

KS06 Safety Light Curtain

GB/T 19436.1/IEC 61496-1(Type 4)
GB/T 19436.2/IEC 61496-2(Type 4)

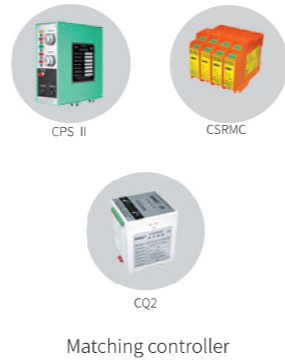
Product description

The product meets the requirements for safety Level 4. KS06 AOPD can effectively detect all opaque objects in the light curtain area that exceed the detection accuracy. It is applicable to the safety protection for mechanical presses, hydraulic machines, shears, bending machines and other dangerous places.

KS06 AOPD supports CPSII controller, CPSIII controller, CQ2 controller, CQ3 controller, CSRMC safety relay module or JK III type safety interface, and it can control the automatic shutdown in dangerous situations with the machine control system.

Product features

- With perfect self-test function, it can realize the full-test including output signal;
- It can serve floating shielding function to process long materials;
- It provides the passive contact output of two-way relay, with higher safety performance;
- The detection accuracy can be up to 18mm to protect your fingers.
- The operating range can be up to 40m;
- The protection height can be up to 2,840mm;
- There are many product specifications, with a wide range of applications;
- It can provide shunt instruction function, to intuitively display the ON/OFF state of light beam;
- With good vibration damping performance, it is applicable to the presses with high speed and large tonnage, featuring a long service life;
- The ability to resist light interference and electromagnetic interference is strong and the operation is more stable;
- When configuring the safety relay module, it can provide two forms, namely 3 normally open and 1 normally closed output and 2 normally open and 1 normally closed output.

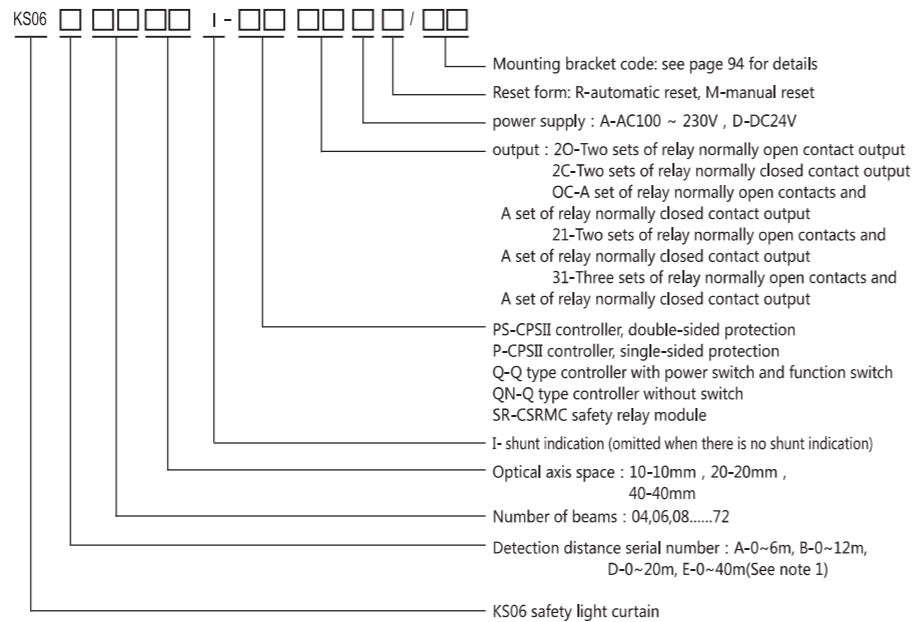


Product composition

It is composed of controller, emitter, receiver, transmission cable and power line.

Specifications model

The specifications of AOPD with transistor output are as follows:



Note 1: Number of beams of E light curtain: 04, 06, 08 ... 40, with a beam spacing of only 40mm;
Protection length: 0~40m for 4 ~ 16 beam, and 0 ~ 30m for 18 ~ 40 beam.

Technical parameters

— Table20 —

Safety level	Type 4 (GB/T19436)					
Standards	GB/T19436.1; GB/T19436.2; GB4584-2007					
Optical characteristics						
Detection light source	Infrared LED (central wavelength of 940nm)					
Beam spacing	10mm	20mm	30mm	40mm		
Detection capability	18mm	28mm	38mm	48mm		
Number of beams	12、16、20...72	6、8、10、12...72	6、8、10...72	4、6、8...72	4、6、8...16	18、20、22...40
Operating range	A: 0~3m, B: 0~6m, D: 8~20m				E: 0~40m	E: 0~30m
Protective height	Beam spacing × (number of beams-1)					
EAA	<5°					
Environmental characteristics						
Environment temperature	Operating	-10°C~55°C (No frost or fog)				
	Storage	-40°C~70°C				
Environment humidity	Operating	35%RH~85%RH				
	Storage	35%RH~95%RH				
Light interference resistance	Incandescent lamp	3000 Lux				
	Fluorescent lamp	3000 Lux				
	Sun light source	10000 Lux				
EMC	EMS	Meet the requirements for Level 4 safety light curtain in GB/T19436-1 and GB4584-2007				
	EMI	Meet the requirements for the electromagnetic radiation at the industrial site in EN61326-1 and EN55011				
Vibration resistance	Frequency: 10Hz ~ 55Hz; amplitude: 0.35 ± 0.05 mm; number of scans: three axes, 20 times per axis					
Shock resistance	Acceleration: 10g; pulse duration: 16 ms; number of collisions: three axes, 1000 ± 10 times per axis					
IPcode	IP65					
Dimensions	52×35×Jmm (J is the length of emitter/receiver)					
Electrical characteristics						
Power supply	DC12V±10%					
Consumption current	Emitter	≤300mA				
	Receiver	≤100mA				
Response time	≤20ms(whole machine, including the controller)					
Output characteristics	The square wave signal with a frequency of 4kHz is output during light transmitting					
Supporting controller	CPS II /CPSIII/CQ2/CSRMC					

Specification table

H represents protection height, J represents the length of emitter / receiver, L represents steel pipe length, C represents the length of scatter shield (unit: mm)

— Table21 —

Beam spacing: 10						Beam spacing: 20					
Detection capability 18						Detection capability 28					
Number of beams	Specifications	H	J	L	C	Number of beams	Specifications	H	J	L	C
12	KS06*1210	110	199	500	260	6	KS06*0620	100	199	500	260
16	KS06*1610	150	239	500	300	8	KS06*0820	140	239	500	300
20	KS06*2010	190	279	500	340	10	KS06*1020	180	279	500	340
24	KS06*2410	230	319	500	380	12	KS06*1220	220	319	500	380
28	KS06*2810	270	359	750	420	14	KS06*1420	260	359	750	420
32	KS06*3210	310	399	750	460	16	KS06*1620	300	399	750	460
36	KS06*3610	350	439	750	500	18	KS06*1820	340	439	750	500
40	KS06*4010	390	479	750	540	20	KS06*2020	380	479	750	540
44	KS06*4410	430	519	750	580	22	KS06*2220	420	519	750	580
48	KS06*4810	470	559	1000	620	24	KS06*2420	460	559	1000	620
52	KS06*5210	510	599	1000	660	26	KS06*2620	500	599	1000	660
56	KS06*5610	550	639	1000	700	28	KS06*2820	540	639	1000	700
60	KS06*6010	590	679	1000	740	30	KS06*3020	580	679	1000	740
64	KS06*6410	630	719	1000	780	32	KS06*3220	620	719	1000	780
68	KS06*6810	670	759	1000	820	34	KS06*3420	660	759	1000	820
72	KS06*7210	710	799	1000	860	36	KS06*3620	700	799	1000	860
						38	KS06*3820	740	839	1200	900
						40	KS06*4020	780	879	1200	940
						42	KS06*4220	820	919	1200	980
						44	KS06*4420	860	959	1200	1020
						46	KS06*4620	900	999	1200	1060
						48	KS06*4820	940	1039	1500	1100
						50	KS06*5020	980	1079	1500	1140
						52	KS06*5220	1020	1119	1500	1180
						54	KS06*5420	1060	1159	1500	1220
						56	KS06*5620	1100	1199	1500	1260
						58	KS06*5820	1140	1239	1500	1300
						60	KS06*6020	1180	1279	1500	1340
						62	KS06*6220	1220	1319	1750	1380
						64	KS06*6420	1260	1359	1750	1420
						66	KS06*6620	1300	1399	1750	1460
						68	KS06*6820	1340	1439	1750	1500
						70	KS06*7020	1380	1479	1750	1540
						72	KS06*7220	1420	1519	1750	1580

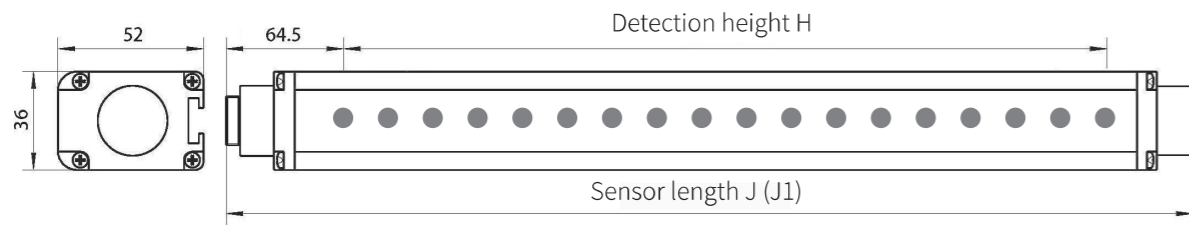
Note: * in the specification model number represents the protection length serial number, A series 0~6m, B series 0~12m, D series 8~20m, E series 0~40m (4~16 beams) / 0~30m (18~40 beams); The E series only provides the specifications and models of the yellow bottom part.

Beam spacing: 30						Beam spacing: 40					
Detection capability 38						Detection capability 48					
Number of beams	Specifications	H	J	L	C	Number of beams	Specifications	H	J	L	C
6	KS06*0630	150	239	500	300	4	KS06*0440	120	239	500	300
8	KS06*0830	210	299	500	360	6	KS06*0640	200	319	500	380
10	KS06*1030	270	359	750	420	8	KS06*0840	280	399	750	460
12	KS06*1230	330	419	750	480	10	KS06*1040	360	479	750	540
14	KS06*1430	390	479	750	540	12	KS06*1240	440	559	1000	620
16	KS06*1630	450	539	750	600	14	KS06*1440	520	639	1000	700
18	KS06*1830	510	599	1000	660	16	KS06*1640	600	719	1000	780
20	KS06*2030	570	659	1000	720	18	KS06*1840	680	799	1000	860
22	KS06*2230	630	719	1000	780	20	KS06*2040	760	879	1200	940
24	KS06*2430	690	779	1000	840	22	KS06*2240	840	959	1200	1020
26	KS06*2630	750	839	1200	900	24	KS06*2440	920	1039	1500	1100
28	KS06*2830	810	899	1200	960	26	KS06*2640	1000	1119	1500	1180
30	KS06*3030	870	959	1200	1020	28	KS06*2840	1080	1199	1500	1260
32	KS06*3230	930	1019	1500	1080	30	KS06*3040	1160	1279	1500	1340
34	KS06*3430	990	1079	1500	1140	32	KS06*3240	1240	1359	1750	1420
36	KS06*3630	1050	1139	1500	1200	34	KS06*3440	1320	1439	1750	1500
38	KS06*3830	1110	1199	1500	1260	36	KS06*3640	1400	1519	1750	1580
40	KS06*4030	1170	1259	1500	1320	38	KS06*3840	1480	1599	2000	1660
42	KS06*4230	1230	1319	1750	1380	40	KS06*4040	1560	1679	2000	1740
44	KS06*4430	1290	1379	1750	1440	42	KS06*4240	1640	1759	2000	1820
46	KS06*4630	1350	1439	1750	1500	44	KS06*4440	1720	1839		1900
48	KS06*4830	1410	1499	1750	1560	46	KS06*4640	1800	1919		1980
50	KS06*5030	1470	1559	2000	1620	48	KS06*4840	1880	1999		2060
52	KS06*5230	1530	1619	2000	1680	50	KS06*5040	1960	2079		2140
54	KS06*5430	1590	1679	2000	1740	52	KS06*5240	2040	2159		2220
56	KS06*5630	1650	1739	2000	1800	54	KS06*5440	2120	2239		2300
58	KS06*5830	1710	1799	2000	1860	56	KS06*5640	2200	2319		2380
60	KS06*6030	1770	1859		1920	58	KS06*5840	2280	2399		2460
62	KS06*6230	1830	1919		1980	60	KS06*6040	2360	2479		2540
64	KS06*6430	1890	1979		2040	62	KS06*6240	2440	2559		2620
66	KS06*6630	1950	2039		2100	64	KS06*6440	2520	2639		2700
68	KS06*6830	2010	2099		2160	66	KS06*6640	2600	2719		2780
70	KS06*7030	2070	2159		2220	68	KS06*6840	2680	2799		2860
72	KS06*7230	2130	2219		2280	70	KS06*7040	2760	2879		2940
						72	KS06*7240	2840	2959		

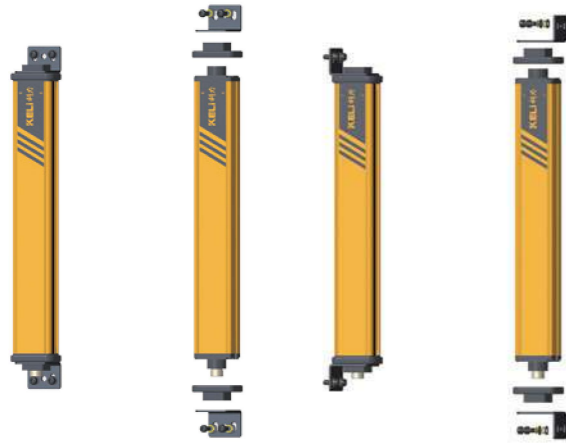
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Dimensions

(unit: mm)

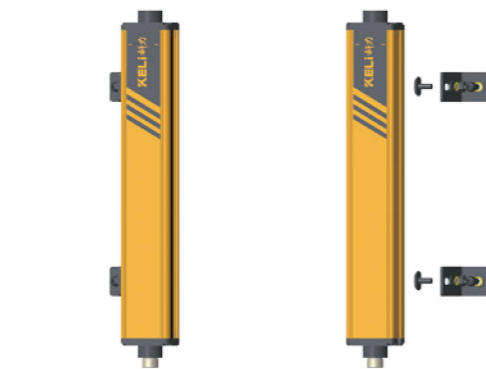


Installation method



ZC-mounting (ZC)

It is the installation method to directly install the KS06/KS06G emitter /receiver at the body of machine tool through KS ZC-mounting bracket.



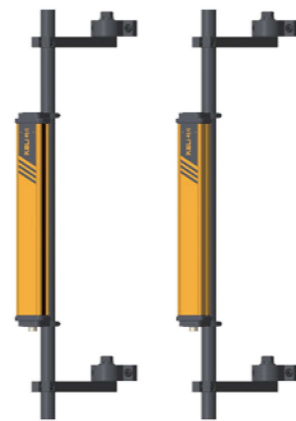
Side-mounted method of T groove (TC)

It is the installation method to fix the emitter / receiver at the wall of machine tool through T bolt and L bending plate bracket.



Pipe mounting (GC)

It is the installation method to directly fix the emitter / receiver at steel pipe through KS pipe-mounting fixing clamp, and bracket seat at the machine tool base or column.



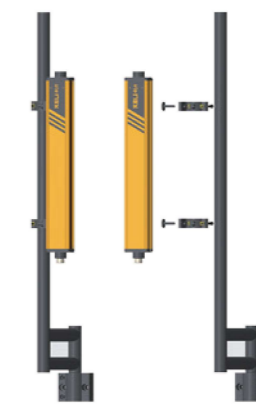
Double-bracket arm mounting (G1)

It is the installation method to directly fix the emitter / receiver at steel pipe through KS pipe-mounting fixing clamp, and bracket seat at the machine tool base or column. The double-bracket arm can effectively increase the anti-vibration performance.



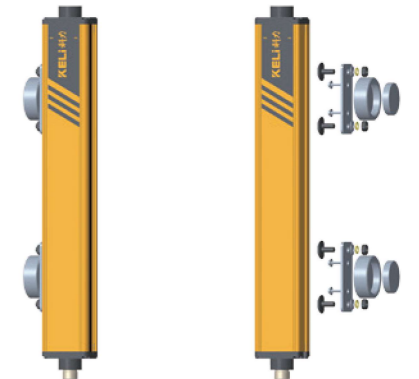
Double-arm side mounting -with reducer (SCJ)

It is the installation method to fix the emitter / receiver at double-arm pipe-mounted bracket through KS pipe-mounting fixing clamp, and support seat at the machine tool base or column.



Double-arm side mounting -T-groove (SCT)

It is the installation method to fix the emitter / receiver at double-arm pipe bracket through Q-clamp, and support seat at the machine tool base or column.



Magnetic attachment mounting (CX)

It is the installation method to fix the emitter / receiver at the wall of machine tool through strong magnet.

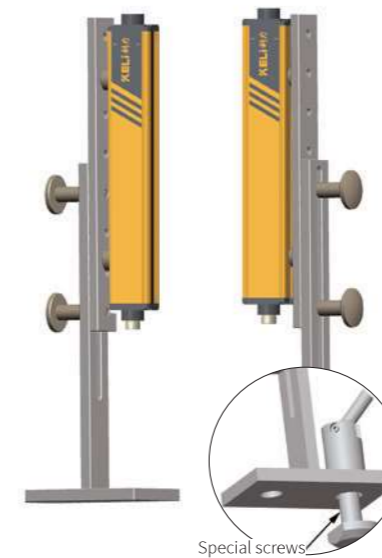


Plate support with bolt mounting (BL)

Emitter / receiver is installed at the bolt support plate by magnet installation method, and support plate is installed at the operation table of machine tool by bolt installation method.

Special safety management personnel should be assigned to be responsible for management when this installation method is used.

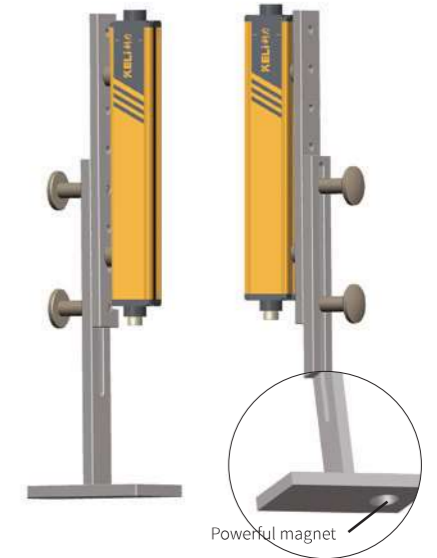


Plate support with magnet mounting (BC)

Emitter / receiver is installed at the magnetic support plate by magnet installation method, and support plate is attached at the operation table of machine tool by using strong magnet. Special safety management personnel should be assigned to be responsible for management when this installation method is used.

