

Safety light curtain/safety lidar/safety mat/safety edge/safety relay



◆产品特点 Product characteristics

- ★ 自检功能完善：当安全传感器出现故障时，确保不向所控制的电器发送错误的信号；
 - ★ 抗干扰能力强：系统对电磁信号，频闪灯光，焊接弧光及周围的光源具有良好的抗干扰能力；
 - ★ 安装调试方便，配线简单，外形美观；
 - ★ 采用表面贴装技术，防震性能优越；
 - ★ 符合国际电工学会IEC61496-1/2标准安全等级，已通过TUV的CE认证；
 - ★ 响应时间短（≤15ms），安全可靠性能高；
 - ★ 尺寸设计35mm*51mm,安全传感器可以通过航空插座与电缆线(M12)链接；
 - ★ 所有电子元器件均采用全球知名品牌配件。
- ★ 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 (≤ 15ms), 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.

◆产品配置 Product configuration

发光器、受光器、数据线和安装配件组成。
Composition of Light Emitter, Light Receiver, Data Line and Installation Parts.



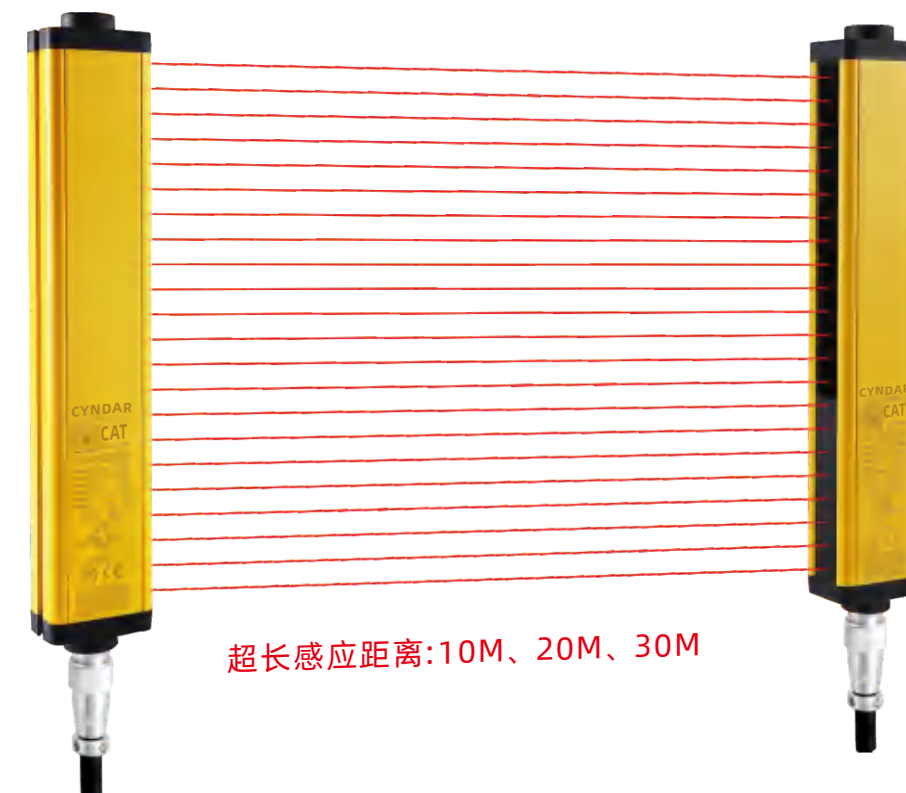
五芯(发射3m,接收3.5m)数据线(标配)
5 core(Emitter 3m, Receive 3.5m)
data cable (standard)



安全光幕控制器QCA(选购件)
Safety light curtain controller QCA (optional)



安全光幕双面控制器QCA2(选购件)
Safety light curtain double-sided controller QCA2
(optional)



超长感应距离:10M、20M、30M

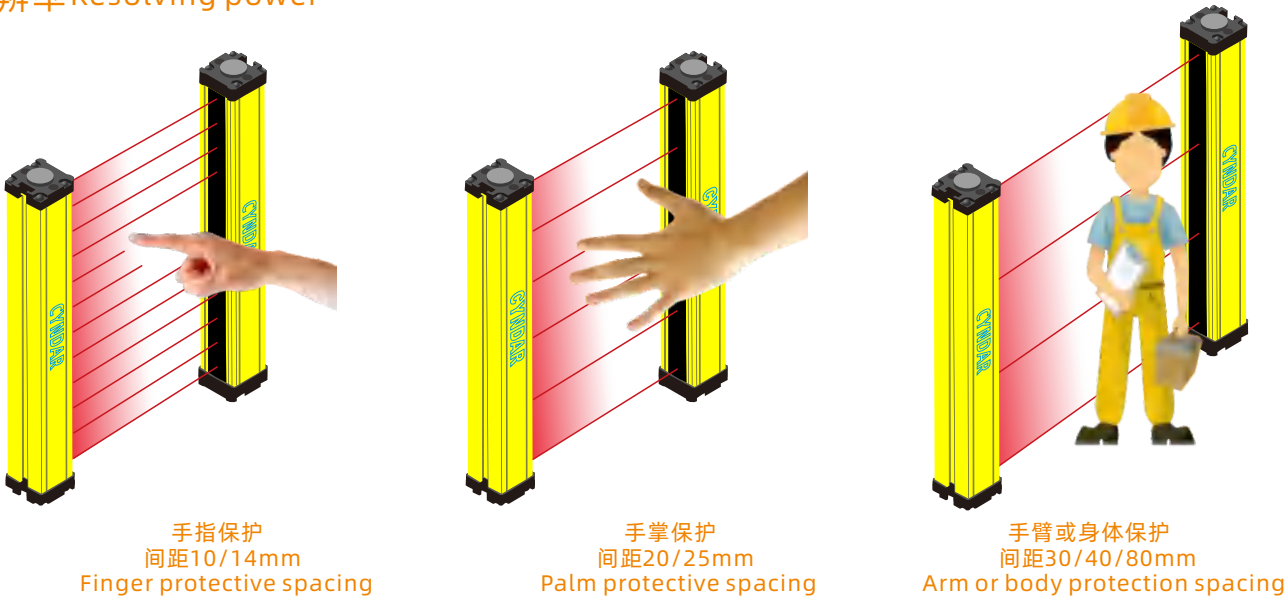
超远距离对射光幕-CAT Ultra-long distance on the beam light curtain

- 对射距离最长达50米
- 开关量、继电器无源输出
- 能有效屏蔽99%干扰信号
- 极性、短路、过载保护、自检
- 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

广泛适用于压力机、液压机、油压机、剪板机、自动门等大型机械或需要长距离保护的场合。

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.

◆ 分辨率Resolving power

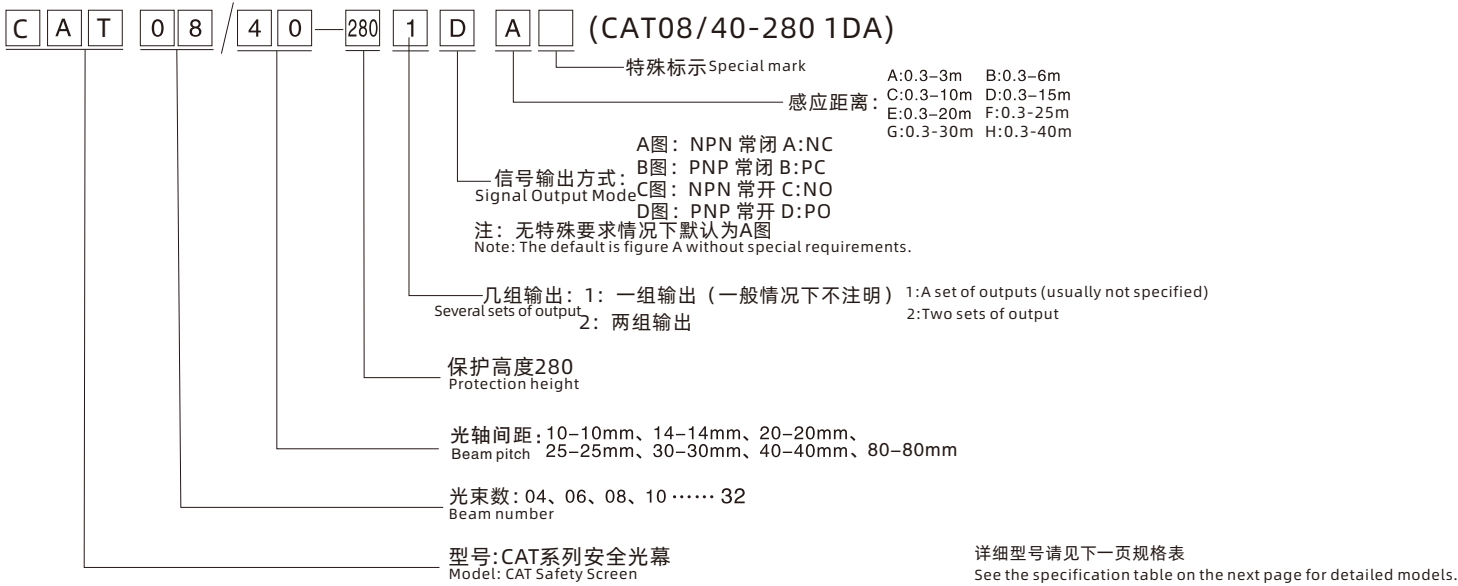


◆ 产品技术参数 Technical parameters of products

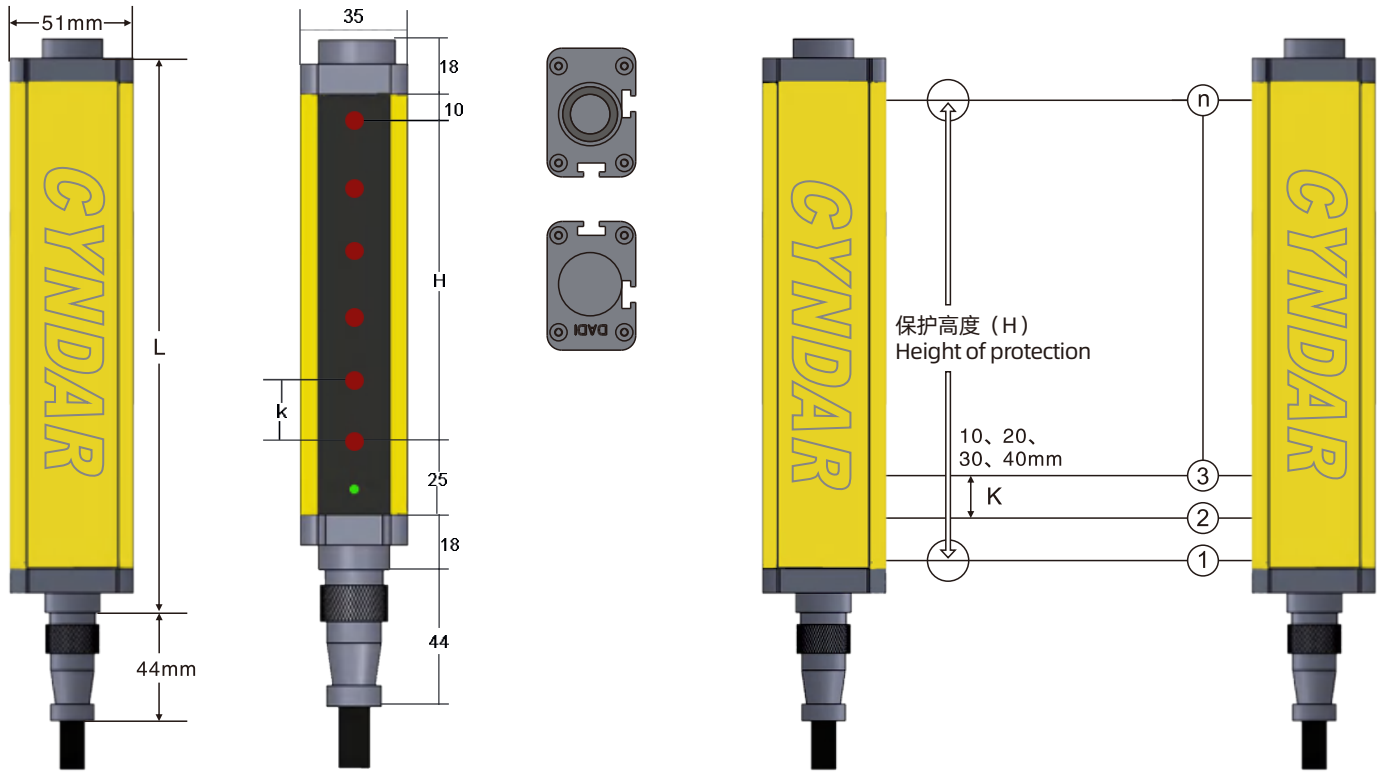
光幕形式 Light curtain form	对射式Counter shooting						
光轴间距 Beam pitch	10mm	14mm	20mm	25mm	30mm	40mm	80mm
检测精度 Check the accuracy	18mm	22mm	28mm	33mm	38mm	48mm	88mm
光束数 Beam number	6、8...32	6、8...32	4、6...32	6、8...32	4、6...32	4、6...32	4、6...32
保护高度 Height of protection	光轴间距Beam pitch X (光束数Beam number-1)						
检测距离 Detection distance	30 ~ 3000mm 、 30~6000mm						
响应时间 Response time	≤15ms						
抗光干扰 Anti light interference	10000Lux(入射角incidence angle≥5°)						
外形尺寸 Outline size	35x51xLmm(L为发光器/受光器长度L is the length of light emitter/receiver)						
防护等级 Protection level	IP65						
控制器 Controller	QCA QCA2						
电源电压 Supply voltage	DC12/24V AC110~220V(继电器输出Relay output)						
消耗电流 Consumption current	≤200mA						
输出 Output	NPN/PNP型, 灌入电流500mA, 电压1.5v以下, 极性、短路、过载保护 NPN/PNP type, with current 500 mA and voltage less than 1.5 v, polarity, short circuit and overload protection						
输出状态 Output state	ON (接收指示灯Receiving Indicator Green Light)						
指示灯 Indicator light	投光器: 电源指示灯 (红色) ; 受光器: 输出指示灯 透光 (绿色) 遮光 (红色) Projector: Power indicator (red); Receiver: Output indicator (green) shading (red)						
光源 Light source	调制红外LED Modulated Infrared LED						
连接方式 Connection mode	圆形航空插座, 配专用连接电缆, 投光器5芯, 受光器5芯 Circular aviation socket with special connecting cable, 5 cores of projector and 5 cores of receiver						
壳体材料 Shell material	铝合金, 端盖: ABS增强尼龙 Aluminum alloy, end cover: ABS reinforced nylon						
耐环境光 Environmental light resistance	白炽光: 受光面照度3000Lx; 太阳光: 受光面照度10000Lx Incandescent light: illumination of the receiving surface 3000Lx; sunlight: illumination of the receiving surface 10000Lx						
环境温度 Ambient temperature	工作时: -10~+40℃(但不结冰), 保存时: -25~+55℃ When working: - 10 ~ + 40 C (but not freezing), when preserved: - 25 ~ + 55 C						
环境湿度 Ambient humidity	工作时: 35~85%RH, 保存时: 35~95%RH Work: 35-85% RH, save: 35-95% RH						

CAT型安全光幕规格表说明如下:
The specifications of CAT type safety screen are as follows

单位Unit: mm



外形尺寸Dimensions



备注:
Remarks

H= (n-1) *K=保护高度
Height of detection

L:光幕总长度
Total length of light screen

n:光轴数
Optical axis number

K:光轴间距
Optical axis spacing

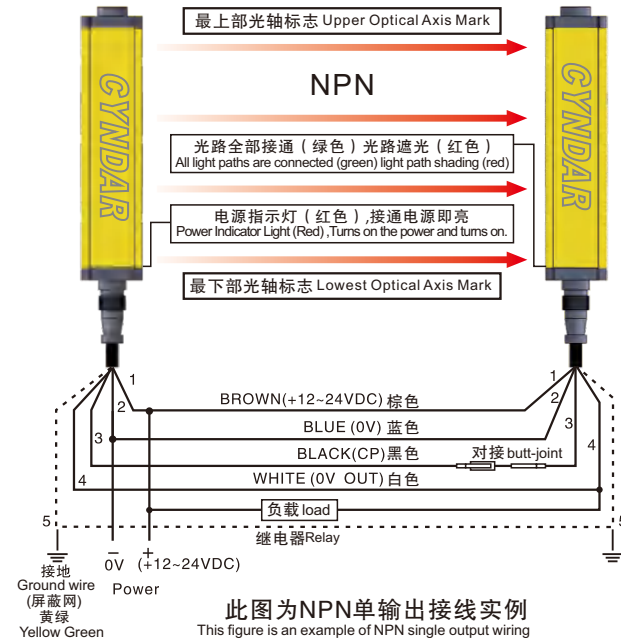
L=P+H+J+18mm+18mm

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

光轴间距 Beam pitch	光束数 Light beam	保护高度mm(H) Protection height	光幕高度mm(l) Screen height	产品型号 Product model	信号输出方式 Signal output mode				检测距离 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
14mm (K)	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
	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
20mm (K)	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
	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
25mm (K)	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
	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
30mm (K)	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
	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
40mm (K)	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
	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
80mm (K)	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
	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

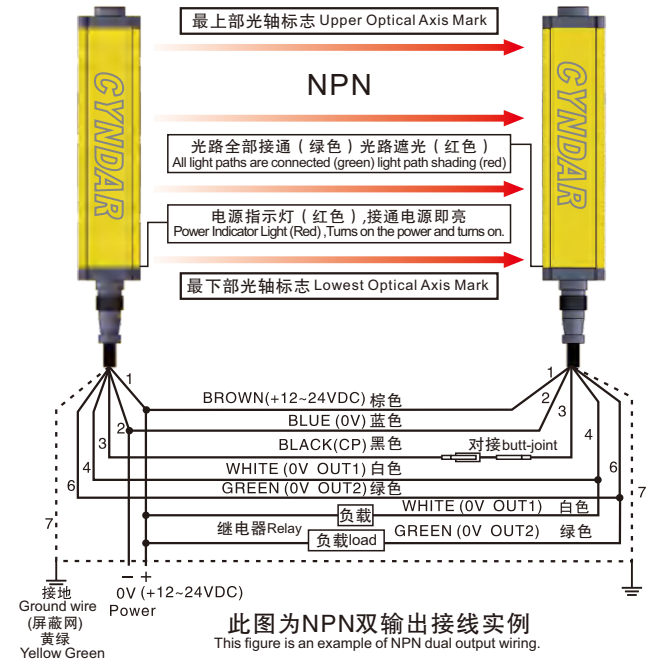
备注：输出方式详见上一页规格说明，如无要求默认为A图。特殊规格可另外订做，检测距离A：0.3-3M、B：0.3-6M、C：0.3-10M、D：0.3-15M、E：0.3-20M、F：0.3-25M、G：0.3-30M、H：0.3-40M。
Note: The mode of output is detailed in the specification on the next page. If there is no requirement, the default is figure A. Special specifications can be customized, detection 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五芯系列接线图
CAT five-core series wiring diagram



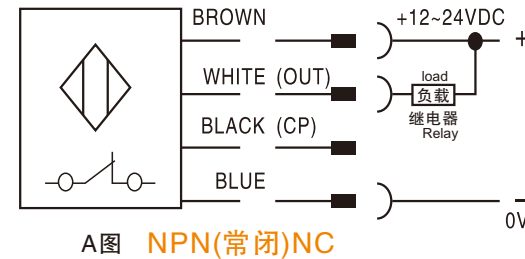
此图为NPN单输出接线实例
This figure is an example of NPN single output wiring

◆ CAT 7 6
CAT transmitter and receiver are all seven-pin six-core wiring diagram

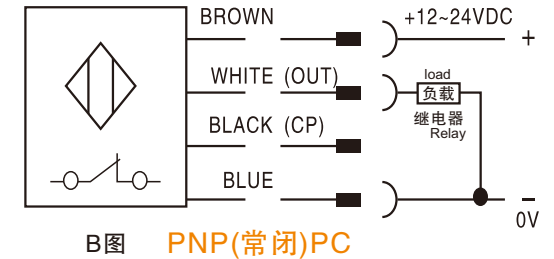


此图为NPN双输出接线实例
This figure is an example of NPN dual output wiring.

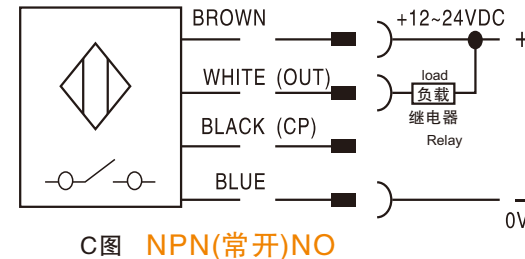
◆ CAT信号输出选择（晶体管正常工作的实际输出）
CAT signal output selection (actual output of transistor working normally)



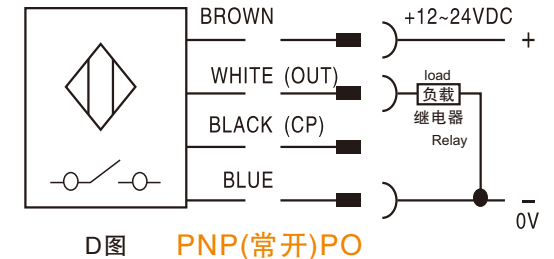
A图 NPN(常闭)NC



B图 PNP(常闭)PC



C图 NPN(常开)NO



D图 PNP(常开)PO

CAT内部继电器无源输出

注：同步线CP：发射、接收短接 触点容量：AC: 250V 10A
Note: Synchronization line CP: Short connection between transmitter and receiver contact rating DC: 30V 16A

注：光幕通光时：红、绿接通（常闭），红、白断开（常开）
光幕遮光时：红、绿断开，红、白接通（常开）

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.