



特点 Features

- 采用专用IC提高抗干扰能力
- 内置浪涌保护, 电源反接保护和过流保护电路
- 寿命长, 高可靠性, 操作简单, 经济实惠
- 红色LED状态指示灯, 易于识别运行状态
- IP65防护等级(IEC规格)
- 可以代替微动开关或限位开关广泛使用
- Exclusively designed IC for improving anti-jamming capability
- Inside surge protection, reverse polarity protection, overcurrent protection
- Long use-life cycle and high reliability, easy install, enconomic price
- Red LED status indication, easy to confirm work situation
- Protection structure IP65(IEC standard)
- Replaceable for limit switches



选型说明 Model Designation

CJ Y 12 E □ - 04 D N A / M

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

序号 No	项目 Item	代号 Code	说明 Description
①	分类代号 Classification code	CJ	电感式 Inductive type
②	外形代号 Shape code	Y	圆柱形金属铜管 Cylindrical copper tube of metal
③	尺寸代码 Size code	12	08=M8、12=M12、18=M18、30=M30
④	产品类型 Product type	E	经济型 Economical
⑤	螺纹长度 Thread length	无 None	标准型 Normal form
		L	长螺纹型 Long thread type
⑥	检测距离 Detection distance	04	02=2mm、04=4mm、05=5mm、08=8mm、10=10mm、15=15mm
⑦	工作电压 Operating voltage	A	90...250VAC
		D	10...30VDC
		E	20...60VDC
		J	5...10VDC
⑧	输出方式 Output mode	N	NPN
		P	PNP
		K	AC 二线 2 Wires
		L	DC 二线 2 Wires
⑨	输出状态 Output state	A	NO
		B	NC
		C	NO+NC
⑩	连接形式 Connection form	M	M12针式 直头 4芯 A编码 M12 pin straight head 4-core A coding

国际认证规格 International Certification Specifications

认证规格 Certification specifications	规格 Specifications	文件No. Document
CCC	GB/T 14048.10	请咨询昌得代表处 Please consult the CNTD Representative Office
TUV	EN 60947-5-2	
CE		

安全规格认证额定值 Safety Specification Certification Rating

CCC(GB/T 14048.10)、TUV(EN60947-5-2)

类型与额定值 Type and Rating
AC-140 24~250VAC 200mA
DC-13 10~30VDC 200mA

规格 Specifications

直流3线式 DC 3wire type

型号名 Model	CJY12E-02DNA/M CJY12E-02DNB/M CJY12E-02DNC/M CJY12E-02DPA/M CJY12E-02DPB/M CJY12E-02DPC/M	CJY12E-04DNA/M CJY12E-04DNB/M CJY12E-04DNC/M CJY12E-04DPA/M CJY12E-04DPB/M CJY12E-04DPC/M	CJY18E-05DNA/M CJY18E-05DNB/M CJY18E-05DNC/M CJY18E-05DPA/M CJY18E-05DPB/M CJY18E-05DPC/M	CJY18E-08DNA/M CJY18E-08DNB/M CJY18E-08DNC/M CJY18E-08DPA/M CJY18E-08DPB/M CJY18E-08DPC/M	CJY30E-10DNA/M CJY30E-10DNB/M CJY30E-10DNC/M CJY30E-10DPA/M CJY30E-10DPB/M CJY30E-10DPC/M	CJY30E-15DNA/M CJY30E-15DNB/M CJY30E-15DNC/M CJY30E-15DPA/M CJY30E-15DPB/M CJY30E-15DPC/M
检测距离 Sensing distance	2mm	4mm	5mm	8mm	10mm	15mm
应差距离 Hysteresis	检测距离的10%以下 Max. 10% of sensing distance					
标准检测物 Standard sensing target	12×12×1mm (铁 Iron)		18×18×1mm (铁 Iron)	25×25×1mm (铁 Iron)	30×30×1mm (铁 Iron)	45×45×1mm (铁 Iron)
设定距离 Setting distance	0~1.4mm	0~2.8mm	0~3.5mm	0~5.6mm	0~7mm	0~10.5mm
工作电压 Working voltage	10-30VDC					
漏电流 Leakage current	10mA以下 Max.10mA					
应答频率(※1) Response frequency (※1)	1000Hz	500Hz	500Hz	350Hz	350Hz(高端) 400Hz(标准)	200Hz
残留电压 Residual voltage	1.0V以下 Max. 1.0V					
温度的影响 Affection by Temp	在-25~+70℃温度范围内+20℃时的检测距离的±10%以内 Max. ±10% for sensing distance at ambient temperature 20℃					
控制输出 Control output	200mA以下 Max. 200mA					
绝缘阻抗 Insulation resistance	50MΩ以上(500VDC为基准) Min. 50MΩ(at 500VDC megger)					
耐电压 Dielectric strength	1500VAC 50/60Hz1分钟 1500VAC 50/60Hz for 1minute					
耐振动 Vibration	10~55Hz(周期1分钟) 振幅1mm X, Y, Z各方向2小时 1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours					
耐冲击 Shock	500m/s ² (50G) X, Y, Z 各方向3次 500m/s ² (approx. 50G) X, Y, Z directions for 3 times					
显示灯 Indicator	动作指示灯(红色LED) Operation indicator(red LED)					
使用周围温度 Ambient temperature	-25~+70℃(未结冰状态 No icing)					
储存温度 Storage temperature	-30~+80℃(未结冰状态 No icing)					
使用周围湿度 Ambient humidity	35~95%RH (未结露状态 No condensation)					
保护电路 Protection circuit	内置浪涌保护, 电源反接保护电路, 过流保护电路 Surge protection circuit, Reverse polarity protection circuit, Overcurrent protection circuit					
材质 Material	外壳/螺母: 镀镍黄铜, 垫片: 镍镀铁, 检测面: PBT Case/Nut: Nickel plated Brass, Washer: Nickel plated Iron, Sensing surface: PBT					
防护等级 Protection	IP65					

(※1) 开关动作的应答频率为平均值。测定条件使用标准检测物, 检测物的间距为标准检测物的2倍, 设定距离为检测距离的1/2。

(※1): The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

规格 Specifications

直流2线式 DC 2-wire type

型号名 Model	CJY12E-02DLA/M CJY12E-02DLB/M	CJY12E-04DLA/M CJY12E-04DLB/M	CJY18E-05DLA/M CJY18E-05DLB/M	CJY18E-08DLA/M CJY18E-08DLB/M	CJY30E-10DLA/M CJY30E-10DLB/M	CJY30E-15DLA/M CJY30E-15DLB/M
检测距离 Sensing distance	2mm	4mm	5mm	8mm	10mm	15mm
应差距离 Hysteresis	检测距离的10%以下 Max. 10% of sensing distance					
标准检测物 Standard sensing target	12×12×1mm (铁 Iron)		18×18×1mm (铁 Iron)	25×25×1mm (铁 Iron)	30×30×1mm (铁 Iron)	45×45×1mm (铁 Iron)
设定距离 Setting distance	0~1.4mm	0~2.8mm	0~3.5mm	0~5.6mm	0~7mm	0~10.5mm
工作电压 Working voltage	10-30VDC					
漏电流 Leakage current	0.6mA以下 Max.0.6mA					
应答频率(※1) Response frequency(※1)	1000Hz	500Hz	500Hz	350Hz	350Hz	200Hz
残留电压 Residual voltage	3.5V以下 Max. 3.5V					
温度的影响 Affection by Temp	在-25~+70℃温度范围内+20℃时的检测距离的±10%以内 Max. ±10% for sensing distance at ambient temperature 20℃					
控制输出 Control output	200mA以下 Max. 200mA					
绝缘阻抗 Insulation resistance	50MΩ以上(500VDC为基准) Min. 50MΩ(at 500VDC megger)					
耐电压 Dielectric strength	1500VAC 50/60Hz1分钟 1500VAC 50/60Hz for 1minute					
耐振动 Vibration	10~55Hz(周期1分钟) 振幅1mm X, Y, Z各方向2小时 1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours					
耐冲击 Shock	500m/s ² (50G) X, Y, Z 各方向3次 500m/s ² (approx. 50G) X, Y, Z directions for 3 times					
显示灯 Indicator	动作指示灯(红色LED) Operation indicator(red LED)					
使用周围温度 Ambient temperature	-25~+70℃(未结冰状态 No icing)					
储存温度 Storage temperature	-30~+80℃(未结冰状态 No icing)					
使用周围湿度 Ambient humidity	35~95%RH (未结露状态 No condensation)					
保护电路 Protection circuit	浪涌保护电路 Surge protection circuit					
材质 Material	外壳/螺母: 镀镍黄铜, 垫片: 镀镍铁, 检测面: PBT Case/Nut: Nickel plated Brass, Washer: Nickel plated Iron, Sensing surface: PBT					
防护等级 Protection	IP65					

(※1) 开关动作的应答频率为平均值。测定条件使用标准检测物, 检测物的间距为标准检测物的2倍, 设定距离为检测距离的1/2。

(※1): The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

规格 Specifications

交流2线式 AC 2-wire type

DKA/M and DKB/M in the table below are 90-250VAC two-wire models.

型号名 Model	/	CJY12E-04DKA/M CJY12E-04DKB/M	CJY18E-05DKA/M CJY18E-05DKB/M	CJY18E-08DKA/M CJY18E-08DKB/M	CJY30E-10DKA/M CJY30E-10DKB/M	CJY30E-15DKA/M CJY30E-15DKB/M
检测距离 Sensing distance	2mm	4mm	5mm	8mm	10mm	15mm
应差距离 Hysteresis	检测距离的10%以下 Max. 10% of sensing distance					
标准检测物 Standard sensing target	12×12×1mm (铁 Iron)		18×18×1mm (铁 Iron)	25×25×1mm (铁 Iron)	30×30×1mm (铁 Iron)	45×45×1mm (铁 Iron)
设定距离 Setting distance	0~1.4mm	0~2.8mm	0~3.5mm	0~5.6mm	0~7mm	0~10.5mm
工作电压 Working voltage	90-250VAC					
漏电流 Leakage current	10mA以下 Max.10mA					
应答频率 (※1) Response frequency (※1)	20Hz					
残留电压 Residual voltage	10V以下 Max. 10V					
温度的影响 Affection by Temp	在-25~+70℃温度范围内+20℃时的检测距离的±10%以内 Max. ±10% for sensing distance at ambient temperature 20℃					
控制输出 Control output	200mA以下 Max. 200mA					
绝缘阻抗 Insulation resistance	50MΩ以上(500VDC为基准) Min. 50MΩ(at 500VDC megger)					
耐电压 Dielectric strength	1500VAC 50/60Hz1分钟 1500VAC 50/60Hz for 1minute					
耐振动 Vibration	10~55Hz(周期1分钟) 振幅1mm X, Y, Z各方向2小时 1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours					
耐冲击 Shock	500m/s ² (50G) X, Y, Z 各方向3次 500m/s ² (approx. 50G) X, Y, Z directions for 3 times					
显示灯 Indicator	动作指示灯(红色LED) Operation indicator(red LED)					
使用周围温度 Ambient temperature	-25~+70℃(未结冰状态 No icing)					
储存温度 Storage temperature	-30~+80℃(未结冰状态 No icing)					
使用周围湿度 Ambient humidity	35~95%RH (未结露状态 No condensation)					
保护电路 Protection circuit	浪涌保护电路 Surge protection current					
材质 Material	外壳/螺母: 镀镍黄铜, 垫片: 镀镍铁, 检测面: PBT Case/Nut: Nickel plated Brass, Washer: Nickel plated Iron, Sensing surface: PBT					
防护等级 Protection	IP65					

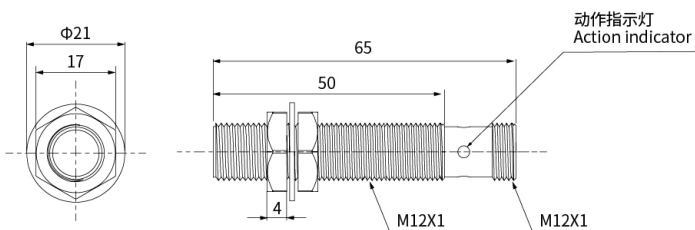
(※1) 开关动作的应答频率为平均值。测定条件使用标准检测物, 检测物的间距为标准检测物的2倍, 设定距离为检测距离的1/2。

(※1): The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

外观和尺寸 Appearance and Dimension

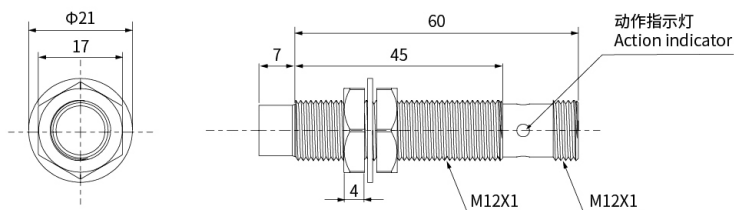
CJY12E-02/M

埋入式
Embedded type



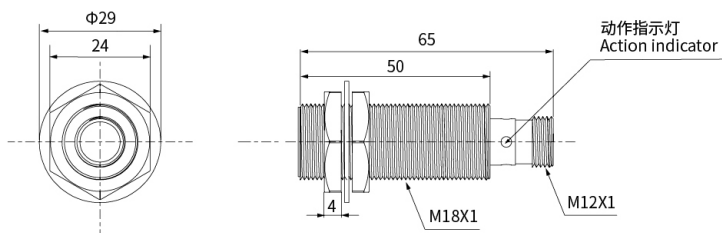
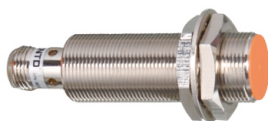
CJY12E-04/M

非埋入式
Non-embedded



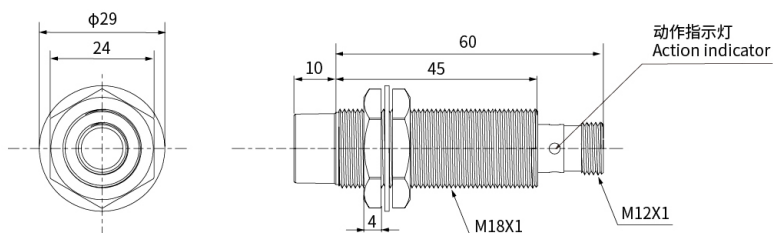
CJY18E-05/M

埋入式
Embedded type



CJY18E-08/M

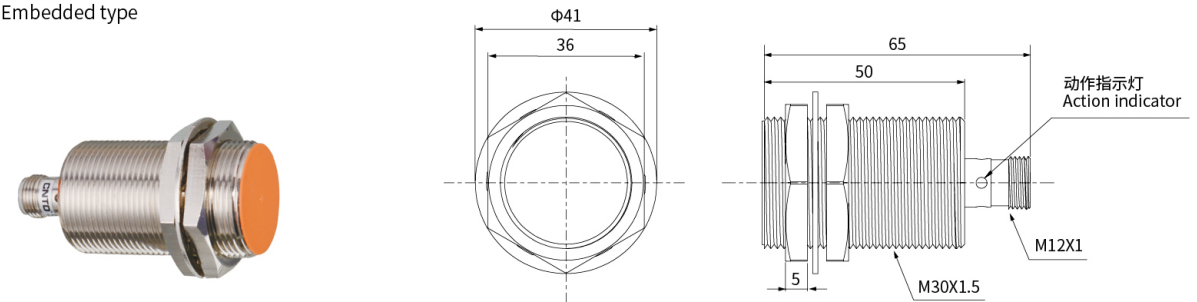
非埋入式
Non-embedded



外观和尺寸 Appearance and Dimension

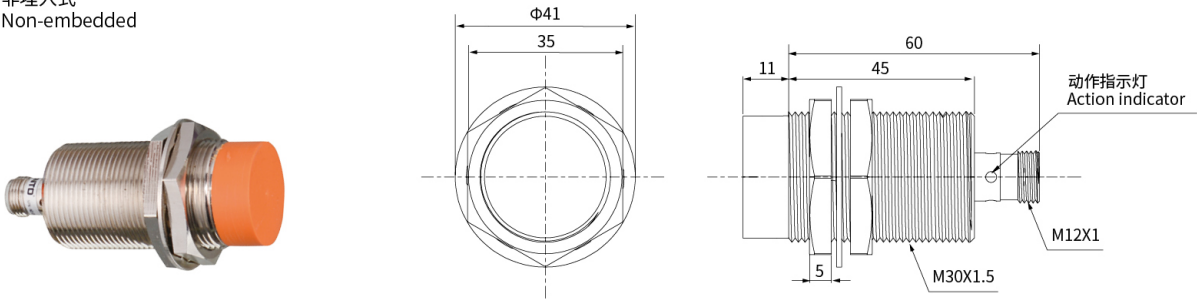
CJY30E-10/M

埋入式
Embedded type



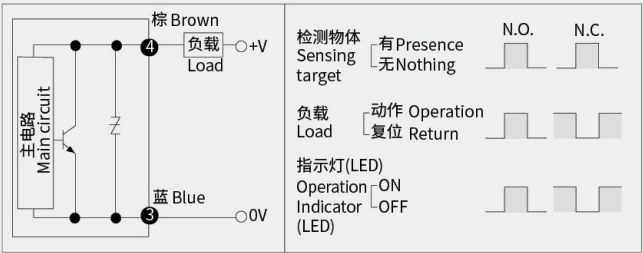
CJY30E-15/M

非埋入式
Non-embedded

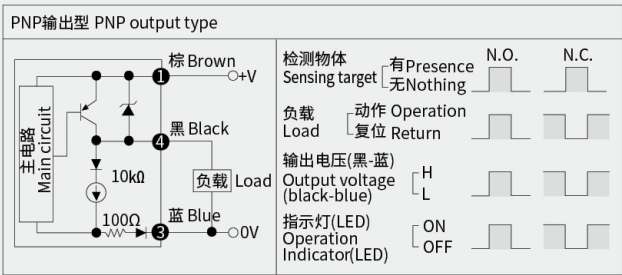
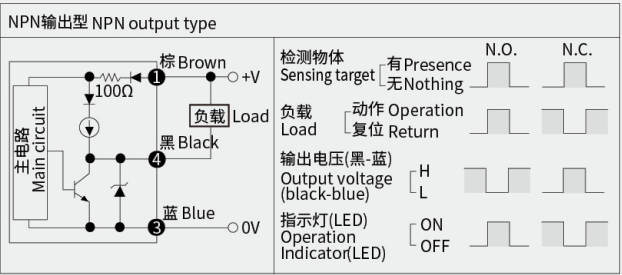


输出电路 Control Output Diagram

直流2线式 DC 2-wire type

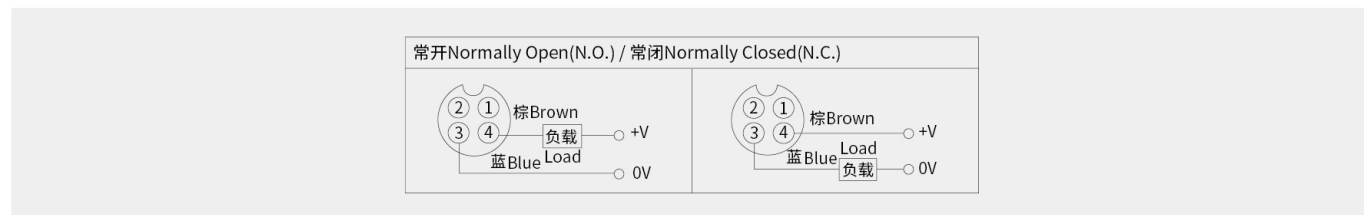


直流3线式 DC 3-wire type

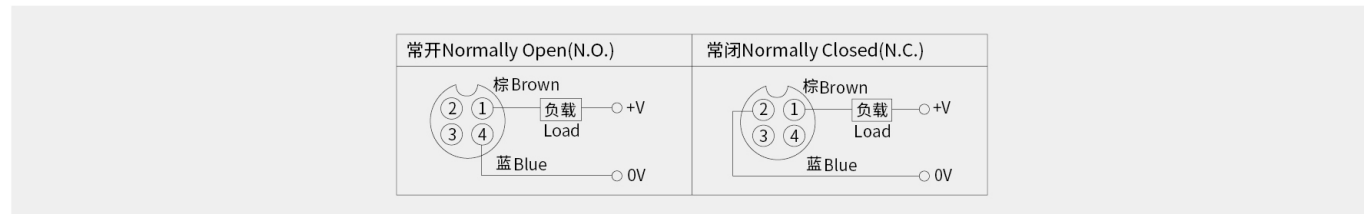


The diagram shows the internal main circuit of the sensor. It includes a power supply section with a brown wire (Brown) and a blue wire (Blue). The main circuit contains a load (Load) and a timing network consisting of a resistor (R) and a capacitor (C). The timing network is connected to a relay or switch mechanism that controls the output. The timing diagram shows the output signal (Operation Indicator LED) for two cases: '有 Presence' (N.O.) and '无 Nothing' (N.C.). The '有 Presence' signal is a pulse that goes high when the target is detected. The '无 Nothing' signal is a pulse that goes high when the target is not detected. The timing diagram also shows the '复位 Return' (Reset) signal, which is a pulse that goes high when the target is not detected.

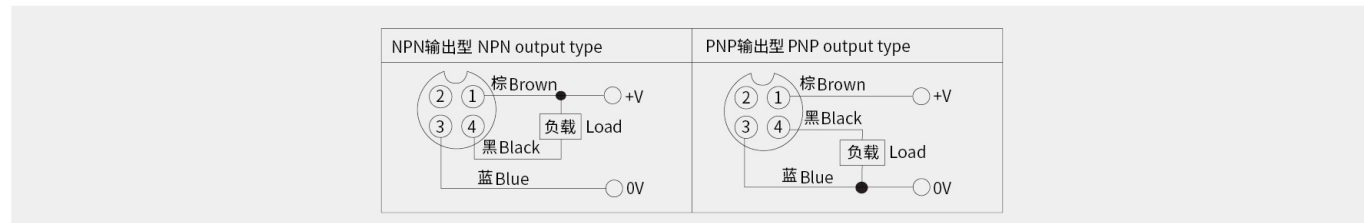
直流2线式(标准型) DC 2-wire type (Standard type)



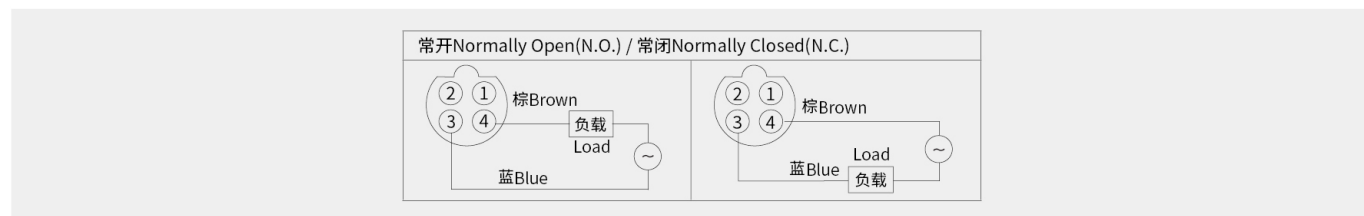
- 直流2线式(IEC规格) DC 2-wire type (IEC standard type)



- 直流3线式 DC 3-wire type



- 交流2线式 AC 2-wire type



- 27

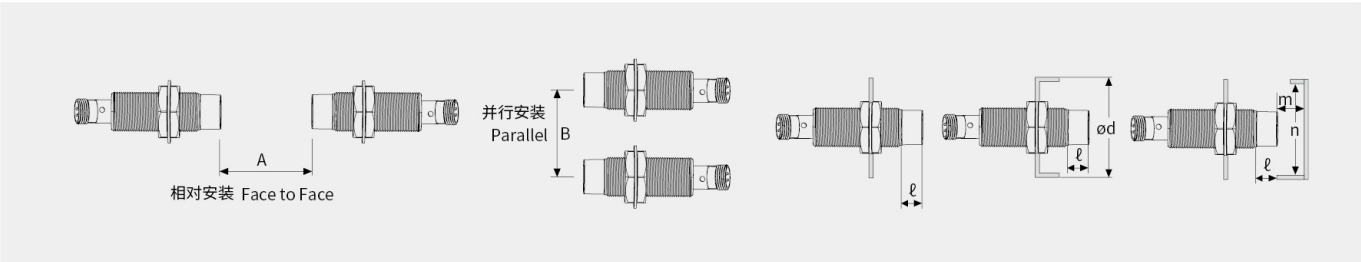
正确使用 Proper Usage

相互干扰 Mutual-interference

当把两个以上的接近开关一起安装使用时，可能会发生相互干扰引起的误动作，在安装时请务必满足下表中所规定的尺寸要求进行安装。
When several proximity sensors are mounted close to one another a malfunction of the sensor may be caused due to mutual interference. Therefore, be sure to provide a minimum distance between the two sensors as below chart indicates.

周围金属的影响 Influence by surrounding metals

当接近传感器周围有金属存在时，为防止复位不正常等误差发生，安装时请满足下表中所规定的尺寸要求进行安装。
When sensors are mounted on metallic panel, you must prevent the sensors from being affected by any metallic object except target. Therefore, be sure to provide a minimum distance as below chart indicates.



型号名Model	CJY12E-02/M	CJY12E-04/M	CJY18E-05/M	CJY18E-08/M	CJY30E-10/M	CJY30E-15/M
项目Item						
A	12	24	30	48	60	90
B	24	36	36	54	60	90
n	0	11	0	14	0	15
φd	12	36	18	54	30	90
ℓ	6	12	15	24	30	45
m	18	36	27	54	45	90

使用注意事项 Using Precautions

本公司产品是作为工业产品而设计生产，严格遵守工业产品标准。我司明确声明，除非经过特殊设计并得到我司明确书面确认，我司产品不适用于以下应用场合：

- 要求极高可靠性的应用场合，包括核能、燃气、电力等要求长期稳定运行的系统。
- 要求极高安全性的应用场合，涉及人身安全与财产的情况。
- 苛刻条件、严酷环境的应用场合，包括室外、存在化学污染、电磁、振动或冲击影响的环境。
- 有火灾或爆炸风险的应用场合，包括存在易燃易爆性气体、强酸强碱化学品等物质的环境。
- 涉及军工用途、航天航空项目的应用场合。

The company's products are designed and produced as industrial products, in strict compliance with industrial product standards. We expressly declare that, unless specifically designed and expressly confirmed by us in writing, our products are not intended for the following applications:

- Applications that require high reliability, including nuclear, gas, electric and other systems that require long-term stable operation.
- Applications requiring very high security, situations involving personal safety and property.
- Applications in harsh conditions, harsh environments, including outdoor, chemical contamination, electromagnetic, vibration or shock effects.
- Applications where there is a risk of fire or explosion, including environments where flammable and explosive gases, strong acids and alkali chemicals are present.
- Applications involving military use and aerospace projects.