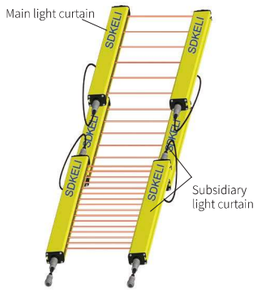
KS06G cascaded safety light curtain

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

Product description

KS06G cascaded safety light curtain can achieve 4 sets of light curtains in series, the total number of beams is up to 288; meanwhile, it can also realize “serial settings” with increased protection height, “L setting” and “U setting” with multi-sided protection, thus saving costs for users while simplifying installation and wiring space.

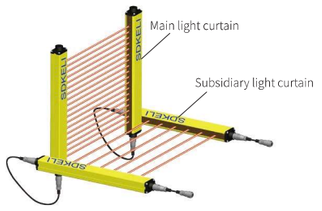
After risk assessment, if a controller is not required and level signal control is required, KS06G cascaded safety light curtain can be used to integrate the controller functions into the sensor and directly output two-way safe PNP or NPN signals.



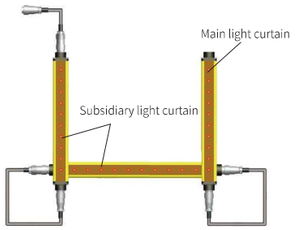
Series setting using compensation installation

Product composition

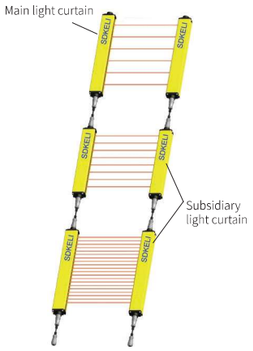
It is composed of 1 set of main light curtain, 1-3 sets of subsidiary light curtain and transmission cable.



Compensation installation used for L setting

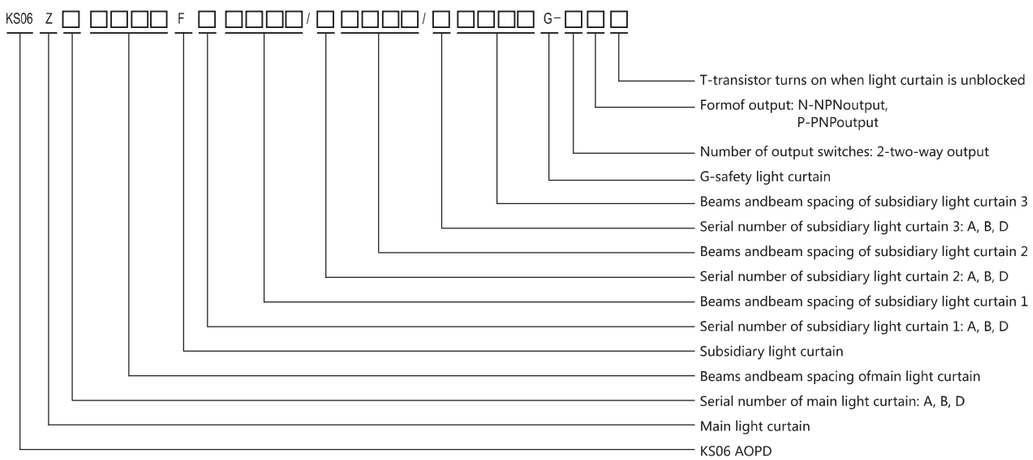


Compensation installation used for U setting



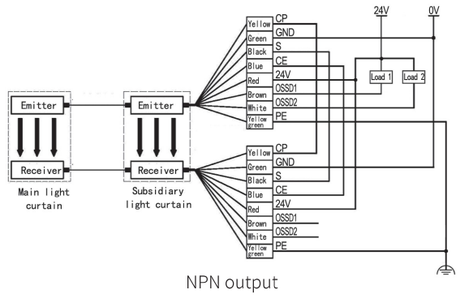
There is spacing between direct series light curtains

Specifications model

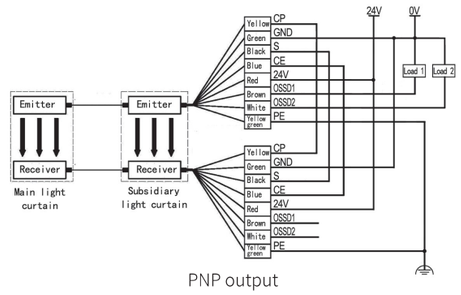


Note: Please specify the mounting brackets of safety light curtain when ordering.

Typical wiring diagram



NPN output



PNP output

Technical parameters

— Table31 —

Safety level	Type 4（GB/T 19436，IEC 61496）		
Standards	GB/T 19436.1；GB/T 19436.2；GB 4584-2007；IEC 61496-1；IEC 61496-2		
Optical characteristics			
Detection light source	Infrared LED (central wavelength of 940nm)		
Beam spacing	10mm	20mm	40mm
Detection capability	18mm	28mm	48mm
Number of beams	16、20…72	8、12…72	4、6…72
Operating range	A: 0～3m, B: 0～6m, C: 0～12m, D: 8～20m (specially customized)		
Protective height	Beam spacing × (Number of beams-1)		
EAA	Meet the requirements of IEC61496-2, when the detection distance is above 3m, EAA＜2.5°		
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	
IP code		IP65	
Dimensions		52×35×J1/J2mm(J1 is the length of emitter/receiver ofmain light curtain; J2 is the length of emitter/receiver of subsidiarylight curtain)	
Electrical characteristics			
Power supply		DC24V±10%	
Consumption current	Emitter	≤300mA	
	Receiver	≤100mA	
Response time		≤20ms	
Output characteristics	PNP	Light-passing state: 300mA, DC20V～24V; light-shading state: OPEN, DC0V	
	NPN	Light-passing state: 300mA, DC0V～4V; light-shading state: OPEN,DC24V	

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)

— Table32 —

Beam spacing 10									
Detection capability 18									
Number of beams	Specifications	H	Main light curtain J1	Subsidiarylight curtain J2	L	C	$MTTF_D$	PFH_D (1/h)	MTTF
16	KS06 () *1610G2#T	150	239	259	500	300	311	7.76E-09	59
20	KS06 () *2010G2#T	190	279	299	500	340	292	7.76E-09	56
24	KS06 () *2410G2#T	230	319	339	500	380	275	8.67E-09	54
28	KS06 () *2810G2#T	270	359	379	750	420	260	8.67E-09	52
32	KS06 () *3210G2#T	310	399	419	750	460	246	9.81E-09	49
36	KS06 () *3610G2#T	350	439	459	750	500	234	9.81E-09	48
40	KS06 () *4010G2#T	390	479	499	750	540	223	1.08E-08	46
44	KS06 () *4410G2#T	430	519	539	750	580	213	1.08E-08	44
48	KS06 () *4810G2#T	470	559	579	1000	620	204	1.19E-08	43
52	KS06 () *5210G2#T	510	599	619	1000	660	195	1.19E-08	41
56	KS06 () *5610G2#T	550	639	659	1000	700	188	1.33E-08	40
60	KS06 () *6010G2#T	590	679	699	1000	740	180	1.33E-08	39
64	KS06 () *6410G2#T	630	719	739	1000	780	174	1.33E-08	38
68	KS06 () *6810G2#T	670	759	779	1000	820	168	1.50E-08	36
72	KS06 () *7210G2#T	710	799	819	1000	860	162	1.50E-08	35

Note: In the specifications, () represents the number of main / subsidiary light curtain, Z represents mainlight curtain, F1/F2/F3 represents the number of subsidiary light curtain; * represents operating rangeserial length, 0~3m for A series, 0~6m for B series, 0~12m for C series and 8~20m for D series.
represents output form, P represents PNP output, N represents NPN output. The yellow part shows that the cascaded safety light curtain does not provide the subsidiary light curtain with this specificationat the last level.

Beam spacing 20									
Detectioncapability28									
Number of beams	Specifications	H	Main light curtain J1	Subsidiarylight curtain J2	L	C	$MTTF_D$	PFH_D (1/h)	MTTF
8	KS06 () *0820G2#T	140	239	249	500	300	358	6.44E-09	65
12	KS06 () *1220G2#T	220	319	329	500	380	345	7.04E-09	63
16	KS06 () *1620G2#T	300	399	409	750	460	333	7.04E-09	62
20	KS06 () *2020G2#T	380	479	489	750	540	321	7.04E-09	60
24	KS06 () *2420G2#T	460	559	569	1000	620	311	7.76E-09	59
28	KS06 () *2820G2#T	540	639	649	1000	700	301	7.76E-09	57
32	KS06 () *3220G2#T	620	719	729	1000	780	292	7.76E-09	56
36	KS06 () *3620G2#T	700	799	809	1000	860	283	8.67E-09	55
40	KS06 () *4020G2#T	780	879	889	1200	940	275	8.67E-09	54
44	KS06 () *4420G2#T	860	959	969	1200	1020	267	8.67E-09	53
48	KS06 () *4820G2#T	940	1039	1049	1500	1100	260	8.67E-09	52
52	KS06 () *5220G2#T	1020	1119	1129	1500	1180	253	9.81E-09	50
56	KS06 () *5620G2#T	1100	1199	1209	1500	1260	246	9.81E-09	49
60	KS06 () *6020G2#T	1180	1279	1289	1500	1340	240	9.81E-09	49
64	KS06 () *6420G2#T	1260	1359	1369	1750	1420	234	9.81E-09	48
68	KS06 () *6820G2#T	1340	1439	1449	1750	1500	228	1.08E-08	47
72	KS06 () *7220G2#T	1420	1519	1529	1750	1580	223	1.08E-08	46
42	KS06 () *4220G2#T	820	919	929	1200	980	218	1.08E-08	45
44	KS06 () *4420G2#T	860	959	969	1200	1020	213	1.08E-08	44
46	KS06 () *4620G2#T	900	999	1009	1200	1060	208	1.19E-08	43
48	KS06 () *4820G2#T	940	1039	1049	1500	1100	204	1.19E-08	43
50	KS06 () *5020G2#T	980	1079	1089	1500	1140	199	1.19E-08	42
52	KS06 () *5220G2#T	1020	1119	1129	1500	1180	195	1.19E-08	41
54	KS06 () *5420G2#T	1060	1159	1169	1500	1220	191	1.19E-08	41
56	KS06 () *5620G2#T	1100	1199	1209	1500	1260	188	1.33E-08	40
58	KS06 () *5820G2#T	1140	1239	1249	1500	1300	184	1.33E-08	39
60	KS06 () *6020G2#T	1180	1279	1289	1500	1340	180	1.33E-08	39
62	KS06 () *6220G2#T	1220	1319	1329	1750	1380	177	1.33E-08	38
64	KS06 () *6420G2#T	1260	1359	1369	1750	1420	174	1.33E-08	38
66	KS06 () *6620G2#T	1300	1399	1409	1750	1460	171	1.33E-08	37
68	KS06 () *6820G2#T	1340	1439	1449	1750	1500	168	1.50E-08	36
70	KS06 () *7020G2#T	1380	1479	1489	1750	1540	165	1.50E-08	36
72	KS06 () *7220G2#T	1420	1519	1529	1750	1580	162	1.50E-08	35

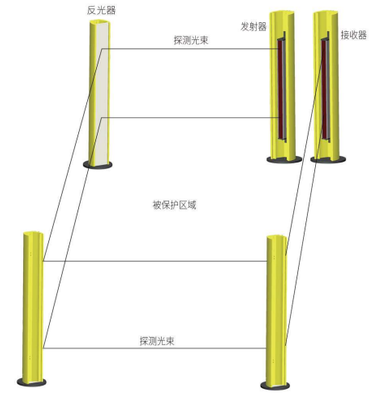
Beam spacing 40									
Detection capability 48									
Number of beams	Specifications	H	Main light curtain J1	Subsidiarylight curtain J2	L	C	$MTTF_D$	PFH_D (1/h)	MTTF
4	KS06 () *0440G2#T	120	239	249	500	300	387	5.94E-09	69
6	KS06 () *0640G2#T	200	319	329	500	380	372	6.44E-09	67
8	KS06 () *0840G2#T	280	399	409	750	460	358	6.44E-09	65
10	KS06 () *1040G2#T	360	479	489	750	540	345	7.04E-09	63
12	KS06 () *1240G2#T	440	559	569	1000	620	333	7.04E-09	62
14	KS06 () *1440G2#T	520	639	649	1000	700	321	7.04E-09	60
16	KS06 () *1640G2#T	600	719	729	1000	780	311	7.76E-09	59
18	KS06 () *1840G2#T	680	799	809	1000	860	301	7.76E-09	57
20	KS06 () *2040G2#T	760	879	889	1200	940	292	7.76E-09	56
22	KS06 () *2240G2#T	840	959	969	1200	1020	283	8.67E-09	55
24	KS06 () *2440G2#T	920	1039	1049	1500	1100	275	8.67E-09	54
26	KS06 () *2640G2#T	1000	1119	1129	1500	1180	267	8.67E-09	53
28	KS06 () *2840G2#T	1080	1199	1209	1500	1260	260	8.67E-09	52
30	KS06 () *3040G2#T	1160	1279	1289	1500	1340	253	9.81E-09	50
32	KS06 () *3240G2#T	1240	1359	1369	1750	1420	246	9.81E-09	49
34	KS06 () *3440G2#T	1320	1439	1449	1750	1500	240	9.81E-09	49
36	KS06 () *3640G2#T	1400	1519	1529	1750	1580	234	9.81E-09	48
38	KS06 () *3840G2#T	1480	1599	1609	2000	1660	228	1.08E-08	47
40	KS06 () *4040G2#T	1560	1679	1689	2000	1740	223	1.08E-08	46
42	KS06 () *4240G2#T	1640	1759	1769	2000	1820	218	1.08E-08	45
44	KS06 () *4440G2#T	1720	1839	1849		1900	213	1.08E-08	44
46	KS06 () *4640G2#T	1800	1919	1929		1980	208	1.19E-08	43
48	KS06 () *4840G2#T	1880	1999	2009		2060	204	1.19E-08	43
50	KS06 () *5040G2#T	1960	2079	2089		2140	199	1.19E-08	42
52	KS06 () *5240G2#T	2040	2159	2169		2220	195	1.19E-08	41
54	KS06 () *5440G2#T	2120	2239	2249		2300	191	1.19E-08	41
56	KS06 () *5640G2#T	2200	2319	2329		2380	188	1.33E-08	40
58	KS06 () *5840G2#T	2280	2399	2409		2460	184	1.33E-08	39
60	KS06 () *6040G2#T	2360	2479	2489		2540	180	1.33E-08	39
62	KS06 () *6240G2#T	2440	2559	2569		2620	177	1.33E-08	38
64	KS06 () *6440G2#T	2520	2639	2649		2700	174	1.33E-08	38
66	KS06 () *6640G2#T	2600	2719	2729		2780	171	1.33E-08	37
68	KS06 () *6840G2#T	2680	2799	2809		2860	168	1.50E-08	36

KS06 Qarea protective safety light curtain

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

Product description

KS06Qarea protective safety light curtain are divided into KS06QA series and KS06QB series. KS06Qarea safety
light curtain does not require controller, and it can provide two ways of PNP or NPN transistor output signal.



Product composition

It is composed of emitter, receiver, reflector, and transmission cable.

Product Features

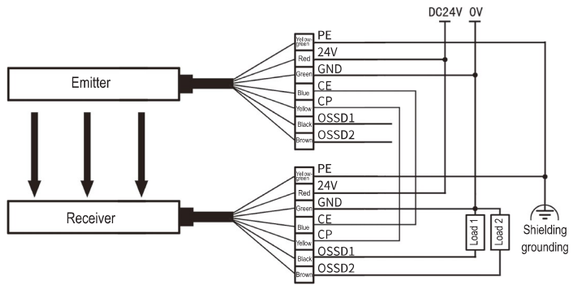
With long detection distance, it can achieve a variety of production, including single protection zone, two
protection zones, three protection zones and four protection zones;
Protective distance for single protection zone: -20 m for A series and -40 m for B series;
It can provide 4-sided area protection, so as to simplify wiring and save costs.
With strong ability to resist electromagnetic interference and light interference.

Specifications model

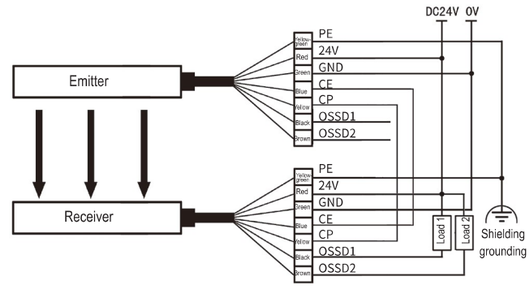
KS06Q □□ □□□□ - □ □□□ / □□

- Formof installation: FL-Ground installation of scatter shield
- T-transistor turns onwhenlightcurtainisunblocked
- Form ofoutput:2N-2channels NPN output
  2P-2channels PNP output
- G-safety light curtain
- Beamspacing: 04-40mm, 08-80mm, 16-160mm
- Number of beams: 4, 6...16
- Number of protection zones: It is represented using 1-digit number, for example: 2 represents two protection zones
- Light curtain series: A: single protection zone 20m,
  B: single protection zone 40m
- KS06Qarea protective safety light curtain

Typical wiring diagram



PNP output



NPN output

Note: The control signal wires OSSD1 and OSSD2 at the end of emitter are overhead.