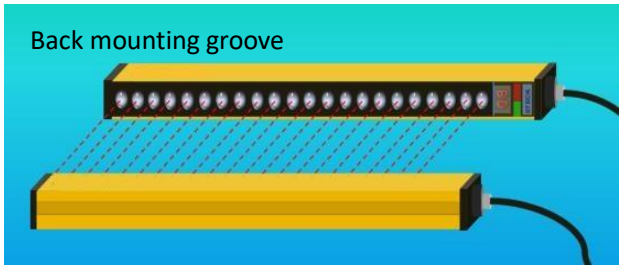
SZ series safety light curtain equipped with support system of innovation, through the integrated status indicator to realize rapid alignment and diagnosis, with remarkable characteristics of debugging and needs very little maintenance.

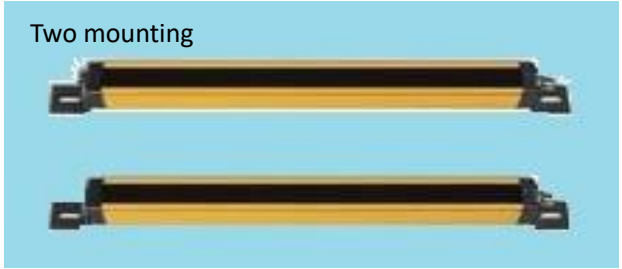
Only a few seconds to complete the installation and alignment

The SZ safety grating is positioned at different positions of the shell by the slot on the back or side of the shell, which greatly simplifies the alignment process. Therefore, users do not need to consider the specific location of the stent located on the shell can be easily installed.

Automatic distance function, to save time

The initial stage, the new "width of the protection zone on the automatic ranging" function is very useful. After Installation and alignment, SZ series safety light curtain can automatically measure the scanning range, do not need to configure in the best use of the state.





Efficient integration

——From planning to selection and installation

For extremely limited space: continuous protection area

The continuity of the protected area SZA series safety light curtain can be formed with high resolution,the protection covers the entire housing until the end of the housing,it can shorten the safety distance of machine integration.in addition, the protection zone height of up to 2000 mm.

SZA compact series

—— overview of technical specifications

•Level 2
• no blind area / blind area
• resolution: 10/15/20/30/40/60 mm
• protection zone height: 60 mm to 2000 mm
• in the protection zone width of the automatic ranging range of 5m
• ambient operating temperature: - 30 DEG C to +65 C
Enclosure protection class: IP 65
• M12 aviation plug

Solid shell

SZA series safety light curtain made of high strength aluminum as the shell, to ensure maximum safety light curtain bending and impact resisting ability.

SZE and XZYF type safety light curtain for Level 2 protection application

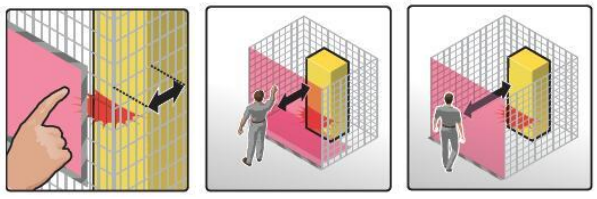
—— simple and safe operation

SZE and SZF positive light side light type safety light curtain is to show "model to protect the machine and operator of pure security" as the core concept of integrated protection, accurate personnel and machine operation personnel safety. Each of our product lines is designed for specific applications,and the environmental factors are fully considered.

Excellent safety, can meet the requirements of the protection level

According to the risk assessment, in PL c and/or SIL1 typical protection applications, should as far as possible to reduce the possibility of causing injuries or operator into the possibility. Common examples include assembly workstation, with a rotating table or mobile pallet loading system, testing equipment, as well as riveting and cement equipment.

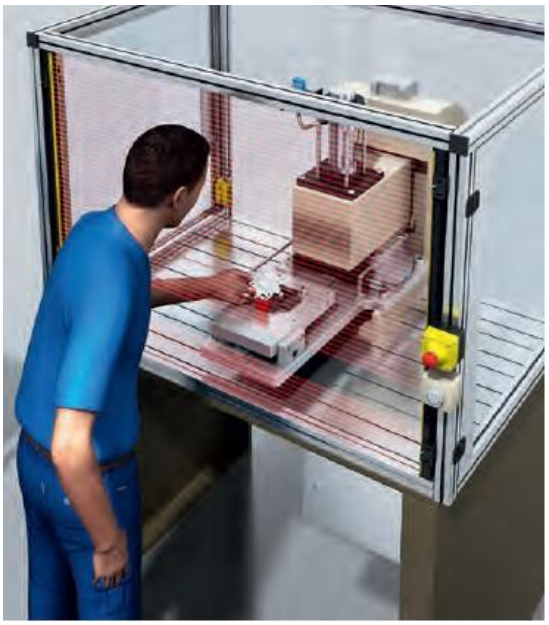
SZE/F type safety light curtain is widely used in various security applications



Fingers& palms Arms and body Unilateral Getinto

Typical applications include:

- Test equipment
- Food manufacturing
- Electronic equipment industry
- Hot stamping machine industry
- Pharmaceutical equipment industry



Daily use is very intuitive, durable

Just power: no need to set any security can be achieved, and the work and fault diagnosis is very fast

SZE/F type safety light curtain shape design with strong cleaning, ensure the products can meet the functional requirements. SZE/F type safety light curtain is specially designed for operation protection application,the utility model can start running immediately with the power supply, and does not need a large number of configuration work, and the detection range can be adjusted accurately according to the application needs. In addition, the safety curtain also has the following characteristics:

- Integrated alignment LED indicator can be used to quickly and accurately locate the transmitter and receiver at the best relative position;
- Be equipped with red / green LED lights, can clearly display the current working status of safety curtain.

SZE/F ultra thin series - technical specifications overview

- Level 2
- no blind area / blind area
- resolution: 10/15/20/30/40/60 mm
- protection zone height: 10 mm to 5000 mm
- in the protection zone width of the automatic ranging range of 3M
- ambient operating temperature: - 30 DEG C to +65 C
- Enclosure protection class: IP 65
- M12 aviation plug / direct outlet optional

Ultra-thin:

- **To save space**
- **The plug and play, easy to maintain**

Once and for all, let you no worries

Rapid debugging with LED indicator light

SZ series safety light curtain does not require pre configuration can achieve all the basic functions, and do not need to complete the software debugging process. In addition, some models are also equipped with integrated LED indicator and diagnostic functions, effectively reducing the debugging time.

Plug and play maintenance and replacement

SZ series safety light curtain not need to wiring configuration or fast maintenance. All products are designed with a simple stent design and standardized M12-4 pin plug technology, simplifying the replacement process of various equipment. In addition, the bright LED can continuously provide state information for all processes.

Solid shell for harsh production environments
—— IP69K Protection grade

A new design of shock resistant shell

SZH/K series safety light curtain ingenious combination of metal and synthetic resin component, the structure is extremely strong, so it can easily withstand strong impact, to ensure the safety of time.

No blind zone: flexible system integration

SZH/K series safety light curtain does not need to consider the support machine frame mounting point can determine the best position. Two products have the characteristics of no blind area and unique support design, to provide a high degree of flexibility for machine integration.

Safe and reliable, safety protection level up to IP 69K

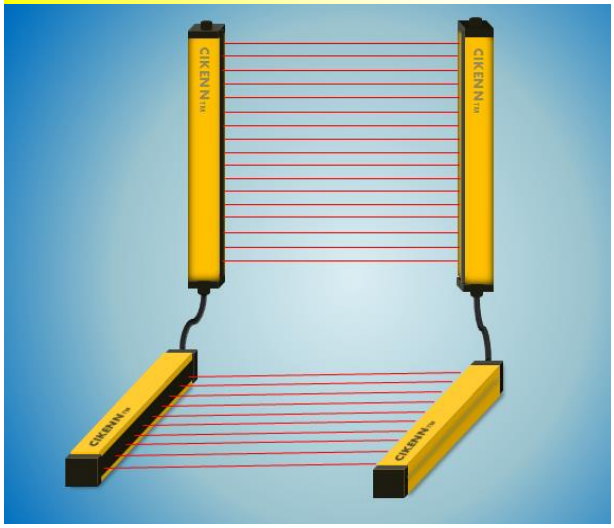
Can meet the safety light curtain IP 65 and IP67 protection grade, high availability, fully qualified applications under harsh environment.

Ambient operating temperature low - 30 C

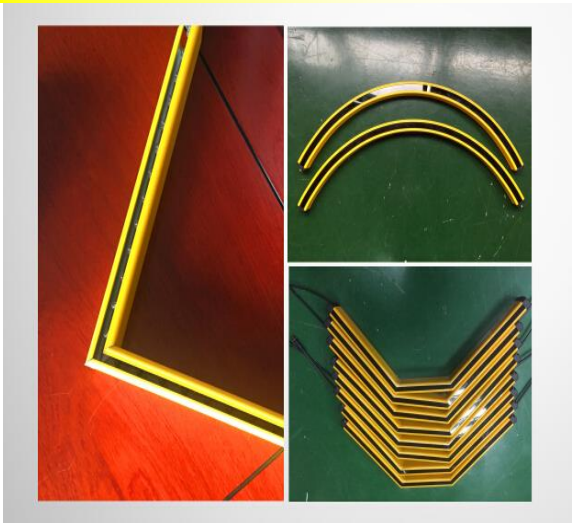
Safety environment operating temperature range of - 30 DEG C to +65 DEG C, it can keep the safety performance under a variety of conditions, with very high cost-effective no fault applied to frozen environment.

Customized products
—— to meet your different needs

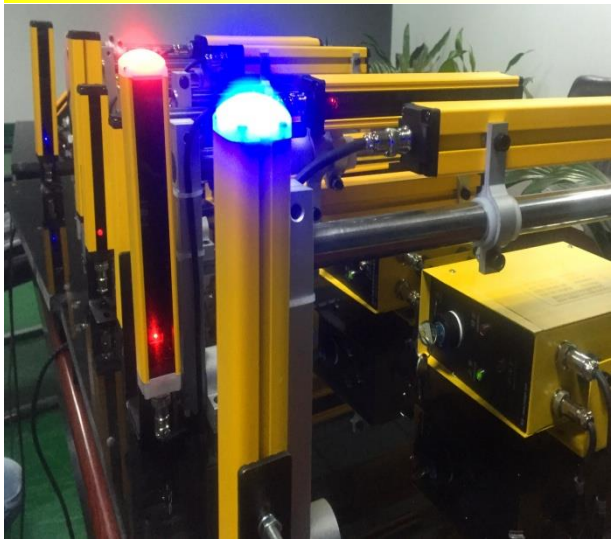
series connection



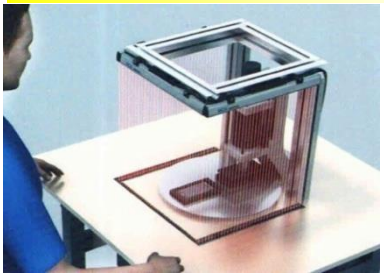
Special-shaped

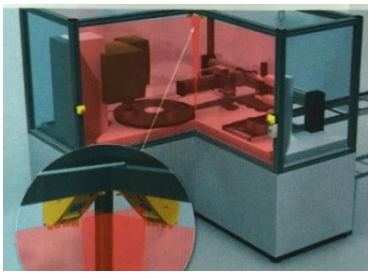


Head lamp



Type U and type V





More different shape safety light curtain, please contact our sales staff!

The typical application of safety light curtain

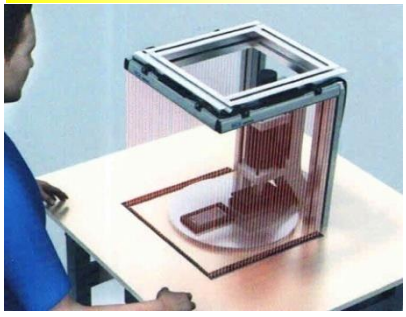
——A variety of occasions, a variety of applications

Rotary table with circular protection

Standard station

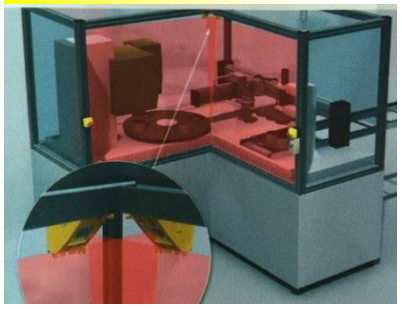
Rotary table

Type U station

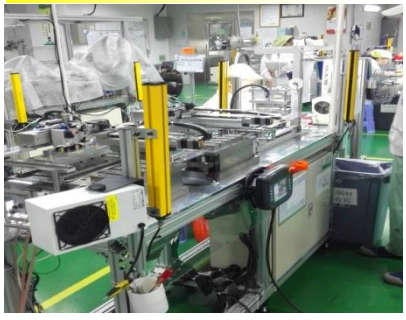


Minimum size V type station

Type V station



Area protection



Production line count

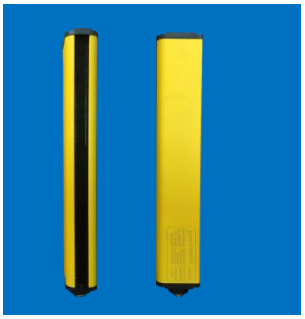
Punch safety protection

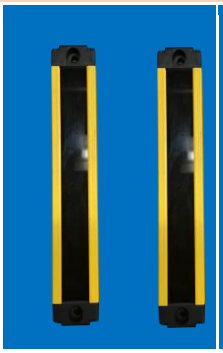
Standard machine protection

Bending machine safety protection

Safety protection of hot briquetting machine

Product parameters

Product physical picture				
Product type	SZA	SZB	SZC	SZD
Section size	29*26mm	29*30mm	35*35mm	35*50mm
Protection grade	IP65	IP65	IP66	IP65
Power	DC12V-36V±10%			
Response time	≤10ms			
Output	NPN/PNP/ Relay			
Sync type	Optical synchronization / Line synchronization			
Beam number	4-500			
Accuracy	10mm/15mm/20mm/40mm/60mm			
Protection height	60-2000mm	60-3000mm	60-5000mm	60-5000mm
Protection distance	0.1-1m 1-3m 1-5m	0.1-1m 1-3m 2-5m	0.1-1m 1-3m 2-5m2-10m 3-20m 5-30m	
Anti-interference ability	3000Lux			
Shape material	Aluminium alloy			
Circuit protection	Reverse protection / output short circuit protection			
Consumed power	3-8W			
working temperature	-15℃--65℃			
ambient temperature	20C,RH≤85%			
Product certification	CE			

Product physical picture				
Product type	SZE Ultra-thin positive light	SZF Ultra-thin side light	SZH-IP69KStandard type	SZK-IP69KRemote type
Section size	13*28mm	18*35mm	Outside diameter 37mm	Outside diameter 55mm
Protection grade	IP65		IP69K	
Power	DC12V-36V±10%			
Response time	≤10ms			
Output	NPN/PNP/Relay			
Sync type	Optical synchronization / Line synchronization			
Beam number	4-300 beam		4-500 beam	
Accuracy	10mm/15mm/20mm/40mm/60mm		5mm/10mm/15mm/20mm/40mm/60mm	
Protection height	60-2000mm	60-3000mm	60-4000mm	60-5000mm
Product type	0.1-1m 1-3m	0.1-1m 1-3m	0.1-1m 1-3m 1-5m	0.1-1m 1-3m 1-5m 2-10m 5-20m
Anti-interference ability	10000Lux			
Shape material	Aluminium alloy		Aluminum Alloy and acrylic	
Circuit protection	Reverse protection / output short circuit protection			
Consumed power	3-8W			
working temperature	-15℃--65℃			
ambient temperature	20C,RH≤85%			
Product certification	CE FCC			

Introduction and technical parameters of controller for punch press

The controller can be divided into two types: external and internal! This product is optional accessories!

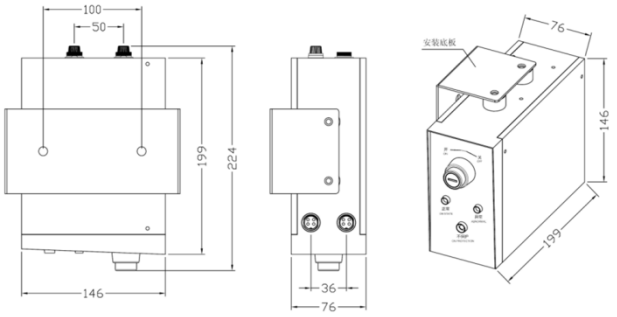
Mainly used in the forging industry, such as: punch, shears, bending machine, hydraulic machine etc..

P external controller

Metal external controller:

The choice of forging equipment, the power 110-380VAC.Rugged, mounted on the outside of the machine tool, all metal housing,

Can withstand the shock of the unique shock absorber design, so that the controller Longer life!

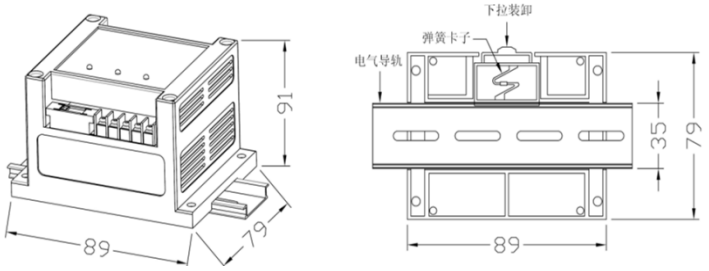


Q built-in controller

Plastic built-in controller:

Supply voltage:

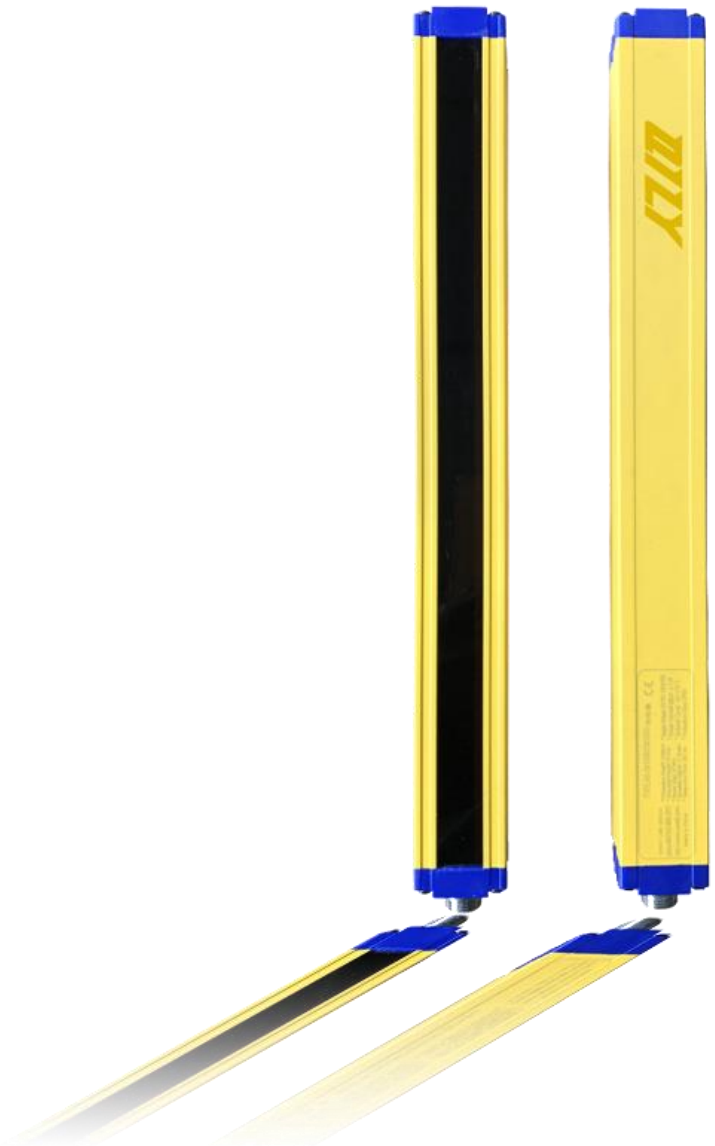
110-220VAC, fully functional,Compact, suitable for installation in the cabinet inside,Dual loop interlock relay signal output



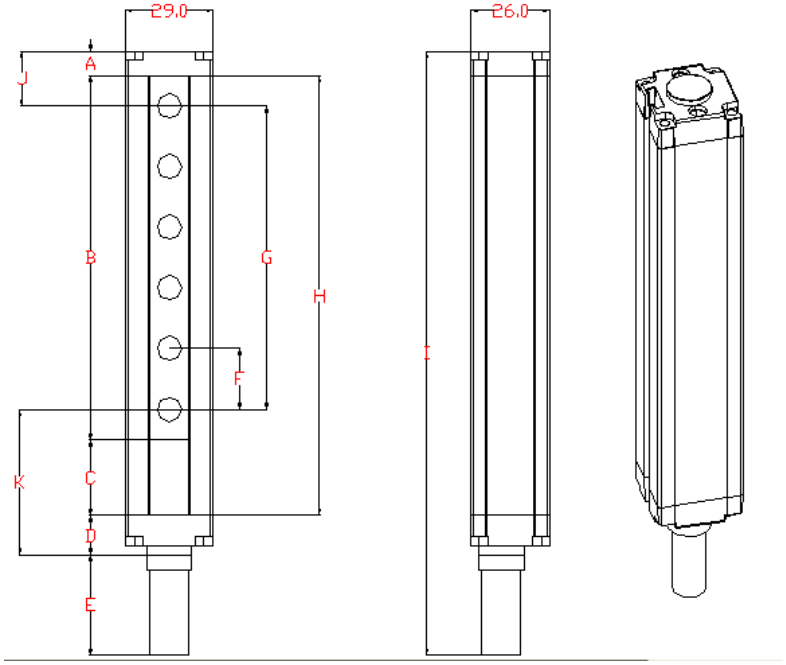
Type	SZ-P external controller	SZ-Q built-in controller
Protection function	Yes	
Key switch	Yes	No
Number of connected gratings	1 or 2 sets	
The protective function	Yes	
Optional raster specification	Section size : 35*35mm / 35*50mm	
Output	Normally open / normally closed relay signal	
Power	110V/220/380VAC	
working temperature	-25℃--65℃	
Circuit protection	Reverse protection / output short circuit protection	
Anti-interference ability	10000Lux	
Relay life	2 million times	
Consumed power	5W	

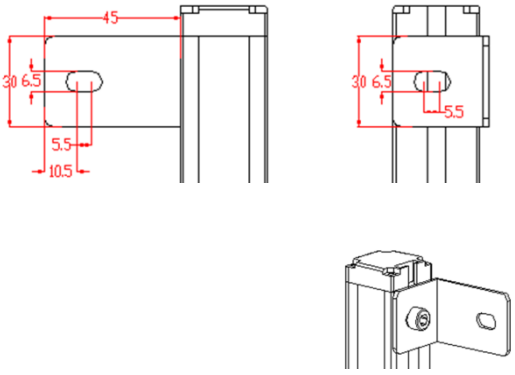
The safety light curtain size and Selection Guide

SZA series, cross section: 29*26mm



Design size





Calculation formula:

Protection height： G=(L-1)×F mm
Overall height：I=F x L+ 81 mm
Upper blind height：J=F÷2 + 8 mm
Lower blind height：K=F÷2 + 40 mm

Letter meaning:

A:Upper cover height 8mm B:Lamp plate length C:Control board length 27mm D:Lower cover height 13mm
E:Plug height 33mm F:Beam pitch G:Protection height H:Panel height I:Total height J:Upper blind height
K:Lower blind height L:Beams number

Selection Guide

SZA 20 10 N C T 03

- 03: Protection distance: 01=1m, 03=3m
- T: Installation: L type side mount bracket: mounting bracket
- C: Signal mode: C=normally closed, O=normally open
- N: Output：N = NPN P = PNP R = Relay
- 10: Resolution： 10, 15, 20, 30, 40, 60 mm
- 20: Beams number：4, 8, 10, 12, 16, 18 ……
- SZA: This series of screen fixed prefix

SZA series size table

SZA series 10mm Resolution		
Beams number	Protection height (mm)	Contour height (mm)
4	30	121
6	50	141
8	70	161
10	90	181
12	110	201
14	130	221
16	150	241
18	170	261
20	190	281
22	210	301
24	230	321
26	250	341
28	270	361
30	290	381
.....	.....	.....

SZA series 15mm Resolution		
Beams number	Protection height (mm)	Contour height (mm)
4	45	141
6	75	171
8	105	201
10	135	231
12	165	261
14	195	291
16	225	321
18	255	351
20	285	381
22	315	411
24	345	441
26	375	471
28	405	501
30	435	531
.....	.....	.....

SZA series 20mm Resolution		
Beams number	Protection height (mm)	Contour height (mm)
4	60	161
6	100	201
8	140	241
10	180	281
12	220	321
14	260	361
16	300	401
18	340	441
20	380	481
22	420	521
24	460	561
26	500	601
28	540	641
30	580	681
.....	.....	.....

SZA series 30mm Resolution		
Beams number	Protection height (mm)	Contour height (mm)
4	90	201
6	150	261
8	210	321
10	270	381
12	330	441
14	390	501
16	450	561
18	510	621
20	570	681
22	630	741
24	690	801
26	750	861
28	810	921
30	870	981
32	930	1041
.....	.....	.....

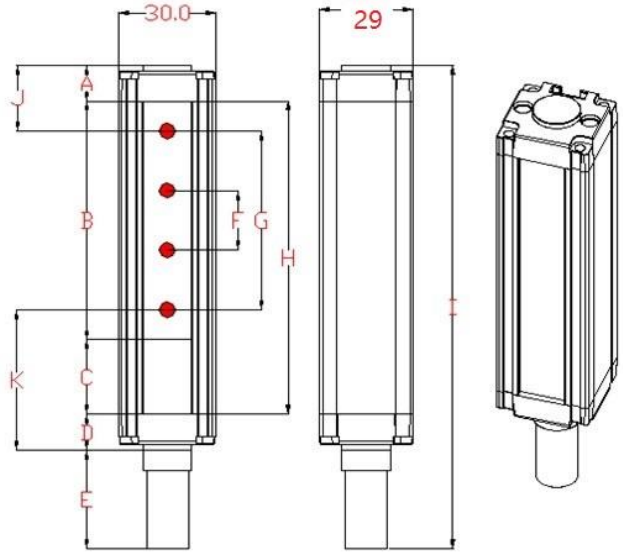
SZA series 40mm Resolution		
Beams number	Protection height (mm)	Contour height (mm)
4	120	241
6	200	321
8	280	401
10	360	481
12	440	561
14	520	641
16	600	721
18	680	801
20	760	881
22	840	961
24	920	1041
26	1000	1121
28	1080	1201
30	1160	1281
32	1240	1361
.....	.....	.....

SZA series 60mm Resolution		
Beams number	Protection height (mm)	Contour height (mm)
4	180	321
6	300	441
8	420	561
10	540	681
12	660	801
14	780	921
16	900	1041
18	1020	1161
20	1140	1281
22	1260	1401
24	1380	1521
26	1500	1641
28	1620	1761
30	1740	1881
32	1860	2001
.....	.....	.....

The safety light curtain size and Selection Guide

SZB series cross section: 29*30mm, head with indicator light

Design size



Note: there are two sizes in this series, please confirm with the company's salesman when selecting.

Calculation formula:

Protection height: G=(L-1)×F mm
Overall height: I=F x L+ 84(or70) mm
Upper blind height: J=F÷2 + 14 mm
Lower blind height: K=F÷2 + 55 mm

Letter meaning:

A: Upper cover height 14mm B: Lamp plate length C: Control board length 13or27mm D: Lower cover height 15mm E: Plug height 33mm F: Beam pitch G: Protection height H: Panel height I: Total height J: Upper blind height K: Lower blind height L: Beams number

Selection Guide

SZB - 20 10 N C T 03 X

- X: Sync mode: X-line sync; G-optical sync
- 03: Protection distance:01=1m, 03=3m, 05=5m
- T: Installation: L type side mount bracket, T: steel pipe bracket
- C: Signal mode: C=normally closed, O=normally open
- N: Output: N = NPN, P = PNP, R = relay, W = NPN/PNP Double
- 10: Resolution: 10, 15, 20, 30, 40, 60mm
- 20: Beams number: 4, 8, 10, 12, 16, 18 ……
- SZB: This series of screen fixed prefix

SZB series size table

SZB series 10mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	30	129
6	50	149
8	70	169
10	90	189
12	110	209
14	130	229
16	150	249
18	170	269
20	190	289
22	210	309
24	230	329
26	250	349
28	270	369
30	290	389
32	310	409
.....	.....	.....

SZB series 15mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	45	149
6	75	179
8	105	209
10	135	239
12	165	269
14	195	299
16	225	329
18	255	359
20	285	389
22	315	419
24	345	449
26	375	479
28	405	509
30	435	539
32	465	569
.....	.....	.....

SZB series 20mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	60	169
6	100	209
8	140	249
10	180	289
12	220	329
14	260	369
16	300	409
18	340	449
20	380	489
22	420	529
24	460	569
26	500	609
28	540	649
30	580	689
32	620	729
.....	.....	.....

SZB series 20mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	90	209
6	150	269
8	210	329
10	270	389
12	330	449
14	390	509
16	450	569
18	510	629
20	570	689
22	630	749
24	690	809
26	750	869
28	810	929
30	870	989
32	930	1049
.....	.....	.....

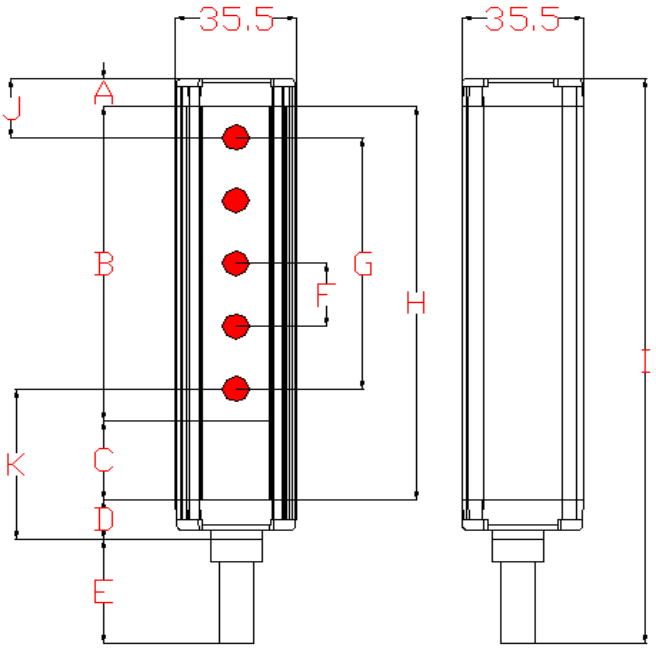
SZB series 40mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	120	249
6	200	329
8	280	409
10	360	489
12	440	569
14	520	649
16	600	729
18	680	809
20	760	889
22	840	969
24	920	1049
26	1000	1129
28	1080	1209
30	1160	1289
32	1240	1369
.....	.....	.....

SZB series 60mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	180	329
6	300	449
8	420	569
10	540	689
12	660	809
14	780	929
16	900	1049
18	1020	1169
20	1140	1289
22	1260	1409
24	1380	1529
26	1500	1649
28	1620	1769
30	1740	1889
32	1860	2009
.....	.....	.....

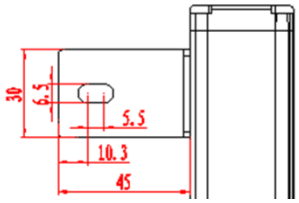
The safety light curtain size and Selection Guide

SZC series cross section: 35*35mm

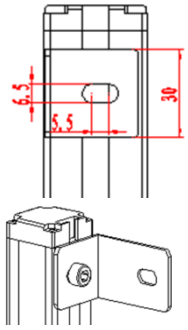
Design size



L型安装支架尺寸图（右）



L型安装支架
尺寸图（右）



Calculation formula:

Protection height： G=(L-1)×F mm
Overall height：I=F x L+ 82 mm
Upper blind height：J=F÷2 + 9 mm
Lower blind height：K=F÷2 + 40 mm

Letter meaning:

A:Upper cover height 9mm B:Lamp plate length C:Control board length 27mm D:Lower cover height 13mm
E:Plug height 33mm F:Beam pitch G:Protection height H:Panel height I:Total height J:Upper blind height
K:Lower blind height L:Beams number

Selection Guide

SZC - 20 10 N C T 03 X

- X: Sync mode: X-line sync; G-optical sync
- 03: Protection distance:01=1, 03=3, 05=5, 10=10, 30=30m
- T: Installation: L type side mount bracket, T: steel pipe bracket
- C: Signal mode: C=normally closed, O=normally open
- N: Output： N = NPN, P = PNP, R =relay, W = NPN/PNP double
- 10: Resolution： 10, 15, 20, 30, 40, 60 mm
- 20: Beams number： 4, 6, 8, 10, 12, 14, 16 ……
- SZC: This series of screen fixed prefix

SZC series size table

SZC series 10mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	30	122
6	50	142
8	70	162
10	90	182
12	110	202
14	130	222
16	150	242
18	170	262
20	190	282
22	210	302
24	230	322
26	250	342
28	270	362
30	290	382
32	310	402
……	……	……

SZC series 15mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	45	142
6	75	172
8	105	202
10	135	232
12	165	262
14	195	292
16	225	322
18	255	352
20	285	382
22	315	412
24	345	442
26	375	472
28	405	502
30	435	532
32	465	562
……	……	……

SZC series 20mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	60	162
6	100	202
8	140	242
10	180	282
12	220	322
14	260	362
16	300	402
18	340	442
20	380	482
22	420	522
24	460	562
26	500	602
28	540	642
30	580	682
32	620	722
……	……	……

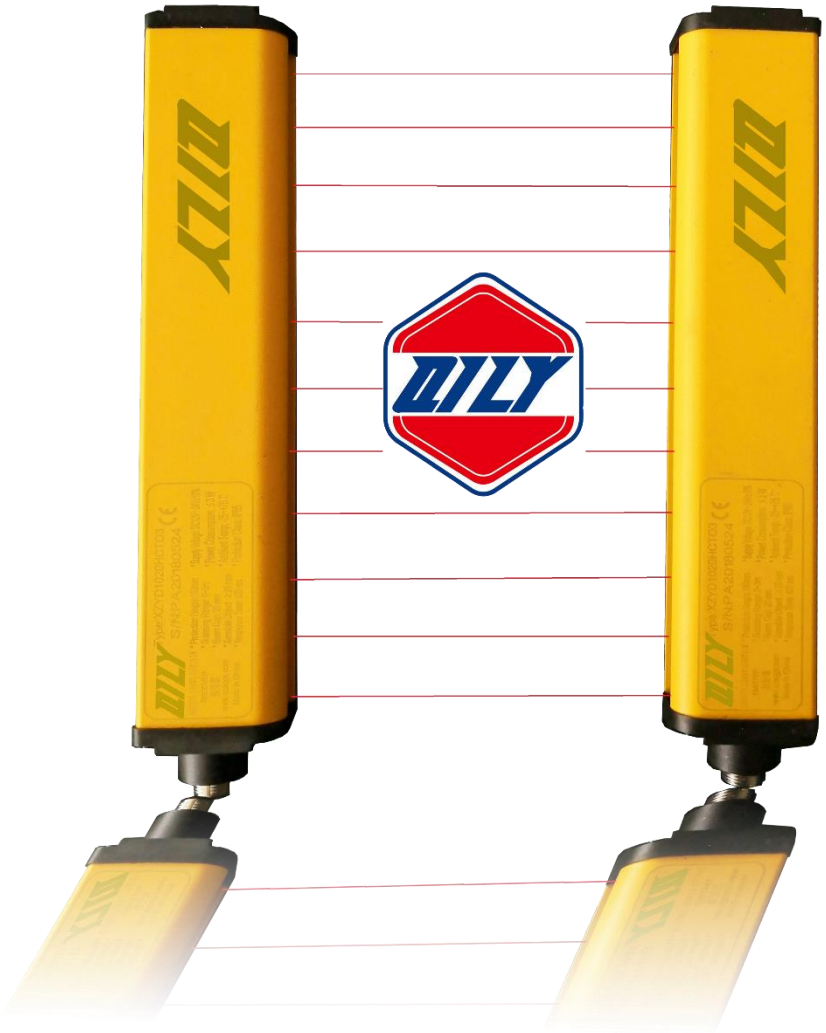
SZC series 30mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	90	202
6	150	262
8	210	322
10	270	382
12	330	442
14	390	502
16	450	562
18	510	622
20	570	682
22	630	742
24	690	802
26	750	862
28	810	922
30	870	982
32	930	1042
……	……	……

SZC series 40mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	120	242
6	200	322
8	280	402
10	360	482
12	440	562
14	520	642
16	600	722
18	680	802
20	760	882
22	840	962
24	920	1042
26	1000	1122
28	1080	1202
30	1160	1282
32	1240	1362
……	……	……

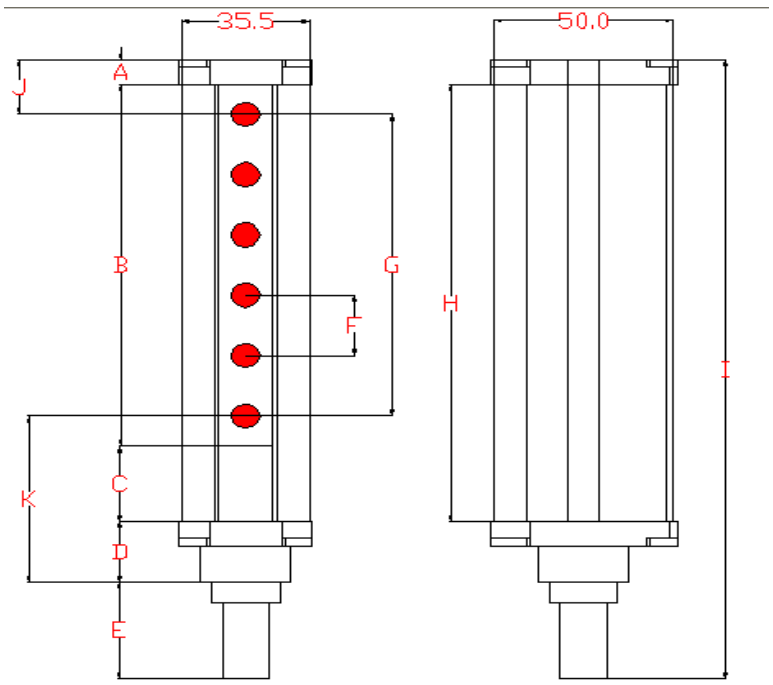
SZC series 60mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	180	322
6	300	442
8	420	562
10	540	682
12	660	802
14	780	922
16	900	1042
18	1020	1162
20	1140	1282
22	1260	1402
24	1380	1522
26	1500	1642
28	1620	1762
30	1740	1882
32	1860	2002
……	……	……

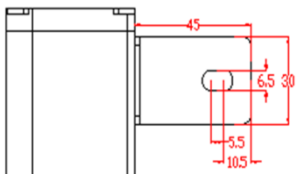
The safety light curtain size and Selection Guide

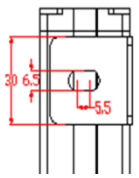
SZD series cross section:35*50mm



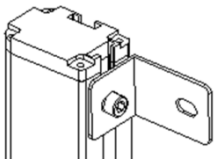
Design size







L mounting bracket size figure



Calculation formula:

Protection height： G=(L-1)×F mm

Overall height：I=F x L+ 87 mm

Upper blind height：J=F÷2 + 8 mm

Lower blind height：K=F÷2 + 47 mm

Letter meaning:

A:Upper cover height 8mm B:Lamp plate length C:Control board length 27mm D:Lower cover height 20mm E:Plug height 32mm F:Beam pitch G:Protection height H:Panel height I:Total height J:Upper blind height K:Lower blind height L:Beams number

Selection Guide

SZD 20 10 N C T 03 X

- X: Sync mode: X-line sync; G-optical sync
- 03: Protection distance: 01=1, 03=3, 05=5m, 10=10m, 30=30m
- T: Installation: L type side mount bracket, T: steel pipe bracket
- C: Signal mode: C=normally closed, O=normally open
- N: Output：N = NPN, P = PNP, R = relay, H = AC220V External controller; K = AC220V External Dual channel controller;L = AC380V External Dual channel controller
- 10: Resolution：10, 15, 20, 30, 40, 60 mm
- 20: Beams number：4, 6, 8, 10, 12, 14, 16, 18 ……
- SZD: This series of screen fixed prefix

SZD series size table

SZD series 10mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	30	127
6	50	147
8	70	167
10	90	187
12	110	207
14	130	227
16	150	247
18	170	267
20	190	287
22	210	307
24	230	327
26	250	347
28	270	367
30	290	387
32	310	407
.....	.....	.....

SZD series 15mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	45	147
6	75	177
8	105	207
10	135	237
12	165	267
14	195	297
16	225	327
18	255	357
20	285	387
22	315	417
24	345	447
26	375	477
28	405	507
30	435	537
32	465	567
.....	.....	.....

SZD series 20mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	60	167
6	100	207
8	140	247
10	180	287
12	220	327
14	260	367
16	300	407
18	340	447
20	380	487
22	420	527
24	460	567
26	500	607
28	540	647
30	580	687
32	620	727
.....	.....	.....

SZD series 30mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	90	207
6	150	267
8	210	327
10	270	387
12	330	447
14	390	507
16	450	567
18	510	627
20	570	687
22	630	747
24	690	807
26	750	867
28	810	927
30	870	987
32	930	1047
.....	.....	.....

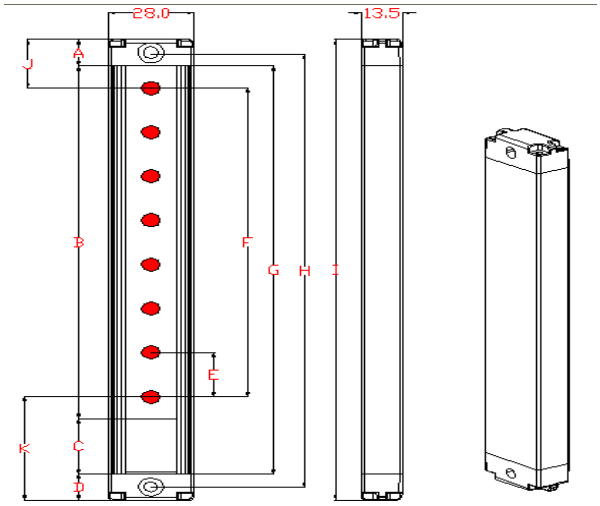
SZD series 40mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	120	247
6	200	327
8	280	407
10	360	487
12	440	567
14	520	647
16	600	727
18	680	807
20	760	887
22	840	967
24	920	1047
26	1000	1127
28	1080	1207
30	1160	1287
32	1240	1367
.....	.....	.....

SZD series 60mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	180	327
6	300	447
8	420	567
10	540	687
12	660	807
14	780	927
16	900	1047
18	1020	1167
20	1140	1287
22	1260	1407
24	1380	1527
26	1500	1647
28	1620	1767
30	1740	1887
32	1860	2007
.....	.....	.....

The safety light curtain size and Selection Guide

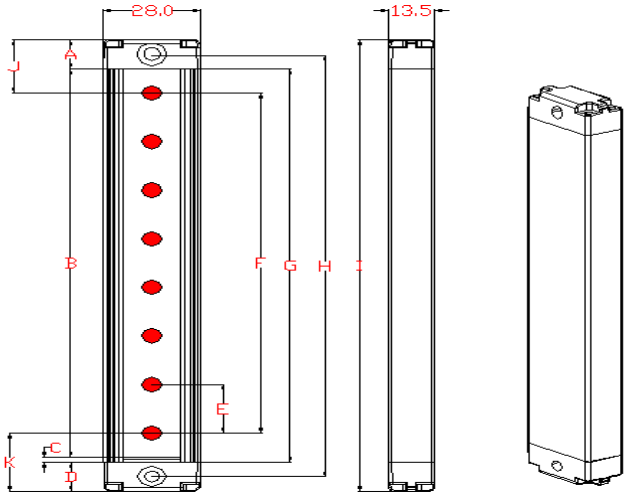
SZE series cross section:28*13mm——Positive light ultra-thin

Design size



Letter meaning:

A：Upper cover height 12mm B：Lamp plate length C：Control board length 27mm D：Lower cover height 12mm E：Plug height 32mm F：Beam pitch G：Protection height H：Center distance of mounting hole I：Total height J：Upper blind height K：Lower blind height L：Beams number



Letter meaning:

A：Upper cover height 12mm B：Lamp plate length C：surplus length 2mm D：Lower cover height 12mm E：Plug height 32mm F：Beam pitch G：Protection height H：Center distance of mounting hole I：Total height J：Upper blind height K：Lower blind height L：Beams number

Protection height： F=(L-1)×E mm Overall height： I=E x L+ 51 mm(No blind spot is 26mm)

Upper blind height：J=E÷2 + 12 mm Lower blind height：K=E÷2 + 39 mm(No blind spot is 14mm)

Selection Guide

SZE 20 10 N C Z 01 X M

- M: No blind area;Not selected: commonly used
- Sync mode: X-line sync; G-optical sync
- Protection distance: 01=1, 03=3 m
- Installation: Z = Own mounting hole
- Signal mode: C=normally closed, O=normally open
- Output：N = NPN, P = PNP, R = relay, W = NPN/PNP Double
- Resolution：10, 15, 20, 30, 40, 60 mm
- Beams number：4, 6, 8, 10, 12, 14, 16, 18 ……
- This series of screen fixed prefix

SZE series size table

SZE series 10mm Resolution			
Beams number	Protection height(mm)	Total height-no blind area(mm)	Total height-blind area(mm)
4	30	66	91
6	50	86	111
8	70	106	131
10	90	126	151
12	110	146	171
14	130	166	191
16	150	186	211
18	170	206	231
20	190	226	251
22	210	246	271
24	230	266	291
26	250	286	311
28	270	306	331
.....	.....	.....	.....

SZE series 15mm Resolution			
Beams number	Protection height(mm)	Total height-no blind area(mm)	Total height-blind area(mm)
4	45	86	111
6	75	116	141
8	105	146	171
10	135	176	201
12	165	206	231
14	195	236	261
16	225	266	291
18	255	296	321
20	285	326	351
22	315	356	381
24	345	386	411
26	375	416	441
28	405	446	471
.....	.....	.....	.....

SZE series 20mm Resolution			
Beams number	Protection height(mm)	Total height-no blind area(mm)	Total height-blind area(mm)
4	60	106	131
6	100	146	171
8	140	186	211
10	180	226	251
12	220	266	291
14	260	306	331
16	300	346	371
18	340	386	411
20	380	426	451
22	420	466	491
24	460	506	531
26	500	546	571
28	540	586	611
.....	.....	.....	.....

SZE series 30mm Resolution			
Beams number	Protection height(mm)	Total height-no blind area(mm)	Total height-blind area(mm)
4	90	146	171
6	150	206	231
8	210	266	291
10	270	326	351
12	330	386	411
14	390	446	471
16	450	506	531
18	510	566	591
20	570	626	651
22	630	686	711
24	690	746	771
26	750	806	831
28	810	866	891
.....	.....	.....	.....

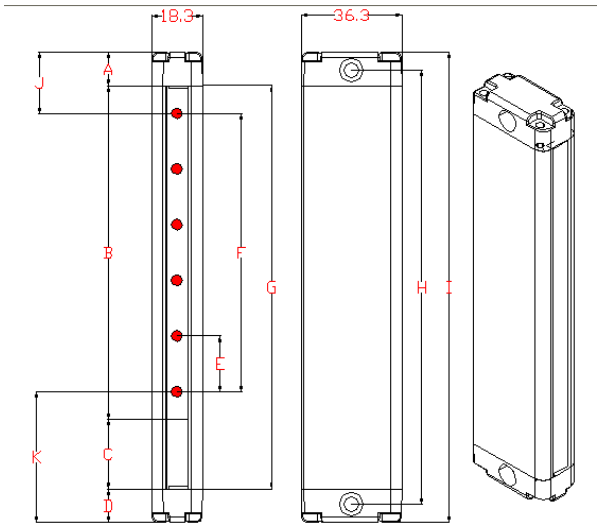
SZE series 40mm Resolution			
Beams number	Protection height(mm)	Total height-no blind area(mm)	Total height-blind area(mm)
4	120	186	211
6	200	266	291
8	280	346	371
10	360	426	451
12	440	506	531
14	520	586	611
16	600	666	691
18	680	746	771
20	760	826	851
22	840	906	931
24	920	986	1011
26	1000	1066	1091
28	1080	1146	1171
.....	.....	.....	.....

SZE series 60mm Resolution			
Beams number	Protection height(mm)	Total height-no blind area(mm)	Total height-blind area(mm)
4	180	266	291
6	300	386	411
8	420	506	531
10	540	626	651
12	660	746	771
14	780	866	891
16	900	986	1011
18	1020	1106	1131
20	1140	1226	1251
22	1260	1346	1371
24	1380	1466	1491
26	1500	1586	1611
28	1620	1706	1731
.....	.....	.....	.....

The safety light curtain size and Selection Guide

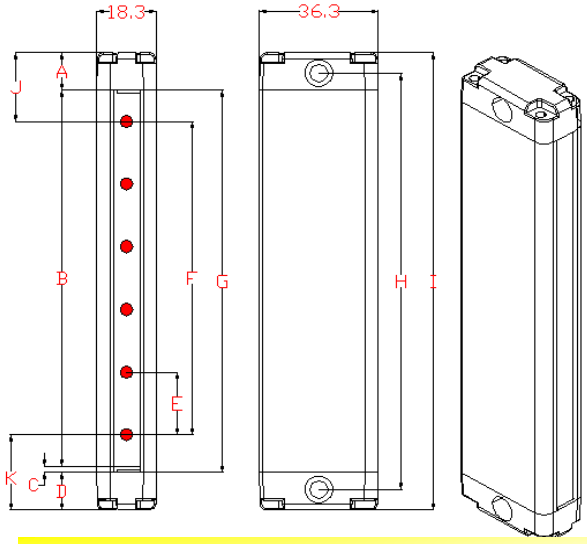
SZF series cross section:18*35mm——Side light ultra-thin

Design size



Letter meaning:

A：Upper cover height 12mm B：Lamp plate length C：Control board length 27mm D：Lower cover height 12mm E：Plug height 32mm F：Beam pitch G：Protection height H：Center distance of mounting hole I：Total height J：Upper blind height K：Lower blind height L：Beams number



Letter meaning:

A：Upper cover height 12mm B：Lamp plate length C：surplus length 2mm D：Lower cover height 12mm E：Plug height 32mm F：Beam pitch G：Protection height H：Center distance of mounting hole I：Total height J：Upper blind height K：Lower blind height L：Beams number

Protection height： F=(L-1)×E mm Overall height：I=E x L+ 51 mm(No blind spot is 26mm)

Upper blind height：J=E÷2 + 12 mm Lower blind height：K=E÷2 + 39 mm(No blind spot is 14mm)

Selection Guide

SZF 20 10 N C Z 01 X M

- M: No blind area;Not selected: commonly used
- Sync mode: X-line sync; G-optical sync
- Protection distance:01=1,03=3 m
- Installation: Z = Own mounting hole
- Signal mode: C=normally closed, O=normally open
- Output：N = NPN,P = PNP,R = relay,W = NPN/PNP Double
- Resolution：10,15,20,40,60 mm
- Beams number：4,6,8,10,12,14,16,18 ……
- This series of screen fixed prefix

SZF series size table

SZF series 10mm Resolution			
Beams number	Protection height(mm)	Total height-no blind area	Total height-blind area(mm)
4	30	66	91
6	50	86	111
8	70	106	131
10	90	126	151
12	110	146	171
14	130	166	191
16	150	186	211
18	170	206	231
20	190	226	251
22	210	246	271
24	230	266	291
26	250	286	311
.....	.....	.....	.....

SZF series 15mm Resolution			
Beams number	Protection height(mm)	Total height-no blind area	Total height-blind area(mm)
4	45	86	111
6	75	116	141
8	105	146	171
10	135	176	201
12	165	206	231
14	195	236	261
16	225	266	291
18	255	296	321
20	285	326	351
22	315	356	381
24	345	386	411
26	375	416	441
.....	.....	.....	.....

SZF series 20mm Resolution			
Beams number	Protection height(mm)	Total height-no blind area	Total height-blind area(mm)
4	60	106	131
6	100	146	171
8	140	186	211
10	180	226	251
12	220	266	291
14	260	306	331
16	300	346	371
18	340	386	411
20	380	426	451
22	420	466	491
24	460	506	531
26	500	546	571
.....	.....	.....	.....

SZF series 30mm Resolution			
Beams number	Protection height(mm)	Total height-no blind area(mm)	Total height-blind area(mm)
4	90	146	171
6	150	206	231
8	210	266	291
10	270	326	351
12	330	386	411
14	390	446	471
16	450	506	531
18	510	566	591
20	570	626	651
22	630	686	711
24	690	746	771
.....	.....	.....	.....

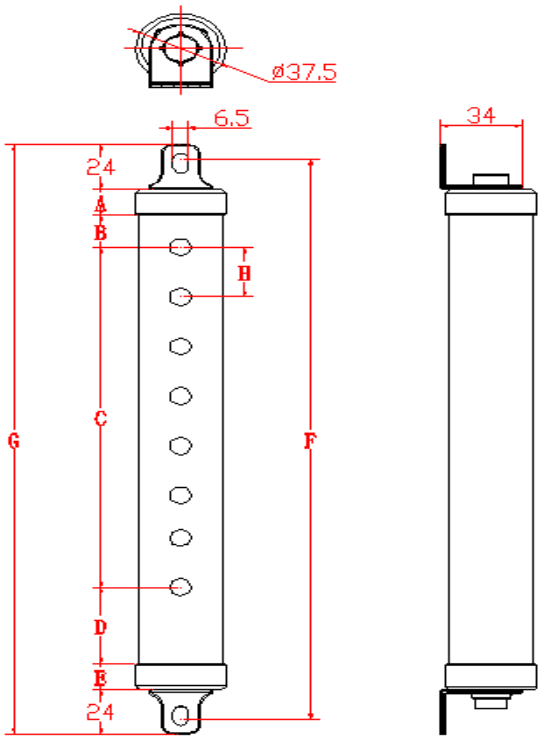
SZF series 40mm Resolution			
Beams number	Protection height(mm)	Total height-no blind area(mm)	Total height-blind area(mm)
4	120	186	211
6	200	266	291
8	280	346	371
10	360	426	451
12	440	506	531
14	520	586	611
16	600	666	691
18	680	746	771
20	760	826	851
22	840	906	931
24	920	986	1011
.....	.....	.....	.....

SZF series 60mm Resolution			
Beams number	Protection height(mm)	Total height-no blind area(mm)	Total height-blind area(mm)
4	180	266	291
6	300	386	411
8	420	506	531
10	540	626	651
12	660	746	771
14	780	866	891
16	900	986	1011
18	1020	1106	1131
20	1140	1226	1251
22	1260	1346	1371
24	1380	1466	1491
.....	.....	.....	.....

The safety light curtain size and Selection Guide

SZH series cross section: Ø37mm——IP69K waterproof

Design size



This type of products using reinforcement waterproof shell, protection grade reaches IP69K, suitable for use in harsh environment.
Prevent water and dust from entering the product leading to short circuit fire and other dangerous situations.
IP69K protection level is often used for cleaning and washing, such as brewery, car wash, food and beverage production and processing.

Calculation formula:

Protection height： C=(K-1)×H mm
Overall height：G=C+(H÷2)+ 104 mm
Upper blind height：I=A+B+24= H÷2+38 mm
Lower blind height：J=D+E+24=66 mm

Letter meaning:

A:Upper cover height 14mm B:Upper circuit board blank C:Protection height D:Control board length 30mm E:Lower cover height 12mm F:Center distance of mounting hole G:Total height H:Beam pitch I:Upper blind height J:Lower blind height K:Beams number

Selection Guide

SZH – 20 10 N C Z 01 X

- X: Sync mode: X-line sync; G-optical sync
- 01: Protection distance: 01=1, 03=3 m
- Z: Installation: Z =both ends
- C: Signal mode: C=normally closed, O=normally open
- N: Output：N = NPN, P = PNP, R =relay, W = NPN&PNPdouble
- 10: Resolution：10, 15, 20, 30, 40, 60 mm
- 20: Beams number：4, 6, 8, 10, 12, 14, 16, 18 ……
- SZH: This series of screen fixed prefix

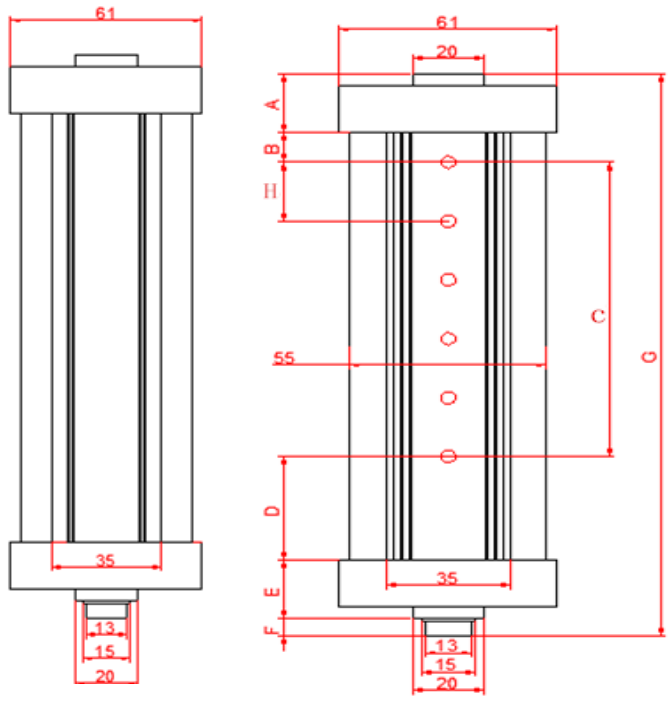
SZH series size table

SZH series 10mm Resolution				SZH series 15mm Resolution				SZH series 20mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)		Beams number	Protection height(mm)	Contour height(mm)		Beams number	Protection height(mm)	Contour height(mm)
4	30	144		4	45	164		4	60	184
6	50	164		6	75	194		6	100	224
8	70	184		8	105	224		8	140	264
10	90	204		10	135	254		10	180	304
12	110	224		12	165	284		12	220	344
14	130	244		14	195	314		14	260	384
16	150	264		16	225	344		16	300	424
18	170	284		18	255	374		18	340	464
20	190	304		20	285	404		20	380	504
22	210	324		22	315	434		22	420	544
24	230	344		24	345	464		24	460	584
26	250	364		26	375	494		26	500	624
28	270	384		28	405	524		28	540	664
30	290	404		30	435	554		30	580	704
32	310	424		32	465	584		32	620	744
……	……	……		……	……	……		……	……	……
SZH series 30mm Resolution				SZH series 40mm Resolution				SZH series 60mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)		Beams number	Protection height(mm)	Contour height(mm)		Beams number	Protection height(mm)	Contour height(mm)
4	90	224		4	120	264		4	180	344
6	150	284		6	200	344		6	300	464
8	210	344		8	280	424		8	420	584
10	270	404		10	360	504		10	540	704
12	330	464		12	440	584		12	660	824
14	390	524		14	520	664		14	780	944
16	450	584		16	600	744		16	900	1064
18	510	644		18	680	824		18	1020	1184
20	570	704		20	760	904		20	1140	1304
22	630	764		22	840	984		22	1260	1424
24	690	824		24	920	1064		24	1380	1544
26	750	884		26	1000	1144		26	1500	1664
28	810	944		28	1080	1224		28	1620	1784
30	870	1004		30	1160	1304		30	1740	1904
32	930	1064		32	1240	1384		32	1860	2024
……	……	……		……	……	……		……	……	……

The safety light curtain size and Selection Guide

SZK series cross section:Ø55mm———IP69K waterproof, remote

Design size



This type of products using reinforcement waterproof shell, protection grade reaches IP69K, suitable for use in harsh environment.

Prevent water and dust from entering the product leading to short circuit fire and other dangerous situations.

IP69K protection level is often used for cleaning and washing, such as brewery, car wash, food and beverage production and processing.

Calculation formula:

Protection height： C=(K-1)×H mm

Overall height：G=C+(H÷2)+ 76 mm

Upper blind height：I= H÷2+22 mm

Lower blind heigh：J=D+E+F=56 mm

Letter meaning:

A:Upper cover height 20mm B:Upper circuit board blank C:Protection height D:Control board length 30mm E:Lower cover height 20mm F:Plug height 6mm G:Total height H:Beam pitch I:Upper blind height J:Lower blind height K:Beams number

Selection Guide

SZK – 20 10 N C Z 01 X

- X: Sync mode: X-line sync; G-optical sync
- 01: Protection distance: 01=1, 03=3, 05=5, 10=10, 30=30m
- Z: Installation: Z =both ends
- C: Signal mode: C=normally closed, O=normally open
- N: Output：N = NPN, P = PNP, R =relay, W = NPN&PNP double
- 10: Resolution：10, 15, 20, 30, 40, 60 mm
- 20: Beams number：4, 6, 8, 10, 12, 14, 16, 18 ……
- SZK: This series of screen fixed prefix

SZH series size table

SZK series 10mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	30	116
6	50	136
8	70	156
10	90	176
12	110	196
14	130	216
16	150	236
18	170	256
20	190	276
22	210	296
24	230	316
26	250	336
28	270	356
30	290	376
32	310	396
……	……	……

SZK series 15mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	45	136
6	75	166
8	105	196
10	135	226
12	165	256
14	195	286
16	225	316
18	255	346
20	285	376
22	315	406
24	345	436
26	375	466
28	405	496
30	435	526
32	465	556
……	……	……

SZK series 20mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	60	156
6	100	196
8	140	236
10	180	276
12	220	316
14	260	356
16	300	396
18	340	436
20	380	476
22	420	516
24	460	556
26	500	596
28	540	636
30	580	676
32	620	716
……	……	……

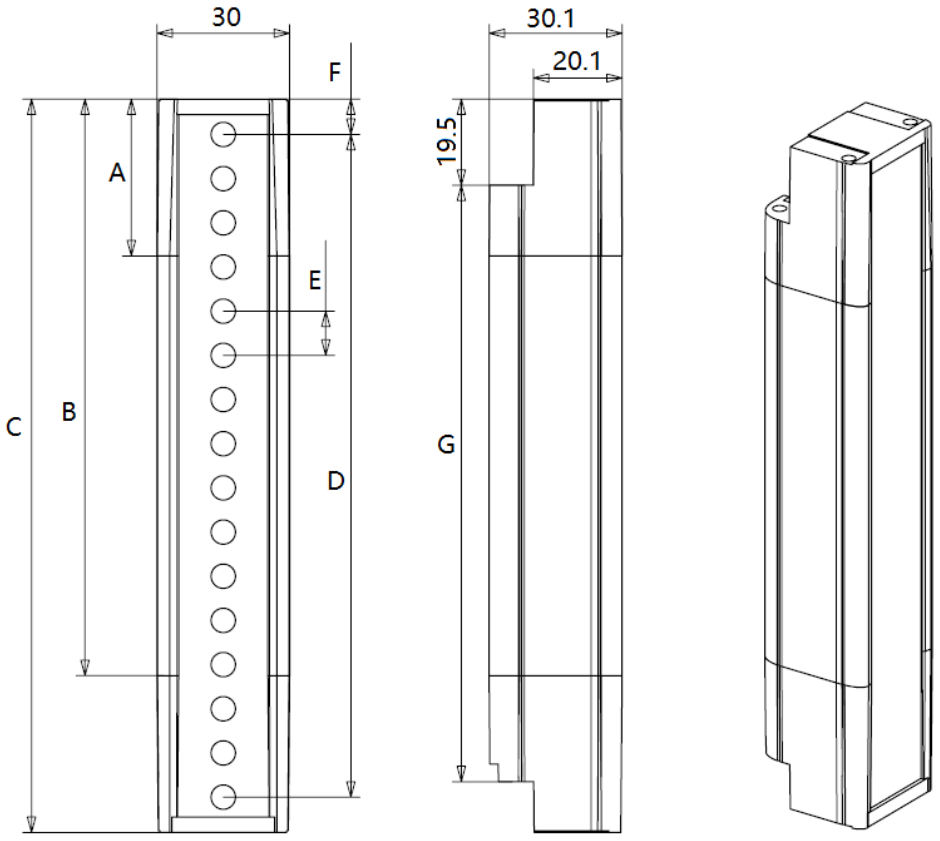
SZK series 30mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	90	196
6	150	256
8	210	316
10	270	376
12	330	436
14	390	496
16	450	556
18	510	616
20	570	676
22	630	736
24	690	796
26	750	856
28	810	916
30	870	976
32	930	1036
……	……	……

SZK series 40mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	120	236
6	200	316
8	280	396
10	360	476
12	440	556
14	520	636
16	600	716
18	680	796
20	760	876
22	840	956
24	920	1036
26	1000	1116
28	1080	1196
30	1160	1276
32	1240	1356
……	……	……

SZK series 60mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	180	316
6	300	436
8	420	556
10	540	676
12	660	796
14	780	916
16	900	1036
18	1020	1156
20	1140	1276
22	1260	1396
24	1380	1516
26	1500	1636
28	1620	1756
30	1740	1876
32	1860	1996
……	……	……

SZI series, cross section:30*30mm——No blind zone type

Design size:



Letter meaning:

A:End cover height 35.5mm C: Total length D: Protective height E: Beam pitch L: Number of optical beam

Calculation formula of protection height： D=(L-1)×E mm

Calculation formula of total height：C=E x L+E/2+6 mm

Selection Guide

SZI - 20 10 N C Z A X

- X — Synch mode: G- Optical sync
- A — Installation distance: A=0.2-1,B=1-3 m,C=5-10m
- Z — Installation method: Z = Back installation
- C — Signal mode：C=NC , O=NO
- N — Output：N = NPN,P = PNP,R = relay,W = NPN/PNP double
- 10 — accuracy： 10,15,20,30,40,60 mm
- 20 — Beams number：4,6,8,10,12,14,16,18,20 ……
- SZI - his series of screen fixed prefix

SZF 系列尺寸表

SZI series 10mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	30	48
6	50	68
8	70	88
10	90	108
12	110	128
14	130	148
16	150	168
18	170	188
20	190	208
22	210	228
24	230	248
26	250	268
28	270	288
30	290	308
32	310	328
……	……	……

SZI series 15mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	45	70.5
6	75	100.5
8	105	130.5
10	135	160.5
12	165	190.5
14	195	220.5
16	225	250.5
18	255	280.5
20	285	310.5
22	315	340.5
24	345	370.5
26	375	410.5
28	405	440.5
30	435	470.5
32	465	500.5
……	……	……

SZI series 20mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	60	93
6	100	133
8	140	173
10	180	213
12	220	253
14	260	293
16	300	333
18	340	373
20	380	413
22	420	453
24	460	493
26	500	533
28	540	573
30	580	613
32	620	653
……	……	……

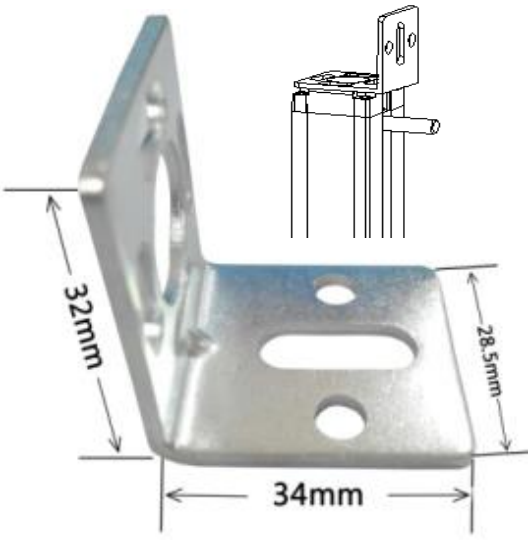
SZI series 30mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	90	138
6	150	198
8	210	258
10	270	318
12	330	378
14	390	438
16	450	498
18	510	558
20	570	618
22	630	678
24	690	738
26	750	798
28	810	858
30	870	918
32	930	978
……	……	……

SZI series 40mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	120	183
6	200	263
8	280	343
10	360	423
12	440	503
14	520	583
16	600	663
18	680	743
20	760	823
22	840	903
24	920	983
26	1000	1063
28	1080	1143
30	1160	1223
32	1240	1303
……	……	……

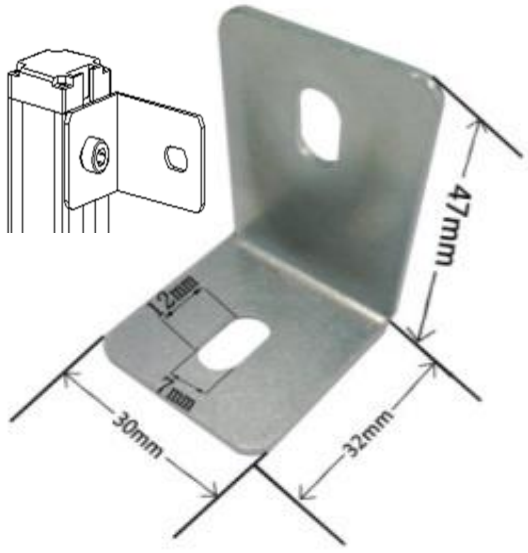
SZI series 60mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	180	273
6	300	393
8	420	513
10	540	633
12	660	753
14	780	873
16	900	993
18	1020	1113
20	1140	1233
22	1260	1353
24	1380	1473
26	1500	1593
28	1620	1713
30	1740	1833
32	1860	1953
……	……	……

Dimensions of mounting bracket

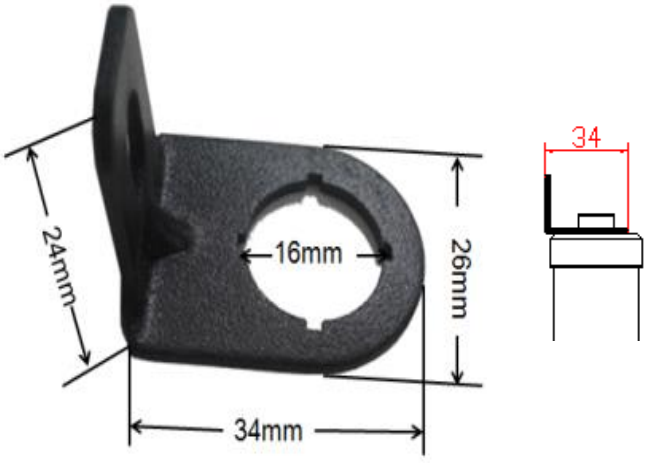
L type both ends mounting bracket



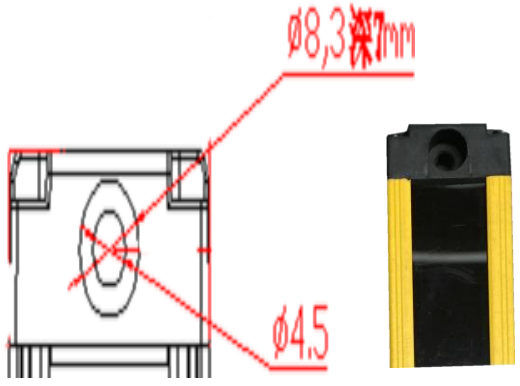
L type side / back mounting bracket



Mounting bracket (XZYH Series)



XZYB,XZYZ Series

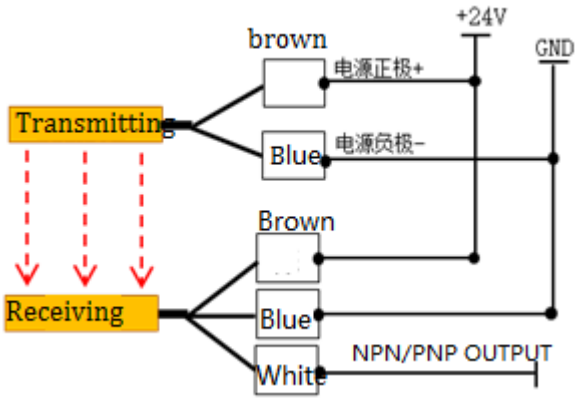


Installation bracket with the product, please consult our sales staff

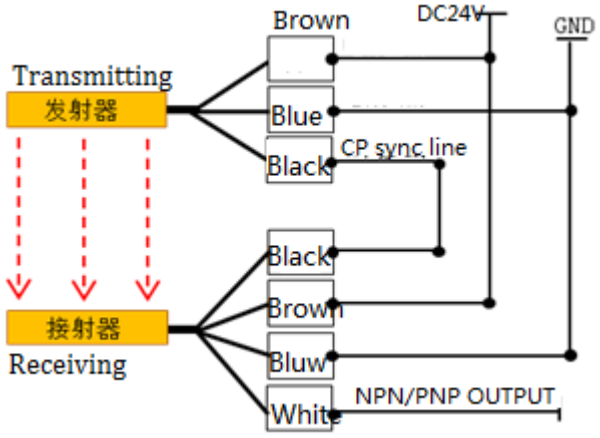
Product wiring instructions

The following wiring diagrams are applicable to conventional products except for custom products

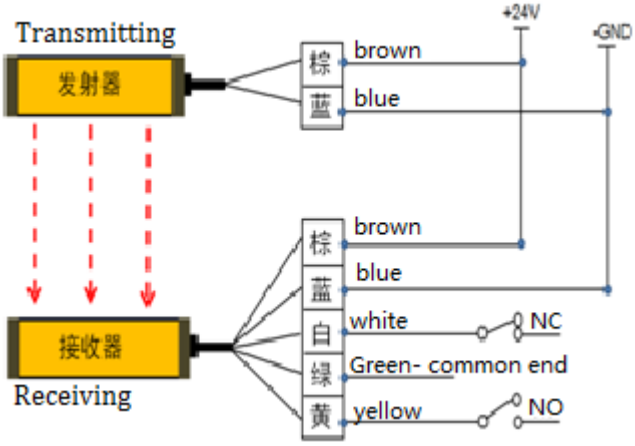
Light synchronization (NPN/PNP connection)



Thread synchronization (NPN/PNP connection)

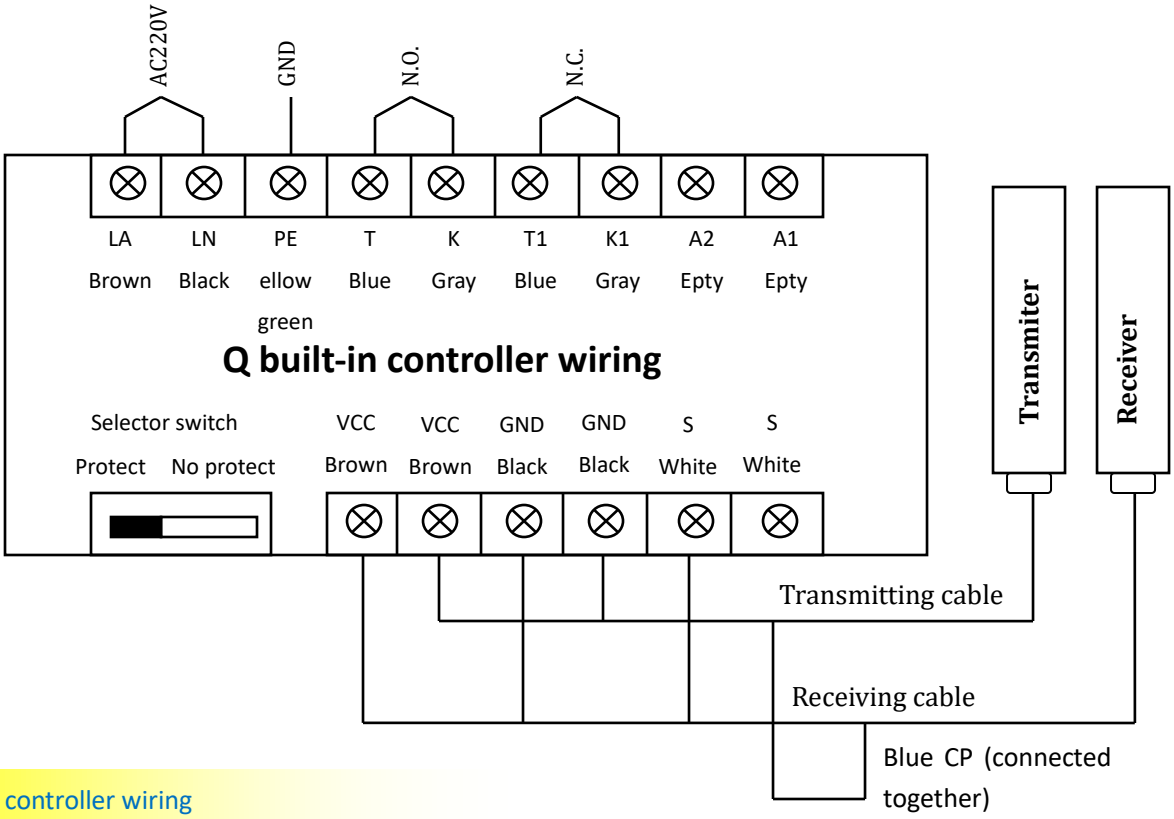


24v(relay signal output connection)

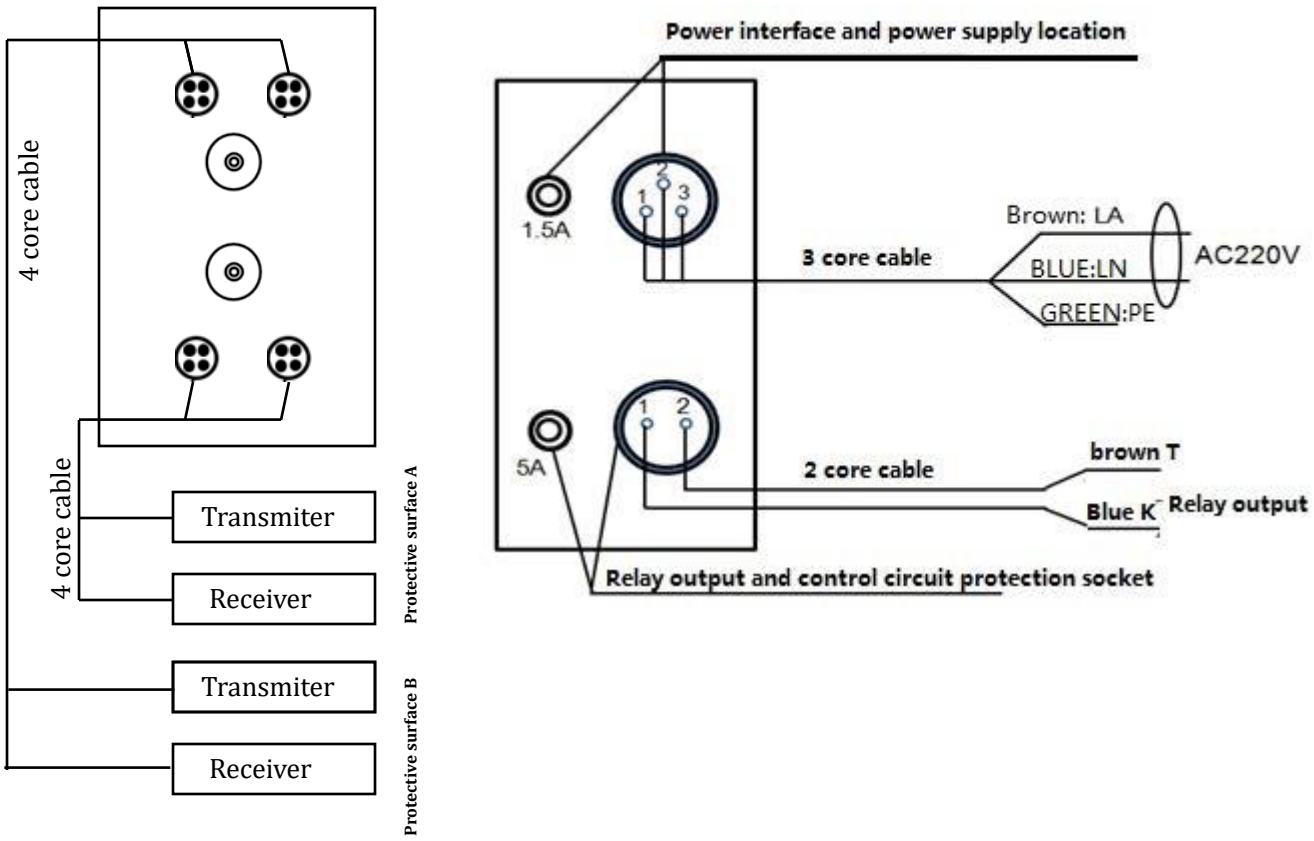


Output	State	Receiver light	Output transistor status	
NPN	No occlusion	Green light on	ON	0.3Woutput voltage≤1V
	shading	Red light on	OFF	OPENleakage current≤2mA
	fault	Flashing red light	OFF	OPENleakage current≤2mA
PNP	No occlusion	Green light on	ON	0.3W Output level ≤1V
	shading	Red light on	OFF	OPEN,DO0V Earth resistance 10K
	fault	Flashing red light	OFF	OPEN,DO0V Earth resistance 10K

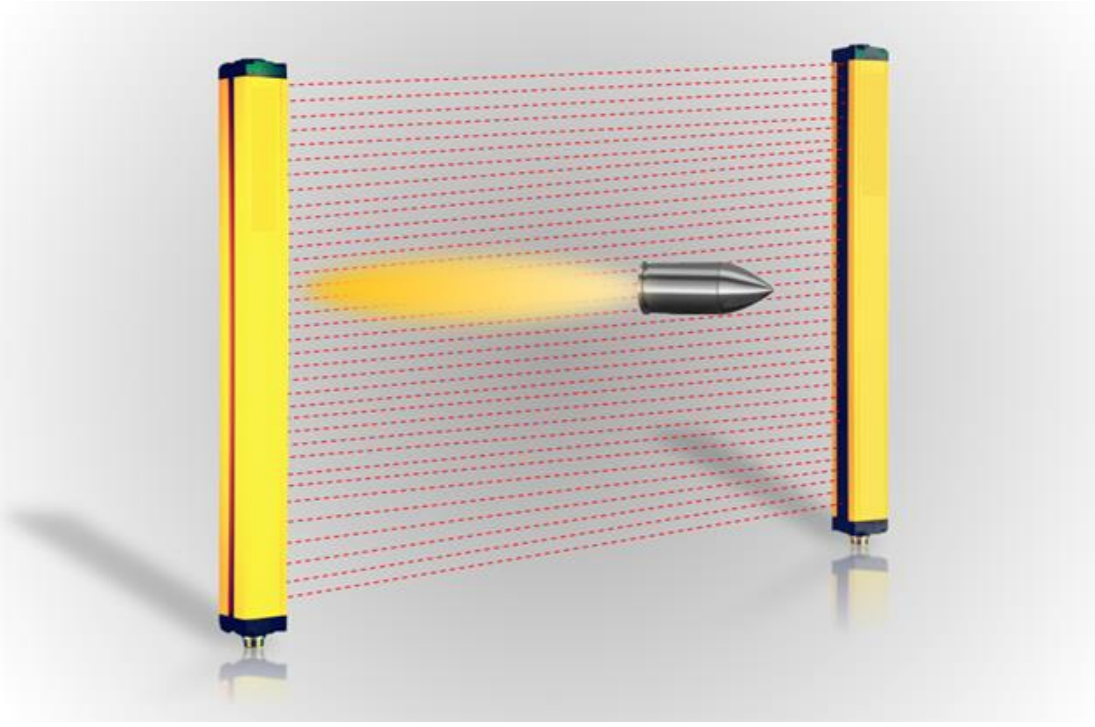
Q built-in controller wiring



P external controller wiring



Measuring light curtain



- The highest accuracy of 0. 5 mm, the highest in the industry
- Single point response time of 9 μ s, the highest in the industry

Fast response Super precision!

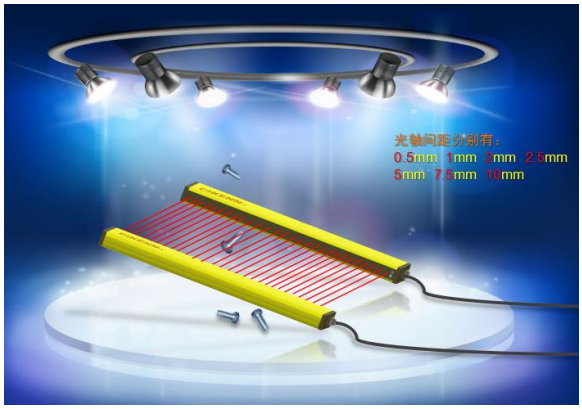
Introduction of measuring light curtain

SZ-M measuring light curtain：High Speed, Not just a little faster

SZ-M is one of the most rapid reaction measurement light curtain in the market. “High-velocity scanning” function has shorten the operation time with triple improving to reaction time. SZ-M owns the superiority of detecting function to detect the small object with high speed.

SZ-M measuring light curtain：Ultrahigh resolution to detect smaller objects

SZ-M owns six specifications on beam pitch with 1mm,2mm,2.5mm,5mm,7.5mm and 10mm which supports mini-type object detecting. “High-precision scanning” function is able to improve the resolution accuracy on detecting various size objects.



SZ-M measuring light curtain：Reliable operation in harsh environment

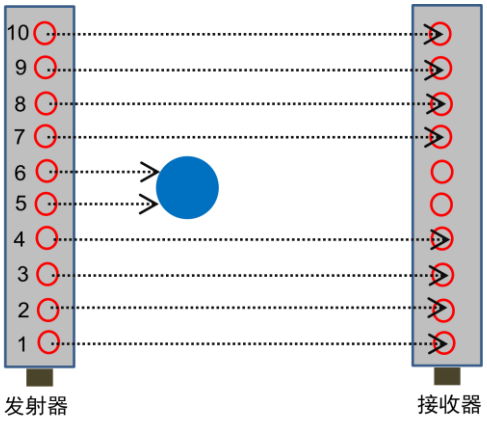
Fully imported EE components on SZ-G owns the good performance of low/high temperature resistance, stable detecting and anti-interference against light which lessens the frequency of shut down.

SZ-M measuring light curtain：Simply Operation

Fully imported EE components on SZ-M owns the good performance of low/high temperature resistance, stable detecting and anti-interference against light which lessens the frequency of shut down.

Introduction of measuring light curtain

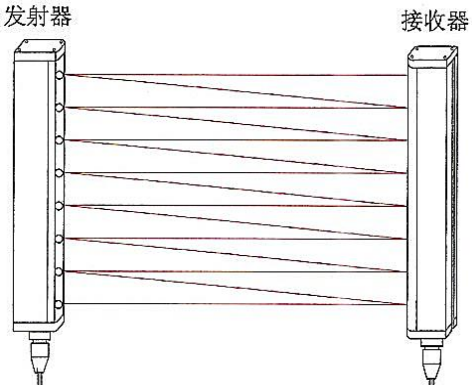
operating principle



Fully imported EE components on SZ-M owns the good performance of low/high temperature resistance, stable detecting and anti-interference against light which lessens the frequency of shut down.

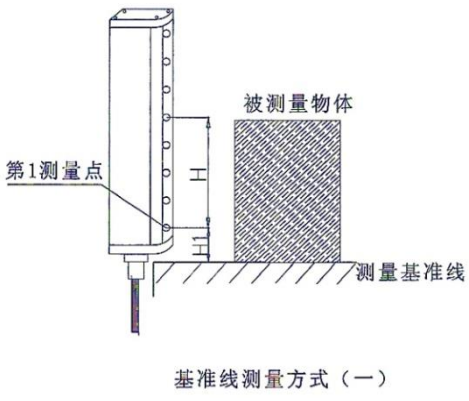
Scanning mode

- parallel scan (default): scan all beams, the emission of the transmitter is corresponding to the reception of the receiver.
- cross scan: composed of parallel scanning and tilted beam, the oblique beam has a second channel corresponding to the first channel of the receiver; Complete the entire scan until the last channel of the transmitter corresponds to the last channel of the receiver.
- single scan: single scan can only be used to detect the edge of the screen in the screen, this scan mode can reduce the reaction time of detection.Unilateral scanning

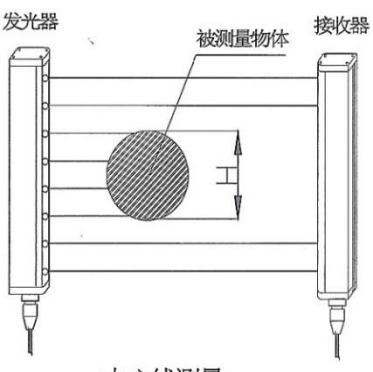


Measurement mode

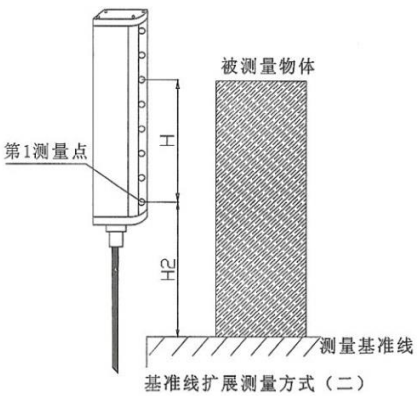
According to the size and shape of different objects can determine different measuring methods, there are three main ways of measuring light curtain: baseline measurement; Baseline expansion measurement mode; Algebra measurement mode.



基准线测量方式（一）



中心线测量

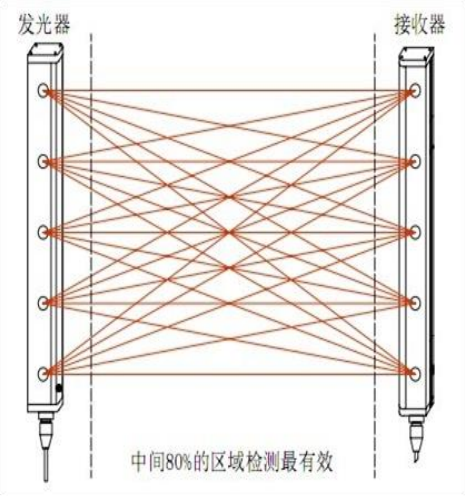


基准线扩展测量方式（二）

Introduction of measuring light curtain

General Features

- Detectable minimum object size: 0.5 mm (1 mm cross)
- Detect Range：250—10000mm;
- Detect Height：40-3000mm(normal);
- Power：12—36VDC;
- Reaction Time: Up to 9 μs
- Work Temp: -15° C ～65° C;
- Output：NPN/PNP;
- Used in object size measurement, vehicle ocean contour measurement, automatic spray, corrugated board, sorting size objects, coordinate positioning, object speed detection, etc.



Parallel light mode

平行检测

Cross light mode

交叉检测

Cross light mode

交叉检测

Introduction of measuring light curtain

Technical parameters

Cross Section Size	35*35mm		
Light Beam Quantity	4 points to a multiple of 2. Any choice (4 to 500 optical axis) is general, the number of other optical axes can be customized.		
Light Beam Pitch	1mm, 2mm, 2.5mm, 5mm, 7.5mm, 10mm, 15mm, 20mm, 30mm, 40mm, 60mm		
Signal Output	1、 I/O output: When the NPN / PNP is set by the program to block different number of beams, the light curtain has signal output; By the built-in (or external) adjustment switch, when setting the different number of beams, the light curtain has signal output; When applied to hole detection, the light curtain can be output by any beam or more light beam. When applied to eight binary output, when occlusion of different number of beams, the light screen output according to eight binary mode; 2, Analog output: 4-20 mA; 0-5 VDC; 0- VDC, accessible host computer or other data acquisition system; 3, Relay output: two pairs of constant, generally used as the main analog output; 4, With RS232 or RS485 communication function, using standard Modbus protocol to communicate with the upper computer;		
Detection pair distance	A:50-300mm B:50-1000mm C:1000mm-3000mm D:1000-5000mm F:2000-10000mm		
Reaction Time	The response time is different at more points and higher precision, the fastest response time is 9 us, such as 10 optical axis, 5 mm spacing, the fastest response time is 10 * 9 us = 90 microseconds (ultimately depends on product model).		
Power	DC12V-36V±10%	Light curtain form	Trough beam
wavelengths	850 nm	Anti-interference Range	10000 Lux
output load	100 nF	circuit protection	Reverse protection / output short circuit protection
Outer Texture	Aluminum	consumed power	3-8W
Protection class	IP65 / IP67 / IP69K	OP Temperature	-15℃--65℃
Synchronization	Wire synchronization	environment temperature	20C, RH≤85%
insulation resistance	＞100 MΩ	dielectric strength	DC36V. 5A
Compliance Certificate	CE FCC	Cable	port: 3 pin, 5 pin M12 plug

Measuring light curtain — simple, easy to use, rapid response, excellent performance

Applicable to

- logistics: height and Overrun measuring logistic: Measuring on height
- logistics: volume measuring Logistic: Measuring on dimension
- logistics: packaging calibration Logistic: Measurement on PKG
- Machine tools: measuring workpiece and mold Tooling: Measuring on
- Dynamic warehouse system: height and overrun measuring
- Traffic technology: sorting and validation
- Food and beverage industry: Container identification
  Equipment coating: robot control

Overview

•High resolution screen:1, 2, 2.5, 5, 7.5, 10, 15, 20, 30, 40, 60mm Beam Pitch

•The high speed scan feature has three times the scan speed

•Transparent mode function can detect transparent material

•Precision can be set to 1 mm in high resolution measurement

•Data compression: runtime encoding (RLC)

Your benefit

•The ″ high speed scan ″ function has the ability to detect high speed moving objects in a short response time.

•The modular design concept brings the right solution to a single source

•The ″ high measurement accuracy ″ function is used to reliably detect small objects

•Integrated circuit interface and corresponding function accessories to reduce commissioning time

•Configuration software has the help features of Manual Charging System, reducing configuration time

Product Advantage

- the fastest response speed in this industry
  Single point response speed 9μs
- measurement is the highest in the industry
  Height can reach 10m
- the highest accuracy of detection in this industry: Maximum 0.5 mm detection accuracy
- The signal output is rich: With RS485, RS232, 0 to 10 v, 4 to 20 mA, switching value and other output types
- poor environmental use: Application of ip69k level measurement grating in harsh environment
- Three detection methods: Parallel detection, cross detection and one-sided scanning

Measuring light curtain various applications — meet your needs

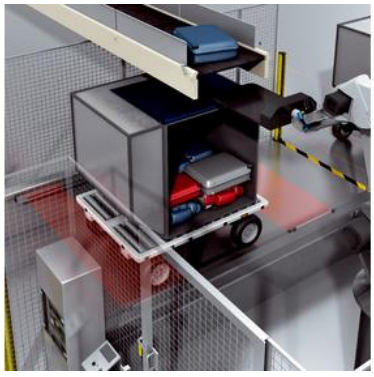
Direction identification of safety gate

The lukongshi gate divides the airport channel into safe and Fei areas. If the personnel pass the gate in a predetermined direction, from the safety area, two of the installed automation gratings are considered correct. If a person is detected moving from the wrong direction or throwing objects from the land into the air, an alert is triggered.

Personnel control of automatic boarding gate

In automatic boarding pass, it must ensure that no more people pass through the safety gate at the same time. Only authorized personnel can enter the aircraft. For this, through multiple horizontal and vertical placement of automatic grating to ensure.

Locate the luggage vehicle in the robot workstation



Measuring the position information of the light screen in the robot workstation to provide baggage car or luggage air containers. The feature of the product is the individual optical axis matching, continuous threshold adaptation and environmental guangkang.

Monitoring super-long luggage

Measure the length of the light curtain on the automatic luggage compartment. This ensures that excessive baggage is not carried to the luggage transport equipment. The beam spacing and monitoring length of this product are defined separately.

Various applications

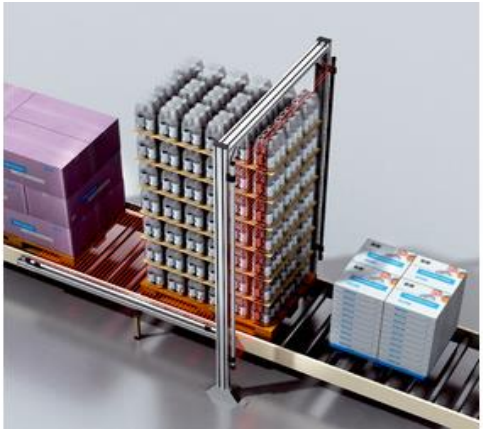
- meet your needs

Avoid error in stereoscopic warehouse

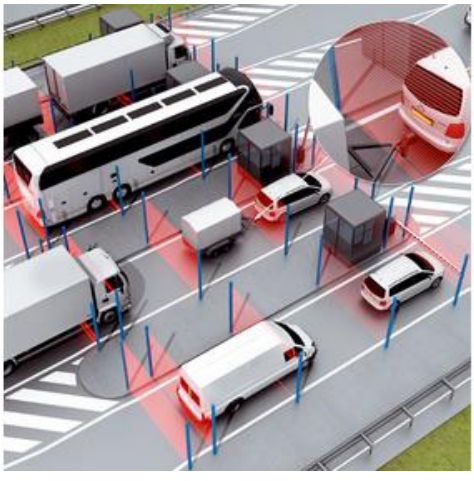
By placing the grating on the vertical and horizontal frame of the grating, the goods can be selected correctly on the manual dinggouzhan. Because the grating can be encoded into different regions, it emits a signal through dinggouzhan, whether the goods or excessive goods ordered from the wrong warehouse area.

Dynamic height measurement in conveying technology

Automatic grating can accurately measure the height of various objects. This is particularly important for highly optimized, transparent or aluminum foil objects that are easily controlled by gratings. The working temperature of the automatic grating can even reach – 30 ° c ~ + 65, adapted to the field of freeze storage. SZ-M innovative fasteners minimize installation costs. With the advantages of high reflection security, high resolution and fast data output, the automatic grating can also be used in the field of vertical warehousing.



Automatic grating of toll station

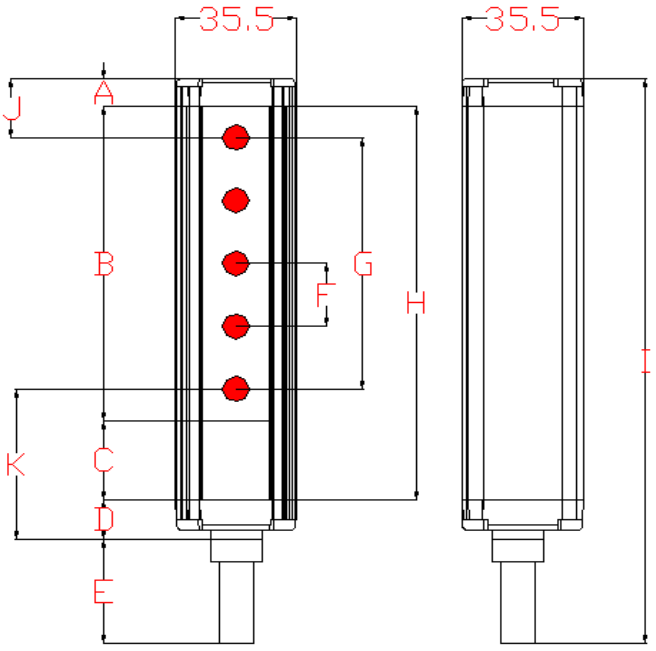


Automatic grating is used for vehicle classification. With the measured data, the vehicle axle and the height of the vehicle can be measured briefly through the first axle. For simple vehicle classification, separation techniques can be used. By arranging multiple gratings for each lane, the length of the vehicle can be simply divided.

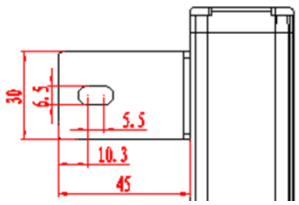
Guide for measuring dimensions and selection of light screens

SZM type cross section:35*35mm

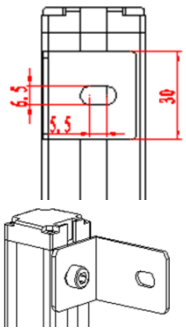
Design size



L型安装支架尺寸图（右）



L型安装支架
尺寸图（右）



computing formula

measured height： G=(L-1)×F mm

Overall height：I=F x L+ 82 mm

Letter meaning

A:Upper cover height 9mm B:Lamp panel length C:Control board length 27mm D:Lower cover height 13mm
E:Plug height 33mm F:Beam Pitch G: measured height H: Light screen height I: Total height of light curtain
J: Upper blind zone height K: Lower blind zone height L:Number of axes

Selection Guide

SZM - 20 10 N H L A X

- X: Synchronous mode: x=line sync; G=light sync
- A: mounting distance: A：50-300mm,B：50-1000mm, C：1-3m.D：1-5m.E：2-10m
- L: Installation: L-shaped Side Mount support,T: steel pipe support
- H: Detection method：H=Range , X=cross
- N: Output：T=RS485,M =Modbus,L = 4-20mA,D = 0-10V, W = NPN/PNP double
- 10: Resolution： 2,5,10,15,20,30,40,60 mm
- 20: Number of axes：4,6,8,10,12,14,16,18,20 ……
- SZM: Grating fixed prefix of series

SZM series size table

SZM series 10mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	30	122
6	50	142
8	70	162
10	90	182
12	110	202
14	130	222
16	150	242
18	170	262
20	190	282
22	210	302
24	230	322
26	250	342
28	270	362
30	290	382
32	310	402
.....	.....	.....

SZM series 15mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	45	142
6	75	172
8	105	202
10	135	232
12	165	262
14	195	292
16	225	322
18	255	352
20	285	382
22	315	412
24	345	442
26	375	472
28	405	502
30	435	532
32	465	562
.....	.....	.....

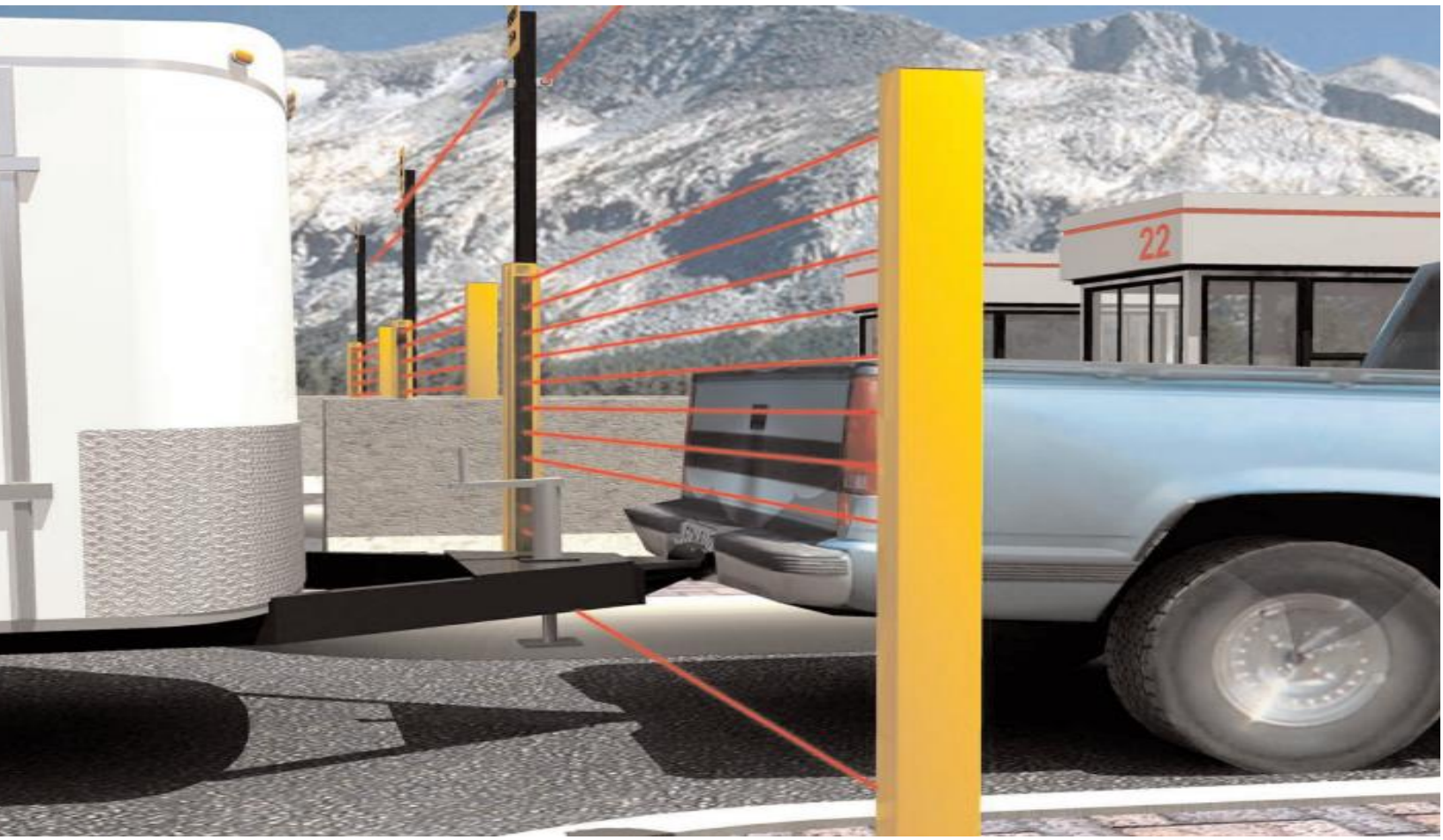
SZM series 20mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	60	162
6	100	202
8	140	242
10	180	282
12	220	322
14	260	362
16	300	402
18	340	442
20	380	482
22	420	522
24	460	562
26	500	602
28	540	642
30	580	682
32	620	722
.....	.....	.....

SZM series 30mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	90	202
6	150	262
8	210	322
10	270	382
12	330	442
14	390	502
16	450	562
18	510	622
20	570	682
22	630	742
24	690	802
26	750	862
28	810	922
30	870	982
32	930	1042
.....	.....	.....

SZM series 40mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	120	242
6	200	322
8	280	402
10	360	482
12	440	562
14	520	642
16	600	722
18	680	802
20	760	882
22	840	962
24	920	1042
26	1000	1122
28	1080	1202
30	1160	1282
32	1240	1362
.....	.....	.....

SZM series 60mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	180	322
6	300	442
8	420	562
10	540	682
12	660	802
14	780	922
16	900	1042
18	1020	1162
20	1140	1282
22	1260	1402
24	1380	1522
26	1500	1642
28	1620	1762
30	1740	1882
32	1860	2002
.....	.....	.....

Vehicle separation light curtain

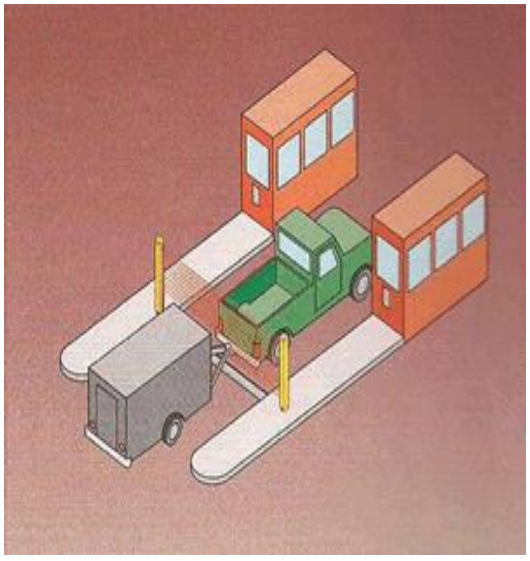


Vehicle separation light curtain

System brief

QILY SZL two chip measurement for vehicle separation application and design, the product is integrated on SZ-YFL product design basis, more easy to use, easy installation, no controller, with a variety of detection mode, and can also be used for object detection, shape measurement etc..

In the transportation industry, QILY SZL series vehicle separation curtain is intelligent transportation system, highway toll system, toll collection system, highway weightcharge equipment key system, overrun detection system and other traffic control system.



Working principle

The principle of infrared detector is Zhang Shun by linear array infrared transmitter and receiver to realize synchronous scanning of the vehicle, and the optical signals are converted to electrical signals, so as to realize the comprehensive detection of vehicle data, compared with other detection technology, detection technology for infrared vehicle products mature, easy installation, high response speed, anti-interference strong, can the vehicle data rich information output, reliable detection of a variety of special vehicles. Infrared scanning vehicle system is mainly used for toll collection system of highway toll stations, (ETC), automatic vehicle classification system (AVC), highway toll by weight system (WIM), fixed gauge station, customs vehicle management system testing.

Application situation

- Automobile separation system and limit height system for Expressway passage.
- Spraying equipment, tracking shapes and contours for spraying, saving paint, environmental protection and so on.
- Logistics equipment, measurement of items on a channel, measurement of volume.
- Automotive equipment, inspection of small parts, counting, etc..
- Tire equipment, measurement of tire position, height, tension control, etc..
- Production correction, high-precision detection and measurement, including accuracy correction, online correction, online similar detection and measurement.
- Can be customized to measure the speed at which bullets are fired.

Vehicle separation light curtain

Component unit:

A complete set of infrared vehicle separators, including:

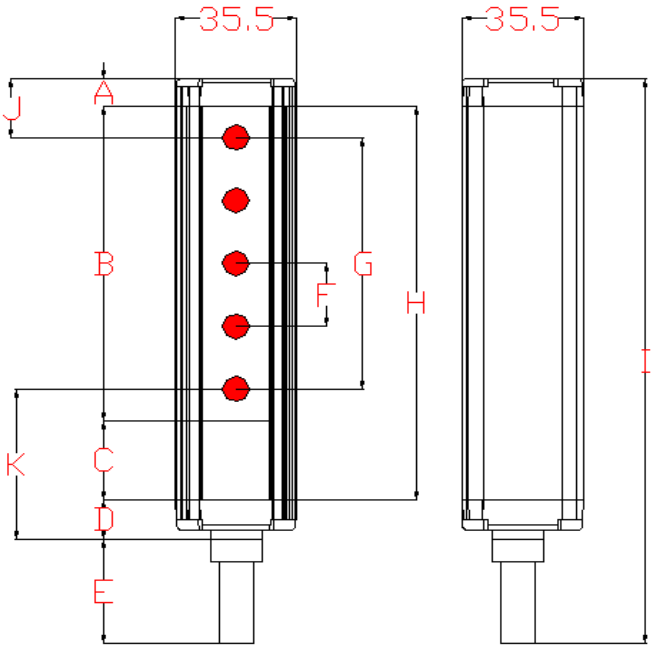
- The transmitter and receiver: high energy light emitter built-in linear array, the same number of receiving element installed in the receiver and transmitter, the corresponding photoelectric element transmitter and receiver are sequentially synchronized trigger detection optical path is switched on, when the car passes through the scanning area, all or part of the beam is blocked, thus being detected.
- The control unit reads and processes: synchronous scanning signal transmitter / receiver, and inspection work, to provide a variety of output signals, such as switch output, serial output or analog output. Considering the reliability of the system and the simplicity of the installation, the vehicle separators commonly used in the market are two box type built-in controllers, and there is no independent external controller.
- Cable: plug in connector for transmitter / receiver and controller. The length is 5-10m.
- Protective cover: stainless steel or Aluminum Alloy materials, to provide protection for the separator, a built-in electric heating glass, temperature controller and humidity controller, the humidity is too high, too low temperature of automatic heating, to ensure that vehicles separator in humid areas, rain and snow, cold season and reliable.

Product features:

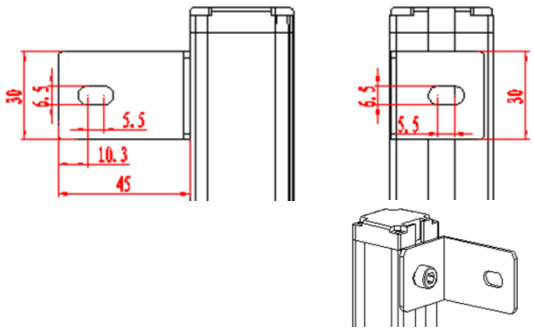
- integrated design, no controller, easy to use;
- screen height: 100mm to 2800mm;
- detection accuracy: 10, 20, 40, 80mm four kinds, other spacing can be customized;
- detection distance: 0-5 m, 0-10m;
- LED indicator shows the working state and fault state of the screen;
- dual NPN/PNP output:
  # output 1: vehicle detection signal output;
  # output 2: screen fault alarm output;
- the use of the unique algorithm, the light curtain only detected more than 150mm objects, with a resolution of 25mm, which can avoid misoperation caused by sunshine, birds, mosquitoes and sludge, can reliably detect vehicle hook;
- automatically detect faults and ignore (shielded) problematic light beams that still function properly while outputting alarm signals;
- use high energy, high penetration photoelectric tubes for ease of installation and maintenance;
- automatic separation, counting, detection, classification, and determination of vehicle headway;
- completely eliminate vehicle following phenomenon, separating semi trailers, trailers and bicycles reliably;
- special protective shell using aluminum made of sturdy, reliable to ensure the vehicle separation screen to the harsh outdoor environment;
- applicable temperature: -10 --55 °C; humidity: RH = 85% (20 °C)

The screen size vehicle separation and Selection Guide

Design size



L型安装支架尺寸图（右）



computing formula:

measured height： G=(L-1)×F mm

Overall height：I=F x L+ 82 mm

Letter meaning:

A:Upper cover height 9mm B:Lamp panel length C:Control board length 27mm D:Lower cover height 13mm E:Plug height 33mm F:Beam Pitch G: measured height H: Light screen height I: Total height of light curtain J: Upper blind zone height K: Lower blind zone height L:Number of axes

Selection Guide

SZL - 20 20 N C L A X

- X: Sync mode: X- line sync; G- optical sync
- A: Shooting distance: A=1-5 m, B=1-10m, C=10m
- L: Installation: L type side mounting bracket
- C: Signal mode：C=NC , O=NO
- N: Output：N = NPN, P = PNP, R=relay
- 20: Resolution： 10, 15, 20, 30, 40, 60 mm
- 20: Number of axes：4, 6, 8, 10, 12, 14, 16, 18, 20 ……
- SZL: Grating fixed prefix of series

SZL series size table

SZL series 10mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	30	122
6	50	142
8	70	162
10	90	182
12	110	202
14	130	222
16	150	242
18	170	262
20	190	282
22	210	302
24	230	322
26	250	342
28	270	362
30	290	382
32	310	402
.....	.....	.....

SZL series 15mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	45	142
6	75	172
8	105	202
10	135	232
12	165	262
14	195	292
16	225	322
18	255	352
20	285	382
22	315	412
24	345	442
26	375	472
28	405	502
30	435	532
32	465	562
.....	.....	.....

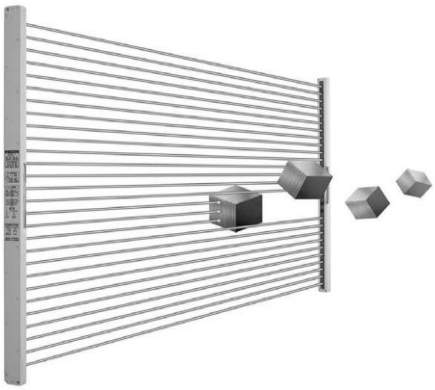
SZL series 20mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	60	162
6	100	202
8	140	242
10	180	282
12	220	322
14	260	362
16	300	402
18	340	442
20	380	482
22	420	522
24	460	562
26	500	602
28	540	642
30	580	682
32	620	722
.....	.....	.....

SZL series 30mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	90	202
6	150	262
8	210	322
10	270	382
12	330	442
14	390	502
16	450	562
18	510	622
20	570	682
22	630	742
24	690	802
26	750	862
28	810	922
30	870	982
32	930	1042
.....	.....	.....

SZL series 40mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	120	242
6	200	322
8	280	402
10	360	482
12	440	562
14	520	642
16	600	722
18	680	802
20	760	882
22	840	962
24	920	1042
26	1000	1122
28	1080	1202
30	1160	1282
32	1240	1362
.....	.....	.....

SZL series 60mm Resolution		
Beams number	Protection height(mm)	Contour height(mm)
4	180	322
6	300	442
8	420	562
10	540	682
12	660	802
14	780	922
16	900	1042
18	1020	1162
20	1140	1282
22	1260	1402
24	1380	1522
26	1500	1642
28	1620	1762
30	1740	1882
32	1860	2002
.....	.....	.....

Ultrathin area safety light curtain series SZ-NA



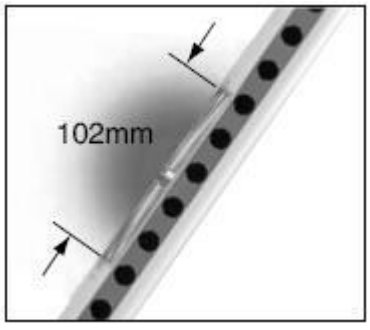
- **Characteristic：**
- **Ultrathin shell, thickness 13mm**
- **Both the light projector and the light receiver have clear operating lights**
- **The 2 Detection heights are optional: 8 optical axis and 12 optical axis**
- **Anti interference design of parallel installation**
- **Optional lighting action**

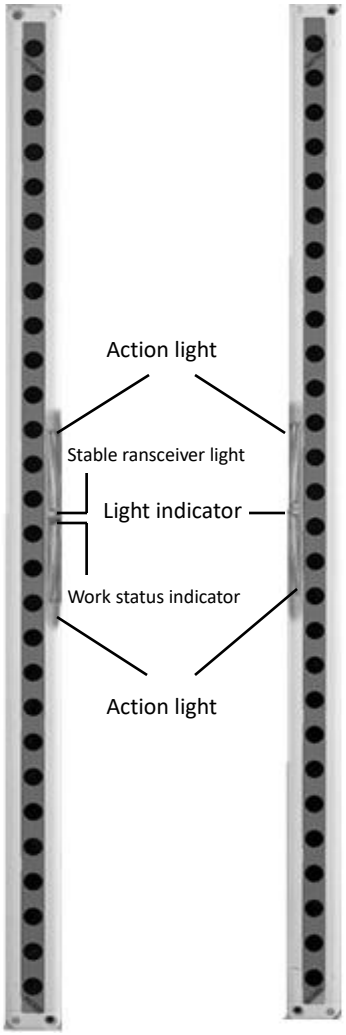
Detection mode	Detection distance	Action pattern	type of output
Through	3m	Light-ON	NPN
			PNP
			NPN
			PNP

Clear and easy operation indicator light

Both sides of the light projector and the light receiver are provided with a clear and easy red operation indicator lamp, and the height is 102mm.

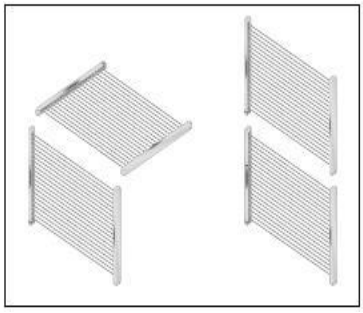
When the detection output is directly connected with the operation indicator lamp input, the utility model can also be used as a large work status indicator lamp.





Anti interference settings for parallel installation

The two sensors are set to different frequency of light throwing to prevent mutual interference. Two sensors are also used to detect a wider area. The setting frequency can be determined according to the quantity of the lighted indicator lamp.



Technical parameter

Beams number		6	8	12	16	28
Model		SZNA2-6N SZNA2-6NP	SZNA2-8N SZNA2-8NP	SZNA2-12N SZNA2-12NP	SZNA2-16N SZNA2-16NP	SZNA2-28N SZNA2-28NP
Detection height		100mm	140mm	220mm	300mm	540mm
Object detection		Opaque objects, diameter greater than 25mm				
Detection distance		3m				
Beam pitch		20mm				
supply voltage		DC12-24V±10%				
response time		10ms(12ms Max when using the tamper prevention function)				
Ambient emperature		The action is 25~+170°C and stored at 40~+105°C (without condensation or freezing)				
Ambient humidity		Action 35-85%RH, save 35-95%RH (without condensation)				
Light emitting diode		Infrared LED (modulation type)				
Output		When all optical axis are light, ON (one or more optical axes shading OFF)				
Anti-interference function		have				
Short-circuit protection		have				
Protective structure		IEC IP40				
Texture of material		Shell: heat resistant ABS, front cover: polyester, display cover: propylene				
Indicator light	Light projector	Light indicator: green LED * 2 (light up, set frequency A, 1 LED light, set frequency B, 2 LED light up) Operation indicator: red LED (light up, flashing or out when using operation indicator light input, select the light form by working mode switch)				
	Light receiver	Work status indicator: red LED (one or more light axes are illuminated when disturbed) Stable light indicator light: green LED (light is accepted when all optical axis is light) Operation indicator: red LED (light up, flashing or out when using operation indicator light input, select the light form by working mode switch) When the output by the excessive current, due to the operation of the circuit short circuit protection, stable light lights and light receiving device on the working state of the indicator light flashing at the same time.				

NOTE:

As the company continues to introduce new products and product upgrades, we no longer notice.

Our company can provide OEM production. You can also develop new sensors according to customer requirements.

Qily sensor technology (Dongguan) Co.,Ltd

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E-mail：winkey@qilysensor.com

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