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Focus on high-end quality

CE ISO9001:2015
RoHS IP65

Technology changes the future

COMPREHENSIVE CATALOG OF SENSORS **Safety light curtain**

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

Safety light curtain application case



Other product application cases





Model-CAT Ultra-long distance on the beam light curtain

- The shooting distance is up to 50 meters
- Switch quantity, relay passive output
- Can effectively shield 99% of interference signals
- Polarity, short circuit, overload protection, self-check

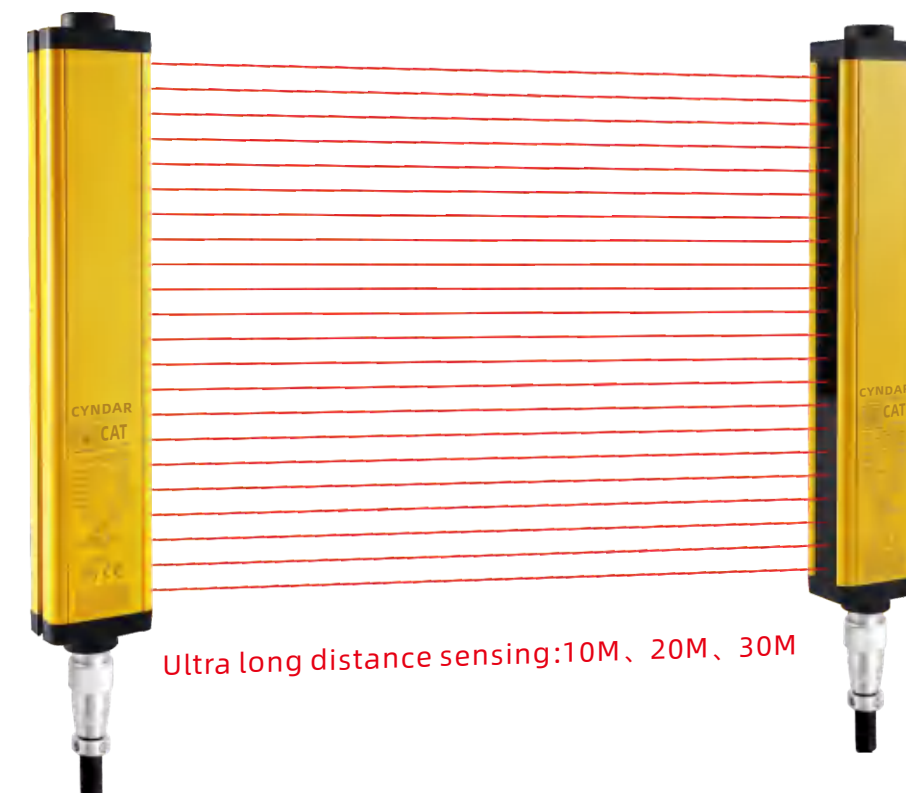
It is widely used in large machinery such as presses, hydraulic presses, hydraulic presses, shears, automatic doors, or dangerous occasions that require long-distance protection.

◆ Product characteristics

- ★ Perfect self-check function: When the safety screen protector fails, ensure that the wrong signal is not sent to the controlled electrical appliances.
- ★ Strong anti-interference ability: The system has good anti-interference ability to electromagnetic signal, stroboscopic light, welding arc and surrounding light source;
- ★ Easy installation and debugging, simple wiring, beautiful appearance;
- ★ Surface mounting technology is adopted, which has superior seismic performance.
- ★ It conforms to IEC61496-1/2 standard safety grade and TUV CE certification.
- ★ The corresponding time is short ($\leq 15\text{ms}$), and the safety and reliability performance is high.
- ★ The dimension design is 35mm*51mm.
The safety sensor can be connected to the cable (M12) through the air socket.
- ★ All electronic components adopt world-renowned brand accessories.

◆ Product configuration

Composition of Light Emitter, Light Receiver, Data Line and Installation Parts.



5 core(Emitter 3m, Receive 3.5m)
data cable (standard)

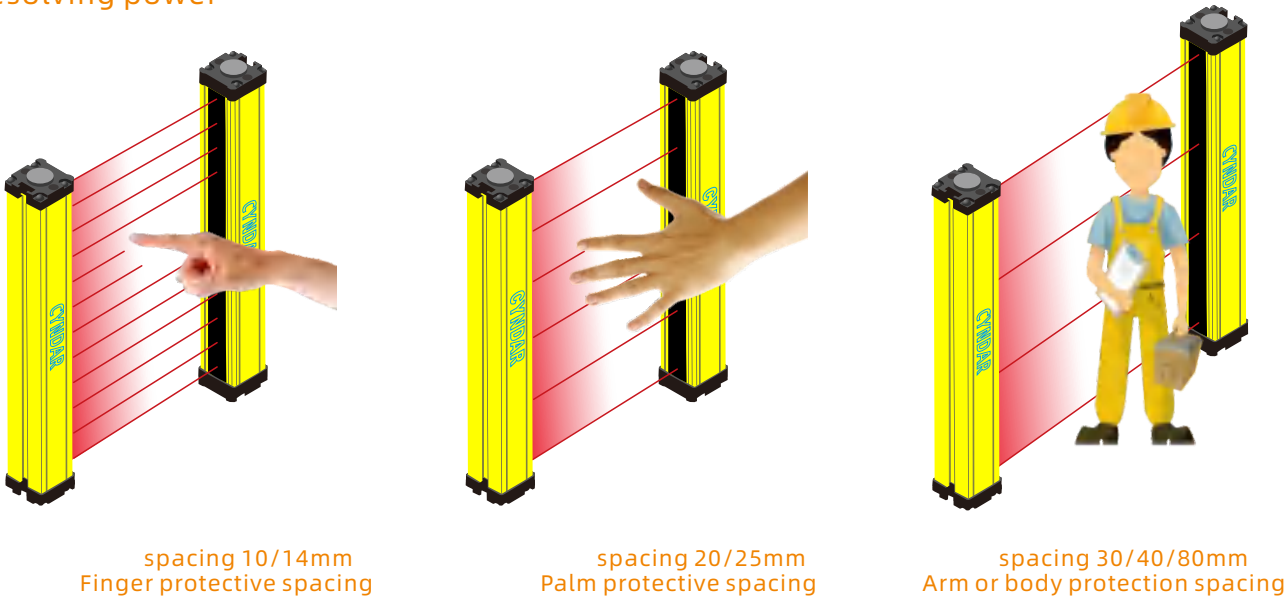


Safety light curtain controller QCA (optional)



Safety light curtain double-sided controller QCA2
(optional)

◆ Resolving power

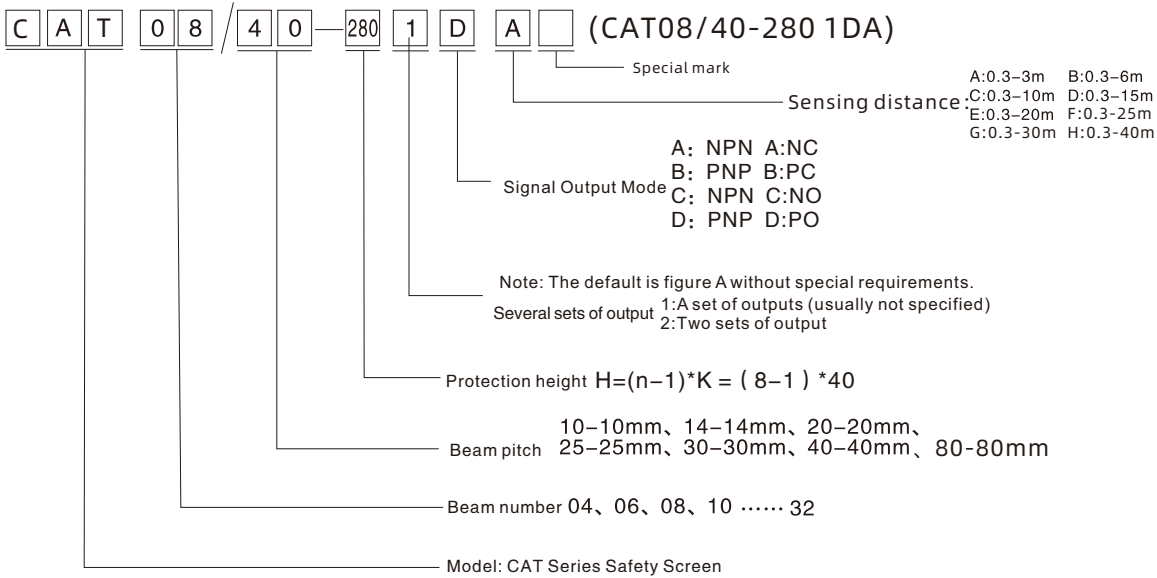


◆ Technical parameters of products

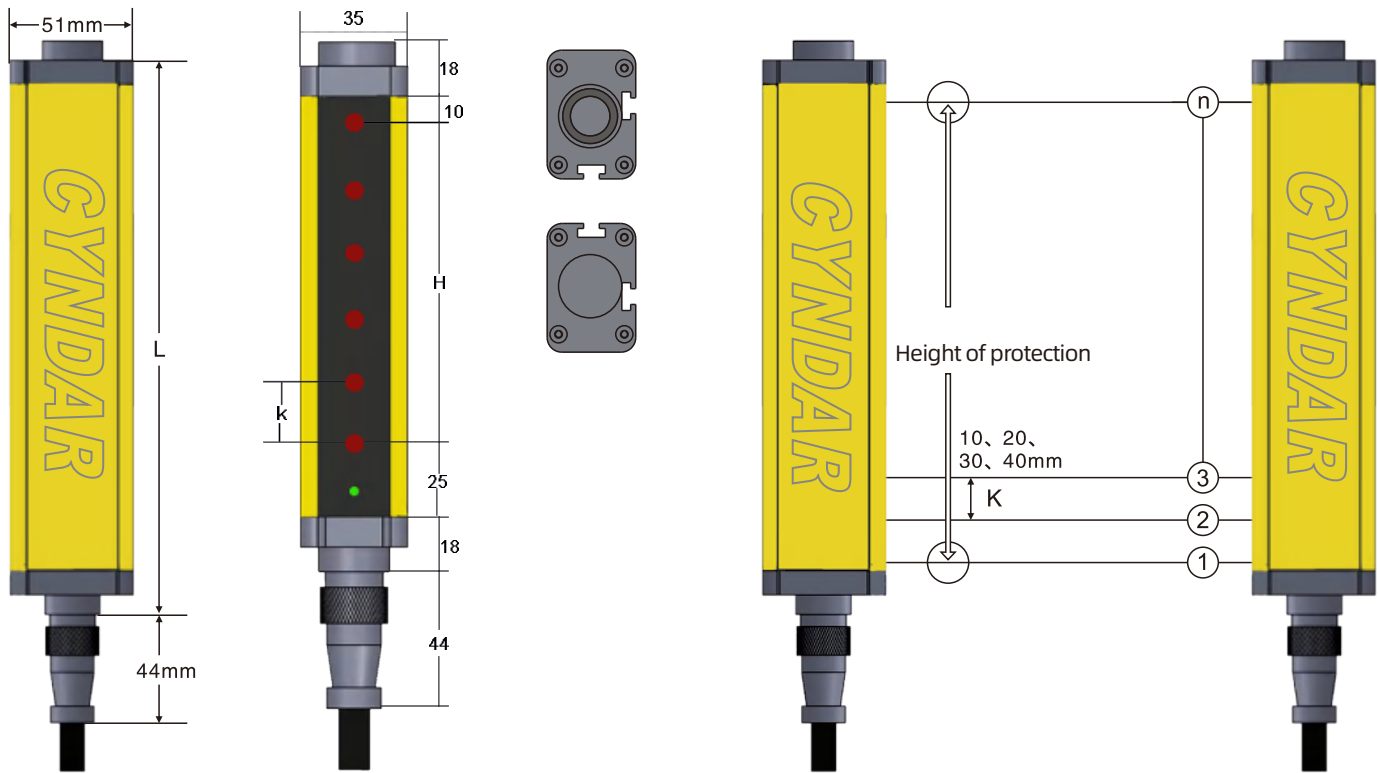
Light curtain form	Counter shooting						
Beam pitch	10mm	14mm	20mm	25mm	30mm	40mm	80mm
Check the accuracy	18mm	22mm	28mm	33mm	38mm	48mm	88mm
Beam number	6、8…32	6、8…32	4、6…32	6、8…32	4、6…32	4、6…32	4、6…32
Height of protection	Beam pitch X (Beam number-1)						
Detection distance	30 ~ 3000mm 、 30~6000mm						
Response time	≤15ms						
Anti light interference	10000Lux(Incidence angle ≥5°)						
Outline size	35x51xLmm(L is the length of light emitter/receiver)						
Protection level	IP65						
Controller	QCA QCA2						
Supply voltage	DC12/24V AC110~220V(Relay output)						
Consumption current	≤200mA						
Output	NPN/PNP type, with current 500 mA and voltage less than 1.5 v, polarity, short circuit and overload protection						
Output state	ON (Receiving Indicator Green Light)						
Indicator light	Projector: Power indicator (red); Receiver: Output indicator (green) shading (red)						
Light source	LED Modulated Infrared LED						
Connection mode	Circular aviation socket with special connecting cable, 5 cores of projector and 5 cores of receiver						
Shell material	Aluminum alloy, end cover: ABS reinforced nylon						
Environmental light resistance	Incandescent light: illumination of the receiving surface 3000Lx; sunlight: illumination of the receiving surface 10000Lx						
Ambient temperature	When working: - 10 ~ + 40 C (but not freezing), when preserved: - 25 ~ + 55 C						
Ambient humidity	Work: 35~85% RH, save: 35~95% RH						

Unit: mm

The specifications of CAT type safety screen are as follows



Dimensions



Remarks
H= (n-1) *K= Height of detection n:Optical axis number
L:Total length of light screen K:Optical axis spacing
L=P+H+J+18mm+18mm

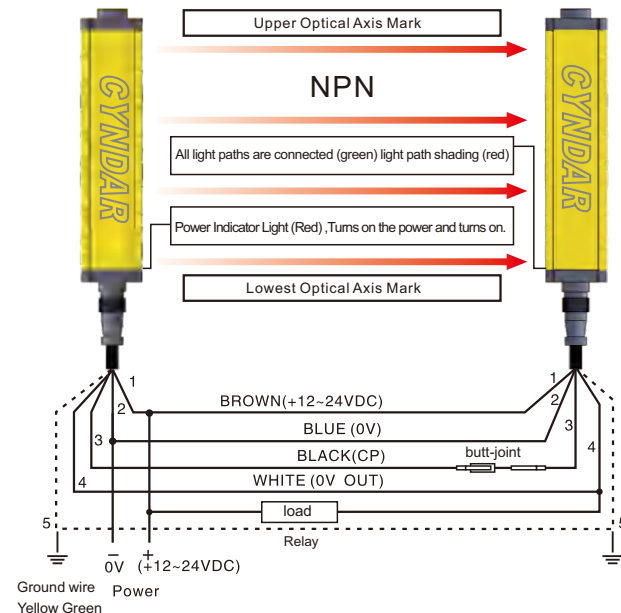
K (mm)	10	14	20	25	30	40	80
P (mm)	5	7	10	12.5	15	20	40
J (mm)	32	32	25	25	25	25	25

Beam pitch	Light beam	Protection height	Screen height	Product model	Signal output mode				Detection distance
					NPN	PNP	NPN	PNP	
10mm (K)	6	50	123	CAT06/10-50	A	B	C	D	0.3-3m
	8	70	143	CAT08/10-70	A	B	C	D	0.3-3m
	10	90	163	CAT10/10-90	A	B	C	D	0.3-3m
	12	110	183	CAT12/10-110	A	B	C	D	0.3-3m
	14	130	203	CAT14/10-130	A	B	C	D	0.3-3m
	16	150	223	CAT16/10-150	A	B	C	D	0.3-3m
	18	170	243	CAT18/10-170	A	B	C	D	0.3-3m
	20	190	263	CAT20/10-190	A	B	C	D	0.3-3m
	22	210	283	CAT22/10-210	A	B	C	D	0.3-3m
	24	230	303	CAT24/10-230	A	B	C	D	0.3-3m
	26	250	323	CAT26/10-250	A	B	C	D	0.3-3m
	28	270	343	CAT28/10-270	A	B	C	D	0.3-3m
	30	290	363	CAT30/10-290	A	B	C	D	0.3-3m
	32	310	383	CAT32/10-310	A	B	C	D	0.3-3m
	6	70	145	CAT06/14-70	A	B	C	D	0.3-3m
	8	98	173	CAT08/14-98	A	B	C	D	0.3-3m
14mm (K)	10	126	201	CAT10/14-126	A	B	C	D	0.3-3m
	12	154	229	CAT12/14-154	A	B	C	D	0.3-3m
	14	182	257	CAT14/14-182	A	B	C	D	0.3-3m
	16	210	285	CAT16/14-210	A	B	C	D	0.3-3m
	18	238	313	CAT18/14-238	A	B	C	D	0.3-3m
	20	266	341	CAT20/14-266	A	B	C	D	0.3-3m
	22	294	369	CAT22/14-294	A	B	C	D	0.3-3m
	24	322	397	CAT24/14-322	A	B	C	D	0.3-3m
	26	350	425	CAT26/14-350	A	B	C	D	0.3-3m
	28	378	453	CAT28/14-378	A	B	C	D	0.3-3m
	30	406	481	CAT30/14-406	A	B	C	D	0.3-3m
	32	434	509	CAT32/14-434	A	B	C	D	0.3-3m
	4	60	131	CAT04/20-60	A	B	C	D	0.3-3m
	6	100	171	CAT06/20-100	A	B	C	D	0.3-3m
	8	140	211	CAT08/20-140	A	B	C	D	0.3-3m
20mm (K)	10	180	251	CAT10/20-180	A	B	C	D	0.3-3m
	12	220	291	CAT12/20-220	A	B	C	D	0.3-3m
	14	260	331	CAT14/20-260	A	B	C	D	0.3-3m
	16	300	371	CAT16/20-300	A	B	C	D	0.3-3m
	18	340	411	CAT18/20-340	A	B	C	D	0.3-3m
	20	380	451	CAT20/20-380	A	B	C	D	0.3-3m
	22	420	491	CAT22/20-420	A	B	C	D	0.3-3m
	24	460	531	CAT24/20-460	A	B	C	D	0.3-3m
	26	500	571	CAT26/20-500	A	B	C	D	0.3-3m
	28	540	611	CAT28/20-540	A	B	C	D	0.3-3m
	30	580	651	CAT30/20-580	A	B	C	D	0.3-3m
	32	620	691	CAT32/20-620	A	B	C	D	0.3-3m
	6	125	198.5	CAT06/25-125	A	B	C	D	0.3-3m
	8	175	248.5	CAT08/25-175	A	B	C	D	0.3-3m
	10	225	298.5	CAT10/25-225	A	B	C	D	0.3-3m
25mm (K)	12	275	348.5	CAT12/25-275	A	B	C	D	0.3-3m
	14	325	398.5	CAT14/25-325	A	B	C	D	0.3-3m
	16	375	448.5	CAT16/25-375	A	B	C	D	0.3-3m
	18	425	498.5	CAT18/25-425	A	B	C	D	0.3-3m
	20	475	548.5	CAT20/25-475	A	B	C	D	0.3-3m
	22	525	598.5	CAT22/25-525	A	B	C	D	0.3-3m
	24	575	648.5	CAT24/25-575	A	B	C	D	0.3-3m
	26	625	698.5	CAT26/25-625	A	B	C	D	0.3-3m
	28	675	748.5	CAT28/25-675	A	B	C	D	0.3-3m
	30	725	798.5	CAT30/25-725	A	B	C	D	0.3-3m
	32	775	848.5	CAT32/25-775	A	B	C	D	0.3-3m
	4	90	166	CAT04/30-90	A	B	C	D	0.3-3m
	6	150	226	CAT06/30-150	A	B	C	D	0.3-3m
	8	210	286	CAT08/30-210	A	B	C	D	0.3-3m
	10	270	346	CAT10/30-270	A	B	C	D	0.3-3m
30mm (K)	12	330	406	CAT12/30-330	A	B	C	D	0.3-3m
	14	390	466	CAT14/30-390	A	B	C	D	0.3-3m
	16	450	526	CAT16/30-450	A	B	C	D	0.3-3m
	18	510	586	CAT18/30-510	A	B	C	D	0.3-3m
	20	570	646	CAT20/30-570	A	B	C	D	0.3-3m
	22	630	706	CAT22/30-630	A	B	C	D	0.3-3m
	24	690	766	CAT24/30-690	A	B	C	D	0.3-3m
	26	750	826	CAT26/30-750	A	B	C	D	0.3-3m
	28	810	886	CAT28/30-810	A	B	C	D	0.3-3m
	30	870	946	CAT30/30-870	A	B	C	D	0.3-3m
	32	930	1006	CAT32/30-930	A	B	C	D	0.3-3m
	4	120	201	CAT04/40-120	A	B	C	D	0.3-3m
	6	200	281	CAT06/40-200	A	B	C	D	0.3-3m
	8	280	361	CAT08/40-280	A	B	C	D	0.3-3m
	10	360	441	CAT10/40-360	A	B	C	D	0.3-3m
40mm (K)	12	440	521	CAT12/40-440	A	B	C	D	0.3-3m
	14	520	601	CAT14/40-520	A	B	C	D	0.3-3m
	16	600	681	CAT16/40-600	A	B	C	D	0.3-3m
	18	680	761	CAT18/40-680	A	B	C	D	0.3-3m
	20	760	841	CAT20/40-760	A	B	C	D	0.3-3m
	22	840	921	CAT22/40-840	A	B	C	D	0.3-3m
	24	920	1001	CAT24/40-920	A	B	C	D	0.3-3m
	26	1000	1081	CAT26/40-1000	A	B	C	D	0.3-3m
	28	1080	1161	CAT28/40-1080	A	B	C	D	0.3-3m
	30	1160	1241	CAT30/40-1160	A	B	C	D	0.3-3m
	32	1240	1321	CAT32/40-1240	A	B	C	D	0.3-3m
	4	240	341	CAT04/80-240	A	B	C	D	0.3-3m
	6	400	501	CAT06/80-400	A	B	C	D	0.3-3m
	8	560	661	CAT08/80-560	A	B	C	D	0.3-3m
	10	720	821	CAT10/80-720	A	B	C	D	0.3-3m
80mm (K)	12	880	981	CAT12/80-880	A	B	C	D	0.3-3m
	14	1040	1141	CAT14/80-1040	A	B	C	D	0.3-3m
	16	1200	1301	CAT16/80-1200	A	B	C	D	0.3-3m
	18	1360	1461	CAT18/80-1360	A	B	C	D	0.3-3m
	20	1520	1621	CAT20/80-1520	A	B	C	D	0.3-3m
	22	1680	1781	CAT22/80-1680	A	B	C	D	0.3-3m
	24	1840	1941	CAT24/80-1840	A	B	C	D	0.3-3m
	26	2000	2101	CAT26/80-2000	A	B	C	D	0.3-3m
	28	2160	2261	CAT28/80-2160	A	B	C	D	0.3-3m
	30	2320	2421	CAT30/80-2320	A	B	C	D	0.3-3m
	32	2480	2581	CAT32/80-2480	A	B	C	D	0.3-3m

备注：输出方式详见上一规格说明，如无要求默认为A图。特殊规格可另外订做，检测距离A: 0.3-3M、B: 0.3-6M、C: 0.3-10M、D: 0.3-15M、E: 0.3-20M、F: 0.3-25M、G: 0.3-30M、H: 0.3-40M。

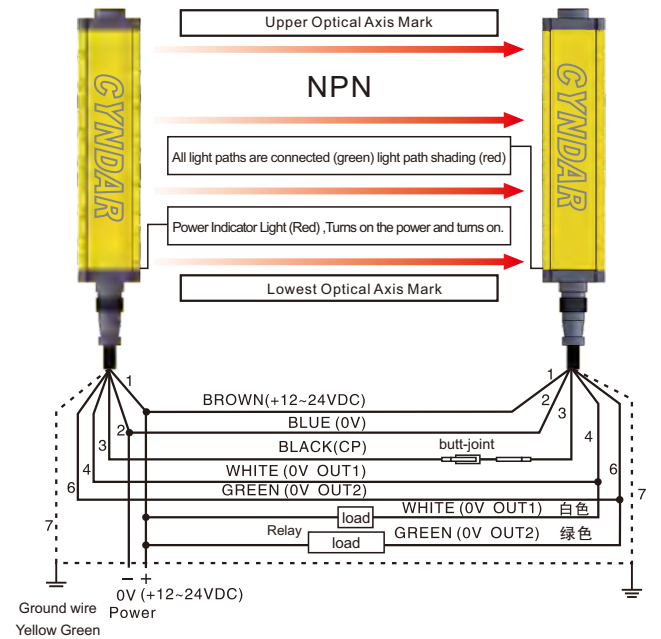
Note: The mode of output is detailed in the specification on the next page. If there is no requirement, the default is figure A. Special specifications can be customized, detection distance A:0.3-3M, B:0.3-6M, C:0.3-10M, etc. D: 0.3-15M, E: 0.3-20M, F: 0.3-25M, G: 0.3-30M, H: 0.3-40M.

◆ CAT five-core series wiring diagram



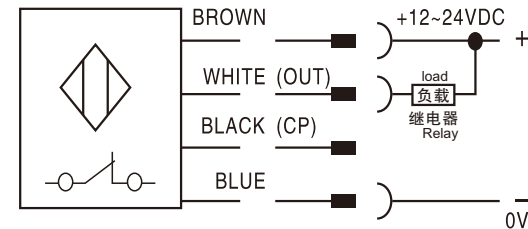
This figure is an example of NPN single output wiring

◆ CAT transmitter and receiver are all seven-pin six-core wiring diagram

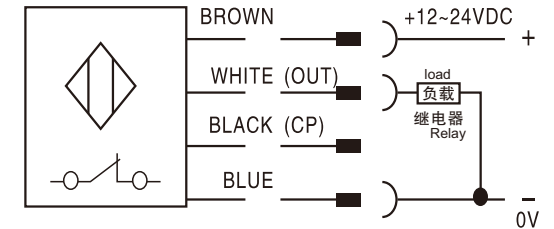


This figure is an example of NPN dual output wiring.

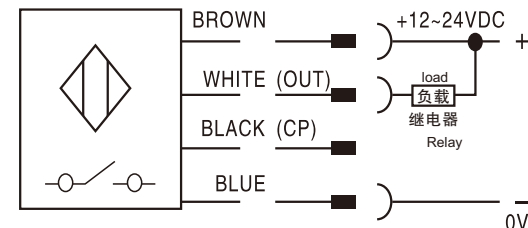
◆ CAT signal output selection (actual output of transistor working normally)



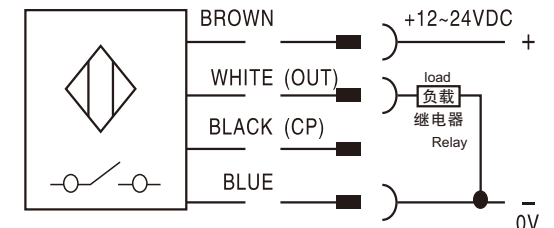
A图 NPN(常闭)NC



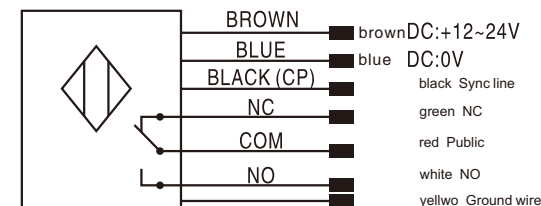
B图 PNP(常闭)PC



C图 NPN(常开)NO



D图 PNP(常开)PO



J图

CAT internal relay passive output

Note: Synchronization line CP: Short connection between transmitter and receiver contact rating AC: 250V 10A DC: 30V 16A

Note: When the light curtain is illuminated, the connection between red and green (NC) and the disconnection between red and white (NO). When the light screen is shaded, the red and green are disconnected and the red and white are connected.