





绿色科技 共享未来

乐清埃贝肯电气有限公司是一家集生产、开发、销售和服务于一体的现代化企业，专业生产接近开关、光电开关、磁性开关等各种低压电子电器产品。现成为全国规模较大的多品种专业厂家。

公司产品种类齐全、品质卓越、做工精致，公司生产的电子产品远销世界各国，已被广泛应用于各种机械、机床制造业及纺织、造纸、烟草、轻工、食品、化工、矿山、冶金、航空工业、电力保安、汽车工业、船舶交通运输、建筑、地铁等各行各业。作限位、定位检测、自动计数、测速、自动保护、工业生产流水线及微机信号、数控装置等应用，对提高自控系统先进性和可靠性，具有巨大作用。

公司本着以高品质的产品和一流的服务并赢取客户最大的满意为宗旨；坚持“科技兴业、品牌兴业”方针。以全球战略眼光，从更大范围和更宽视野谋求企业发展；不断优化产品结构革新与改善产品设计，提升加工工艺水平，以保持公司品牌平稳持续向上发展，建立长盛不衰的创新企业。

向客户提供精良的产品和真诚的服务是我们永远的承诺。我们竭诚欢迎与您的合作，期待与您携手共创美好明天！

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圆柱型接近开关型号命名及含义 The columned proximity switches model named and meaning

LJ		18	A3	-	8	-	Z	-	B	X	-	A	P
埃贝肯 接近开关 代号	感应方式 无表示 为电感式 C:电容式 G:干簧管式	外形序号 12:外形直径12mm 18:外形直径18mm 30:外形直径30mm	结构形式 A3:圆柱型 螺母金属外壳 A4:圆柱型 螺母塑料外壳	动作距离 1:1mm 4:4mm 8:8mm B:1-10mm T:1-15mm H:1-20mm K:1-25mm	工作电源范围 Z:DC6-36V Z1:DC30-65V J:AC90-250V J1: AC300-400V	输出形式 A:三线制常闭 B:三线制常开 C:四线制常开 及常闭 D:二线制常闭 E:二线制常开	输出电流 X:NPN DC 200mA Y:PNP DC 200mA Z:400mA M:500mA W:1500mA	应用表示 A:测高低温及 余量时型,如 AJ:带继电器型 为大电流输出 “0”无表示: 工业配用	使用分类 P:配用单片机、 PC机、电子计 数、数码控制 “0”无表示: 工业配用				

注:有些老型号因以前按单种型号定型和命名,现无法归纳现在的基本型号及含义,所以仍然以老型号命名,若有不详之处,请联系!

光电开关型号命名及含义 Photoelectric switch type naming and meaning

E3F			D	S	10		C	4	
外型序号 例:E3F1:Φ12圆柱 E3F:Φ18圆柱 E3F3:Φ30圆柱 GDN15:42X75X94 GDN16:60X40X100 E3JK:50X50X18 E3JM:25X60X75 E3S:20X20X65 E3K80:24X50X80	检出方向 无表示 平行于开关光轴的 顶端面 L: 垂直于开关光轴的 上端面	检出方式 D:漫反射形 R: 反馈反射形 G:槽形 无字母表示: 对射形	检出距离单位 S: CM厘米 无字母 表示 M:米	检出距离 具体数字	对射形 L:表示 发射器 I:表示 接收器 I:表示	检出形式 N,C4,E4:NPN 300MA输出 P:PNP 300MA输出 M:继电器触点 1A:开-闭输出 Y:交流二线制	输出状态 1:常开 2:常闭 3(12): 一开一闭 4:常开	T1: 带前 延时 T3: 带后 延时 T12: 带前 后延 时	

无接触开关型号命名及含义

JWK	220	A	10	JK
埃贝肯 接近开关 代号	电源电压 220: AC220V电源 110: AC110V电源 36: AC36V电源 380: AC380V电源 24: DC24V电源 12: DC12V电源	感应面 方向位置 A:表示感应 方向为开关 上端 D:表示感应 方向为开关 前端	动作距离 10:10mm 15:15mm 20:20mm 25:25mm 5:5mm	输出方式 JK:继电器触点 输出如图JK J:电压输出 如图J P:晶体管输出 如图JA

方形、圆柱型接近开关型号命名及含义

TCA	20	20	A
外型序号 TCA0050C20mm TCA0100C20mm TCA0200C20mm TCA0300C20mm TCA0400C20mm TCA0500C20mm TCA0600C20mm TCA0700C20mm TCA0800C20mm TCA0900C20mm TCA1000C20mm TCA1100C20mm TCA1200C20mm TCA1300C20mm TCA1400C20mm TCA1500C20mm	电源电压 20:表不 AC90-250V 30:表示 DC6-36V	动作距离 5:5mm 8:8mm 15:15mm 20:20mm 25:25mm 50:50mm 80:80mm 120:120mm	输出方式 A:OC为NPN三线常开, AC为交流二线常开 B:DC为NPN三线常闭, AC为交流二线常闭 C:PNP三线常开 D:PNP三线常闭 AL:DC二线常开 BL:DC二线常闭

LJ2系列接近开关型号及含义

LJ2		15	-		/	2	2	1
外型序号 高:40 宽:38 长:80	无表示 直流型 接近开关 L表示: 交流型 接近开关	动作距离 5:5mm 10:10mm 15:15mm 20:20mm	无表示: 感应位置在开 关及标志上 方 F表示: 感应头分装型	无表示: 输出电流为300mA 4:400mA 5:500mA 6:600mA 8:800mA	1: DC型为12V 2: DC型为24V 交流型(有图标) 1: AC90-250V 2: AC380V	接线方式 2: 螺柱头 引线型 1: 航空插头 接插型	接线方式 1: 前侧 2: 左侧 3: 右侧 4: 底部 5: 上端	

圆柱型接近开关型号命名及含义

P	R	12	4	DN
电感式 接近开 关	外形 R: 圆柱型 S: 角柱型 L: 小方型	外型尺寸 8:M8X1X30mm 12:M12X1X42.5mm 18:M18X1X47mm 30:M30X1.5X58mm P5:17X17X28mm PL:17X17X35mm	感应 距离 1:1mm 2:2mm 4:4mm 5:5mm 8:8mm 10:10mm 15:15mm 20:20mm	DN:直流NPN三线常开 DN2:直流NPN三线常闭 DP:直流PNP三线常开 DP2:直流PNP三线常闭 DO:交流二线常开 DC:交流二线常闭 AO:交流二线常开 AC:交流二线常闭 D表示电压DC6-36V A表示电压AC90-250V

角柱型接近开关型号命名及含义

TL	Q5	M	C	1
角柱 型 接近 开关 设计 序号	感应距离 Q:最小角柱型 N:外型大点的 角柱型 5:5mm 10:10mm 15:15mm 20:20mm 25:25mm 30:30mm	M: 非埋 入型	输出方式 C:NPN三线 F:PNP三线 (B):PNP三线 D:直流二线 Y:交流二线	1:常开型输出 2:常闭型输出 12:常开+常闭 型输出

霍尔传感器型号命名及含义

NJK	50	02	C	
埃贝肯 霍尔传 感器号	外形尺寸 50: 25mm长 80: 35mm长 90: 50mm长	外形体积 01:角型外形直 径为Φ8mm 02:角型外形直 径为Φ12mm 03:角型外形直 径为Φ18mm 010:角型外形直 径为Φ12mm	输出方式 C:无字母: 表示NPN常开 D:NPN常闭 A:PNP常开 B:PNP常闭 K:记忆 L:反馈	无表示为: 输出电流200mA 输入电压DC6-36V 如有其它电压电 流需求,直接注明。

接近开关工作原理 Proximity switch working principle

接近开关又称接近传感器。接近传感器分电感式、电容式、模拟式、霍尔式、磁性式。传感器可与PLC可编程控制器、单片机、非门电路、电子计数器、固态继电器、小型继电器等产品配套使用。

电感式接近传感器由高频振荡、检波、放大、触发及输出电路等组成。振荡器在传感器检测面产生一个交变电磁场，当金属物体接近其检测面时，金属中产生的涡流吸收了振荡器的能量，使振荡减弱以至停振。振荡器的振荡及停振这二种状态，转换为电信号通过整形放大器转换成二进制的开关信号，经功率放大后输出。

电容式接近传感器由高频振荡器和放大器等组成，由传感器的检测面与大地间构成一个电容器，参与振荡回路工作，起始处于停振状态。当物体接近其检测面时，回路的电容量发生变化，使高频振荡器振荡，振荡与停振这二种状态转换为电信号经放大器转换成二进制的开关信号。

模拟传感器(又称线性位移传感器)，当金属物体接近其检测面时，随着距离的变化其输出一个与距离成线性关系变化的电信号，从而达到监控的目的。

霍尔传感器是一种内含霍尔集成电路的接近传感器。利用霍尔效应将磁信号的有或无转换成开关量，广泛应用于信号检测、自动控制、安全保护。

磁性传感器由舌簧管和放大器组成，当外磁场靠近传感器迫使簧片磁化而动作，再经放大电路放大，增大开关电量，以实现对外接电路的通断控制。

Proximity switches also called proximity sensors. Sensor can be divided into inductive type, capacitive type, simulative type, Hall type, magnetic type. Sensor can support using of PLC programmable controller, SCM, Sr circuit, Electronic counters, Solid-state relay, Small relays and other products.

Capacitive proximity switch are composed by High frequency concussion and amplification. Sensor detection surface and between the earth form a capacitor. participate Oscillation circuit work, starting at the stop vibration state. When the object near the surface, The circuit capacity changes, is the Oscillation of high-frequency oscillator. The two states of Oscillator- oscillations and stopping vibration Converted to electrical signals through the shaping amplifier Switch into binary signals.

Simulative sensor (also known as the linear displacement sensor), when the metal object close to the detection surface. With the change of the distance, then output the signal which have linear relationship changes with the distance, So as to achieve the purpose of monitoring.

Hall sensor is a kind of proximity sensor which inside with Hall IC. Using Hall effect convert magnetic signal on or off into switch capacity. Widely used in signal detection, automatic control and safety protection.

Magnetic sensor are composed by reed tube and amplification. When the external magnetic field near the magnetic reed sensor to force the action, and then amplified by the amplifier, increasing the switching capacity, in order to realize the on-off control of external circuits.

接近开关技术术语 Proximity switches technical terms

● 动作距离 action distance

动作距离是接近开关最重要的参数，它主要是取决于接近开关的感应面直径大小，感应目标的材料及环境温度也影响接近开关的动作距离。对于磁性、霍尔传感器，安装在铁板上及磁性强度也同样影响传感器的动作距离。接近开关的动作方式有两种：轴向接近，径向接近，一般都采用轴向接近。

Operating distance is the most important parameter of the proximity switch, which mainly depends on the proximity switch sensing face diameter, sensing target material and ambient temperature also affects the proximity switch movement distance. For magnetic, Hall sensor, installed on the iron plate or on the items which with the magnetic strength, also affects the movement distance; There are two action ways of the proximity switch: Axial close and Radial close. Generally using axial approach.

● 额定感应距离(Sn) Rated sensing distance(Sn)

它是一个标准值。不考虑外部环境影响。

It's a standard value without regard to the influence of external environment.

● 标准检测片 Standard detection sheet

检测片设计成正方形，厚度为1mm；材料为ST37号钢，表面光滑，它的边长为 $3 \times S_n$ 。检测目标尺寸或材料的改变会衰减感应范围。

The detection sheet is designed into square type. The thickness is 1 mm, the material is ST37 with smooth surface and the side length is $3 \times S_n$. The alternation of the detection object dimension or material will attenuate the inductive range.

● 有效动作距离(Sr) Effective action distance (Sr)

开关在额定工作电压及室温下($23 \pm 5^\circ\text{C}$)测得的动作距离： $0.9S_n \leq S_r \leq 1.1S_n$

The action distance detected at the rated operating voltage and room temperature ($23 \pm 50^\circ\text{C}$): $0.9S_n \leq S_r \leq 1.1S_n$

● 可用动作距离(Su) Practicable action distance (Su)

开关在允许的环境温度 $-25^\circ\text{C} \sim +70^\circ\text{C}$ 下，输入电压在额定电压的85%到110%的范围内，测得的动作距离： $0.9S_r \leq S_u \leq 1.1S_r$

The action distance detected when the input voltage is in the range of 85% to 110% the rated voltage and the switch works at the allowable ambient temperature $-25^\circ\text{C} \sim +70^\circ\text{C}$: $0.9S_r \leq S_u \leq 1.1S_r$

● 可靠动作距离(Sa) Reliable action distance (Sa)

测量目标在这个动作距离内，开关的动作是可靠的： $0 \leq Sa \leq 0.81Sn$
 When the measure object is in this action distance, the action of the switch is reliable: $0 \leq Sa \leq 0.81Sn$

● 重复精度(R) Repeatability precision (R)

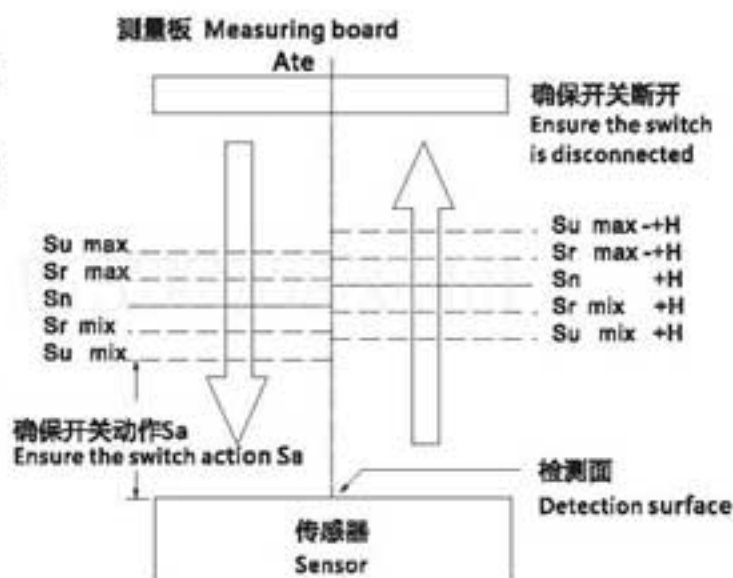
是指在环境温度($23 \pm 5^\circ\text{C}$)，相对湿度为随机的，供电电压为 $U_e \pm 5\%$ ，在8个小时的范围内进行测量所产生的有效作用距离的变化量： $R \leq 0.1Sn$
 It is the convert value of the effective action distance that is measured in 8 hours when the ambient temperature is $23 \pm 5^\circ\text{C}$, relative humidity is random and the service voltage is $U_e \pm 5\%$: $R \leq 0.1Sn$

● 确保开关断开距离 Ensure the switch breaking distance

当检测片到开关感应面的距离大于开关的额定动作距离时，确保开关断开。
 When the distance between the detection sheet and the switch inductive surface is larger than the rated action distance, ensure the switch is disconnected.

● 衰减作用 Attenuation

衰减系数是指某一种材料的动作距离相对于用ST37号钢作检测片时减少了多少。
 对于电感式接近开关而言，检测片材料的导电性是影响衰减系数的主要参数。
 Attenuation coefficient means how much the action distance of a certain kind of material is attenuated when ST37 steel is used as detection sheet. For inductive type proximity switch, the electrical conductivity of the detection sheet material is the main parameter affecting attenuation coefficient.



电感式接近开关对部分材料衰减系数 Inductive proximity switch on the material attenuation coefficient	
材料Material	衰减系数 Attenuation coefficient
钢 Steel	1.0
不锈钢 Stainless steel	0.85
铝 Aluminum	0.4
黄铜 Brass	0.4
铜 Bronze	0.3

电容式接近开关对部分材料衰减系数 Capacitive proximity switch on the material attenuation coefficient	
材料Material	衰减系数 Attenuation coefficient
接地板 Earth plate	1.0
水 Water	1.0
酒精 Alcohol	0.75
陶瓷 Ceramic	0.6
PVC	0.45

● 空载电流(IO) No-load current (IO)

是指接近开关在没有负载时所测得的电流消耗。
 It means the current consumption that is measured when the proximity switch is on no-load.

● 工作电流(IL) Operating current (IL)

是指开关在连续工作时的最大负载电流。
 It means the maximum load current when the switch works continuously.

● 瞬间电流(IK) Instantaneous current (IK)

是指当开关闭合时不会损坏接近开关短时间内出现的允许电流。
 It means the allowable current in a short time that doesn't ruin the switch when the switch is closed.

● 剩余电流(IR) Residual current (IR)

是指接近开关断开时流过负载的电流。
 It means the current that goes through the load when the proximity switch is disconnected.

● 工作电压(UB) Operating voltage (UB)

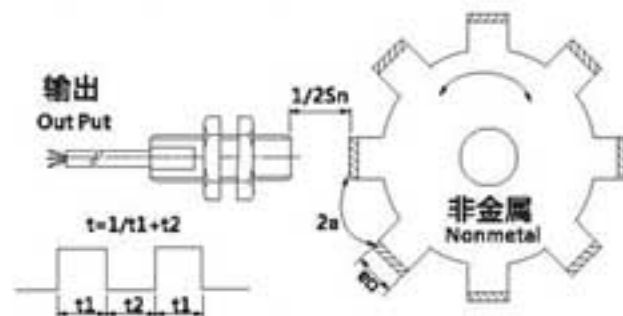
是指工作电压的最大，最小值在这个范围内接近开关可以保证安全工作。
 It means the maximum and minimum of the operating voltage. In this range, the proximity switch can ensure the safe operation.

● 电压降(UD) Voltage drop (UD)

是指开关接通时在开关两端所测得的电压。
 It means the voltage measured at the both ends of the switch when the switch is turned on.

● 工作频率(F) Operating frequency (F)

是指从衰减状态转变到无衰减状态的最大变换次数，用赫芝(Hz)来表示。
 It means the maximum switching times from the attenuation state to non-attenuation state, shown as Hz.



接近开关安装方法 Promixity switche installation method

圆柱型接近开关 Cylindrical type proximity switch

非屏蔽式接近开关可以获得最大的动作距离(与直径有关);但为了防止开关周围的金属对开关影响,开关感应头必须与周围的金属保持一定的间隙。(图1)

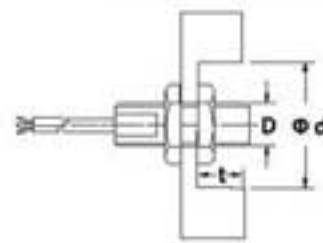
屏蔽式接近开关由于内部特殊的屏蔽作用,使侧面径向的磁场减小,感应距离大约是非屏蔽式的60%,因为可以齐平安装在金属内。(图2)

磁式传感器不受安装条件的影响,只要周围的材料不被磁化。

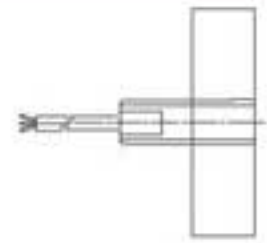
Non-screen shield type proximity switch can achieve the biggest action distance (related to the diameter);but in order to avoid the influence from the metal surrounding the switch to the switch, the switch inductive head must keep a certain space with the surrounding metal.(Chart 1)

The inside special screen shielding of the screen shield type proximity switch makes the magnetic field of side radial decrease and the sensing distance is about 60% that of the non-screen shield type ,therefore it can be flush mounted inside the metal. (Chart 2)

Magnetic type sensor doesn't affected by the installation condition , as long as the surrounding materials aren't be magnetized.



(图1)Chart1

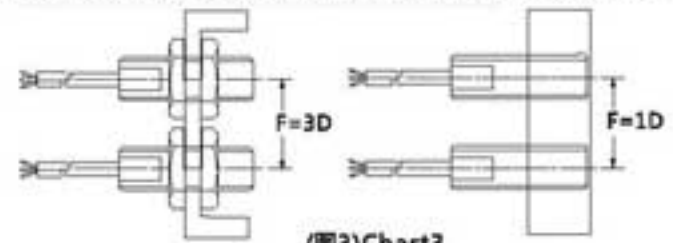


(图2)Chart2

并排安装的影响(图3)Influence of parallel installation (chart3)

为了防止相互干扰,必须保持相互间的最小距离。

To avoid mutual interference, the minimum distance between them must be



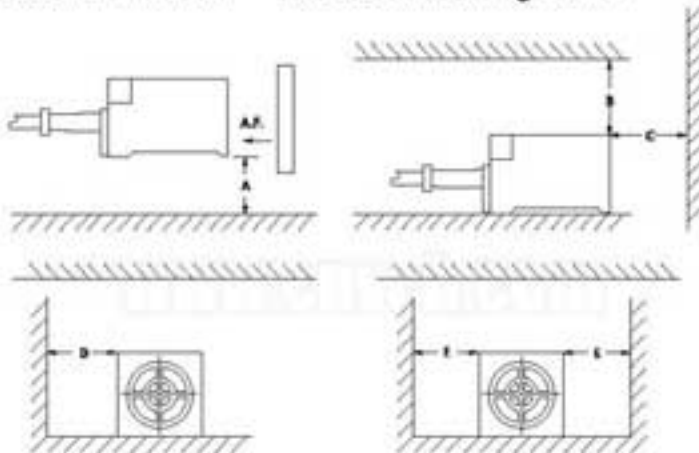
(图3)Chart3

具体数据请参阅各种型号的使用说明书

For detailed data, refer to the operation instruction of various types

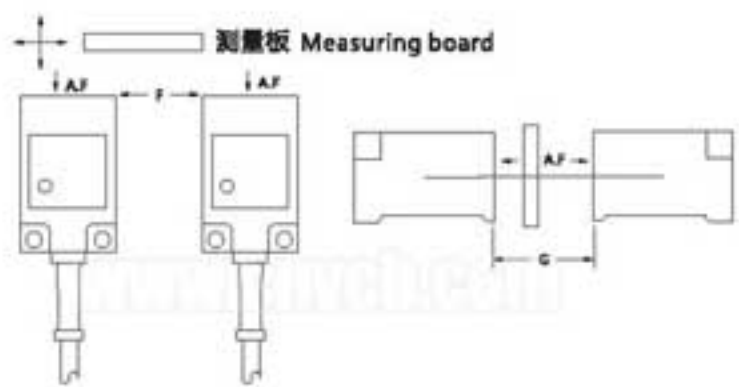
角型及方型接近开关安装要求 Horn type and the square of promixity switche installation requirements

安装 Installation 测量板 Measuring board



具体数据请参阅各种型号的使用说明书。

For detailed data, refer to the operation instruction of various types



可编程控制器DC输入模块

DC input module of programmable controller

接近开关输出方式和电气特征 promixity switch output way and electrical characteristics

接近开关与可编程控制器的连接

Connection between proximity switch and programmable controller

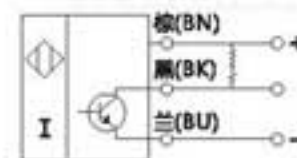
可与直流开关三线制NPN型输出

Can be connected with the proximity switch of DC switch three-wire system NPN type output

直流二线制NO或NC DC two-wire system NO or NC

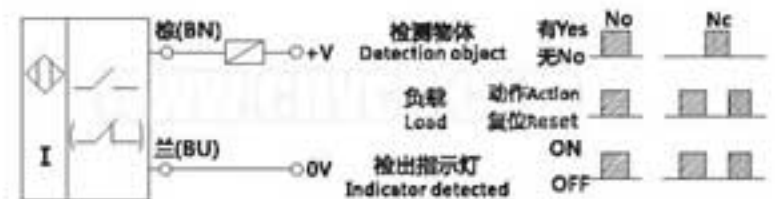
传感器必须与负载串联起来使用,绝不能直接接上电源两端,以防引起火灾,传感器有极性保护功能;在开路状态,存在有很小的漏电流;在闭路状态,开关元件上有一个较小的电压降。

The sensor must be and load series rises use, can never directly connected to the power source, with both ends fire prevention, sensor have protection function; in open state, there are small and leakage current, In closed-circuit state, switch components on a smaller voltage drop.



NPN 三线制常开 (闭)

可编程控制器DC输入模块
DC input module of programmable controller

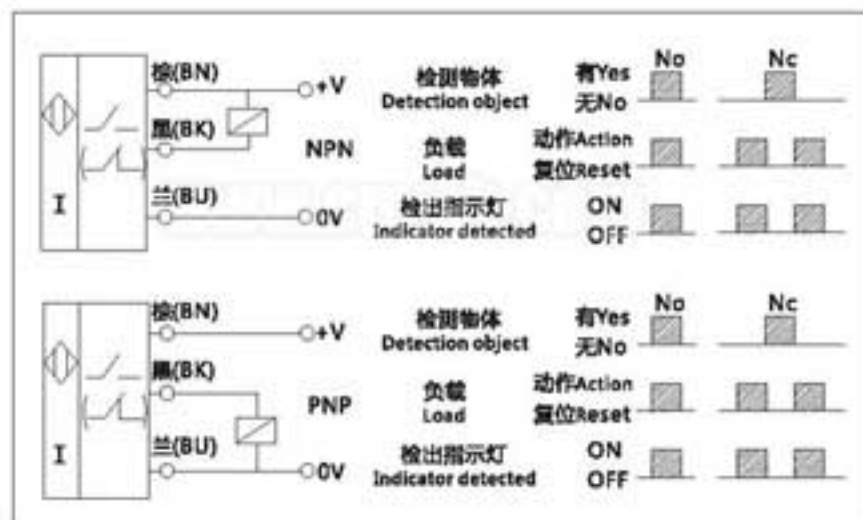


二线制NPN 常开 (闭)

● 直流三线制 (N , P型) NO或NC
DC three-wire system(N,P type)NO or NC

开关的负载和供电电源分开连接；有极性保护功能，剩余电流可以忽略。

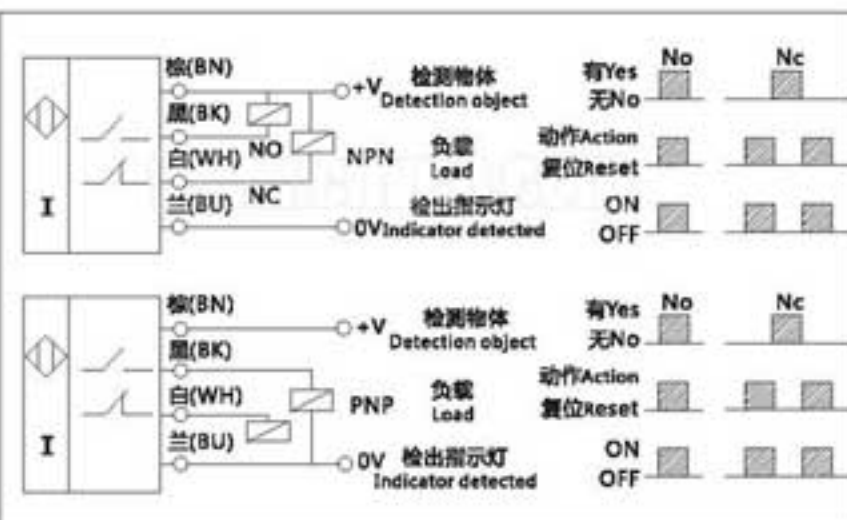
The load of these switches connects separately with the power supply, owning the functions of polarity ,short-circuit and over-load protection, the residual current can be neglected.



● 直流四线制 (N , P型) NO+NC
DC four-wire system(N,P type)NO plus Nc

开关可提供常开，常闭两组输出。

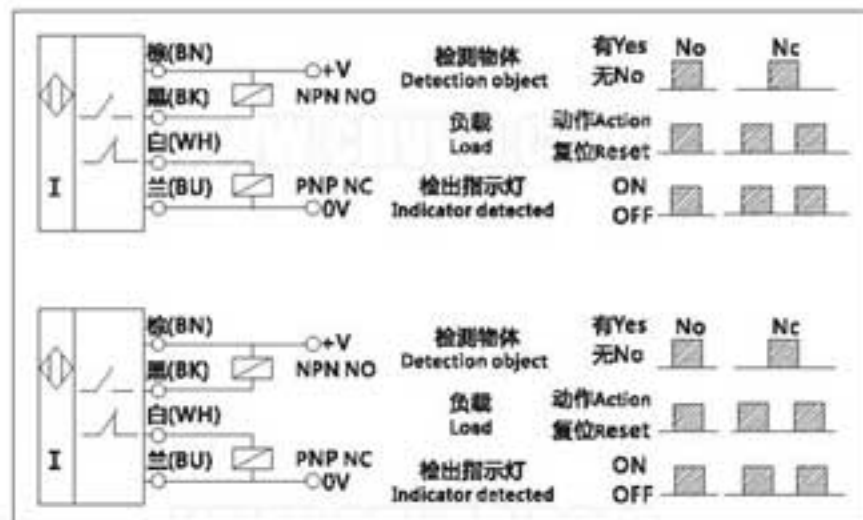
The switches can provide two groups of output No and NC



● 直流四线制 (X型) DC Four-wire system(X type)

NPN,PNP,NO,NC四种输出方式可转换

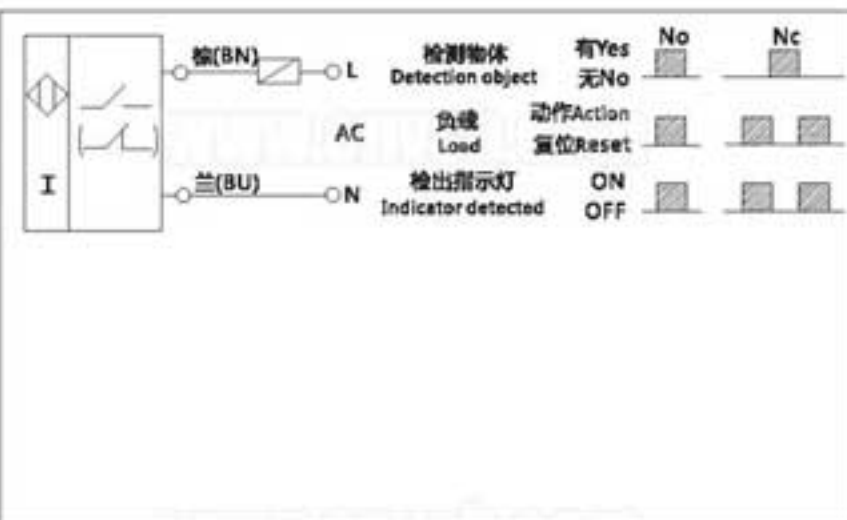
the four output modes can be convertel among NPN,PNP,NO and NC



● 交流二线制NO或NC AC Two-wire system NO or NC

负载必须串联在传感器内进行工作，在闭路状态，开关元件上有一个较小的电压降。

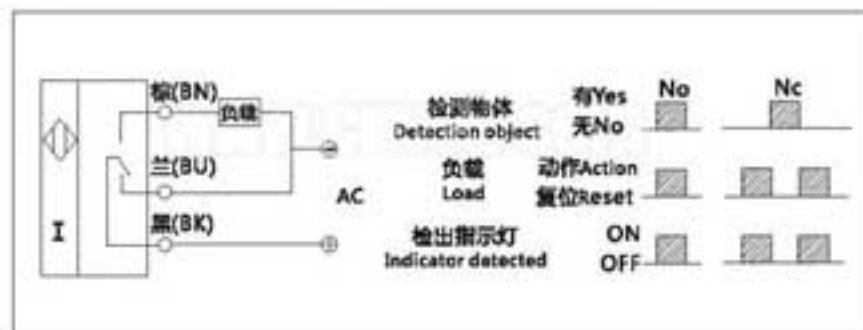
The load must be series connected inside the sensor and work, and on closed-circuit state, there is a minor voltage drop on the switch elements.



● 交流三线制NO+NC AC
Three-wire system NO+NC

这些开关可提供常开，常闭两组输出。

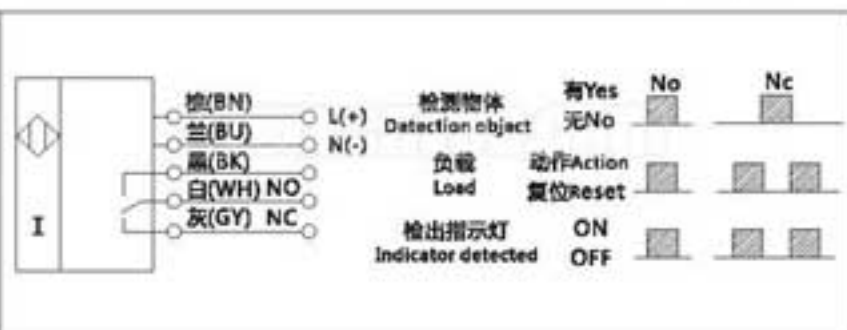
The switches can provide two groups of output No and NC



● 交流、直流五线制 (继电器输出) NO+NC
AC/DE five wire(relay output)NO+NC

这些开关可提供常开，常闭两组继电器输出。

The switches can provide to often open,closed two group relay output.



● 接近开关的并联、串联

Series and parallel connection of proximity switch

OR连接(NPN,PNP)型不可混杂使用, 并联接近开关OR连接, 任意一个接近开关动作就可驱动负载。接近开关的数量取决于漏电流的和。只要它不影响负载动作, 就可多个连接。

OR connection(NPN and PNP types can be used mixed)series When the proximity switch is OR connected, the action of any proximity switch candrive load. The quantity of the proximity switches depends on the sum of leakage current. More connections are available given that it doesn't affect the loading action.

● AND连接(串联)AND connection (series)

当接近开关AND连接,全部的接近开关动作时可驱动负载。接近开关的数量取决于其饱和电压的和, 只要它不影响接近开关的电源电压, 就可多个连接。接近开关的响应频率为各个接近开关初始复位的累加。

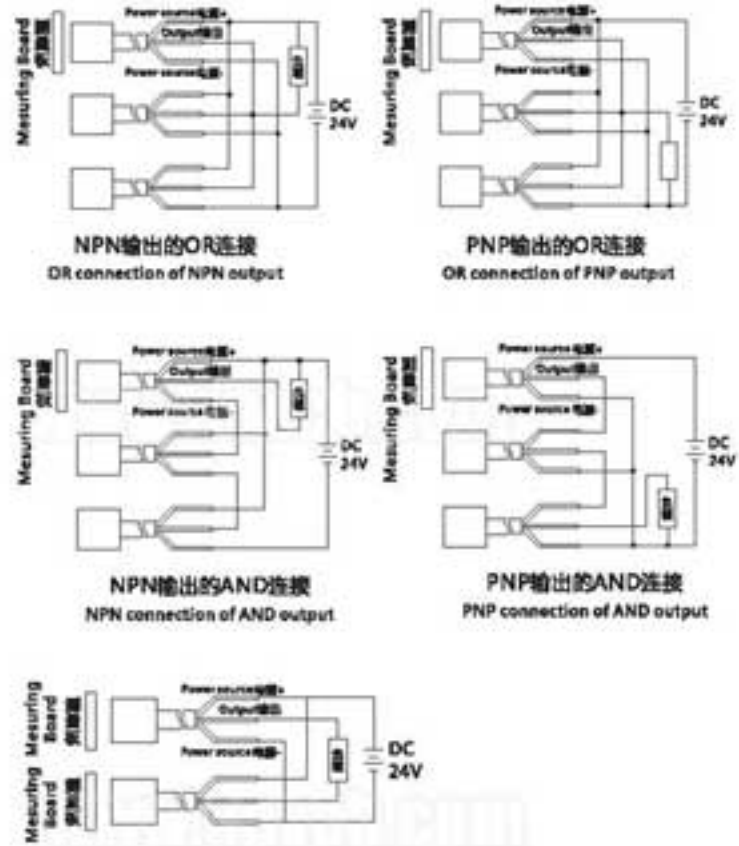
When the proximity switch is AND connected, the action of all proximity switches can drive load. The quantity of the proximity switches depends on the sun of saturation voltage. More connections are available given that it doesn't affect the supply voltage of the proximity switch . The response frequency of the proximity switch is the accumulation of initialized reset of various proximity switch.

● 接近开关的并联、串联

Series and parallel connection of proximity switch

AND连接(串联)NPN, PNP混杂使用

AND connection (series) NPN, PNP mixed-use



接近开关使用注意事项 Promixity switches matters need attention

● 接通或断开电源时的注意事项

Cautions when connected or disconnected with the power supply

将接近开关与计数器, 可编程控制器相连接时, 其内部带有初始复位电路, 不会有问题。请注意避免发生以下情况:

检测物体位于接近开关的检测距离附近,对于直流电压型和直流开关型接近开关, 在电源接通(断开)时, 时间常数出现大幅上升(下降)的情况; 交流型接近开关在其电流接通(断开)时, 有自激, 噪音的情况。

When connecting the proximity switch with the counter and the programmable controller, there isn't any problem because of the built-in initialized reset circuit please avoid the conditions mentioned below:

The detection object lies around the detection distance of the proximity switch; For DC voltage type and DC switch type, when the power supply is turned on (turned off), time constant rises (drops) greatly; There is self-excitation and noise when the AC switch type proximity switch is power-on (off).

● 电容、灯负载Capacitor, light load

接近开关不能把电容、灯等突升电流较大的负荷作为与其直接连接的负载, 请通过继电器连接或串接一限流电阻。限流电阻R设定的峰值电流在接近开关的负载电流内的限流电阻, 请务必经过负载进行连接。

The proximity switch can't have the capacitor of light that has larger jumping current as the load directly connected; its needed to be connected through a relay or series connected with a current-limiting resistance. the peak current set by current-linmiting resistance Ris within the load current of the proximity switch; Make sure to connect through load.

$$\frac{\text{电源电压V}}{\text{接近开关的最大负荷电流mA}} \leq R(\text{k}\Omega)$$

$$\frac{\text{电阻R的容许损失(W)}}{\frac{\text{电源电压V}^2}{\leq R(\text{k}\Omega)} \times 2\text{倍以上}}$$

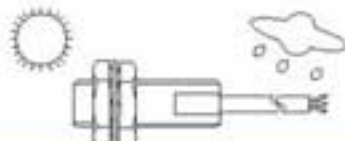
$$\frac{\text{Supply Voltage V}}{\text{Peak load current value of proximity switch mA}} \leq R(\text{k}\Omega)$$

$$\frac{\text{Supply voltageV}^2}{\leq R(\text{k}\Omega)} \times 2\text{ Times above}$$

● 接近开关安装注意事项 Installation notice of proximity switch

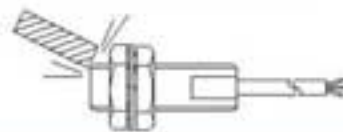
请不要在露天环境中使用, 必要时请使用保护罩。

Don't use it in the open air, and use a protectivecover, if necessary.



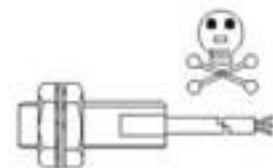
请不要用硬的物体撞击检测面, 必要时请使用保护罩。

Don't knock the detection surface with hard objects and use a protective cover, if necessary.



请不要在有腐蚀性物品的环境中使用。

Don't use it in the environment with corrosive objects.



请不要用大力量紧固，紧固时，请使用弹垫紧固。

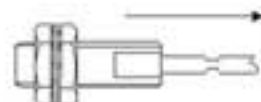
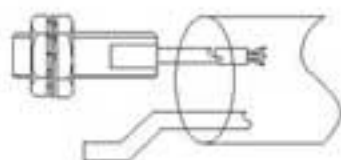
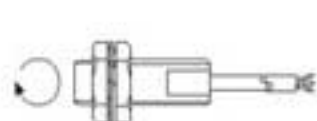
Don't fasten it with a big force, but fasten it with spring washer

接近开关的配线应单独配金属软管，请不要与电力线，动力线一起在同一金属软管内。

The proximity switch must be equipped individually with metal flexible pipe, and Don't make it with the electric line and power line in the same metal flexible pipe

请不要用大力量拉伸接近开关的电源线。

Don't stretch the power line of the proximity switch with a big force.



接近、光电开关应用实例 Application Examples Proximity Switch And Photoelectric Switch

<p>1、厚纸箱检测 Thick carton detection</p> <p>一侧不能按设传感器时采用漫反射式光电开关</p> <p>Use photoelectric switch with diffuse reflection when the sensor can't be mounted on one side</p> <p>内置电源型光电开关 Built-in power type photoelectric switch</p> <p>漫反射式光电开关 Photoelectric switch with diffuse reflection</p>	<p>2、起重机的报警装置 Alarm device of the crane</p> <p>起重机的方向判断和进入危险区的检测</p> <p>The direction judgment of the crane and the detection of the approach to the dangerous zone</p> <p>危险区 Danger's Zone</p> <p>槽型光电开关 Slot type photoelectric switch</p> <p>加磁机 Cone</p> <p>输出 Output</p> <p>槽型光电开关 Slot type photoelectric shape</p>	<p>3、啤酒瓶的有无标牌检测 Tag detection of the beer bottle</p> <p>用反射式光电开关检测啤酒瓶，用对射式光电开关检测有无标牌</p> <p>Check the beer bottle with the reflection type photoelectric switch, and check whether there is a tag with the correlation type photoelectric switch.</p> <p>检测装置 Tapping device</p> <p>复位 Reset</p> <p>按钮 Button</p> <p>反射式光电开关，对射式光电开关 Reflection type photoelectric switch, correlation type photoelectric switch</p>	<p>4、镜圆体的稳定检测 Steady detection of mirror surface object</p> <p>按MSR功能镜圆体也能毫无误动作地稳定检测。</p> <p>It's available for mirror surface object to undertake steady detection without any misoperation in terms of function MSR.</p> <p>反射型 Reflector</p> <p>反射式光电开关 Reflection type photoelectric switch</p>	<p>5、玻璃管内的水位检测 Water level detection inside glass tube</p> <p>把发射器和受光器稍微错开角度安装，仅发射器上落点是关键。水位下降时能变成透光状态，可实现精度为1mm的水位检测。</p> <p>Mount the light projector and the light receptor at a slightly staggered angle and the lens on the light projector is the key point. The water level drops, it turns in to light-proof state, and the precision of water level detection is up to 1mm.</p> <p>对射式光纤传感器 Correlation type optical fiber sensor</p>
<p>6、气量检测 Gas flow detection</p> <p>衬底为半透明时，用对射式可检测。</p> <p>When the substrate is translucent, undertake detection with correlation type</p> <p>光纤对射式光电开关 Optical fiber correlation type photoelectric switch</p>	<p>7、检志检测 Mark detection</p> <p>色标 Color mark</p> <p>光纤标志传感器 Mark sensor</p>	<p>8、斜度检测 Inclination detection</p> <p>漫反射式光电开关 Photoelectric switch with diffuse reflection</p>	<p>9、机器人工作区安全检测 Safety detection in robot work area</p> <p>安全光幕传感器 Safety optical sensing sensor</p>	<p>10、机加工中心的各种位置检测 Various position detection in machining centre</p> <p>圆柱型接近开关 Cylindrical type proximity switch</p>
<p>11、动作时凸轮检出 Action sequence cam detection</p> <p>CAM Cam</p> <p>扁平型接近开关 Flat type proximity switch</p>	<p>12、脉冲发生器 Pulsar</p> <p>槽型接近开关 Slot type proximity switch</p>	<p>13、瓶盖检测 Bottle cap detection</p> <p>热水冲淋 Clean with warm water</p> <p>多温环境 Multi-temperature environment</p> <p>防水型接近开关 Water-proof type proximity switch</p>	<p>14、磨床挡块检测 Grinder stop detection</p> <p>研磨液 Grinding fluid</p> <p>磨床 Grinder</p> <p>防水型接近开关 Water-proof type proximity switch</p>	<p>15、检测纸包装内有无牛奶 Detect whether there is milk inside the paper packet</p> <p>牛奶纸袋 Milk paper packet</p> <p>不合格品(无奶) Unaccepted product (No milk)</p> <p>合格品 Accepted product</p> <p>发射器 Propeller</p> <p>电容式接近开关 Waqueptive type proximity switch</p>

圆柱型能与国内外各相同品种直接替换 Cylinder type, can be the direct substitution of the same type both at home and abroad

- 电源反接保护、短路保护，可直接与PLC相联接
- 普通场合使用，耐环境性能中等
- 红色LED显示可以检测传感器工作状态
- 经济并且简单的操作
- 应用广泛。可替换小型开关和限位开关
- IP67防护结构(IEC规格)
- 使用前请先阅读产品说明书的“注意事项”
- Power supply reversal connection protection; short-circuit protection, can directly connect with PLC
- Used in common places with medium environment resistance
- Red LED indicates that it's available to detect the sensor operating state
- Economic and simple operation
- Widely used, can be the substitution of min-type switch and limiting switch
- IP67 protection structure (IEC specification)
- Read the "Matters needing attention" of the Product instruction before use



型号规格 Type and Specification

尺寸 Dimension		Φ4(LJ4)		M5(LJ5)		Φ6(LJ6)		M8(LJ8)		M10(LJ10)		
安装方式 Mounting way		屏蔽式 Screen shield type		屏蔽式 Screen shield type		屏蔽式 Screen shield type		非屏蔽式 Non-screen shield type		非屏蔽式 Non-screen shield type		
直流型 DC type	NPN	NO	LJ4A3-1-Z/BX	LJ5A3-1-Z/BX	LJ6A3-1-Z/BX	LJ6A3-2-Z/BX	LJ8A3-1-Z/BX	LJ8A3-2-Z/BX	LJ10A3-3-Z/BX	LJ10A3-3-Z/BX	LJ10A3-3-Z/BX	
		NC	LJ4A3-1-Z/AX	LJ5A3-1-Z/AX	LJ6A3-1-Z/AX	LJ6A3-2-Z/AX	LJ8A3-1-Z/AX	LJ8A3-2-Z/AX	LJ10A3-3-Z/AX	LJ10A3-3-Z/AX	LJ10A3-3-Z/AX	
		NO+NC										
	PNP	NO	LJ4A3-1-Z/BY	LJ5A3-1-Z/BY	LJ6A3-1-Z/BY	LJ6A3-2-Z/BY	LJ8A3-1-Z/BY	LJ8A3-2-Z/BY	LJ10A3-3-Z/BY	LJ10A3-3-Z/BY	LJ10A3-3-Z/BY	LJ10A3-3-Z/BY
		NC	LJ4A3-1-Z/AY	LJ5A3-1-Z/AY	LJ6A3-1-Z/AY	LJ6A3-2-Z/AY	LJ8A3-1-Z/AY	LJ8A3-2-Z/AY	LJ10A3-3-Z/AY	LJ10A3-3-Z/AY	LJ10A3-3-Z/AY	LJ10A3-3-Z/AY
		NO+NC										
	二线 Two-wire	NO	LJ4A3-1-Z/EX	LJ5A3-1-Z/EX	LJ6A3-1-Z/EX	LJ6A3-2-Z/EX	LJ8A3-1-Z/EX	LJ8A3-2-Z/EX	LJ10A3-3-Z/EX	LJ10A3-3-Z/EX	LJ10A3-3-Z/EX	LJ10A3-3-Z/EX
		NC	LJ4A3-1-Z/DX	LJ5A3-1-Z/DX	LJ6A3-1-Z/DX	LJ6A3-2-Z/DX	LJ8A3-1-Z/DX	LJ8A3-2-Z/DX	LJ10A3-3-Z/DX	LJ10A3-3-Z/DX	LJ10A3-3-Z/DX	LJ10A3-3-Z/DX
		NO+NC										
	交流型 AC type	二线 Two-wire	NO			LJ6A3-1-J/EZ	LJ6A3-2-J/EZ	LJ8A3-1-J/EZ	LJ8A3-2-J/EZ	LJ10A3-3-J/EZ	LJ10A3-3-J/EZ	LJ10A3-3-J/EZ
			NC			LJ6A3-1-J/DZ	LJ6A3-2-J/DZ	LJ8A3-1-J/DZ	LJ8A3-2-J/DZ	LJ10A3-3-J/DZ	LJ10A3-3-J/DZ	LJ10A3-3-J/DZ
		三线 Three-wire	NO+NC									
检测距 Detection distance		1mm±10%	1mm±10%	1mm±10%	2mm±10%	1mm±10%	2mm±10%	3mm±10%				
设定距离 Set distance		0~0.7mm	0~0.7mm	0~1.2mm	0~1.6mm	0~1.2mm	0~1.6mm	0~2.1mm				
标准检测物件 Standard detection object		铁5x5x1mm	铁5x5x1mm	铁8x8x1mm	铁12x12x1mm	铁8x8x1mm	铁12x12x1mm	铁8x8x1mm				
响应频率 Response frequency		DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz				
图例 illustration		图01 Chart 01	图02 Chart 02	图03 Chart 03		图04 Chart 04	图05 Chart 05	图06 Chart 06				



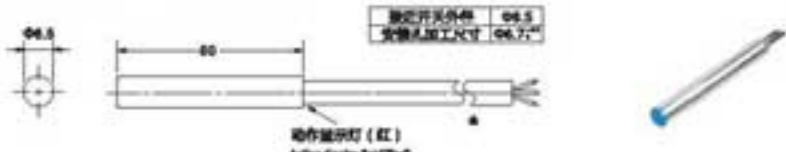
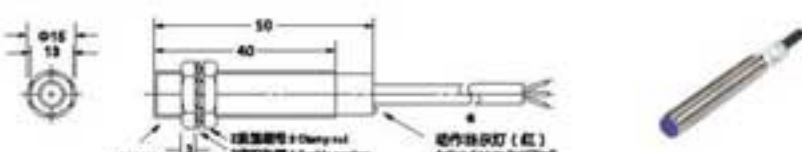
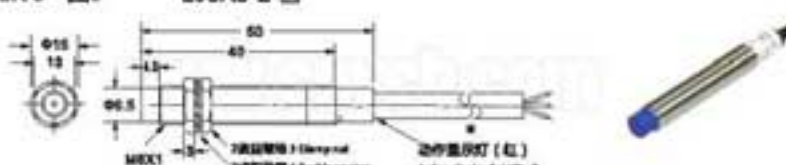
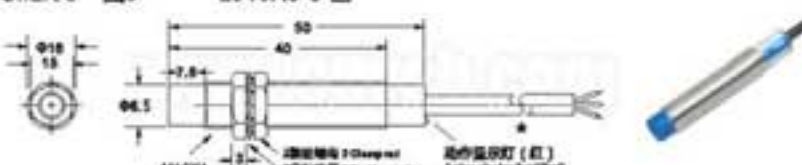
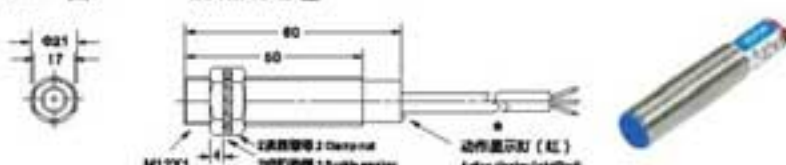

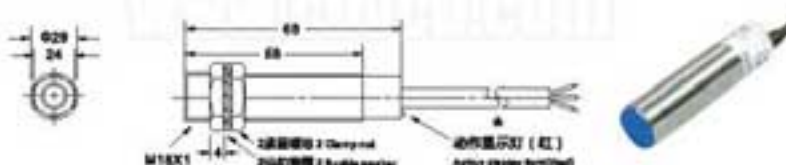

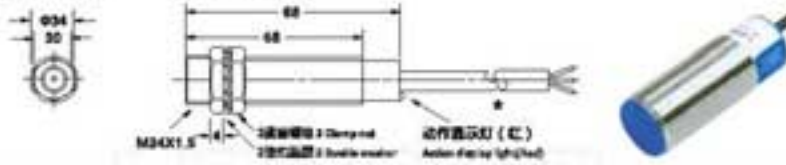
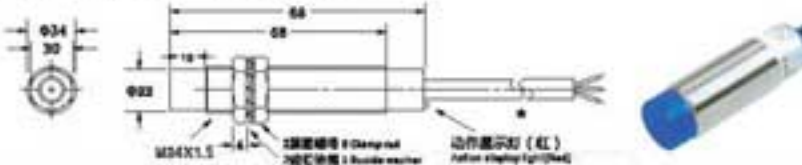
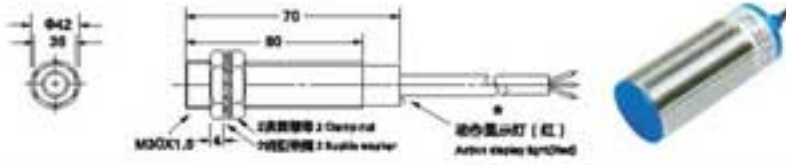
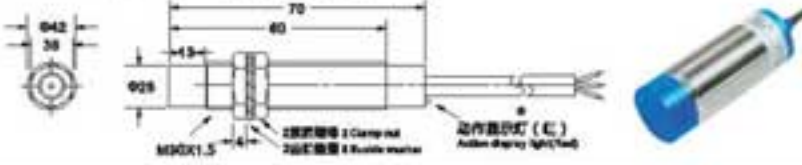
型号规格 Type and Specification

尺寸 Dimension		M12(LJ4)		M18(LJ18)		M24(LJ24)		M30(LJ30)			
安装方式 Mounting way		屏蔽式 Screen shield type		非屏蔽式 Non-screen shield type		屏蔽式 Screen shield type		非屏蔽式 Non-screen shield type			
直流型 DC type	NPN	NO	LJ12A3-2-Z/BX	LJ12A3-4-Z/BX	LJ18A3-5-Z/BX	LJ18A3-8-Z/BX	LJ24A3-8-Z/BX	LJ24A3-10-Z/BX	LJ30A3-10-Z/BX	LJ30A3-15-Z/BX	
		NC	LJ12A3-2-Z/AX	LJ12A3-4-Z/AX	LJ18A3-5-Z/AX	LJ18A3-8-Z/AX	LJ24A3-8-Z/AX	LJ24A3-10-Z/AX	LJ30A3-10-Z/AX	LJ30A3-15-Z/AX	
		NO+NC	LJ12A3-2-Z/CX	LJ12A3-4-Z/CX	LJ18A3-5-Z/CX	LJ18A3-8-Z/CX	LJ24A3-8-Z/CX	LJ24A3-10-Z/CX	LJ30A3-10-Z/CX	LJ30A3-15-Z/CX	
	PNP	NO	LJ12A3-2-Z/BY	LJ12A3-4-Z/BY	LJ18A3-5-Z/BY	LJ18A3-8-Z/BY	LJ24A3-8-Z/BY	LJ24A3-10-Z/BY	LJ30A3-10-Z/BY	LJ30A3-15-Z/BY	
		NC	LJ12A3-2-Z/AY	LJ12A3-4-Z/AY	LJ18A3-5-Z/AY	LJ18A3-8-Z/AY	LJ24A3-8-Z/AY	LJ24A3-10-Z/AY	LJ30A3-10-Z/AY	LJ30A3-15-Z/AY	
		NO+NC	LJ12A3-2-Z/CY	LJ12A3-4-Z/CY	LJ18A3-5-Z/CY	LJ18A3-8-Z/CY	LJ24A3-8-Z/CY	LJ24A3-10-Z/CY	LJ30A3-10-Z/CY	LJ30A3-15-Z/CY	
	二线 Two-wire	NO	LJ12A3-2-Z/EX	LJ12A3-4-Z/EX	LJ18A3-5-Z/EX	LJ18A3-8-Z/EX	LJ24A3-8-Z/EX	LJ24A3-10-Z/EX	LJ30A3-10-Z/EX	LJ30A3-15-Z/EX	
		NC	LJ12A3-2-Z/DX	LJ12A3-4-Z/DX	LJ18A3-5-Z/DX	LJ18A3-8-Z/DX	LJ24A3-8-Z/DX	LJ24A3-10-Z/DX	LJ30A3-10-Z/DX	LJ30A3-15-Z/DX	
		NO+NC									
	交流型 AC type	二线 Two-wire	NO	LJ12A3-2-J/EZ	LJ12A3-4-J/EZ	LJ18A3-5-J/EZ	LJ18A3-8-J/EZ	LJ24A3-8-J/EZ	LJ24A3-10-J/EZ	LJ30A3-10-J/EZ	LJ30A3-15-J/EZ
			NC	LJ12A3-2-J/DZ	LJ12A3-4-J/DZ	LJ18A3-5-J/DZ	LJ18A3-8-J/DZ	LJ24A3-8-J/DZ	LJ24A3-10-J/DZ	LJ30A3-10-J/DZ	LJ30A3-15-J/DZ
		三线 Three-wire	NO+NC			LJ18A3-5-J/EDZ	LJ18A3-8-J/EDZ	LJ24A3-8-J/EDZ	LJ24A3-10-J/EDZ	LJ30A3-10-J/EDZ	LJ30A3-15-J/EDZ
检测距 Detection distance		2mm±10%	4mm±10%	5mm±10%	8mm±10%	8mm±10%	10mm±10%	10mm±10%	15mm±10%		
设定距离 Set distance		0~1.6mm	0~3.6mm	0~4mm	0~7mm	0~7mm	0~8mm	0~8mm	0~13mm		
标准检测物件 Standard detection object		铁12x12x1mm	铁15x15x1mm	铁18x18x1mm	铁30x30x1mm	铁24x24x1mm	铁30x30x1mm	铁30x30x1mm	铁54x54x1mm		
响应频率 Response frequency		DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz		
图例 illustration		图07 Chart 07	图08 Chart 08	图09 Chart 09	图10 Chart 10	图11 Chart 11	图12 Chart 12	图13 Chart 13	图14 Chart 14		

性能参数 Characteristic parameter

- 滞后距离: 检测距离的10%以下
 - 检测物体: 磁性金属(非磁性金属时检测距离减小)
 - 电源电压: 直流型:DC12-24V(6-36V)脉动(P-P)10%以下, 交流型:AC110-220V(36-250V)50/60Hz
 - 消耗电流: N.P型:13mA以下,D型:0.8mA以下,A型:1.7mA以下
 - 控制输出: N.P型:300mA以下, D型:200mA以下, A型:400mA以下
 - 回路保护: N.P.D型:逆连接保护、浪涌吸收、负载短路保护, A型:浪涌吸收
 - 环境温度: 动作时、保存时:各-30~+65°C(不结冰、不结露)
 - 环境湿度: 动作时、保存时:各35~95% RH
 - 绝缘阻抗: 50MΩ以上(DC500兆欧表)充电部分与外壳间
 - 耐电压: AC1000V 50/60Hz 1min充电部分与外壳间
 - 温度的影响: 温度范围-30~+65°C, +23°C时, ±15%检测距离以内
温度范围-25~+60°C, +23°C时, ±10%检测距离以内
 - 电压的影响: 额定电源电压范围±15%以内、额定电源电压值时±10%检测距离以内
 - 保护构造: IP67(IEC规格)
 - 材质: (外壳:黄铜镀镍)(检测面:ABS)
- Delay distance: 10% below of the detection distance
 - Detection object: Magnetic metal (the detection distance decreases when it is non-magnetic metal)
 - Supply voltage: DC type: DC12-24V(6-36V) impulse (p-p) 10% below, AC type: AC110-220V (36-250V) 50/60Hz
 - Consumption current: N.P type: 13mA below, D type: 0.8mA below, A type: 1.7mA below
 - Control output: N.P type: 300mA below, D type: 200mA below, A type: 400mA below
 - Loop protection: N.P.D type: reversal connection protection, surge absorption, load short-circuit protection, A type: surge absorption
 - Ambient temperature & humidity: During operation, storage: individually -30~+65°C (no freeze, no dew), During operation, storage: individually 35-95%RH
 - Insulation impedance: 50MΩ about (DC500 megameter) between charging part and housing
 - Withstand voltage: AC1000V 50/60Hz 1min between charging part and housing
 - Temperature influence: Temperature range -30~+65°C, at +23°C, ±15% detection distance; temperature range -25~+60°C, at +23°C, ±10% detection distance
 - Voltage influence: Inside ±15% rated supply voltage range, at rated supply voltage value, inside ±10% detection distance
 - Protection structure: IP67 (IEC specification)
 - Material: (Housing: Nickel plated brass), (Detection surface: ABS).

外形尺寸(mm) External dimension

Chart 1 图1 LJ4A3-1-□ 	Chart 2 图2 LJ5A3-1-□ 
Chart 3 图3 LJ6A3-1-□ 	Chart 4 图4 LJ8A3-1-□ 
Chart 5 图5 LJ8A3-2-□ 	Chart 6 图6 LJ10A3-3-□ 
Chart 7 图7 LJ12A3-2-□ 	Chart 8 图8 LJ12A3-4-□ 
Chart 9 图9 LJ18A3-5-□ 	Chart 10 图10 LJ18A3-8-□ 
Chart 11 图11 LJ24A3-8-□ 	Chart 12 图12 LJ24A3-10-□ 
Chart 13 图13 LJ30A3-10-□ 	Chart 14 图14 LJ30A3-15-□ 

圆柱型能与国内外各相同品种直接替换 Cylinder type, can be the direct substitution of the same type both at home and abroad

- 电源反接保护、短路保护，可直接与PLC相联接
- 普通场合使用，耐环境性能中等
- 红色LED显示可以检测传感器工作状态
- 经济并且简单的操作
- 应用广泛。可替换小型开关和限位开关
- IP67防护结构(IEC规格)
- 使用前请先阅读产品说明书的“注意事项”



型号规格 Type and Specification

尺寸 Dimension		M14(LJ14)		M16(LJ16)		M20(LJ20)		M22(LJ22)			
安装方式 Mounting way		屏蔽式 Screen shield type	非屏蔽式 Non-screen shield type	屏蔽式 Screen shield type	非屏蔽式 Non-screen shield type	屏蔽式 Screen shield type	非屏蔽式 Non-screen shield type	屏蔽式 Screen shield type	非屏蔽式 Non-screen shield type		
启动 Type	直流型 DC type	NPN	NO	LJ14A3-3-Z/BX	LJ14A3-5-Z/BX	LJ16A3-3-Z/BX	LJ16A3-5-Z/BX	LJ20A3-5-Z/BX	LJ20A3-8-Z/BX	LJ22A3-5-Z/BX	LJ22A3-8-Z/BX
			NC	LJ14A3-3-Z/AX	LJ14A3-5-Z/AX	LJ16A3-3-Z/AX	LJ16A3-5-Z/AX	LJ20A3-5-Z/AX	LJ20A3-8-Z/AX	LJ22A3-5-Z/AX	LJ22A3-8-Z/AX
			NO+NC	LJ14A3-3-Z/CX	LJ14A3-5-Z/CX	LJ16A3-3-Z/CX	LJ16A3-5-Z/CX	LJ20A3-5-Z/CX	LJ20A3-8-Z/CX	LJ22A3-5-Z/CX	LJ22A3-8-Z/CX
		PNP	NO	LJ14A3-3-Z/BY	LJ14A3-5-Z/BY	LJ16A3-3-Z/BY	LJ16A3-5-Z/BY	LJ20A3-5-Z/BY	LJ20A3-8-Z/BY	LJ22A3-5-Z/BY	LJ22A3-8-Z/BY
			NC	LJ14A3-3-Z/AY	LJ14A3-5-Z/AY	LJ16A3-3-Z/AY	LJ16A3-5-Z/AY	LJ20A3-5-Z/AY	LJ20A3-8-Z/AY	LJ22A3-5-Z/AY	LJ22A3-8-Z/AY
			NO+NC	LJ14A3-3-Z/CY	LJ14A3-5-Z/CY	LJ16A3-3-Z/CY	LJ16A3-5-Z/CY	LJ20A3-5-Z/CY	LJ20A3-8-Z/CY	LJ22A3-5-Z/CY	LJ22A3-8-Z/CY
	交流型 AC type	二线 Two-wire	NO	LJ14A3-3-Z/EX	LJ14A3-5-Z/EX	LJ16A3-3-Z/EX	LJ16A3-5-Z/EX	LJ20A3-5-Z/EX	LJ20A3-8-Z/EX	LJ22A3-5-Z/EX	LJ22A3-8-Z/EX
			NC	LJ14A3-3-Z/DX	LJ14A3-5-Z/DX	LJ16A3-3-Z/DX	LJ16A3-5-Z/DX	LJ20A3-5-Z/DX	LJ20A3-8-Z/DX	LJ22A3-5-Z/DX	LJ22A3-8-Z/DX
		三线 Three-wire	NO	LJ14A3-3-J/EZ	LJ14A3-5-J/EZ	LJ16A3-3-J/EZ	LJ16A3-5-J/EZ	LJ20A3-5-J/EZ	LJ20A3-8-J/EZ	LJ22A3-5-J/EZ	LJ22A3-8-J/EZ
			NC	LJ14A3-3-J/DZ	LJ14A3-5-J/DZ	LJ16A3-3-J/DZ	LJ16A3-5-J/DZ	LJ20A3-5-J/DZ	LJ20A3-8-J/DZ	LJ22A3-5-J/DZ	LJ22A3-8-J/DZ
			NO+NC					LJ20A3-5-J/EDZ	LJ20A3-8-J/EDZ	LJ20A3-5-J/EDZ	LJ22A3-8-J/EDZ
检测距 Detection distance		3mm±10%	5mm±10%	3mm±10%	5mm±10%	5mm±10%	8mm±10%	5mm±10%	8mm±10%		
设定距离 Set distance		0~2.1mm	0~4mm	0~2.4mm	0~4mm	0~4mm	0~7mm	0~4mm	0~7mm		
标准检测物件 Standard detection object		铁14x14x1mm	铁15x15x1mm	铁20x20x1mm	铁30x30x1mm	铁20x20x1mm	铁30x30x1mm	铁22x22x1mm	铁30x30x1mm		
响应频率 Response frequency		DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz		
图例 Illustration		图15 Chart 15	图16 Chart 16	图17 Chart 17	图18 Chart 18	图19 Chart 19	图20 Chart 20	图21 Chart 21			

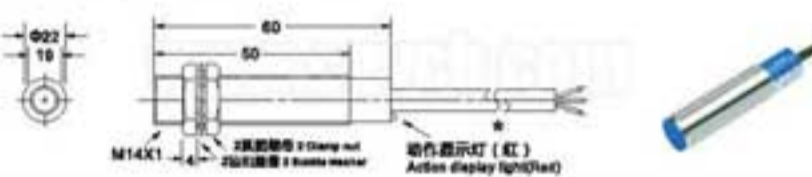
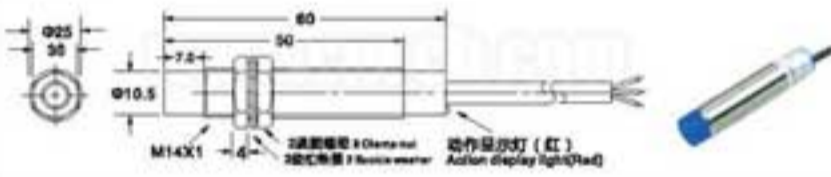
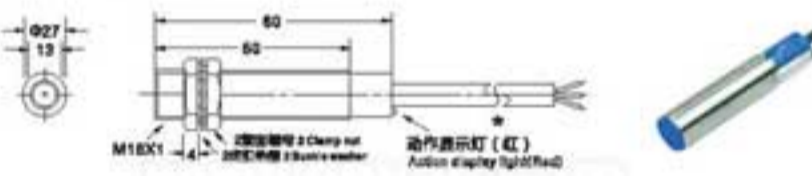
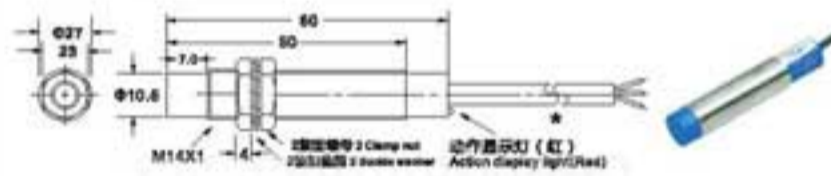
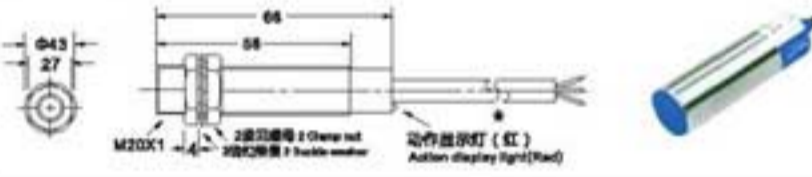
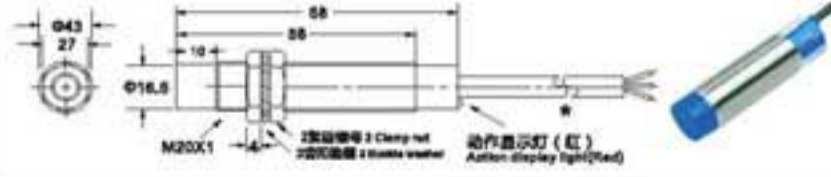
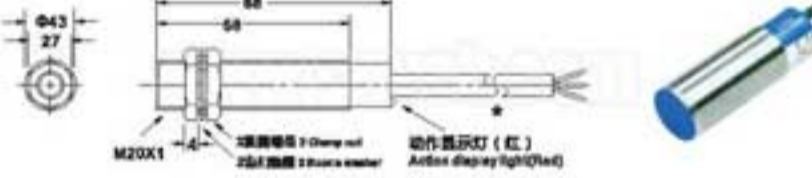
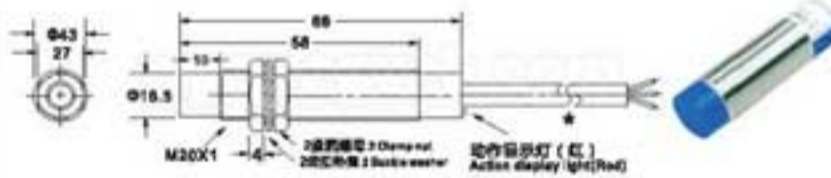


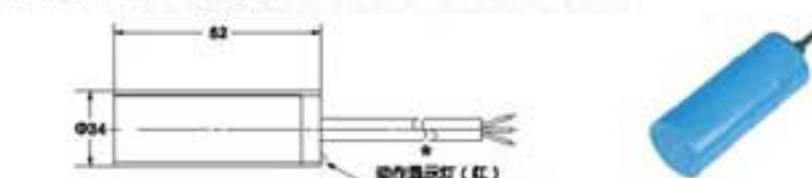
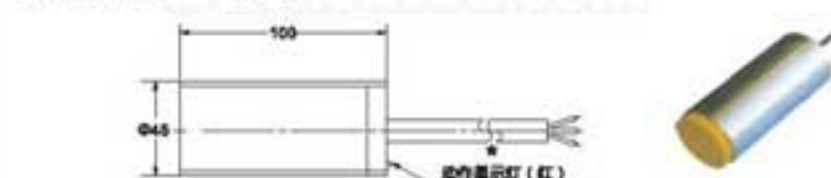
型号规格 Type and Specification

尺寸 Dimension		M38(LJ38)	ΦM40+M24(SC)	ΦM48+M24(SM)	Φ30(SH)	Φ45(SG)		
安装方式 Mounting way		非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type		
启动 Type	直流型 DC type	NPN	NO	LJ38A4-18-Z/BX	SC-3020A	SM-3025A	SH-3020A	SG-3020A
			NC	LJ38A4-18-Z/AX	SC-3020B	SM-3025B	SH-3020B	SG-3020B
			NO+NC	LJ38A4-18-Z/CX	SC-3020AB	SM-3025AB	SH-3020AB	SG-3020AB
		PNP	NO	LJ38A4-18-Z/BY	SC-3020C	SM-3025C	SH-3020C	SG-3020C
			NC	LJ38A4-18-Z/AY	SC-3020D	SM-3025D	SH-3020D	SG-3020D
			NO+NC	LJ38A4-18-Z/CY	SC-3020CD	SM-3025CD	SH-3020CD	SG-3020CD
	交流型 AC type	二线 Two-wire	NO	LJ38A4-18-Z/EX	SC-3020AL	SM-3025AL	SH-3020AL	SG-3020AL
			NC	LJ38A4-18-Z/DX	SC-3020BL	SM-3025BL	SH-3020BL	SG-3020BL
		三线 Three-wire	NO	LJ38A4-18-J/EZ	SC-3020A	SM-2025A	SH-2020A	SG-2020A
			NC	LJ38A4-18-J/DZ	SC-3020B	SM-2025B	SH-2020B	SG-2020B
			NO+NC	LJ38A4-18-J/EDZ	SC-3020AB	SM-2025AB	SH-2020AB	SG-2020AB
检测距 Detection distance		18mm±10%	20mm±10%	25mm±10%	20mm±10%	20mm±10%		
设定距离 Set distance		0~16mm	0~17mm	0~22mm	0~17mm	0~17mm		
标准检测物件 Standard detection object		铁54x54x1mm	铁54x54x1mm	铁65x65x1mm	铁78x78x1mm	铁70x70x1mm		
响应频率 Response frequency		DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz		
图例 Illustration		图22 Chart 22	图23 Chart 23	图24 Chart 24	图25 Chart 25	图26 Chart 26		

性能参数 Characteristic parameter

- 滞后距离：检测距离的10%以下
 - 检测物体：磁性金属(非磁性金属时检测距离减小)
 - 电源电压：直流型:DC12-24V(6-36V)脉动(P-P)10%以下, 交流型:AC110-220V(36-250V)50/60Hz
 - 消耗电流：N.P型:13mA以下,D型:0.8mA以下,A型:1.7mA以下
 - 控制输出：N.P型:300mA以下,D型:200mA以下,A型:400mA以下
 - 回路保护：N.P.D型:逆连接保护、浪涌吸收、负载短路保护,A型:浪涌吸收
 - 环境温度：动作时、保存时:各-30~+65°C(不结冰、不结露)
 - 环境湿度：动作时、保存时:各35~95% RH
 - 绝缘阻抗：50MΩ以上(DC500兆欧表)充电部分与外壳间
 - 耐电压：AC1000V 50/60Hz 1min充电部分与外壳间
 - 温度的影响：温度范围-30~+65°C, +23°C时, ±15%检测距离以内
温度范围-25~+60°C, +23°C时, ±10%检测距离以内
 - 电压的影响：额定电源电压范围±15%以内、额定电源电压值时±10%检测距离以内
 - 保护构造：IP65(IEC规格)
 - 材质：(外壳:黄铜镀镍)(检测面:ABS)
- Delay distance: 10% below of the detection distance
 - Detection object: Magnetic metal (the detection distance decreases when it is non-magnetic metal)
 - Supply voltage: DC type: DC12-24V(6-36V) impulse (p-p) 10% below, AC type: AC110-220V (36-250V) 50/60Hz
 - Consumption current: N.P type: 13mA below, D type: 0.8mA below, A type: 1.7mA below
 - Control output: N.P type: 300mA below, D type: 200mA below, A type: 400mA below
 - Loop protection: N.P.D type: reversal connection protection, surge absorption, load short-circuit protection, A type: surge absorption
 - Ambient temperature & humidity: During operation, storage: Individually -30~+65°C (no freeze, no dew), During operation, storage: individually 35-95%RH
 - Insulation impedance: 50MΩ about (DC500 megameter) between charging part and housing
 - Withstand voltage: AC1000V 50/60Hz 1min between charging part and housing
 - Temperature influence: Temperature range -30~+65°C, at +23°C, ±15% detection distance; temperature range -25~+60°C, at +23°C, ±10% detection distance
 - Voltage influence: Inside ±15% rated supply voltage range, at rated supply voltage value, inside ±10% detection distance
 - Protection structure: IP65 (IEC specification)
 - Material: (Housing: Nickel plated brass), (Detection surface: ABS).

外形尺寸(mm) External dimension

<p>Chart 15 图15 LJ14A3-3-□</p> 	<p>Chart 16 图16 LJ14A3-5-□</p> 
<p>Chart 17 图17 LJ16A3-3-□</p> 	<p>Chart 18 图18 LJ16A3-5-□</p> 
<p>Chart 19 图19 LJ20A3-5-□</p> 	<p>Chart 20 图20 LJ20A3-8-□</p> 
<p>Chart 21 图21 LJ22A3-8-□</p> 	<p>Chart 22 图22 LJ22A3-8-□</p> 
<p>Chart 23 图23 SC-□</p> 	<p>Chart 24 图24 SM-□</p> 
<p>Chart 25 图25 SH-□</p> 	<p>Chart 26 图26 SG-□</p> 

可视型能与欧姆龙、奥托尼克斯相同品种直接替换 Visible type, can be the direct substitution of the same types of Omron and Autonics

- 电源反接保护、短路保护，可直接与PLC相联接
- 长寿命和高可靠性，耐环境性强
- 增加外壳强度
- IP67防护结构(IEC规格)
- 使用前请先阅读产品说明书的“注意事项”
- Power supply reversal connection protection; short-circuit protection, can directly connect with PLC
- Long service life, high reliability and strong resistance property to environment
- Countermeasure to improve the housing intensity
- Red LED indicates that it's available to detect the sensor operating etalc
- IP67 protection structure (IEC specification)
- Read the "Matters needing attention" of the Product Instruction before use



型号规格 Type and Specification

尺寸 Dimension		M8(PR08)		M12(PR12)		M18(PR18)		M30(PR30)			
安装方式 Mounting way		屏蔽式 Screen shield type	非屏蔽式 Non-screen shield type	屏蔽式 Screen shield type	非屏蔽式 Non-screen shield type	屏蔽式 Screen shield type	非屏蔽式 Non-screen shield type	屏蔽式 Screen shield type	非屏蔽式 Non-screen shield type		
型号 Type	直流型 DC type	NPN	NO	PR08-1.5DN	PR08-2DN	PR12-2DN	PR12-4DN	PR18-5DN	PR18-8DN	PR30-10DN	PR30-15DN
			NC	PR08-1.5DN2	PR08-2DN2	PR12-2DN2	PR12-4DN2	PR18-5DN2	PR18-8DN2	PR30-10DN2	PR30-15DN2
			NO+NC								
		PNP	NO	PR08-1.5DP	PR08-2DP	PR12-2DP	PR12-4DP	PR18-5DP	PR18-8DP	PR30-10DP	PR30-15DP
			NC	PR08-1.5DP2	PR08-2DP2	PR12-2DP2	PR12-4DP2	PR18-5DP2	PR18-8DP2	PR30-10DP2	PR30-15DP2
			NO+NC								
	交流型 AC type	二线 Two-wire	NO	PR08-1.5DO	PR08-2DO	PR12-2DO	PR12-4DO	PR18-5DO	PR18-8DO	PR30-10DO	PR30-15DO
			NC	PR08-1.5DC	PR08-2DC	PR12-2DC	PR12-4DC	PR18-5DC	PR18-8DC	PR30-10DC	PR30-15DC
		三线 Three-wire	NO			PR12-2AO	PR12-4AO	PR18-5AO	PR18-8AO	PR30-10AO	PR30-15AO
			NC			PR12-2AC	PR12-4AC	PR18-5AC	PR18-8AC	PR30-10AC	PR30-15AC
			NO+NC								
检测距 Detection distance		1.5mm±10%	2mm±10%	2mm±10%	4mm±10%	5mm±10%	8mm±10%	10mm±10%	15mm±10%		
设定距离 Set distance		0~1.2mm	0~1.6mm	0~1.6mm	0~3.2mm	0~4mm	0~7mm	0~8mm	0~13mm		
标准检测物件 Standard detection object		铁8x8x1mm	铁12x12x1mm	铁12x12x1mm	铁15x15x1mm	铁18x18x1mm	铁30x30x1mm	铁30x30x1mm	铁54x54x1mm		
响应频率 Response frequency		DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz		
图例 Illustration		图27 Chart 27	图28 Chart 28	图29 Chart 29	图30 Chart 30	图31 Chart 31	图32 Chart 32	图33 Chart 33	图34 Chart 34		

型号规格 Type and Specification










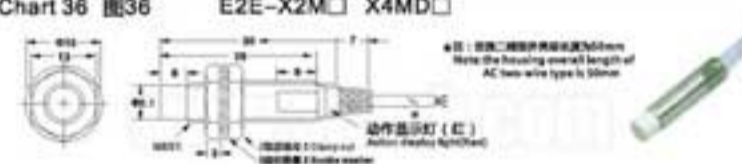
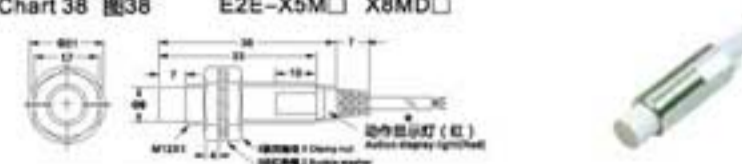

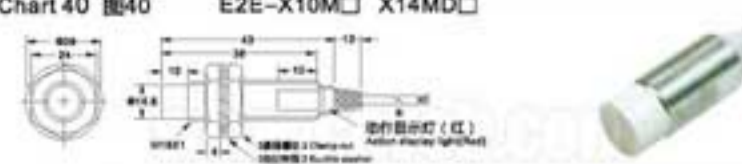
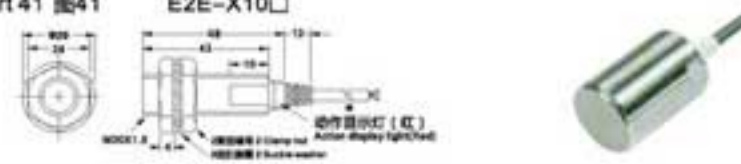

尺寸 Dimension		M8		M12		M18		M30			
安装方式 Mounting way		屏蔽式 Screen shield type	非屏蔽式 Non-screen shield type	屏蔽式 Screen shield type	非屏蔽式 Non-screen shield type	屏蔽式 Screen shield type	非屏蔽式 Non-screen shield type	屏蔽式 Screen shield type	非屏蔽式 Non-screen shield type		
型号 Type	直流型 DC type	NPN	NO	E2E-X1R5E1	E2E-X2ME1	E2E-X2E1	E2E-X5ME1	E2E-X5E1	E2E-X10ME1	E2E-X10E1	E2E-X18ME1
			NC	E2E-X1R5E2	E2E-X2ME2	E2E-X2E2	E2E-X5ME2	E2E-X5E2	E2E-X10ME2	E2E-X10E2	E2E-X18ME2
			NO+NC								
		PNP	NO	E2E-X1R5F1	E2E-X2MF1	E2E-X2F1	E2E-X5MF1	E2E-X5F1	E2E-X10MF1	E2E-X10F1	E2E-X18MF1
			NC	E2E-X1R5F2	E2E-X2MF2	E2E-X2F2	E2E-X5MF2	E2E-X5F2	E2E-X10MF2	E2E-X10F2	E2E-X18MF2
			NO+NC								
	交流型 AC type	二线 Two-wire	NO	E2E-X2D1	E2E-X4MD1	E2E-X3D1	E2E-X8MD1	E2E-X7D1	E2E-X14MD1	E2E-X10D1	E2E-X20MD1
			NC	E2E-X2D2	E2E-X4MD2	E2E-X3D2	E2E-X8MD2	E2E-X7D2	E2E-X14MD2	E2E-X10D2	E2E-X20MD2
		三线 Three-wire	NO			E2E-X2Y1	E2E-X5MY1	E2E-X5Y1	E2E-X10MY1	E2E-X10Y1	E2E-X18MY1
			NC			E2E-X2Y2	E2E-X5MY2	E2E-X5Y2	E2E-X10MY2	E2E-X10Y2	E2E-X18MY2
			NO+NC								
检测距 Detection distance		1.5mm±10%	2mm±10%	2mm±10%	5mm±10%	5mm±10%	10mm±10%	10mm±10%	18mm±10%		
设定距离 Set distance		0~1.2mm	0~1.6mm	0~1.6mm	0~4mm	0~4mm	0~8mm	0~8mm	0~16mm		
标准检测物件 Standard detection object		铁8x8x1mm	铁12x12x1mm	铁12x12x1mm	铁15x15x1mm	铁18x18x1mm	铁30x30x1mm	铁30x30x1mm	铁54x54x1mm		
响应频率 Response frequency		DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz		
图例 Illustration		图35 Chart 35	图36 Chart 36	图37 Chart 37	图38 Chart 38	图39 Chart 39	图40 Chart 40	图41 Chart 41	图42 Chart 42		

性能参数 Characteristic parameters

- 滞后距离：检测距离的10%以下
- 检测物体：磁性金属(非磁性金属时检测距离减小)
- 电源电压：直流型:DC12-24V(6-36V)脉动(P-P)10%以下，
交流型:AC110-220V(36-250V)50/60Hz
- 消耗电流：N.P型:13mA以下,D型:0.8mA以下,A型:1.7mA以下
- 控制输出：N.P型:300mA以下,D型:200mA以下,A型:400mA以下
- 回路保护：N.P.D型:逆连接保护、浪涌吸收、负载短路保护,A型:浪涌吸收
- 环境温度：动作时、保存时:各-30~+65°C(不结冰、不结露)
- 环境湿度：动作时、保存时:各35~95% RH
- 绝缘阻抗：50MΩ以上(DC500兆欧表)充电部分与外壳间
- 耐电压：AC1000V 50/60Hz 1min充电部分与外壳间
- 温度的影响：温度范围-30~+65°C，+23°C时，±15%检测距离以内
温度范围-25~+60°C，+23°C时，±10%检测距离以内
- 电压的影响：额定电源电压范围±15%以内、额定电源电压值时±10%
检测距离以内
- 保护构造：IP67(IEC规格)
- 材质：(外壳:黄铜镀镍)(检测面:ABS)

- Delay distance: 10% below of the detection distance
- Detection object: Magnetic metal (the detection distance decreases when it is non-magnetic metal)
- Supply voltage: DC type: DC12-24V(6-36V) Impulse (p-p) 10% below, AC type:AC110-220V (36-250V) 50/60Hz
- Consumption current: N.P type: 13mA below, D type: 0.8mA below, A type: 1.7mA below
- Control output: N.P type: 300mA below, D type: 200mA below, A type: 400mA below
- Loop protection: N.P.D type: reversal connection protection, surge absorption, load short-circuit protection, A type: surge absorption
- Ambient temperature & humidity: During operation, storage: individually -30~+65°C (no freeze, no dew), During operation, storage: individually 35-95%RH
- Insulation impedance: 50MΩ above (DC500 megameter) between charging part and housing
- Withstand voltage: AC1000V 50/60Hz 1min between charging part and housing
- Temperature influence: Temperature range -30~+65°C, at +23°C, ±15% detection distance; temperature range -25~+60°C, at +23°C, ±10% detection distance
- Voltage influence: Inside ±15% rated supply voltage range, at rated supply voltage value, inside ±10% detection distance
- Protection structure: IP67 (IEC specification)
- Material: (Housing: Nickel plated brass), (Detection surface: ABS).

外形尺寸(mm) External dimension

Chart 27 图27 PR08-1.5□ 	Chart 28 图28 PR08-2□ 
Chart 29 图29 PR12-2□ 	Chart 30 图30 PR12-4□ 
Chart 31 图31 PR18-5□ 	Chart 32 图32 PR18-8□ 
Chart 33 图33 PR30-10□ 	Chart 34 图34 PR30-15□ 
Chart 35 图35 E2E-X1R5□ X2D□ 	Chart 36 图36 E2E-X2M□ X4MD□ 
Chart 37 图37 E2E-X2 X3D□ 	Chart 38 图38 E2E-X5M□ X8MD□ 
Chart 39 图39 E2E-X5□ X7D□ 	Chart 40 图40 E2E-X10M□ X14MD□ 
Chart 41 图41 E2E-X10□ 	Chart 42 图42 E2E-X18M□ X20MD□ 

全能型能与图尔克、倍加福相同品种直接替换 ALL-Purpose type, which can be the direct substitution the same type of P+F and Turck

- 电源反接保护、短路保护，可直接与PLC相联接
- 新增电流过载保护，元器件采用进口芯片
- 长寿命和高可靠性，耐环境性强
- 红色LED显示可以检测传感器工作状态
- 全螺紋形，增大了安装空间；可直接用扳手夹钳
- 增加外壳强度和断线的对策
- IP67防护结构(IEC规格)
- 使用前请先阅读产品说明书的“注意事项”
- Power supply reversal connection protection; short-circuit protection, can directly connect with PLC
- Newly added current over-load protection; the elements are made of imported chip
- Long service life, high reliability and strong resistance property to environment
- Red LED indicates that it's available to detect the sensor operating state
- Full thread shape to enlarge the installation space; can use wrench and clamp directly
- Countermeasure to improve the housing intensity an
- IP67 protection structure (IEC specification)
- Read the "Matters needing attention" of the Product Instruction before use



型号规格 Type and Specification

尺寸 Dimension		M8		M12		M18		M30(PR30)		
安装方式 Mounting way		屏蔽式 Screen shield type	非屏蔽式 Non-screen shield type	屏蔽式 Screen shield type	非屏蔽式 Non-screen shield type	屏蔽式 Screen shield type	非屏蔽式 Non-screen shield type	屏蔽式 Screen shield type	非屏蔽式 Non-screen shield type	
DC Type 直流型	NPN	NO	Bi1.5-M8-AN6X	Ni2-M8-AN6X	Bi2-M12-AN6X	Ni4-M12-AN6X	Bi5-M18-AN6X	Ni8-M18-AN6X	Bi10-M30-AN6X	Ni15-M30-AN6X
		NC	Bi1.5-M8-RN6X	Ni2-M8-RN6X	Bi2-M12-RN6X	Ni4-M12-RN6X	Bi5-M18-RN6X	Ni8-M18-RN6X	Bi10-M30-RN6X	Ni15-M30-RN6X
		NO+NC								
	PNP	NO	Bi1.5-M8-AP6X	Ni2-M8-AP6X	Bi2-M12-AP6X	Ni4-M12-AP6X	Bi5-M18-AP6X	Ni8-M18-AP6X	Bi10-M30-AP6X	Ni15-M30-AP6X
		NC	Bi1.5-M8-RP6X	Ni2-M8-RP6X	Bi2-M12-RP6X	Ni4-M12-RP6X	Bi5-M18-RP6X	Ni8-M18-RP6X	Bi10-M30-RP6X	Ni15-M30-RP6X
		NO+NC								
	二线 Two-wire	NO	Bi1.5-M8-AD4X	Ni2-M8-AD4X	Bi2-M12-AD4X	Ni4-M12-AD4X	Bi5-M18-AD4X	Ni8-M18-AD4X	Bi10-M30-AD4X	Ni15-M30-AD4X
		NC	Bi1.5-M8-RD4X	Ni2-M8-RD4X	Bi2-M12-RD4X	Ni4-M12-RD4X	Bi5-M18-RD4X	Ni8-M18-RD4X	Bi10-M30-RD4X	Ni15-M30-RD4X
		NO+NC								
	三线 Three-wire	NO	Bi1.5-M8-AZ3X	Ni2-M8-AZ3X	Bi2-M12-AZ3X	Ni4-M12-AZ3X	Bi5-M18-AZ3X	Ni8-M18-AZ3X	Bi10-M30-AZ3X	Ni15-M30-AZ3X
		NC	Bi1.5-M8-RZ3X	Ni2-M8-RZ3X	Bi2-M12-RZ3X	Ni4-M12-RZ3X	Bi5-M18-RZ3X	Ni8-M18-RZ3X	Bi10-M30-RZ3X	Ni15-M30-RZ3X
		NO+NC								
检测距 Detection distance		1.5mm±10%	2mm±10%	2mm±10%	4mm±10%	5mm±10%	8mm±10%	10mm±10%	15mm±10%	
设定距离 Set distance		0~1.2mm	0~1.6mm	0~1.6mm	0~3.2mm	0~4mm	0~7mm	0~8mm	0~13mm	
标准检测物件 Standard detection object		铁8x8x1mm	铁12x12x1mm	铁12x12x1mm	铁15x15x1mm	铁18x18x1mm	铁30x30x1mm	铁30x30x1mm	铁54x54x1mm	
响应频率 Response frequency		DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	
图例 Illustration		图43 Chart 43	图44 Chart 44	图45 Chart 45	图46 Chart 46	图47 Chart 47	图48 Chart 48	图49 Chart 49	图50 Chart 50	

型号规格 Type and Specification

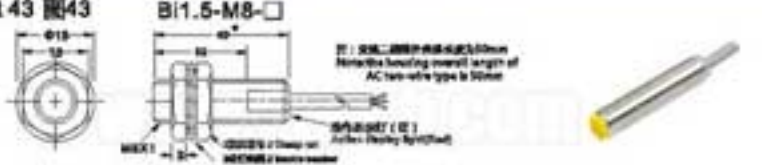
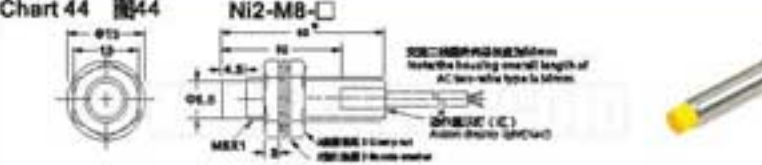

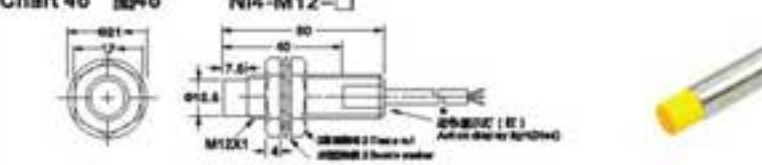

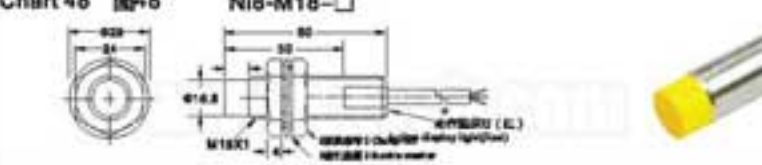

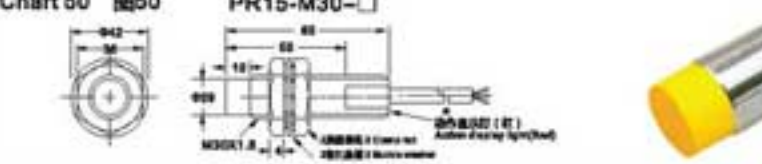
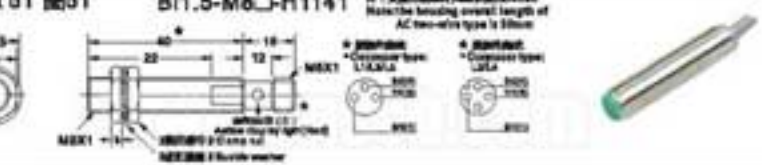
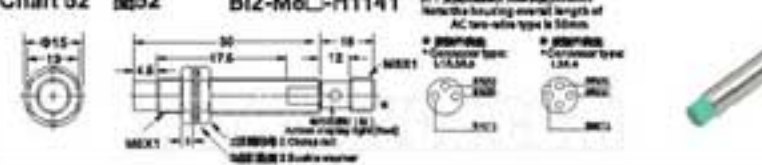
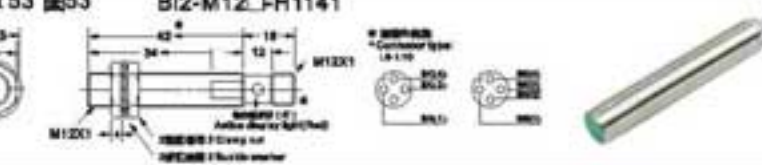
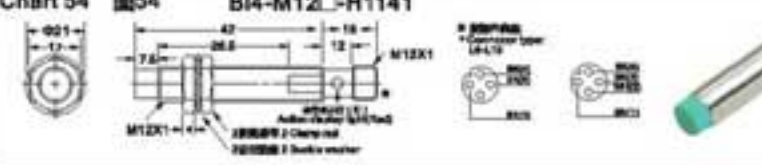
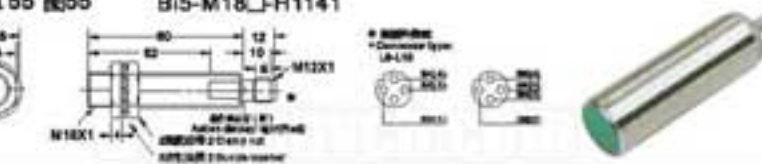

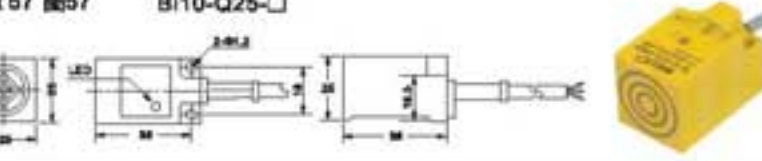
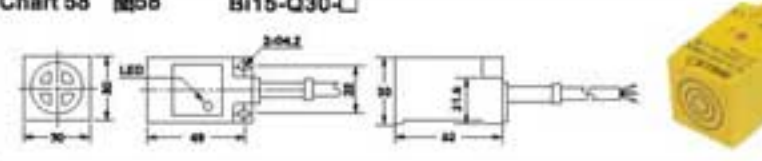
尺寸 Dimension		M8		M12		M18		方壳		
安装方式 Mounting way		屏蔽式 Screen shield type	非屏蔽式 Non-screen shield type	屏蔽式 Screen shield type	非屏蔽式 Non-screen shield type	屏蔽式 Screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	
DC Type 直流型	NPN	NO	Bi1.5-M8-AN6X-H1141	Ni2-M8-AN6X-H1141	Bi2-M12-AN6X-H1141	Ni4-M12-AN6X-H1141	Bi5-M18-AN6X-H1141	Ni8-M18-AN6X-H1141	Ni10-Q25-AN6X	Ni15-Q30-AN6X
		NC	Bi1.5-M8-RN6X-H1141	Ni2-M8-RN6X-H1141	Bi2-M12-RN6X-H1141	Ni4-M12-RN6X-H1141	Bi5-M18-RN6X-H1141	Ni8-M18-RN6X-H1141	Ni10-Q25-RN6X	Ni15-Q30-RN6X
		NO+NC								
	PNP	NO	Bi1.5-M8-AP6X-H1141	Ni2-M8-AP6X-H1141	Bi2-M12-AP6X-H1141	Ni4-M12-AP6X-H1141	Bi5-M18-AP6X-H1141	Ni8-M18-AP6X-H1141	Ni10-Q25-AP6X	Ni15-Q30-AP6X
		NC	Bi1.5-M8-RP6X-H1141	Ni2-M8-RP6X-H1141	Bi2-M12-RP6X-H1141	Ni4-M12-RP6X-H1141	Bi5-M18-RP6X-H1141	Ni8-M18-RP6X-H1141	Ni10-Q25-RP6X	Ni15-Q30-RP6X
		NO+NC								
	二线 Two-wire	NO	Bi1.5-M8-AD4X-H1141	Ni2-M8-AD4X-H1141	Bi2-M12-AD4X-H1141	Ni4-M12-AD4X-H1141	Bi5-M18-AD4X-H1141	Ni8-M18-AD4X-H1141	Ni10-Q25-AD6X	Ni15-Q30-AD6X
		NC	Bi1.5-M8-RD4X-H1141	Ni2-M8-RD4X-H1141	Bi2-M12-RD4X-H1141	Ni4-M12-RD4X-H1141	Bi5-M18-RD4X-H1141	Ni8-M18-RD4X-H1141	Ni10-Q25-RD6X	Ni15-Q30-RD6X
		NO+NC								
	三线 Three-wire	NO	Bi1.5-M8-AZ3X-H1141	Ni2-M8-AZ3X-H1141	Bi2-M12-AZ3X-H1141	Ni4-M12-AZ3X-H1141	Bi5-M18-AZ3X-H1141	Ni8-M18-AZ3X-H1141	Ni10-Q25-AZ3X	Ni15-Q30-AZ3X
		NC	Bi1.5-M8-RZ3X-H1141	Ni2-M8-RZ3X-H1141	Bi2-M12-RZ3X-H1141	Ni4-M12-RZ3X-H1141	Bi5-M18-RZ3X-H1141	Ni8-M18-RZ3X-H1141	Ni10-Q25-RZ3X	Ni15-Q30-RZ3X
		NO+NC								
检测距 Detection distance		1.5mm±10%	2mm±10%	2mm±10%	4mm±10%	5mm±10%	8mm±10%	10mm±10%	15mm±10%	
设定距离 Set distance		0~1.2mm	0~1.6mm	0~1.6mm	0~3.2mm	0~4mm	0~7mm	0~8mm	0~13mm	
标准检测物件 Standard detection object		铁8x8x1mm	铁12x12x1mm	铁12x12x1mm	铁15x15x1mm	铁18x18x1mm	铁30x30x1mm	铁30x30x1mm	铁50x50x1mm	
响应频率 Response frequency		DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	
图例 Illustration		图51 Chart 51	图52 Chart 52	图53 Chart 53	图54 Chart 54	图55 Chart 55	图56 Chart 56	图57 Chart 57	图58 Chart 58	

性能参数 Characteristic parameter

- 滞后距离：检测距离的10%以下
- 检测物体：磁性金属(非磁性金属时检测距离减小)
- 电源电压：直流型:DC12-24V(6-36V)脉动(P-P)10%以下, 交流型:AC110-220V(36-250V)50/60Hz
- 消耗电流：N.P型:13mA以下,D型:0.8mA以下,A型:1.7mA以下
- 控制输出：N.P型:300mA以下,D型:200mA以下,A型:400mA以下
- 回路保护：N.P.D型:逆连接保护、浪涌吸收、负载短路保护,A型:浪涌吸收
- 环境温度：动作时、保存时:各-30~+65°C(不结冰、不结露)
- 环境湿度：动作时、保存时:各35~95% RH
- 绝缘阻抗：50MΩ以上(DC500兆欧表)充电部分与外壳间
- 耐电压：AC1000V 50/60Hz 1min充电部分与外壳间
- 温度的影响：温度范围-30~+65°C, +23°C时, ±15%检测距离以内
温度范围-25~+80°C, +23°C时, ±10%检测距离以内
- 电压的影响：额定电源电压范围±15%以内、额定电源电压值时±10%检测距离以内
- 保护构造：IP67(IEC规格)
- 材质：(外壳:黄铜镀镍)(检测面:ABS)

- Delay distance: 10% below of the detection distance
- Detection object: Magnetic metal (the detection distance decreases when it is non-magnetic metal)
- Supply voltage: DC type: DC12-24V(6-36V) Impulse (p-p) 10% below, AC type: AC110-220V (36-250V) 50/60Hz
- Consumption current: N.P type: 13mA below, D type: 0.8mA below, A type: 1.7mA below
- Control output: N.P type: 300mA below, D type: 200mA below, A type: 400mA below
- Loop protection: N.P.D type: reversal connection protection, surge absorption, load short-circuit protection, A type: surge absorption
- Ambient temperature & humidity: During operation, storage: individually -30~+65°C (no freeze, no dew), During operation, storage: individually 35-95%RH
- Insulation impedance: 50MΩ about (DC500 megameter) between charging part and housing
- Withstand voltage: AC1000V 50/60Hz 1min between charging part and housing
- Temperature influence: Temperature range -30~+65°C, at +23°C, ±15% detection distance; temperature range -25~+80°C, at +23°C, ±10% detection distance
- Voltage influence: inside ±15% rated supply voltage range, at rated supply voltage value, inside ±10% detection distance
- Protection structure: IP67 (IEC specification)
- Material: (Housing; Nickel plated brass), (Detection surface: ABS).

外形尺寸(mm) External dimension

Chart 43 图43 Bi1.5-M8-□ 	Chart 44 图44 Ni2-M8-□ 
Chart 45 图45 Bi2-M12-□ 	Chart 46 图46 Ni4-M12-□ 
Chart 47 图47 Bi5-M18-□ 	Chart 48 图48 Ni8-M18-□ 
Chart 49 图49 Bi10-M30-□ 	Chart 50 图50 PR15-M30-□ 
Chart 51 图51 Bi1.5-M8-□-H1141 	Chart 52 图52 Bi2-M8-□-H1141 
Chart 53 图53 Bi2-M12-□-H1141 	Chart 54 图54 Bi4-M12-□-H1141 
Chart 55 图55 Bi5-M18-□-H1141 	Chart 56 图56 Bi8-M18-□-H1141 
Chart 57 图57 Bi10-Q25-□ 	Chart 58 图58 Bi15-Q30-□ 

角型能与国内外各相同品种直接替换

Horn type, can be the direct substitution of the same type both at home and abroad

- 电源反接保护、短路保护，可直接与PLC相联接
- 经济并且简单的操作
- 长寿命和高可靠性，耐环境性强
- 红色LED显示可以检测传感器工作状态
- IP67防护结构(IEC规格)
- 使用前请先阅读产品说明书的“注意事项”

- Power supply reversal connection protection; short-circuit protection, can directly connect with PLC
- Economic and simple operation
- Long service life, high reliability and strong resistance property to environment
- Red LED indicates that it's available to detect the sensor operating state
- IP67 protection structure (IEC specification)
- Read the "Matters needing attention" of the Product instruction before use



型号规格 Type and Specification

尺寸 Dimension	17X17X28	25X25X38	30X30X52	35X35X52	40X40X52	18X18X36	17X17X28	17X17X28			
安装方式 Mounting way	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type			
输出 Type	直流型 DC type	NPN	NO	TL-Q5MC1	TL-N5ME1	TL-N10ME1	TL-N15ME1	TL-N20ME1	PS17-5DN	PS-05N	PS-08N
			NC	TL-Q5MC2	TL-N5ME2	TL-N10ME2	TL-N15ME2	TL-N20ME2	PS17-5DN2	PS-05N2	PS-08N2
			NO+NC								
		PNP	NO	TL-Q5MF1	TL-N5MF1	TL-N10MF1	TL-N15MF1	TL-N20MF1	PS17-5DP	PS-05P	PS-08P
			NC	TL-Q5MF2	TL-N5MF2	TL-N10MF2	TL-N15MF2	TL-N20MF2	PS17-5DP2	PS-05P2	PS-08P2
			NO+NC								
	交流型 AC type	二线 Two-wire	NO	TL-Q5MD1	TL-N5MD1	TL-N10MD1	TL-N15MD1	TL-N20MD1	PS17-5DO	PS-05DO	PS-08DO
			NC	TL-Q5MD2	TL-N5MD2	TL-N10MD2	TL-N15MD2	TL-N20MD2	PS17-5DC	PS-05DC	PS-08DC
		三线 Three-wire	NO	TL-Q5MY1	TL-N5MY1	TL-N10MY1	TL-N15MY1	TL-N20MY1	PS17-5Y1	PS-05Y1	PS-08Y1
			NC	TL-Q5MY2	TL-N5MY2	TL-N10MY2	TL-N15MY2	TL-N20MY2	PS17-5Y2	PS-05Y2	PS-08Y2
			NO+NC								
检测距 Detection distance	5mm±10%	5mm±10%	10mm±10%	15mm±10%	20mm±10%	5mm±10%	5mm±10%	8mm±10%			
设定距离 Set distance	0~4mm	0~4mm	0~8mm	0~13mm	0~17mm	0~4mm	0~4mm	0~7mm			
标准检测物件 Standard detection object	铁18x18x1mm	铁25x25x1mm	铁45x45x1mm	铁45x45x1mm	铁50x50x1mm	铁18x18x1mm	铁18x18x1mm	铁18x18x1mm			
响应频率 Response frequency	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz			
图例 Illustration	图59 Chart 59	图60 Chart 60	图61 Chart 61	—	图62 Chart 62	图63 Chart 63	图64 Chart 64				

型号规格 Type and Specification

尺寸 Dimension	17X17X35	17X17X35	18X18X36	18X18X34	17X17X29	20X20X36	30X30X52	40X40X52			
安装方式 Mounting way	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type			
输出 Type	直流型 DC type	NPN	NO	PL-05N	PL-08N	SN04-N	SN05-N	SN06-N	SN07-N	SN10-N	SN20-N
			NC	PL-05N2	PL-08N2	SN04-N2	SN05-N2	SN06-N2	SN07-N2	SN10-N2	SN20-N2
			NO+NC								
		PNP	NO	PL-05P	PL-08P	SN04-P	SN05-P	SN06-P	SN07-P	SN10-P	SN20-P
			NC	PL-05P2	PL-08P2	SN04-P2	SN05-P2	SN06-P2	SN07-P2	SN10-P2	SN20-P2
			NO+NC								
	交流型 AC type	二线 Two-wire	NO	PL-05DO	PL-08DO	SN04-D1	SN05-D1	SN06-D1	SN07-D1	SN10-D1	SN20-D1
			NC	PL-05DC	PL-08DC	SN04-D2	SN05-D2	SN06-D2	SN07-D2	SN10-D2	SN20-D2
		三线 Three-wire	NO	PL-05Y1	PL-08Y1	SN04-Y1	SN05-Y1	SN06-Y1	SN07-Y1	SN10-Y1	SN20-Y1
			NC	PL-05Y2	PL-08Y2	SN04-Y2	SN05-Y2	SN06-Y2	SN07-Y2	SN10-Y2	SN20-Y2
			NO+NC								
检测距 Detection distance	5mm±10%	8mm±10%	4mm±10%	5mm±10%	5mm±10%	8mm±10%	10mm±10%	20mm±10%			
设定距离 Set distance	0~4mm	0~7mm	0~3.6mm	0~4mm	0~4mm	0~7mm	0~8mm	0~17mm			
标准检测物件 Standard detection object	铁18x18x1mm	铁18x18x1mm	铁18x18x1mm	铁18x18x1mm	铁18x18x1mm	铁18x18x1mm	铁45x45x1mm	铁50x50x1mm			
响应频率 Response frequency	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz			
图例 Illustration	图65 Chart 65		图66 Chart 66	图67 Chart 67	—	—	—	—			

性能参数 Characteristic parameter

- 滞后距离：检测距离的10%以下
 - 检测物体：磁性金属(非磁性金属时检测距离减小)
 - 电源电压：直流型:DC12-24V(6-36V)脉动(P-P)10%以下，
交流型:AC110-220V(36-250V)50/60Hz
 - 消耗电流：N.P型:13mA以下,D型:0.8mA以下,A型:1.7mA以下
 - 控制输出：N.P型:300mA以下，D型:200mA以下，A型:400mA以下
 - 回路保护：N.P.D型:逆连接保护、浪涌吸收、负载短路保护，A型:浪涌吸收
 - 环境温度：动作时、保存时:各-30~+65℃(不结冰、不结露)
 - 环境湿度：动作时、保存时:各35~95% RH
 - 绝缘阻抗：50MΩ以上(DC500兆欧表)充电部分与外壳间
 - 耐电压：AC1000V 50/60Hz 1min充电部分与外壳间
 - 温度的影响：温度范围-30~+65℃，+23℃时，±15%检测距离以内
温度范围-25~+60℃，+23℃时，±10%检测距离以内
 - 电压的影响：额定电源电压范围±15%以内、额定电源电压值时±10%
检测距离以内
 - 保护构造：IP67(IEC规格)
 - 材质：(外壳:ABS) (检测面:ABS)
- Delay distance: 10% below of the detection distance
 - Detection object: Magnetic metal (the detection distance decreases when it is non-magnetic metal)
 - Supply voltage: DC type: DC12-24V(6-36V) impulse (p-p) 10% below, AC type: AC110-220V (36-250V) 50/60Hz
 - Consumption current: N.P type: 13mA below, D type: 0.8mA below, A type: 1.7mA below
 - Control output: N.P type: 300mA below, D type: 200mA below, A type: 400mA below
 - Loop protection: N.P.D type: reversal connection protection, surge absorption, load short-circuit protection, A type: surge absorption
 - Ambient temperature & humidity: During operation, storage: individually -30~+65°C (no freeze, no dew), During operation, storage: individually 35-95%RH
 - Insulation impedance: 50MΩ about (DC500 megameter) between charging part and housing
 - Withstand voltage: AC1000V 50/60Hz 1min between charging part and housing
 - Temperature influence: Temperature range -30~+65°C, at +23°C, ±15% detection distance; temperature range -25~+60°C, at +23°C, ±10% detection distance
 - Voltage influence: Inside ±15% rated supply voltage range, at rated supply voltage value, inside ±10% detection distance
 - Protection structure: IP67 (IEC specification)
 - Material: (Housing: ABS), (Detection surface: ABS).

外形尺寸(mm) External dimension

Chart 59 图59 TL-Q5M□

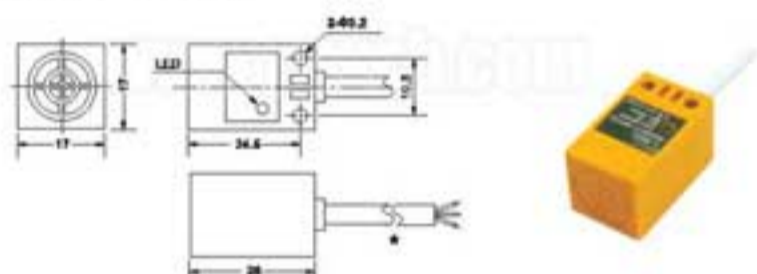


Chart 60 图60 TL-N5M□

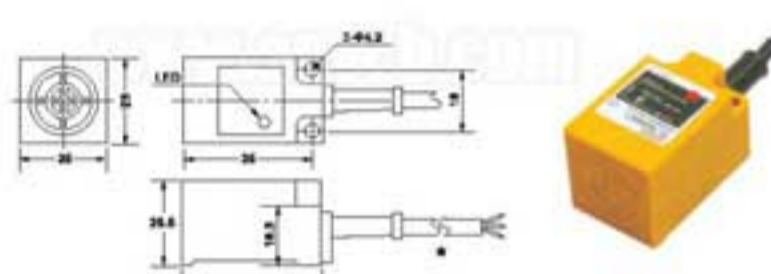


Chart 61 图61 TL-N10M□

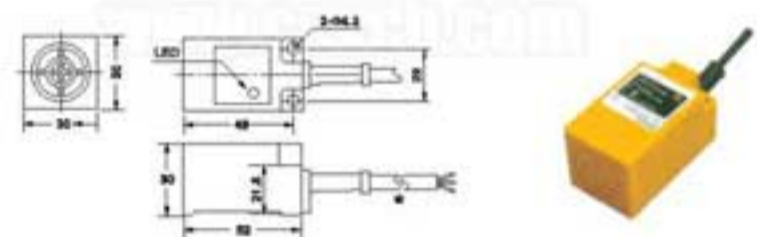


Chart 62 图62 TL-N20M□

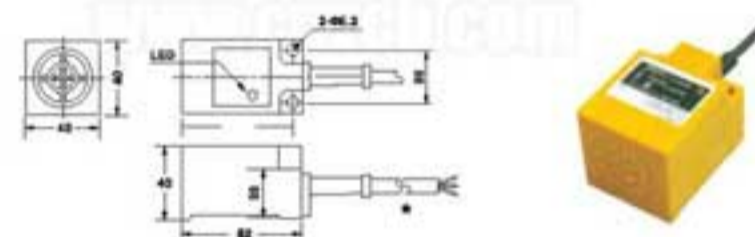


Chart 63 图63 PS17-5□

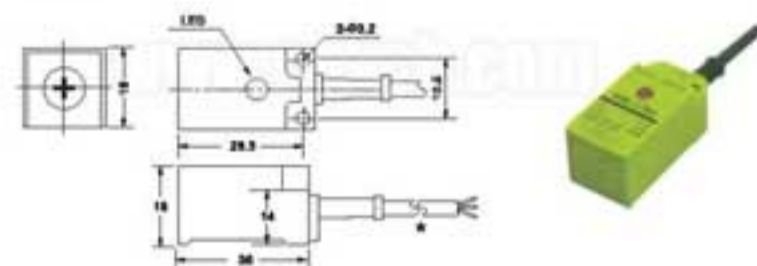


Chart 64 图64 PS-05(8)□

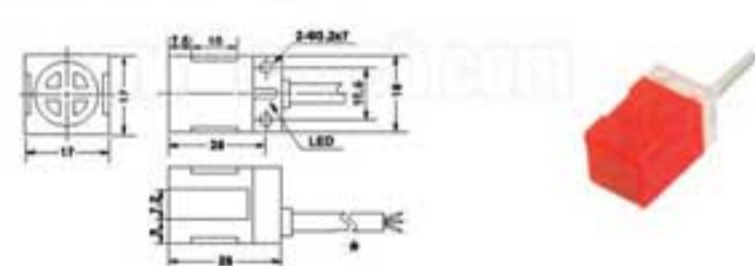


Chart 65 图65 PL-05(8)□

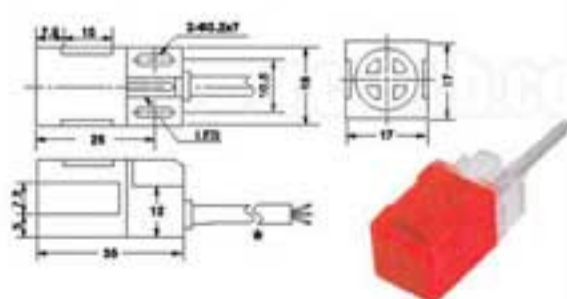


Chart 66 图66 SN04-□

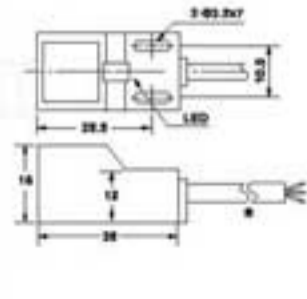
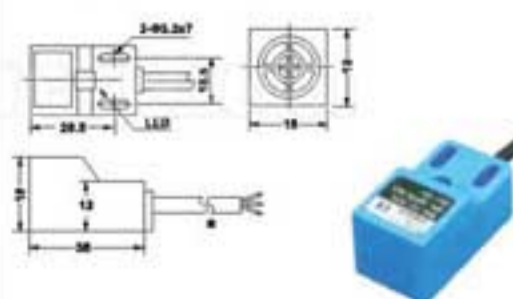


Chart 67 图67 SN05-□



角型与方型能与国内外各相同品种直接替换 Horn type and square type, can be the direct substitution of the same type both at home and abroad

- 电源反接保护、短路保护，可直接与PLC相联接
- 经济并且简单的操作
- 长寿命和高可靠性，耐环境性强
- 红色LED显示可以检测传感器工作状态
- IP67防护结构(IEC规格)
- 使用前请先阅读产品说明书的“注意事项”
- Power supply reversal connection protection; short-circuit protection, can directly connect with PLC
- Economic and simple operation
- Long service life, high reliability and strong resistance property to environment
- Red LED indicates that it's available to detect the sensor operating state
- IP67 protection structure (IEC specification)
- Read the "Matters needing attention" of the Product Instruction before use



型号规格 Type and Specification

尺寸 Dimension	12X12X28	25X25X39	30X30X53		40X40X53	30X18X10	50X25X10	45X30X12			
安装方式 Mounting way	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type		非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type			
输出 Type	直流型 DC type	NPN	NO	PS12-4DN	PSN25-5DN	PSN30-10DN	PSN30-15DN	PSN40-20DN	GKB-M0524NA	TL-W5E1	TL-W7E1
			NC	PS12-4DN2	PSN25-5DN2	PSN30-10DN2	PSN30-15DN2	PSN40-20DN2	GKB-M0524NB	TL-W5E2	TL-W7E2
			NO+NC		PSN25-5DN3	PSN30-10DN3	PSN30-15DN3	PSN40-20DN3			
		PNP	NO	PS12-4DP	PSN25-5DP	PSN30-10DP	PSN30-15DP	PSN40-20DP	GKB-M0524PA	TL-W5F1	TL-W7F1
			NC	PS12-4DP2	PSN25-5DP2	PSN30-10DP2	PSN30-15DP2	PSN40-20DP2	GKB-M0524PB	TL-W5F2	TL-W7F2
			NO+NC		PSN25-5DP3	PSN30-10DP3	PSN30-15DP3	PSN40-20DP3			
	交流型 AC type	二线 Two-wire	NO	PS12-4DO	PSN25-5DO	PSN30-10DO	PSN30-15DO	PSN40-20DO	GKB-M0524D1	TL-W5D1	TL-W7D1
			NC	PS12-4DC	PSN25-5DC	PSN30-10DC	PSN30-15DC	PSN40-20DC	GKB-M0524D2	TL-W5D2	TL-W7D2
		三线 Three-wire	NO	PS12-4AO	PSN25-5AO	PSN30-10AO	PSN30-15AO	PSN40-20AO		TL-W5A1	TL-W7A1
			NC	PS12-4AC	PSN25-5AC	PSN30-10AC	PSN30-15AC	PSN40-20AC		TL-W5A2	TL-W7A2
			NO+NC								
检测距 Detection distance	4mm±10%	5mm±10%	10mm±10%	15mm±10%	20mm±10%	5mm±10%	5mm±10%	7mm±10%			
设定距离 Set distance	0~3.6mm	0~4mm	0~8mm	0~13mm	0~17mm	0~4mm	0~4mm	0~5mm			
标准检测物件 Standard detection object	铁18x18x1mm	铁30x30x1mm	铁45x45x1mm	铁45x45x1mm	铁50x50x1mm	铁18x18x1mm	铁18x18x1mm	铁25x25x1mm			
响应频率 Response frequency	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz			
图例 Illustration	图68 Chart 68	图69 Chart 69	图70 Chart 70		图71 Chart 71	图72 Chart 72	图73 Chart 73	图74 Chart 74			

型号规格 Type and Specification

尺寸 Dimension	120X80X30	40X26X12		60X60X12	86X29X18	96X26X17	40X45X68	55X39X128		
安装方式 Mounting way	非屏蔽式 Non-screen shield type	屏蔽式 screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type		
输出 Type	直流型 DC type	NPN	NO	HJ-3050A	GN-0224NA	GN-0424NA	ST-3NK-F	TK-T5E1	TC-T5E1	JKD-1(正)
			NC	HJ-3050B	GN-0224NB	GN-0424NB	ST-3NH-F	TK-T5E2	TC-T5E2	JKD-1(负)
			NO+NC	HJ-3050AB			ST-4NKH-F	TK-T5E3	TC-T5E3	
		PNP	NO	HJ-3050C	GN-0224PA	GN-0424PA	ST-3PK-F	TK-T5F1	TC-T5F1	
			NC	HJ-3050D	GN-0224PB	GN-0424PB	ST-3PH-F	TK-T5F2	TC-T5F2	
			NO+NC	HJ-3050CD			ST-4PKH-F	TK-T5F3	TC-T5F3	
	交流型 AC type	二线 Two-wire	NO	HJ-3050AL	GN-0224LA	GN-0424LA	ST-2K-F	TK-T5D1	TC-T5D1	
			NC	HJ-3050BL	GN-0224LB	GN-0424LB	ST-2H-F	TK-T5D2	TC-T5D2	
		三线 Three-wire	NO	HJ-2050A	GN-0224KA	GN-0422KA	ST-2K-G	TK-T5A1	TC-T5A1	
			NC	HJ-2050B	GN-0224KB	GN-0422KB	ST-2H-G	TK-T5A2	TC-T5A2	
			NO+NC	HJ-2050AB						3SG3286-1BR86
检测距 Detection distance	50mm±10%	2mm±10%	4mm±10%	5mm±10%	5mm±10%	5mm±10%	10mm±10%	30mm±10%		
设定距离 Set distance	0~40mm	0~1.6mm	0~3.6mm	0~4mm	0~4mm	0~4mm	0~8mm	0~25mm		
标准检测物件 Standard detection object	铁100x100x2mm	铁12x12x1mm	铁18x18x1mm	铁18x18x1mm	铁18x18x1mm	铁18x18x1mm	铁45x45x1mm	铁80x80x1mm		
响应频率 Response frequency	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz		
图例 Illustration	图75 Chart 75	图76 Chart 76		图77 Chart 77	图78 Chart 78	图79 Chart 79	图80 Chart 80	图73 Chart 81		

性能参数 Characteristic parameter

- 滞后距离: 检测距离的10%以下
 - 检测物体: 磁性金属(非磁性金属时检测距离减小)
 - 电源电压: 直流型:DC12-24V(6-36V)脉动(P-P)10%以下, 交流型:AC110-220V(36-250V)50/60Hz
 - 消耗电流: N.P型:13mA以下,D型:0.8mA以下,A型:1.7mA以下
 - 控制输出: N.P型:300mA以下, D型:200mA以下, A型:400mA以下
 - 回路保护: N.P.D型:逆连接保护、浪涌吸收、负载短路保护, A型:浪涌吸收
 - 环境温度: 动作时、保存时:各-30~+65°C(不结冰、不结露)
 - 环境湿度: 动作时、保存时:各35-95% RH
 - 绝缘阻抗: 50MΩ以上(DC500兆欧表)充电部分与外壳间
 - 耐电压: AC1000V 50/160Hz 1min充电部分与外壳间
 - 温度的影响: 温度范围-30~+65°C, +23°C时, ±15%检测距离以内
温度范围-25~+60°C, +23°C时, ±10%检测距离以内
 - 电压的影响: 额定电源电压范围±15%以内、额定电源电压值时±10%检测距离以内
 - 保护构造: IP65(IEC规格)
 - 材质: (外壳:ABS) (检测面:ABS)
- Delay distance: 10% below of the detection distance
 - Detection object: Magnetic metal (the detection distance decreases when it is non-magnetic metal)
 - Supply voltage: DC type: DC12-24V(6-36V) impulse (p-p) 10% below, AC type: AC110-220V (36-250V) 50/60Hz
 - Consumption current: N.P type: 13mA below, D type: 0.8mA below, A type: 1.7mA below
 - Control output: N.P type: 300mA below, D type: 200mA below, A type: 400mA below
 - Loop protection: N.P.D type: reversal connection protection, surge absorption, load short-circuit protection, A type: surge absorption
 - Ambient temperature & humidity: During operation, storage: individually -30~+65°C (no freeze, no dew), During operation, storage: individually 35-95%RH
 - Insulation impedance: 50MΩ about (DC500 megameter) between charging part and housing
 - Withstand voltage: AC1000V 50/160Hz 1min between charging part and housing
 - Temperature influence: Temperature range -30~+65°C, at +23°C, ±15% detection distance; temperature range -25~+60°C, at +23°C, ±10% detection distance
 - Voltage influence: Inside ±15% rated supply voltage range, at rated supply voltage value, inside ±10% detection distance
 - Protection structure: IP67 (IEC specification)
 - Material: (Housing: ABS), (Detection surface: ABS).

外形尺寸(mm) External dimension

<p>Chart 68 图88 PS12-4□</p>	<p>Chart 69 图89 PSN25-5□</p>
<p>Chart 70 图70 PSN30-10(15)-□</p>	<p>Chart 71 图71 PSN40-20□</p>
<p>Chart 72 图72 GKB-M0524□</p>	<p>Chart 73 图73 TL-W5□</p>
<p>Chart 74 图74 TL-W7□</p>	<p>Chart 75 图75 HJ-□</p>
<p>Chart 76 图76 GN-02(04)□</p>	<p>Chart 77 图77 ST-□</p>
<p>Chart 78 图78 TK-T□</p>	<p>Chart 79 图79 TC-T□</p>
<p>Chart 80 图80 TKD-□</p>	<p>Chart 81 图81 3SG3268-□</p>

方型能与国内外各相同品种直接替换

Square type, can be the direct substitution of the same type both at home and abroad

- 电源反接保护、短路保护，可直接与PLC相联接
- 经济并且简单的操作
- 长寿命和高可靠性，耐环境性强
- 红色LED显示可以检测传感器工作状态
- IP67防护结构(IEC规格)
- 使用前请先阅读产品说明书的“注意事项”

- Power supply reversal connection protection; short-circuit protection, can directly connect with PLC
- Economic and simple operation
- Long service life, high reliability and strong resistance property to environment
- Red LED indicates that it's available to detect the sensor operating state
- IP67 protection structure (IEC specification)
- Read the "Matters needing attention" of the Product instruction before use



型号规格 Type and Specification

尺寸 Dimension		30X30X80	40X40X118		55X55X130	50X50X50	55X55X52	80X80X48		
安装方式 Mounting way		非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type		
感应 Type	直流型 DC type	NPN	NO	HY-3010A	HY-3015A	HY-3020A	HY-3030A	HD-3020A	HE-3025A	HM-3040A
			NC	HY-3010B	HY-3015B	HY-3020B	HY-3030B	HD-3020B	HE-3025B	HM-3040B
			NO+NC	HY-3010AB	HY-3015AB	HY-3020AB	HY-3030AB	HD-3020AB	HE-3025AB	HM-3040AB
		PNP	NO	HY-3010C	HY-3015C	HY-3020C	HY-3030C	HD-3020C	HE-3025C	HM-3040C
			NC	HY-3010D	HY-3015D	HY-3020D	HY-3030D	HD-3020D	HE-3025D	HM-3040D
			NO+NC	HY-3010CD	HY-3015CD	HY-3020CD	HY-3030CD	HD-3020CD	HE-3025CD	HM-3040CD
	交流型 AC type	二线 Two-wire	NO	HY-3010AL	HY-3015AL	HY-3020AL	HY-3030AL	HD-3020AL	HE-3025AL	HM-3040AL
			NC	HY-3010BL	HY-3015BL	HY-3020BL	HY-3030BL	HD-3020BL	HE-3025BL	HM-3040BL
			NO+NC	HY-3010AB	HY-3015AB	HY-3020AB	HY-3030AB	HD-3020AB	HE-3025AB	HM-3040AB
		三线 Three-wire	NO	HY-2010A	HY-2015A	HY-2020A	HY-2030A	HD-2020A	HE-2025A	HM-2040A
			NC	HY-2010B	HY-2015B	HY-2020B	HY-2030B	HD-2020B	HE-2025B	HM-2040B
			NO+NC	HY-2015AB	HY-2020AB	HY-2030AB	HD-2020AB	HE-2025AB	HM-2040AB	
检测距 Detection distance	10mm±10%	15mm±10%	20mm±10%	30mm±10%	20mm±10%	25mm±10%	40mm±10%			
设定距离 Set distance	0-8mm	0-13mm	0-17mm	0-27mm	0-17mm	0-22mm	0-35mm			
标准检测物件 Standard detection object	铁30x30x1mm	铁50x50x1mm	铁50x50x1mm	铁65x65x1mm	铁50x50x1mm	铁60x60x1mm	铁90x90x1mm			
响应频率 Response frequency	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz			
图例 Illustration	图82 Chart 82	图83 Chart 83		图84 Chart 84	图85 Chart 85	图86 Chart 86	图87 Chart 87			

型号规格 Type and Specification

尺寸 Dimension		38X40X80	44X45X90	52X33X25	56X36X26	65X39X25	31X33X50	31X33X50	34X42X73		
安装方式 Mounting way		非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type		
感应 Type	直流型 DC type	NPN	NO	LJ2-15(10)221	LJ2-20/221	LJ1A-24		JWK-D5P	JWK-A5P	JWK-D10P	
			NC	LJ2-15G(10)221	LJ2-20G/221	LJ1A-24B		JWK-D5P2	JWK-A5P2	JWK-D10P2	
		PNP	NO	LJ2L-15(10)-4/121	LJ2L-20-/121	LJ1A-220	WJK-II(绿壳)	WJK-II(白壳)			
			NC	LJ2L-15G(10)-4/121	LJ2L-20G-4/121	LJ1A-220B	WJK-II2(绿壳)	WJK-II2(白壳)			
检测距 Detection distance	15mm±10%	20mm±10%	8mm±10%	8mm±10%	8mm±10%	5mm±10%	5mm±10%	10mm±10%			
设定距离 Set distance	0-13mm	0-17mm	0-7mm	0-7mm	0-7mm	0-4mm	0-4mm	0-8mm			
标准检测物件 Standard detection object	铁45x45x1mm	铁50x50x1mm	铁18x18x1mm	铁18x18x1mm	铁18x18x1mm	铁18x18x1mm	铁18x18x1mm	铁25x25x1mm			
响应频率 Response frequency	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz			
图例 Illustration	图88 Chart 88	图89 Chart 89	图90 Chart 90	图91 Chart 91	图92 Chart 92	图93 Chart 93		图94 Chart 94			

尺寸 Dimension		38X40X80	44X45X90	52X33X25	56X36X26	65X39X25	31X33X50	31X33X50	34X42X73	
安装方式 Mounting way		非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	非屏蔽式 Non-screen shield type	
感应 Type	直流型 DC type	NPN	NO	JWK-A10P		JWKL-12AD		SQS19-Z4N	LJ1-24	LXU1-115G
			NC	JWK-A10P2		JWKL-12BD		SQS19-Z4N2	LJ1-24B	LXU1-115G2
		PNP	NO		JWK25-A(D)10(绿壳)	GS-M1522KCT		LXJ1-1A(NO+NC)		
			NC		JWK25-A(D)10(白壳)	LJG8D-15/J2H1		LXJ1-2D(NO+NC)		
检测距 Detection distance	10mm±10%	10mm±10%	8mm±10%	8mm±10%	10mm±10%	4mm±10%	5mm±10%	5mm±10%		
设定距离 Set distance	0-8mm	0-8mm	0-13mm	0-7mm	0-8mm	0-3.6mm	0-4mm	0-4mm		
标准检测物件 Standard detection object	铁30x30x1mm	铁30x30x1mm	铁30x30x1mm	铁18x18x1mm	铁30x30x1mm	铁30x30x1mm	铁18x18x1mm	铁18x18x1mm		
响应频率 Response frequency	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz	DC: 0.5KHz AC: 25Hz		
图例 Illustration	图94 Chart 94	图95 Chart 95	-	-	-	-	-	-		