

## 舌簧传感器 REED SENSOR

### 舌簧传感器 Reed sensor

- 舌簧传感器又称磁性开关，适用于气动、液动、气缸和活塞泵的位置测定亦可作限位开关用。当磁性目标接近时，舌簧合经放大输出开关信号。与电感式传感器比较有以下优点，能安装在金属中可并排紧密安装，可穿过金属进行检测。其检测距离随检测体磁场的强弱而变化。舌簧传感器不适用于强烈震动的场合。
- Also called magnetic switch, reed sensor is applicable for position determination of pneumatic and/or hydraulic cylinder and piston pump. It also can be used as limit switch. When the magnetic object approaches, the reed closes and sends out switch signal through magnification. Compared with inductive sensor, it has the following strongpoints: can be installed in metal closely and side by side and detect through metal object. Its detection distance subjects to the intensity of magnetic field of detected object. Reed sensor is not applicable in the occasion of severe vibration.



## 光电开关 PHOTOELECTRIC SWITCH

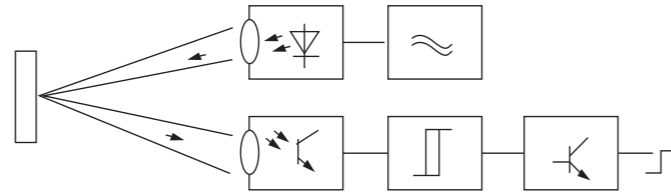


# 光电开关 PHOTOELECTRIC SWITCH

## 结构分类 Structural category

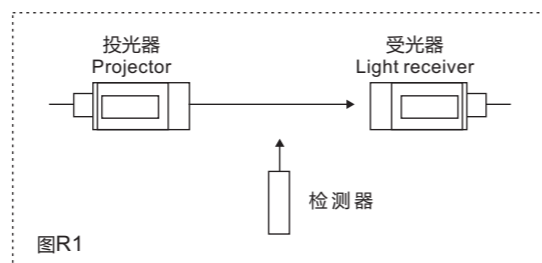
### 光电开关工作原理 Photoelectric switch Principle of photoelectric switch

光电开关的原理是根据投光器发射的光束，被物体阻断或部分反射，受光器最终据此做出判断反应。  
The working principle of the photoelectric switch is that when the beam emitted by the emitter is blocked or partly reflected by the object, the beam receiver whereby makes a judgment and reacts.



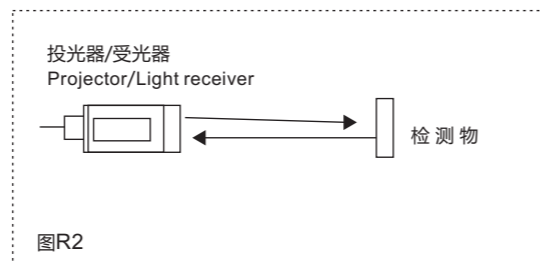
### 类型说明 Description Througt-beam type

对射式(透射型) Diact type (through type) 对射式光电开关是将投光器与受光器置于相对的两个装置，光束也是在相对的两个装置之间，穿达投光器与受光器之间的物体会阻断光束并启动受光器。(图R1)  
Through-beam type photoelectric switch is designed that via the light beam between opposite-mounted transmitter and receiver, the object passing through these two devices will interrupt the light beam and start the receiver.(Fig.R1)



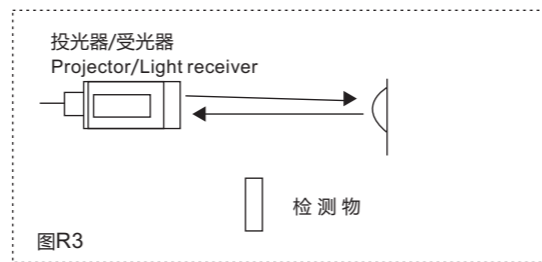
### 扩散反射型(漫反射型) Diffuse type

扩散反射型光电开关将投光器与受光器置于一体，光电开关反射的光被检测物体反射回受光器。(图R2)  
Diffuse reflection type photoelectric switch integrates the transmitter and the reciver. Light reflected by the photoelectric switch is reflected back to the receiver by the detected object.(Fig.R2)



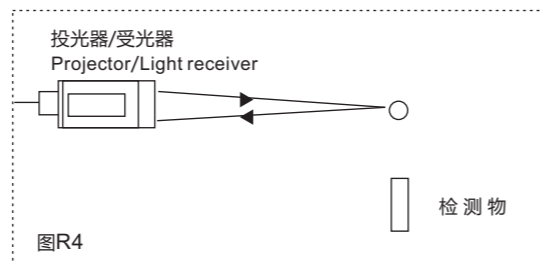
### 镜面反射型(反馈反射型) Retroreflective type

镜面反射型的反射式光电开关也将投光器与受光器置于一体，它不同于其它模式是它采用反射板将光线反射型光电开关，光电开关于反射板之间的物体虽然也反射光线，但其效率远低于反射板，因而切断反射光束。(图R3)  
Retroreflective type photoelectric switch also integrates the transmitter and the receiver, Its difference from other models is that reflector is used to reflect light to the photoelectric switch. Though the object between the photoelectric switch and reflector can reflect the light, it is much less efficient than the reflector so as to cut down reflected light.(Fig.R3)



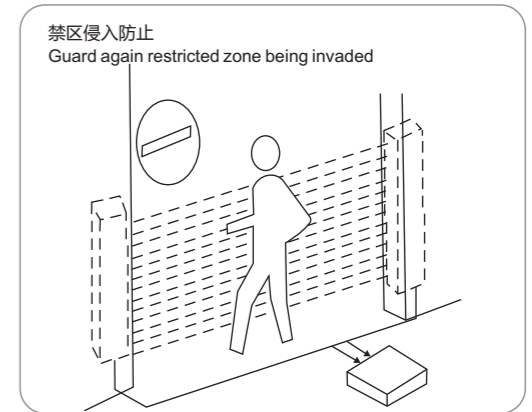
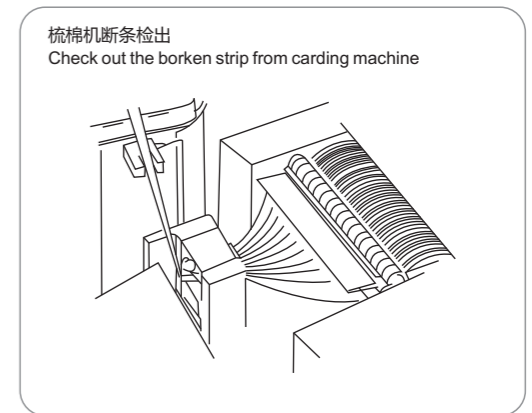
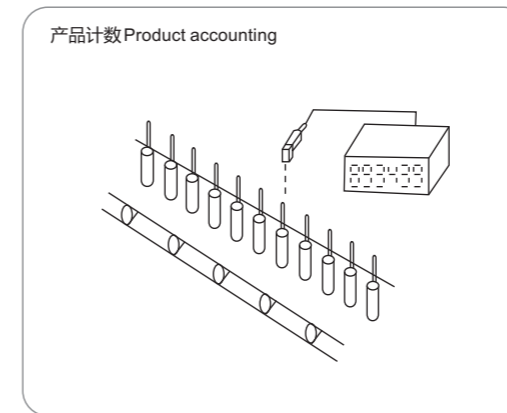
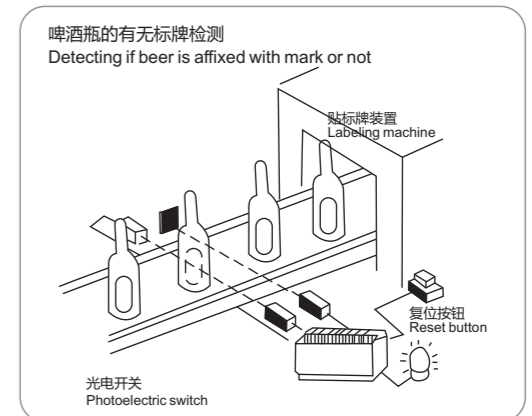
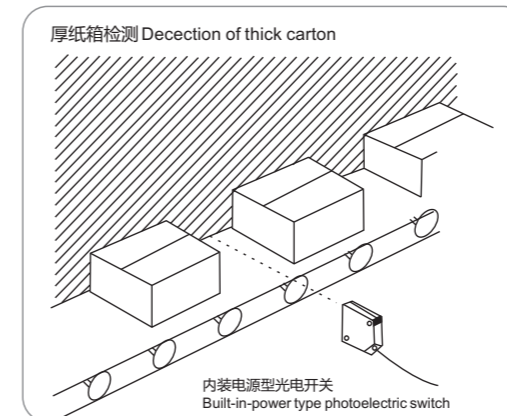
### 会聚型反射型(聚光型) Convergence reflection type (condensation type)

会聚型反射式的光电开关的工作原理类似于直接反射式光电开关，然而其投光器与受光器聚焦于物距离，只有当物体出现在聚焦时，光电开关才有动作。(图R4)  
The working principle of convergence reflection type photoswitch is similar to that of direct reflection type one, while its projector and light receiver focus on object distance, only when the object presents to the focus can the photoswitch actuate.(Fig.R4)



# 光电开关 PHOTOELECTRIC SWITCH

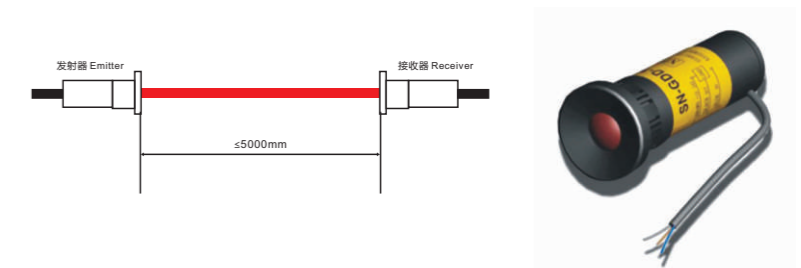
## 光电开关应用图例 Application illustration or photoelectric switch



## 产品简介 Introduction

- SN-GDD-1型对射/漫反射红外线光电开关由一对红外线发射器和接收器相对安装构成电路。产品接通电源后，当来自发射器的红外线光束被物体阻断时，接收器就输出一个电信号(NPN/PNP)给需要控制的设备及系统。
- SN-GDD-1 beam/diffused infrared photoelectric sensor consist of a pair of emitter and receiver installed face to face which compose a circuit. After power is supplied, the receiver will send out an electric signal (NPN/PNP) to the controlled equipment and system when the infrared beam from emitter is blocked by an object.

## 外形尺寸 Dimension





# 光电开关 PHOTOELECTRIC SWITCH

光电开关型号构成及含义 Model composition and definition of infrared ray photoelectric switch.

G 18 3 A 10 N A □  
1 2 3 4 5 6 7 8

编号 No	构成 Composition	代码及含义 Code and definition
1	基本形式 Basic form	G:塑料壳体红外线光电开关 E:金属红外线光电开关 infrared ray photoelectric switch
2	外形编号 Outward appearance code	18,50,76.....
3	工作电压 Working voltage	2.90-250VAC 3:10-30VDC 4:12-240VDC/24~240VAC 5:特殊电压 Special voltage
4	检测方式 Detection way	A:漫反射型(扩散反射型) B:反馈反射型(镜面反射型) C:透过型(对射型) D:标记检测型 G:光纤型 F:槽型 A:diffused reflection type(scattered reflection type) B:feedback reflection type mirror(mirror reflection type) C:penetration type(correlation type) D:marking detection type G:optical fiber type
5	检测距离 Detection distance	05:5cm 10:10cm 30:30cm 101:10cm
6	输出形式 Output form	N:NPN直流负逻辑输出 P:PNP直流正逻辑输出 J:继电器触点输出 L:交流二线输出 S:具备NPN和PNP二种输出 N:PNP transistor output P:PNP transistor output J: Relay contact output L:AC two-wire output S:With two outputs: NPN and PNP
7	输出状态 Output state	A:常开(入光NO) B:常闭(遮光NC) C:一开一闭 Z:常开常闭可逆 A: Normally open(light entering NO) B:Normally close(light sheltering NC) C: normally open+normally close
8	附属功能 Subsidiary	T1:前延时 front delay T2:后延时 rear delay Y:防油型 oil proof T:带航空插件 with aviation connector I:特殊要求 special requirement

例: G18-3A10NA For example:G18-3A10NA

- 表示: M18圆柱形, DC10-30V工作电压, 漫反射型, 检测距离为10cm, NPN(负逻辑)常开式的红外线光电开关。
- That indicates the infrared ray photoelectric switch of M18 cylinder, DC10-30V working voltage, diffused reflection type, detection distance 10cm, and NPN normally open type.

## 技术参数 Technical parameters

检测方式 Detection way	5000mm(对射 beam)	输出电流 Output current	≤80mA(DC12V)
检测距离 Detection distance	800mm(反射 reflection)	环境温度 Ambient temperature	使用时In use-25°C----+55°C
	红外线infrared(920mm)		存储时At stock-4°C----+70°C
光源(波长) Light source(wavelength)	≤30度 degree	引线长度 Lead length	发射器, 接收器个2米 Emitter, receiver both 2m
指向角 Point angle	6-36VDC	输出方式 Output	NPN或PNP晶体管输出 NPN or PNP transistor output
电源电压 Supply voltage	对射型或反射型Beam type of reflective type	防护等级 Protection level	IP67(IEC60529)
残留电压 Residual voltage	DC三线式(3-wire):≤1.5VDC AC二线式(2-wire):≤12VDC	耐压 Withstanding voltage	1500VAC 50/60Hz一分钟(one minute)
绝缘电阻 Insulation resistance	≥50MΩ Min (500VDC Mega 基准)	抗冲击 Impact resistance	500M/S(50G <sup>3</sup> )X、Y、Z各方向3次 (3 times in each direction)
温度影响 Temperature effect	在-25°C~+70°C范围内, 对在+25°C时的检测距离是在10%以下 Within -25°C~+70°C, less than 10% compared with the detection range at+25°C	抗振动 Vibration resistance	10-55Hz(周期每分钟cycles per min.) 复振幅(complex amplitude)1mm,X、Y、Z各方向2小时(2 hours in each direction)

# 光电开关 PHOTOELECTRIC SWITCH

长距离反射型 Long distance reflection type

- 外形尺寸虽小, 检测距离可远
- Small dimensions, long distance detection

## 特点 Characteristics

- 通过特殊的光学设计, 可使漫反射方式下检测距离达到2m  
With special optic design, detection distance is improved to 2m for diffuse type
- 内置稳定的动作指示灯  
With stable built-in cation indicator light
- 灵敏度调整功能  
With sensitivity adjustment
- 双色LED显示  
With 2-color LED indication

使用前请仔细阅读操作手册中的安全注意事项  
Please read carefully the safety cautions in the operation manual before use

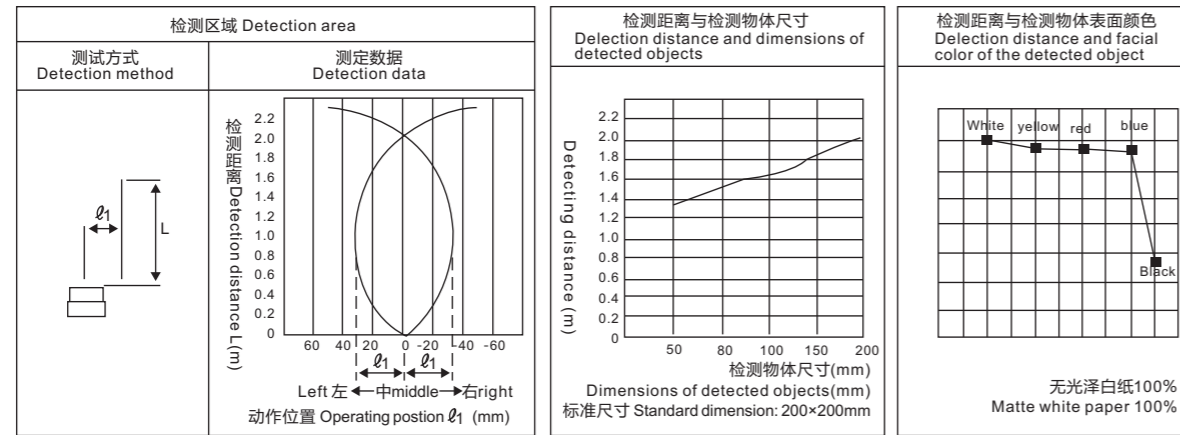


## 规格参数 Specifications

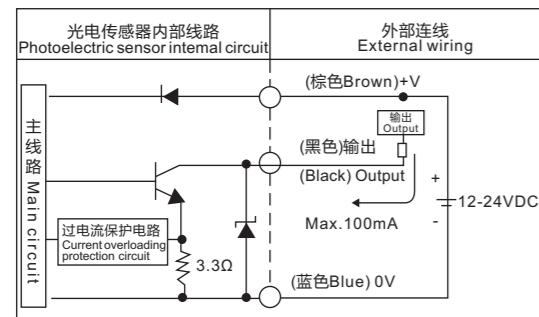
型号 Type	BA2M-DDT
检测模式 Detection method	漫反射型 Diffuse type
检测距离 Detection distance	2m
检测物体 Detection object	透明, 半透明, 不透明物体 Transparent, translucent, opaque objects
回差值 Difference in value	不超过标检测距离的20% Less than 20% of the standard detection distance
响应时间 Response time	大约approx 1ms
电源电压 Supply voltage	12-24VDC±10%(Ripple P-P:Max.10%)
电流消耗 Current consumption	Max.15mA(Max.30mA 输出 Output On)
光源 Light source	红外光 Infrare(850mm 调制光 Modulated light)
灵敏度调节 Sensitivity adjustment	内置可调 Built-in adjustable VR
动作模式 Action pattern	Light ON (Dark On 为可选项 Optional)
控制输出 Output control	NPN开路集电极输出: 负载电压DC30V 以下负载电流100mA以下, 残留电压1V以下 NPN open-collector output: loading voltage below DC30V, loading current below 100mA, residual voltage below 1V
保护电路 Protection circuit	内置电压波动, 电源反向连接, 过流保护电路 Built-in protection circuit for voltage fluctuation, reverse connection, and current overloading
受光元素 Photosensitive element	光电感应二极管(内置IC) Photoelectric sensor diode
指示灯 Indicator light	双色LED灯(动作时: 红色, 稳定时: 黄色 (红色+绿色)Two-color LED(action: red, stable: yellow(red+green))
绝缘阻抗 Insulation resistance	不小于No less than 20MΩ(500VDC)
抗噪声强度 Noise resistance	±240V噪音发生器产生脉动宽度1的方波 Noise generator produces a square wave pulse of 1**wide
耐电压 Withstanding voltage	1000VAC 50/60Hz 1分钟 minute
抗振动 Vibration resistance	1.5mm振幅, 10-55频率, X,Y,Z各方向2小时 Amplitude 1.5mm, frequency 10-55, 2 hours in each direction
抗冲击 Impact resistance	100/s <sup>2</sup> (10G) in X,Y,Z方向3次(3 times in each direction)
环境光照 Ambient illumination	太阳光: 最强10,000/lx, 白炽灯: 最强3,000/lx In sunlight: utmost 10,000/lx, Incandescent light: utmost 3,000/lx
使用环境温度 Ambient temperature	-25S~+55°C(非结冰状态 Non-frozen), 存储温度 Storage temperature:-25S~70°C
使用环境湿度 Ambient humidity	35~80%RH
防护等级 Protection level	IP50(IEC标准 IEC standatd)
材质 Material	外表: PBT, 透镜: PMMA Shell: PBT, lens: PMMA
连接电缆 Connection cable	3P, Φmm, 长度Length: 2m
附件 Accessories	灵敏度调节工具 Sensitivity adjustment tool
认证 Certification	CE
质量 Weight	大约50g Approx. 50g.

# 光电开关 PHOTOELECTRIC SWITCH

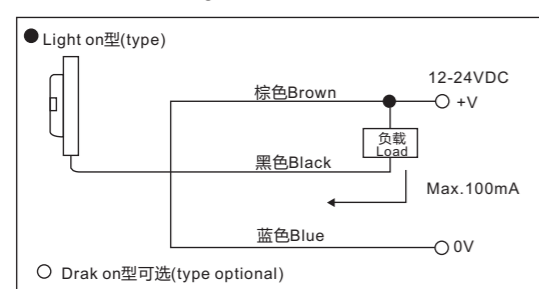
## 特性参数 Specifications



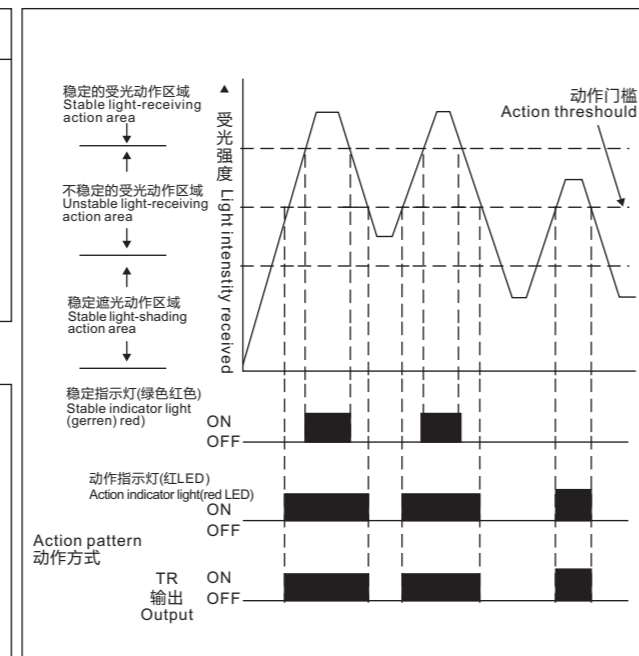
## 控制输出线路图 Control output circuit diagram



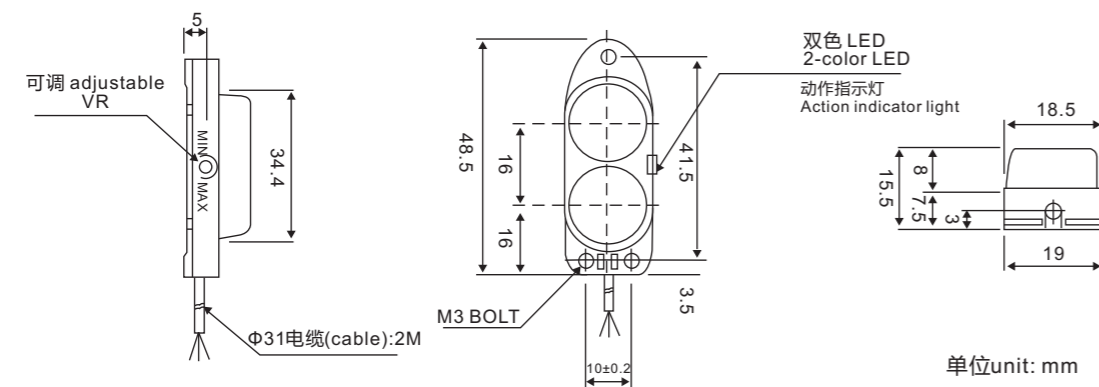
## 控制图 Control diagram



## 动作模式 Action pattern



## 外形尺寸 Dimension



# 光电开关 PHOTOELECTRIC SWITCH

## 光电开关术语解释 Explanantion of technical terms of photoelectric switch

术语 Technical terms	解释 Explanation	术语 Technical terms	解释 Explanation
光芒光轴 Optic axis of radiance		标准被测物体 Standard detected object	指在反射型传感器中为决定基本规定面作为标准的被测物体。一般是白色无光,对专用传感器使用相应的被测物体。(例如薄片) That indicates the standard detected object, which is to determine the basic specifications in the reflection type sensor. Generally, it is white and lusterless. Use relevant detected object (for example, the slice) to the sensor for special purpose
检测轴 Detection axis		最小被测物体 Min detected object	指在一定条件下传感器能测出的最小物体。对射型、镜面反射型是指不透明体(完全遮光),对反射型是指铁丝或铜丝相应的值。 That indicates the smallest object, which can be detected by sensor under a certain condition. To correlation type and mirror reflection type, that indicates opaque body (wholly light sheltering). To reflection type, that indicated the corresponding value of iron wire or copper wire.
检测距离 Detection distance	<p>对射型 Correlation type</p> <ul style="list-style-type: none"> <li>可稳定设定的投光器和受光器之间的距离</li> <li>Stably set distance between light projector and photoreceptor</li> </ul> <p>反馈反射型 Feedback reflection type</p> <ul style="list-style-type: none"> <li>标准设定的传感器和反射之间的距离(0的场合将“0”省略)</li> <li>Standard setting distance between sensor and reflection mirror (omit "0" on the occasion with "0")</li> </ul> <p>漫反射型 Diffused reflection type</p> <ul style="list-style-type: none"> <li>可稳定被测物体(通常是白色无光纸)能被稳定检测的最大距离("0"的场合半"0"省略)</li> <li>The max stable detectable distance of detected object, generally white matte paper (omit "0" on the occasion with "0")</li> </ul>	重复精度 Repeated precision	指在一定条件下,重复动作时响应位置的误差。 That indicates the error of response position when repeating action under a certain condition. 
		响应时间 Response time	检测状态变化后到输出ON或OFF信号的延迟时。 The time delay from the change of detection state to the output of ON or OFF signal 
		使用环境照度(耐杂散光) Intensity of illumination of operating environment (resistance to mixed astigmatism)	指不引起误动作的极限照度用光接收器光面照度表示。 That indicates max, intensity of illumination, which doesn't result in error action, expressed by intensity of illumination of photoreceptor photic surface. 

# 光电开关 PHOTOELECTRIC SWITCH

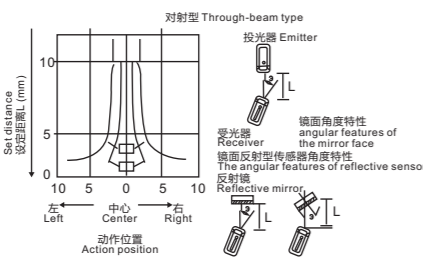
术语 Technical terms

解释 Explanation

使用注意事项 Cautions

角度特性  
Angel characteristic

在对射型以及反馈反射型中，在各设定距离内，从右方在左方向中心线移动，使角度逐渐变小，以传感器动作响应的角度为轨迹所表示的图(灵敏度最大状态下)。  
To correlation type and feedback reflection type, move from right to the centering of left direction within each setting distance to gradually reduce the angle. That is shown by locus diagram of sensor action response angle (under max sensitivity state)



对射型 反馈反射型 To correlation type and feedback reflection type  
距离设定 Distance equipment

✦ 设定距离应小于说明书上规定的检测距离。由于留有余量，大于所规定的检测距离虽也能工作。但性能不能保证。另外，在有垃圾和尘埃的恶劣环境中，距离设定时，请保证一定的余量。

✦ The set distance should be less than the detection distance stipulated in the operation instruction. Because of keeping a room, although it can work when the set distance is bigger than the stipulated detection distance, the performance cannot be guaranteed. In addition, please make sure to keep certain room in the bad environment with rubbish and dust when setting a distance.

漫反射型 To diffused reflection type

✦ 规格书上登出的检测距离是相对于标准被测物体而言的。实际的检测距离，因被测物体大小，颜色及表面的凹凸状况不同，会有所变化。距离设定时，请保证规定的余量。

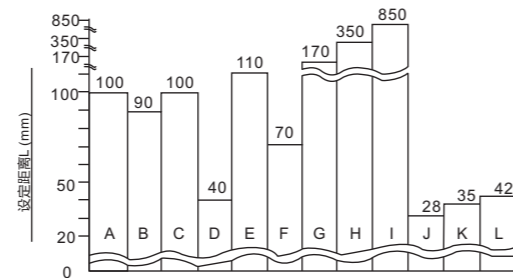
✦ 随被测物体的大小变化，检测距离的变化规律被测物体越大，反光量越大，检测距离越长。但是，当物体的受光面的大小已大于受光的检测，物体大小再增大，检测距离也不会增大。

✦ The detection distance shown in the specification manual is in accordance with standard detected object. Actual detection distance will change in pace with the change of the size, color, surface evenness of detected object. Please ensure the stipulated room when set distance.

✦ According to the change of detected object size and variation regulation regulation of detection distance, bigger detected object, bigger reflection volume, longer detection distance. But when the size of optic receiving surface is bigger than the size of the detected object, the detection distance won't increase even if the object size increases again.

被测物体不同检测距离的差异(适用于漫反射型)

The difference between different detection distances of the detected object (Apply to scattered reflection type)



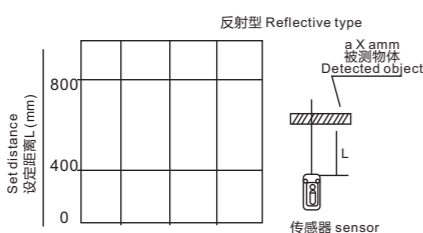
白色无光纸(基准) B、自然色的纸箱 C、胶合板 D、黑色无光纸(三级光泽度) E、有光泽的胶合板(自然的米黄饭，褐色丙烯饭，红色乙烯合成革) F、灰色乙烯合成革 G、有绿色光泽橡胶板 H、铝板 I、反射型或反射板 J、Φ10的锈铁棒 K、黑布 L、深蓝色布

- A、White matt paper(reference)
- B、Natural color carton
- C、Veneer
- D、Black matt paper(Grade 3 glossiness)
- E、Glossy veneer(Natural cream-colored board, brown propyledne board, red ethylene synthetic board)
- F、Grey ethylene synthetic board
- G、Green glossy rubber board
- H、Alboard
- I、Reflector or reflecting board
- J、Rusty iron iron barΦ10
- K、Black cloth
- L、Dark blue cloth

表示在反射型中，因被物体大小对检测距离影响的规律。此图对根据被测物体大小决定能稳定检测的距离有用。带有灵敏度旋钮的传感器是将灵敏度调到与刚好能检测标准被测物体的最大检测距离响应的位置。

Toreflexion type, because the size of detected object affects detection distance, this diagram is useful to determine the stable detection distance according to the size of detected object, the sensor with sensitivity button is to turn the sensitivity to therelevant position of max. detection distance where exactly etecting the standard detected object

被检测物体大小和检测距离特性  
The characteristic of detected object size and detection distance



# 光电开关 PHOTOELECTRIC SWITCH

防止相互干扰的方法及注意事项 Method of anti mutual-interference and cautions

把光电传感器接近设置时，另一个传感器的光入射时造成的不稳定动作，叫做相互干扰。

The unstable action resulted from the entrance light from another sensor while the photoelectric sensor is approaching the equipment is called mutual interference.

✦ 投光器、受光器相互交叉安装。  
Mutual cross installation of optic projector and photoreceptor

✦ 反射式并列使用时，相互间隔须维持设定距离在检测距离的1.4倍以上。  
When using reflection type in parallel, the mutual spacing should be kept at over 1.4 times detection distance.

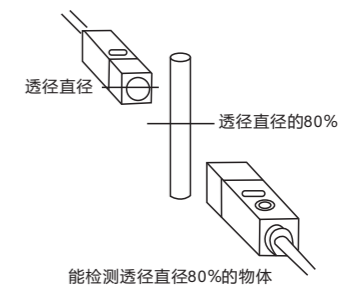
✦ 对射式并列使用时，相互间隔须维持设定距离在检测距离的0.4倍以上。  
When using correlation type in parallel, the mutual spacing should be kept at over 0.4 times detection distance.

✦ 电源电压请在使用电源电压范围内使用。  
The mains voltage should be within the range of operating mains voltage.

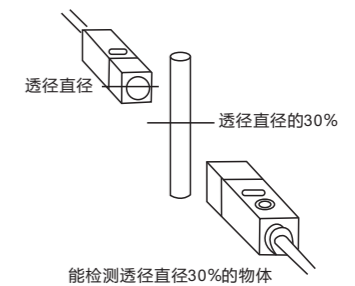
✦ 下列安装场所会造成误动作原因，请注意：  
The following installation occasions will result in error action, take note of

- ① 灰尘较多场所
  - ② 腐蚀性气体较多的场所
  - ③ 水、油、药剂直接溅散的场所
  - ④ 室外或太阳光等有强光直射的场所
- ① Dusty occasion
  - ② The occasion with corrosive gas
  - ③ The occasion directly spattered with water, oil and agent, etc
  - ④ Outdoor or the occasion directly shine by hard light like, sunlight

灵敏度电位器Max时 At the time of max sensitivity potentiometer

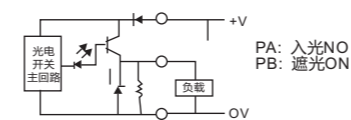


若调节灵敏度 If adjust the sensitivity

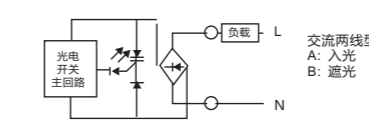


光电开关输出回路图 Output retrun diagram of photoelectric switch

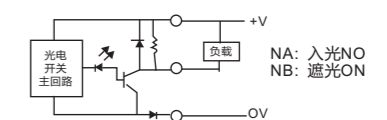
PA、PB型输出回路图



SCR(可控硅)型输出回路图(二线)

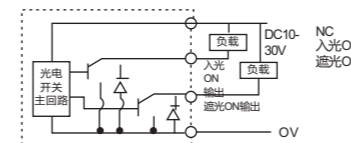


NA、NB型输出回路图



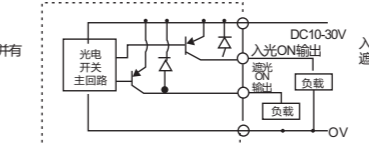
NC型输出回路图

NC type output circuit diagram

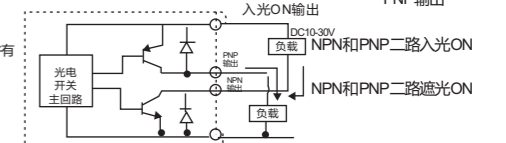


PC型输出回路图

PC type output circuit diagram

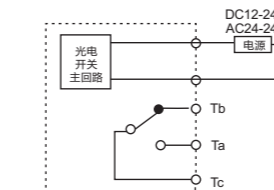


NPN、PNP同时具备型输出回路图  
NPN、PNP type output circuit diagram

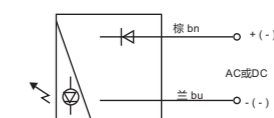


JC型输出回路图

JC type output circuit diagram



红外发射器二线型  
IR emitter 2-wire type





# 光电开关 PHOTOELECTRIC SWITCH

结构分类 Structural category

光电开关 Photoelectric switch

外形编号 Outward appearance code		G12	G13	G14	G15		
外形图例 Outward appearance illustration							
外形尺寸 Overall dimensions							
	检测距离 DETECTION DISTANCE	7cm	10cm	10cm	10cm		
漫反射型 Retroreflective	直流 DC 10-30 VDC	负逻辑 NPN	常开NO	G12-3A07NA	G13-3A10NA	G14-3A10NA	G15-3A10NA
			常闭NC	G12-3A07NB	G13-3A10NB	G14-3A10NB	G15-3A10NB
			一开一闭NO+NC	G12-3A07NC	G13-3A10NC	G14-3A10NC	G15-3A10NC
	交流 AC 90-250 VAC	正逻辑 PNP	常开NO	G12-3A07PA	G13-3A07PA	G14-3A07PA	G15-3A07PA
			常闭NC	G12-3A07PB	G13-3A07PB	G14-3A07PB	G15-3A07PB
			一开一闭NO+NC	G12-3A07PC	G13-3A07PC	G14-3A07PC	G15-3A07PC
	SCR可挂硅 Control Hable silicon	常开NO					
	常闭NC						
	继电器输出 Relay output						
		检测距离 DETECTION DISTANCE	1m	1m	1m	1m	
反馈反射型 Retroreflective	直流 DC 10-30 VDC	负逻辑 NPN	常开NO	G12-3B1NA	G13-3B1NA	G14-3B1NA	G15-3B1NA
			常闭NC	G12-3B1NB	G13-3B1NB	G14-3B1NB	G15-3B1NB
			一开一闭NO+NC	G12-3B1NC	G13-3B1NC	G14-3B1NC	G15-3B1NC
	交流 AC 90-250 VAC	正逻辑 PNP	常开NO	G12-3B1PA	G13-3B1PA	G14-3B1PA	G15-3B1PA
			常闭NC	G12-3B1PB	G13-3B1PB	G14-3B1PB	G15-3B1PB
			一开一闭NO+NC	G12-3B1PC	G13-3B1PC	G14-3B1PC	G15-3B1PC
	SCR可挂硅 Control Hable silicon	常开NO					
	常闭NC						
	继电器输出 Relay output						
		检测距离 DETECTION DISTANCE	3m	3m	3m	3m	
对射型 Through beam	直流 DC 10-30 VDC	负逻辑 NPN	常开NO	G12-3C3NA	G13-3C3NA	G14-3C3NA	G15-3C3NA
			常闭NC	G12-3C3NB	G13-3C3NB	G14-3C3NB	G15-3C3NB
			一开一闭NO+NC	G12-3C3NC	G13-3C3NC	G14-3C3NC	G15-3C3NC
	交流 AC 90-250 VAC	正逻辑 PNP	常开NO	G12-3C3PA	G13-3C3PA	G14-3C3PA	G15-3C3PA
			常闭NC	G12-3C3PB	G13-3C3PB	G14-3C3PB	G15-3C3PB
			一开一闭NO+NC	G12-3C3PC	G13-3C3PC	G14-3C3PC	G15-3C3PC
	SCR可挂硅 Control Hable silicon	常开NO					
	常闭NC						
	继电器输出 Relay output						
	输出电流 DC/SCR 继电器 Control output		DC:200mA				
消耗电流 DC/AC Consumption current		DC<15mA					
响应时间 DC/AC Response time		DC<2ms					
指向角 Directional angle		3°-10°					
检测物体 Detected object		透明或不透明体 transparent or opaque body					
工作环境温度 Working environment temperature		-25°C~+55°C					
工作环境照度 Intensity of illumination of working environment		太阳光10000LX以下 Sunlight under 10000LX 白炽灯3000LX以下 incandescent lamp under 3000LX					
外壳材料 Shell materia		金属Metal	金属Metal	塑料Plastic	塑料·金属Plastic, Metal		
防护等级 Protection grade		IP54	IP54	IP54	IP54		

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结构分类 Structural category

光电开关 Photoelectric switch

外形编号 Outward Appearance code		G16	G17	G18	G23		
外形图例 Outward appearance illustration							
外形尺寸 Overall dimensions							
	检测距离 DETECTION DISTANCE	10cm	30cm	10-30cm	10-50cm		
漫反射型 Retroreflective	直流 DC 10-30 VDC	负逻辑 NPN	常开NO	G16-3A10NA	G17-3A30NA	G18-3A10NA	G23-3A10NA
			常闭NC	G16-3A10NB	G17-3A30NB	G18-3A10NB	G23-3A10NB
			一开一闭NO+NC	G16-3A10NC	G17-3A30NC	G18-3A10NC	G23-3A10NC
	交流 AC 90-250 VAC	正逻辑 PNP	常开NO	G16-3A10PA	G17-3A30PA	G18-3A10PA	G23-3A10PA
			常闭NC	G16-3A10PB	G17-3A30PB	G18-3A10PB	G23-3A10PB
			一开一闭NO+NC	G16-3A10PC	G17-3A30PC	G18-3A10PC	G23-3A10PC
	SCR可挂硅 Control Hable silicon	常开NO			G18-2A10LA		
	常闭NC			G18-2A10LB			
	继电器输出 Relay output						
		检测距离 DETECTION DISTANCE	1m	2m	2m	2m	
反馈反射型 Retroreflective	直流 DC 10-30 VDC	负逻辑 NPN	常开NO	G16-3B1NA	G17-3B2NA	G18-3B2NA	G23-3B2NA
			常闭NC	G16-3B1NB	G17-3B2NB	G18-3B2NB	G23-3B2NB
			一开一闭NO+NC	G16-3B1NC	G17-3B2NC	G18-3B2NC	G23-3B2NC
	交流 AC 90-250 VAC	正逻辑 PNP	常开NO	G16-3B1PA	G17-3B2NA	G18-3B2PA	G23-3B2PA
			常闭NC	G16-3B1PB	G17-3B2NB	G18-3B2PB	G23-3B2PB
			一开一闭NO+NC	G16-3B1PC	G17-3B2NC	G18-3B2PC	G23-3B2PC
	SCR可挂硅 Control Hable silicon	常开NO			G18-2B2LA		
	常闭NC			G18-2B2LB			
	继电器输出 Relay output						
		检测距离 DETECTION DISTANCE	5m	3m	5m	5m	
对射型 Through beam	直流 DC 10-30 VDC	负逻辑 NPN	常开NO	G16-3C5NA	G17-3C3NA	G18-3C5NA	G23-3C5NA
			常闭NC	G16-3C5NB	G17-3C3NB	G18-3C5NB	G23-3C5NB
			一开一闭NO+NC	G16-3C5NC	G17-3C3NC	G18-3C5NC	G23-3C5NC
	交流 AC 90-250 VAC	正逻辑 PNP	常开NO	G16-3C5PA	G17-3C3PA	G18-3C5PA	G23-3C5PA
			常闭NC	G16-3C5PB	G17-3C3PB	G18-3C5PB	G23-3C5PB
			一开一闭NO+NC	G16-3C5PC	G17-3C3PC	G18-3C5PC	G23-3C5PC
	SCR可挂硅 Control Hable silicon	常开NO			G18-2C5LA		
	常闭NC			G18-2C5LB			
	继电器输出 Relay output						
	输出电流 DC/SCR 继电器 Control output		DC:200mA, AC:300mA				
消耗电流 DC/AC Consumption current		DC<15mA, AC<10mA					
响应时间 DC/AC Response time		DC<2ms, AC<2ms					
指向角 Directional angle		3°-10°					
检测物体 Detected object		透明或不透明体 transparent or opaque body					
工作环境温度 Working environment temperature		-25°C~+55°C					
工作环境照度 Intensity of illumination of working environment		太阳光10000LX以下 Sunlight under 10000LX 白炽灯3000LX以下 incandescent lamp under 3000LX					
外壳材料 Shell materia		塑料Plastic	塑料Plastic	塑料Plastic	金属Metal		
防护等级 Protection grade		IP54	IP54	IP54	IP54		

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结构分类 Structural category

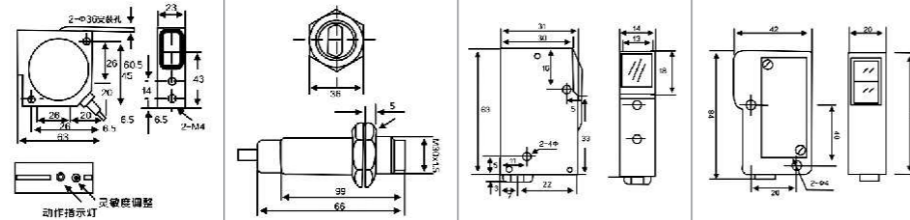
光电开关 Photoelectric switch

外形编号 Outward Appearance code      G24      G30      G33      G35

外形图例  
Outward appearance illustration



外形尺寸  
Overall dimensions

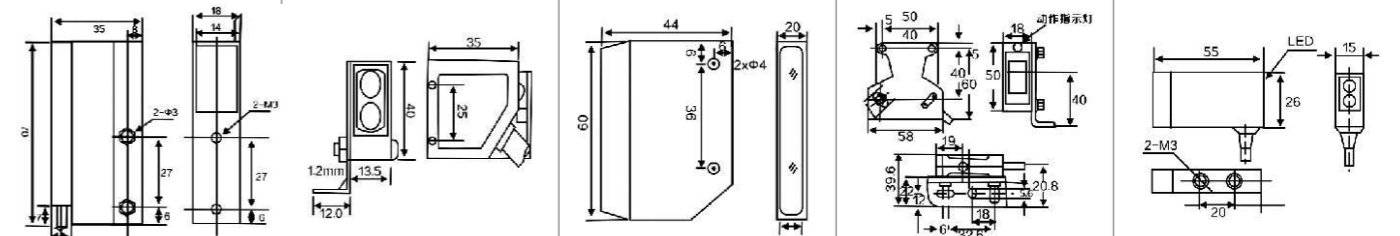


		检测距离 DETECTION DISTANCE		50cm	50cm	50cm	50cm
漫反射型 Retroreflective	直流 DC 10-30 VDC	负逻辑 NPN	常开NO	G24-3A50NA	G30-3A70NA	G33-3A10NA	G35-3A50NA
			常闭NC	G24-3A50NB	G30-3A70NB	G33-3A10NB	G35-3A50NB
			一开一闭NO+NC	G24-3A50NC	G30-3A70NC	G33-3A10NC	G35-3A50NC
	交流 AC 90- 250 VAC	正逻辑 PNP	常开NO	G24-3A50PA	G30-3A70PA	G33-3A10PA	G35-3A50PA
			常闭NC	G24-3A50PB	G30-3A70PB	G33-3A10PB	G35-3A50PB
			一开一闭NO+NC	G24-3A50PC	G30-3A70PC	G33-3A10PC	G35-3A50PC
	SCR可挂硅 Control Hable silicon	常开NO		G30-2A70LA		G35-2A50LA	
	常闭NC		G30-2A70LB		G35-2A50LB		
	继电器输出 Relay output			G30-2A70LC		G35-2A50JC	
			检测距离 DETECTION DISTANCE		4m	1m	3m
反馈反射型 Retroreflective	直流 DC 10-30 VDC	负逻辑 NPN	常开NO	G24-3B4NA	G30-3B3NA	G33-3B1NA	G35-3B3NA
			常闭NC	G24-3B4NB	G30-3B3NB	G33-3B1NB	G35-3B3NB
			一开一闭NO+NC	G24-3B4NC	G30-3B3NC	G33-3B1NC	G35-3B3NC
	交流 AC 90- 250 VAC	正逻辑 PNP	常开NO	G24-3B4PA	G30-3B3PA	G33-3B1PA	G35-3B3PA
			常闭NC	G24-3B4PB	G30-3B3PB	G33-3B1PB	G35-3B3PB
			一开一闭NO+NC	G24-3B4PC	G30-3B3PC	G33-3B1PC	G35-3B3PC
	SCR可挂硅 Control Hable silicon	常开NO		G30-2B3LA		G35-2B3LA	
	常闭NC		G30-2B3LB		G35-2B3LB		
	继电器输出 Relay output			G30-2B3JC		G35-2B3JC	
			检测距离 DETECTION DISTANCE		5m	3m	5m
对射型 Through beam	直流 DC 10-30 VDC	负逻辑 NPN	常开NO	G24-3C5NA	G30-3C101NA	G33-3C3NA	G35-3C5NA
			常闭NC	G24-3C5NB	G30-3C101NB	G33-3C3NB	G35-3C5NB
			一开一闭NO+NC	G24-3C5NC	G30-3C101NC	G33-3C3NC	G35-3C5NC
	交流 AC 90- 250 VAC	正逻辑 PNP	常开NO	G24-3C5PA	G30-3C101PA	G33-3C3PA	G35-3C5PA
			常闭NC	G24-3C5PB	G30-3C101PB	G33-3C3PB	G35-3C5PB
			一开一闭NO+NC	G24-3C5PC	G30-3C101PC	G33-3C3PC	G35-3C5PC
	SCR可挂硅 Control Hable silicon	常开NO		G30-2C101LA		G35-2C5LA	
	常闭NC		G30-2C101LB		G35-2C5LB		
	继电器输出 Relay output			G30-2C101JC		G35-2C5JC	
	输出电流 DC/SCR 继电器 Control output	DC:200mA, AC:300mA					
消耗电流 DC/AC Consumption current	DC<15mA, AC<10mA						
响应时间 DC/AC Response time	DC<2ms, AC<2ms						
指向角 Directional angle	3°-10°						
检测物体 Detected object	透明或不透明体 transparent or opaque body						
工作环境温度 Working environment temperature	-25°C~+55°C						
工作环境照度 Intensity of illumination of working environment	太阳光10000LX以下 Sunlight under 10000LX 白炽灯3000LX以下 incandescent lamp under 3000LX						
外壳材料 Shell materia	塑料 Plastic	塑料 Plastic	塑料 Plastic	塑料 Plastic	金属 Metal	金属 Metal	
防护等级 Protection grade		IP66	IP54	IP54	IP54	IP54	

# 光电开关 PHOTOELECTRIC SWITCH

光电开关 Photoelectric switch

G36      G40      G44      G50      G54



		20cm		10-30cm		30cm		30-50cm		20cm	
	直流 DC 10-30 VDC	负逻辑 NPN	常开NO	G36-3A20NA	G40-3A10NA	G44-3A30NA	G50-3A30NA	G54-3A20NA			
			常闭NC	G36-3A20NB	G40-3A10NB	G44-3A30NB	G50-3A30NB	G54-3A20NB			
			一开一闭NO+NC	G36-3A20NC	G40-3A10NC	G44-3A30NC	G50-3A30NC	G54-3A20NC			
	交流 AC 90- 250 VAC	正逻辑 PNP	常开NO	G36-3A20PA	G40-3A10PA	G44-3A30PA	G50-3A30PA	G54-3A20PA			
			常闭NC	G36-3A20PB	G40-3A10PB	G44-3A30PB	G50-3A30PB	G54-3A20PB			
			一开一闭NO+NC	G36-3A20PC	G40-3A10PC	G44-3A30PC	G50-3A30PC	G54-3A20PC			
	SCR可挂硅 Control Hable silicon	常开NO									
	常闭NC										
	继电器输出 Relay output										
			2m		3m		3m		4m		2m
	直流 DC 10-30 VDC	负逻辑 NPN	常开NO	G36-3B2NA	G40-3B3NA	G44-3B30NA	G50-3B4NA	G54-3B2NA			
			常闭NC	G36-3B2NB	G40-3B3NB	G44-3B30NB	G50-3B4NB	G54-3B2NB			
			一开一闭NO+NC	G36-3B2NC	G40-3B3NC	G44-3B30NC	G50-3B4NC	G54-3B2NC			
	交流 AC 90- 250 VAC	正逻辑 PNP	常开NO	G36-3B2PA	G40-3B3PA	G44-3B30PA	G50-3B4PA	G54-3B2PA			
			常闭NC	G36-3B2PB	G40-3B3PB	G44-3B30PB	G50-3B4PB	G54-3B2PB			
			一开一闭NO+NC	G36-3B2PC	G40-3B3PC	G44-3B30PC	G50-3B4PC	G54-3B2PC			
	SCR可挂硅 Control Hable silicon	常开NO									
	常闭NC										
	继电器输出 Relay output										
			5m		4m		5m		5m		5m
	直流 DC 10-30 VDC	负逻辑 NPN	常开NO	G36-3C5NA	G40-4C4NA	G44-3C5NA	G50-3C5NA	G54-3C5NA			
			常闭NC	G36-3C5NB	G40-4C4NB	G44-3C5NB	G50-3C5NB	G54-3C5NB			
			一开一闭NO+NC	G136-3C5NC	G40-4C4NC	G44-3C5NC	G50-3C5NC	G54-3C5NC			
	交流 AC 90- 250 VAC	正逻辑 PNP	常开NO	G36-3C5PA	G40-4C4PA	G44-3C5PA	G50-3C5PA	G54-3C5NC			
			常闭NC	G36-3C5PB	G40-4C4PB	G44-3C5PB	G50-3C5PB	G54-3C5PA			
			一开一闭NO+NC	G36-3C5PC	G40-4C4PC	G44-3C5PC	G50-3C5PC	G54-3C5PB			
	SCR可挂硅 Control Hable silicon	常开NO									
	常闭NC										
	继电器输出 Relay output										
			5m		4m		5m		5m		5m
		DC:200mA, AC:300mA relay:2A									
		DC<15mA, AC<10ms									
		DC<2ms, AC<20mA									
		3°-10°									
		透明或不透明体 transparent or opaque body									
		-25°C~+55°C									
		太阳光10000LX以下 Sunlight under 10000LX 白炽灯3000LX以下 incandescent lamp under 3000LX									
		金属 Metal	金属 Metal	金属 Metal	塑料 Plastic	塑料 Plastic					
		IP54	IP50	IP54	IP54	IP54					

# 光电开关 PHOTOELECTRIC SWITCH

结构分类 Structural category

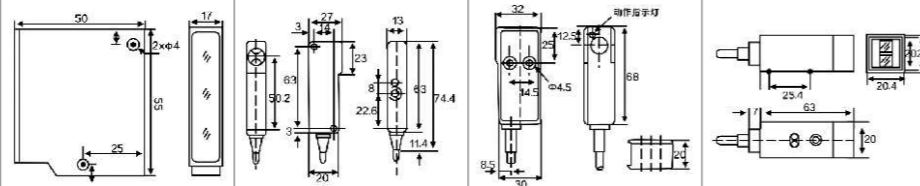
光电开关 Photoelectric switch

外形编号 Outward Appearance code      G55      G64      G68      G70

外形图例  
Outward appearance illustration



外形尺寸  
Overall dimensions

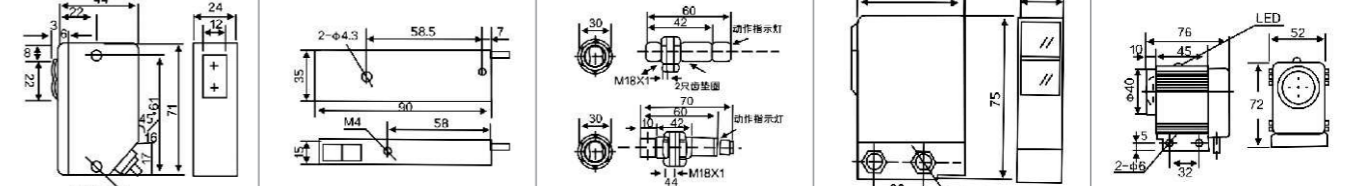


		检测距离 DETECTION DISTANCE		20cm	10cm	30cm	20-100cm	
漫反射型 Retroreflective	直流 DC 10-30 VDC	负逻辑 NPN	常开NO	G55-3A20NA	G64-3A10NA	G68-3A30NA	G70-3A20NA	
			常闭NC	G55-3A20NB	G64-3A10NB	G68-3A30NB	G70-3A20NB	
			一开一闭NO+NC	G55-3A20NC	G64-3A10NC	G68-3A30NC	G70-3A20NC	
		正逻辑 PNP	常开NO	G55-3A20PA	G64-3A10PA	G68-3A30PA	G70-3A20PA	
			常闭NC	G55-3A20PB	G64-3A10PB	G68-3A30PB	G70-3A20PB	
	交流 AC 90- 250 VAC	SCR可挂硅 Control Hable silicon	常开NO	G55-3A20PC	G64-3A10PC	G68-3A30PC	G70-3A20PC	
			常闭NC					
		继电器输出 Relay output						
		检测距离 DETECTION DISTANCE		2m	1.5-2m	2m	2m	
		反射型 Retroreflective	直流 DC 10-30 VDC	负逻辑 NPN	常开NO	G55-3B2NA	G64-3B2NA	G68-3B2NA
常闭NC	G55-3B2NB				G64-3B2NB	G68-3B2NB	G70-3B2NB	
一开一闭NO+NC	G55-3B2NC				G64-3B2NC	G68-3B2NC	G70-3B2NC	
正逻辑 PNP	常开NO			G55-3B2PA	G64-3B2PA	G68-3B2PA	G70-3B2PA	
	常闭NC			G55-3B2PB	G64-3B2PB	G68-3B2PB	G70-3B2PB	
交流 AC 90- 250 VAC	SCR可挂硅 Control Hable silicon		常开NO	G55-3B2PC	G64-3B2PC	G68-3B2PC	G70-3B2PC	
			常闭NC					
	继电器输出 Relay output							
	检测距离 DETECTION DISTANCE		4m	3m	5m	5m		
	对射型 Through beam		直流 DC 10-30 VDC	负逻辑 NPN	常开NO	G55-3C4NA	G64-3C3NA	G68-3C5NA
常闭NC		G55-3C4NB			G64-3C3NB	G68-3C5NB	G70-3C5NB	
一开一闭NO+NC					G64-3C3NC	G68-3C5NC	G70-3C5NC	
正逻辑 PNP		常开NO		G55-3C4PA	G64-3C3PA	G68-3C5PA	G70-3C5PA	
		常闭NC		G55-3C4PB	G64-3C3PB	G68-3C5PB	G70-3C5PB	
交流 AC 90- 250 VAC		SCR可挂硅 Control Hable silicon	常开NO		G64-3C3PC	G68-3C5PC	G70-3C5PC	
			常闭NC					
		继电器输出 Relay output						
		输出电流 DC/SCR 继电器 Control output		DC:200mA, AC:300mA				
		消耗电流 DC/AC Consumption current		DC<15mA, AC<10ms				
响应时间 DC/AC Response time		DC<2ms, AC<20mA						
指向角 Directional angle		3°-10°						
检测物体 Detected object		透明或不透明体 transparent or opaque body						
工作环境温度 Working environment temperature		-25°C~+55°C						
工作环境照度 Intensity of illumination of working environment		太阳光10000LX以下 Sunlight under 10000LX 白炽灯3000LX以下 incandescent lamp under 3000LX						
外壳材料 Shell material		金属 Metal	塑料 Plastic	塑料 Plastic	塑料 Plastic			
防护等级 Protection grade		IP54	IP66	IP54	IP54			

# 光电开关 PHOTOELECTRIC SWITCH

光电开关 Photoelectric switch

G71      G72      G180      G75      G76







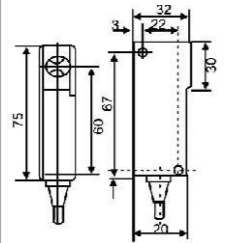
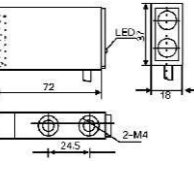
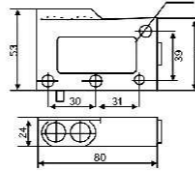
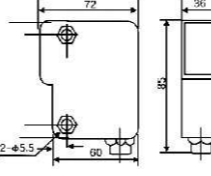
		50cm	40cm	10cm	80cm	1m			
漫反射型 Retroreflective	直流 DC 10-30 VDC	负逻辑 NPN	常开NO	G71-3A50NA	G72-3A40NA	G180-3A10NA	G75-3A80NA	G76-3A1NA	
			常闭NC	G71-3A50NB	G72-3A40NB	G180-3A10NB	G75-3A80NB	G76-3A1NB	
			一开一闭NO+NC	G71-3A50NC	G72-3A40NC	G180-3A10NC	G75-3A80NC	G76-3A1NC	
		正逻辑 PNP	常开NO	G71-3A50PA	G72-3A40PA	G180-3A10PA	G75-3A80PA	G76-3A1PA	
			常闭NC	G71-3A50PB	G72-3A40PB	G180-3A10PB	G75-3A80PB	G76-3A1PB	
	交流 AC 90- 250 VAC	SCR可挂硅 Control Hable silicon	常开NO	G71-3A50PC	G72-3A40PC	G180-3A10PC	G75-3A80PC	G76-3A1PC	
			常闭NC			G180-2A10LA	G75-2A80LA	G76-3A1LA	
		继电器输出 Relay output					G180-2A10LB	G75-2A80LB	G76-3A1LB
		检测距离 DETECTION DISTANCE		2m	3m	2m	80cm	1m	
		反射型 Retroreflective	直流 DC 10-30 VDC	负逻辑 NPN	常开NO	G71-3B2NA	G72-3B3NA	G180-3B2NA	G75-3B3NA
常闭NC	G71-3B2NB				G72-3B3NB	G180-3B2NB	G75-3B3NB	G76-3B5NB	
一开一闭NO+NC	G71-3B2NC				G72-3B3NC	G180-3B2NC	G75-3B3NC	G76-3B5NC	
正逻辑 PNP	常开NO			G71-3B2PA	G72-3B3PA	G180-3B2PA	G75-3B3PA	G76-3B5PA	
	常闭NC			G71-3B2PB	G72-3B3PB	G180-3B2PB	G75-3B3PB	G76-3B5PB	
交流 AC 90- 250 VAC	SCR可挂硅 Control Hable silicon		常开NO	G71-3B2PC	G72-3B3PC	G180-3B2PC	G75-3B3PC	G76-3B5PC	
			常闭NC			G180-2B2LA	G75-2B3LA	G76-2B5LA	
	继电器输出 Relay output					G180-2B2LB	G75-2B3LB	G76-2B5LB	
	检测距离 DETECTION DISTANCE		5m	5m	5m	8m	10-50m		
	对射型 Through beam		直流 DC 10-30 VDC	负逻辑 NPN	常开NO	G71-3C5NA	G72-3C5NA	G180-3C5NA	G75-3C8NA
常闭NC		G71-3C5NB			G72-3C5NB	G180-3C5NB	G75-3C8NB	G76-3C101NB	
一开一闭NO+NC		G71-3C5NC			G72-3C5NC	G180-3C5NC	G75-3C8NC	G76-3C101NC	
正逻辑 PNP		常开NO		G71-3C5PA	G72-3C5PA	G180-3C5PA	G75-3C8PA	G76-3C101PA	
		常闭NC		G71-3C5PB	G72-3C5PB	G180-3C5PB	G75-3C8PB	G76-3C101PB	
交流 AC 90- 250 VAC		SCR可挂硅 Control Hable silicon	常开NO	G71-3C5PC	G72-3C5PC	G180-3C5PC	G75-3C8PC	G76-3C101PC	
			常闭NC			G180-2C5LA	G75-2C8LA	G76-2C101LA	
		继电器输出 Relay output					G180-2C5LB	G75-2C8LB	G76-2C101LB
		输出电流 DC/SCR 继电器 Control output		DC:200mA, AC:300mA relay:2A					
		消耗电流 DC/AC Consumption current		DC<15mA, AC<10mA					
响应时间 DC/AC Response time		DC<2ms, AC<20ms							
指向角 Directional angle		3°-10°							
检测物体 Detected object		透明或不透明体 transparent or opaque body							
工作环境温度 Working environment temperature		-25°C~-55°C							
工作环境照度 Intensity of illumination of working environment		太阳光10000LX以下 Sunlight under 10000LX 白炽灯3000LX以下 incandescent lamp under 3000LX							
外壳材料 Shell material		金属 Metal	塑料 Plastic	塑料 Plastic	金属 Metal	塑料 Plastic			
防护等级 Protection grade		IP54	IP54	IP66	IP54	IP54			



# 光电开关 PHOTOELECTRIC SWITCH






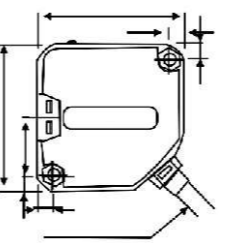
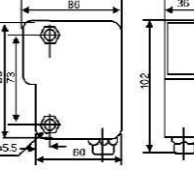
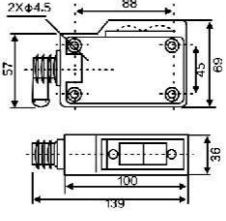
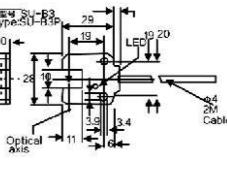
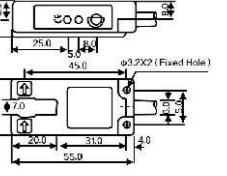
结构分类 Structural category

光电开关 Photoelectric switch

外形编号 Outward Appearance code		G77	G78	G80	G85		
外形图例 Outward appearance illustration							
外形尺寸 Overall dimensions							
漫反射型 Retroreflective	检测距离 DETECTION DISTANCE	30cm	40cm	80cm	1m		
	直流 DC 10-30 VDC	负逻辑 NPN	常开NO	G77-3A30NA	G78-3A40NA	G80-3A80NA	G85-3A1NA
			常闭NC	G77-3A30NB	G78-3A40NB	G80-3A80NB	G85-3A1NB
			一开一闭NO+NC	G77-3A30NC	G78-3A40NC	G80-3A80NC	G85-3A1NC
	交流 AC 90-250 VAC	正逻辑 PNP	常开NO	G77-3A30PA	G78-3A40PA	G80-3A80PA	G85-3A1PA
			常闭NC	G77-3A30PB	G78-3A40PB	G80-3A80PB	G85-3A1PB
			一开一闭NO+NC	G77-3A30PC	G78-3A40PC	G80-3A80PC	G85-3A1PC
	SCR可挂硅 Control Hable silicon	常开NO	G77-2A30LA	G78-2A40LA	G80-2A80LA	G85-2A1LA	
	常闭NC	G77-2A30LB	G78-2A40LB	G80-2A80LB	G85-2A1LB		
	继电器输出 Relay output			G80-2A80JC	G85-2A1JC		
反馈反射型 Retroreflective	检测距离 DETECTION DISTANCE	3m	2m	3m	5m		
	直流 DC 10-30 VDC	负逻辑 NPN	常开NO	G77-3B3NA	G78-3B2NA	G80-3B3NA	G85-3B5NA
			常闭NC	G77-3B3NB	G78-3B2NB	G80-3B3NB	G85-3B5NB
			一开一闭NO+NC	G77-3B3NC	G78-3B2NC	G80-3B3NC	G85-3B5NC
	交流 AC 90-250 VAC	正逻辑 PNP	常开NO	G77-3B3PA	G78-3B2PA	G80-3B3PA	G85-3B5PA
			常闭NC	G77-3B3PB	G78-3B2PB	G80-3B3PB	G85-3B5PB
			一开一闭NO+NC	G77-3B3PC	G78-3B2PC	G80-3B3PC	G85-3B5PC
	SCR可挂硅 Control Hable silicon	常开NO	G77-2B3LA	G78-2B2LA	G80-2B3LA	G85-2B5LA	
	常闭NC	G77-2B3LB	G78-2B2LB	G80-2B3LB	G85-2B5LB		
	继电器输出 Relay output			G80-2B3JC	G85-2B5JC		
对射型 Through beam	检测距离 DETECTION DISTANCE	5m	5m	5m	10m		
	直流 DC 10-30 VDC	负逻辑 NPN	常开NO	G77-3C5NA	G78-3C5NA	G80-3C5NA	G85-3C101NA
			常闭NC	G77-3C5NB	G78-3C5NB	G80-3C5NB	G85-3C101NB
			一开一闭NO+NC	G77-3C5NC	G78-3C5NC	G80-3C5NC	G85-3C101NC
	交流 AC 90-250 VAC	正逻辑 PNP	常开NO	G77-3C5PA	G78-3C5PA	G80-3C5PA	G85-3C101PA
			常闭NC	G77-3C5PB	G78-3C5PB	G80-3C5PB	G85-3C101PB
			一开一闭NO+NC	G77-3C5PC	G78-3C5PC	G80-3C5PC	G85-3C101PC
	SCR可挂硅 Control Hable silicon	常开NO	G77-2C5LA	G78-2C5LA	G80-2C5LA	G85-2C101LA	
	常闭NC	G77-2C5LB	G78-2C5LB	G80-2C5LB	G85-2C101LB		
	继电器输出 Relay output			G80-2C5JC	G85-2C101JC		
输出电流 DC/SCR 继电器 Control output	DC:200mA, AC:300mA						
消耗电流 DC/AC Consumption current	DC<15mA, AC<10mA						
响应时间 DC/AC Response time	DC<2ms, AC<20ms						
指向角 Directional angle	3°-10°						
检测物体 Detected object	透明或不透明体 transparent or opaque body						
工作环境温度 Working environment temperature	-25°C~+55°C						
工作环境照度 Intensity of illumination of working environment	太阳光10000LX以下 Sunlight under 10000LX 白炽灯3000LX以下 incandescent lamp under 3000LX						
外壳材料 Shell materia	塑料 Plastic	塑料 Plastic	塑料 Plastic	金属 Metal			
防护等级 Protection grade	IP54	IP54	IP54	IP54			

# 光电开关 PHOTOELECTRIC SWITCH

光电开关 Photoelectric switch

GEN	G100	G139	G51	G56	
					
					
检测距离 DETECTION DISTANCE	30cm	1m	1m		
漫反射型 diffuse type	GEN300-DDT NPN/PNP 集电极开路输出 open-collector output 12-24VDC 漫反射型 diffuse type 300MM	G100-3A1NA	G139-3A1NA		
		G100-3A1NB	G139-3A1NB		
		G100-3A1NC	G139-3A1NC		
	GEN300-PFR 继电器输出 Relay output 24-240VAC/ 24-240VDC 漫反射型 diffuse type 300MM	G100-3A1PA	G139-3A1PA		
		G100-3A1PB	G139-3A1PB		
		G100-3A1PC	G139-3A1PC		
	GEN5M-MFR 继电器输出 Relay output 24-240VAC/ 24-240VDC 镜面反射型 retro-reflective type 0.1-5m	G100-2A1LA	G139-2A1LA		
		G100-2A1LB	G139-2A1LB		
		G100-2A1JC	G139-2A1JC		
	对射型 through-beam type	GEN10M-TDT NPN/PNP 集电极开路输出 Open-collector output 12-24VDC 对射型 through-beam type 10m	G100-3B5NA	G139-3B5NA	
G100-3B5NB			G139-3B5NB		
G100-3B5NC			G139-3B5NC		
GEN10M-TFR 继电器输出 Relay output 24-240VAC/ 24-240VDC 对射型 through-beam type 10m		G100-3B5PA	G139-3B5PA		
		G100-3B5PB	G139-3B5PB		
		G100-3B5PC	G139-3B5PC		
GEN51-3E01NA		GEN56-3E01NA	G100-2B5LA	G139-2B5LA	
			G100-2B5LB	G139-2B5LB	
			G100-2B5JC	G139-2B5JC	
GEN10M-TDT NPN/PNP 集电极开路输出 Open-collector output 12-24VDC 对射型 through-beam type 10m		GEN10M-TFR 继电器输出 Relay output 24-240VAC/ 24-240VDC 对射型 through-beam type 10m	G100-3C101NA	G139-3C101NA	G51-3E01NA
	G100-3C101NB		G139-3C101NB	G51-3E01NB	G56-3E01NB
	G100-3C101NC		G139-3C101NC	G51-3E01NC	G56-3E01NC
GEN10M-TFR 继电器输出 Relay output 24-240VAC/ 24-240VDC 对射型 through-beam type 10m	GEN10M-TFR 继电器输出 Relay output 24-240VAC/ 24-240VDC 对射型 through-beam type 10m	G100-3C101PA	G139-3C101PA	G51-3E01PA	G56-3E01PA
		G100-3C101PB	G139-3C101PB	G51-3E01PB	G56-3E01PB
		G100-3C101PC	G139-3C101PC	G51-3E01PC	G56-3E01PC
输出电流 DC/SCR 继电器 Control output	DC:200mA, AC:300mA relay:2A				
消耗电流 DC/AC Consumption current	DC<15mA, AC<10mA				
响应时间 DC/AC Response time	DC<2ms, AC<20ms				
指向角 Directional angle	3°-10°				
检测物体 Detected object	透明或不透明体 transparent or opaque body				
工作环境温度 Working environment temperature	-25°C~+55°C				
工作环境照度 Intensity of illumination of working environment	太阳光10000LX以下 Sunlight under 10000LX 白炽灯3000LX以下 incandescent lamp under 3000LX				
外壳材料 Shell materia	塑料 Plastic	金属 Metal	铝壳/塑料 Aluminum/Plastic	塑料 Plastic	塑料 Plastic
防护等级 Protection grade	IP54	IP54	IP54	IP54	IP54

# 光电开关 PHOTOELECTRIC SWITCH

## 结构分类 Structural category

## 光电开关 Photoelectric switch

外形编号 Outward Appearance code		G115	G63	G65	G57		
外形图例 Outward appearance illustration							
外形尺寸 Overall dimensions							
检测距离 DETECTION DISTANCE							
漫反射型 Retroreflective	直流 DC 10-30 VDC	负逻辑 NPN	常开NO				
			常闭NC				
			一开一闭NO+NC				
	交流 AC 90- 250 VAC	正逻辑 PNP	常开NO				
			常闭NC				
			一开一闭NO+NC				
	SCR可挂硅 Control Hable silicon	常开NO					
		常闭NC					
	继电器输出 Relay output						
	检测距离 DETECTION DISTANCE						
反馈反射型 Retroreflective	直流 DC 10-30 VDC	负逻辑 NPN	常开NO				
			常闭NC				
			一开一闭NO+NC				
	交流 AC 90- 250 VAC	正逻辑 PNP	常开NO				
			常闭NC				
			一开一闭NO+NC				
	SCR可挂硅 Control Hable silicon	常开NO					
		常闭NC					
	继电器输出 Relay output						
	检测距离 DETECTION DISTANCE						
对射型 Through beam	直流 DC 10-30 VDC	负逻辑 NPN	常开NO	G115-3E25NA	G63-3E03NA	G65-3E01NA	G57-3E1.5NA
			常闭NC	G115-3E25NB	G63-3E03NB	G65-3E01NB	G57-3E1.5NB
			一开一闭NO+NC	G115-3E25NC	G63-3E03NC	G65-3E01NC	G57-3E1.5NC
	交流 AC 90- 250 VAC	正逻辑 PNP	常开NO	G115-3E25PA	G63-3E03PA	G65-3E01PA	G57-3E1.5PA
			常闭NC	G115-3E25PB	G63-3E03PB	G65-3E01PB	G57-3E1.5PB
			一开一闭NO+NC	G115-3E25PC	G63-3E03PC	G65-3E01PC	G57-3E1.5PC
	SCR可挂硅 Control Hable silicon	常开NO					
		常闭NC					
	继电器输出 Relay output						
	输出电流 DC/SCR 继电器 Control output		DC:200mA, AC:300mA				
消耗电流 DC/AC Consumption current		DC<15mA, AC<10mA					
响应时间 DC/AC Response time		DC<2ms, AC<20ms					
指向角 Directional angle		3°~10°					
检测物体 Detected object		透明或不透明体 transparent or opaque body					
工作环境温度 Working environment temperature		-25°C~+55°C					
工作环境照度 Intensity of illumination of working environment		太阳光10000LX以下 Sunlight under 10000LX 白炽灯3000LX以下 incandescent lamp under 3000LX					
外壳材料 Shell material		金属 Metal	金属或塑料 Metal, Plastic	塑料 Plastic	塑料 Plastic		
防护等级 Protection grade		IP64	IP54				

# 光电开关(PTQ18) PHOTOELECTRIC SWITCH

## 特点 Characteristic

- T型设计可省空间  
T-shaped housing design, saving space.
- N.O./N.I.C.可用选择线切换  
N.O./N.C.function swithable by different wires.
- 体积小, 安装容易  
Easy to install.(30\*45.9\*31.9mm)
- 接线使用特殊材质耐弯曲  
Special design for bending resistance.
- Superior waterproof IP67



## 规格表 Specifications

型号 Model	NPN L.on/D.on	PTQ18-DU10/40N	PTQ18-DU10/40NK1
	PNP L.on/D.on	PTQ18-DU10/40P	PTQ18-DU10/40PK1
检出方式 Sensing type	扩散反射式 Diffuse reflection		
检出距离 Sensing distance	10cm/40cm, white paper 10*10(10/40cm)		
发光源 Emitting light	Infrared LED 850nm		
工作电压 Operating voltage	DC12~24V		
消耗电流 Current Consumption	20mA Max		
负载电流 Load current	100mA Max.at DC20V		
反应时间 Response time	1.5ms Max.		
隔离阻抗 Insulation resistance	20MΩmin.(DC500V)		
绝缘耐压 Voltage withstandability	AC1000V 60Hz for 60 Sec		
工作温度 Operating temperature	-25°C~+60°C		
工作湿度 Ambient humidity	35%~85%RH		
防水等级 Protection degree	IP67		
外观材质 Material	ABS		
出线方式 Wiring method	M12接头 M12 plug-in connector type	Pre-wiredΦ4.2*2M/3-wires出线	
重量 Weight	Approx.68.5g		Approx.18g

## 尺寸图 Dimensions

