

PROXIMITY SWITCH & PHOTO SENSOR

近接和光電開關

MAXTHERMO®

MAXTECH®

SINCE 1978

Maxthermo Touches Your Heart, Maxtech Services Your Mart
極大品質 永遠堅持，極大服務 全球遍佈

報價紀錄表 QUOTATION

型 號	數 量	價 格	備 註

型號指引 ORDERING CODE

H N - 40 20 - E 1

感應方式 SENSING MODE

A	磁簧型	MAGNETIC
H	電感型	INDUCTIVE
K	靜電容型	CAPACITIVE
L	雷射型	LASER TYPE
U	光電型	PHOTO TYPE

感應方式 SENSING MODE

C	圓管型	TUBULAR TYPE
T	扁型	FLAT TYPE
N	方型	RECTANGULAR TYPE
P	擴大器內臟型	AMP. INSIDE TYPE
S	小五角光電	S SEPARATED AMPLIFIER
W	扁平型	PLANE TYPE
X	螺絲型	SCREW TYPE
Y	超小型光電	Y SIDE WIRING TUBULAR PHOTO SENSOR
DN	數位型光電	DIGITAL PHOTO SENSOR
DJ	標字檢測	MARKING & DETECTING PHOTO SENSOR
DX	數位型光電	DIGITAL PHOTO SENSOR

感應面外徑 SENSING FACE DIA.

HN-3010-E1 30 = 30mm
 HX-1204-E1 12 = 12mm DIA. =M12

檢出距離 DETECTING DISTANCEH

HN-3010-E1 10 = 10mm
 UP-300D 300 = 3M

光電開關檢出方式 PHOTO SENSOR DETECTING

D	鏡片反射型	MIRROR REFLEX TYPE
R	直接反射型	REFLEX TYPE
T	對照型	THROUGH-BEAM TYPE

近接開關感應方向 PROXIMITY SWITCH SENSING

S 水平方向 HORIZONTAL
 BLANK 垂直(空白) VERTICAL

輸出方式 OUTPUT MODE

C 電壓型	VOLTAGE
N/E NPN 直流型	NPN TYPE
P PNP 直流型	PNP TYPE
A SCR 交流二線式	AC 2 WIRE MODE
M 交流、直流共用型	M DC/AC MODE
V 類比電壓	V ANALOG MODE
MA 類比電流	MA ANALOG MODE

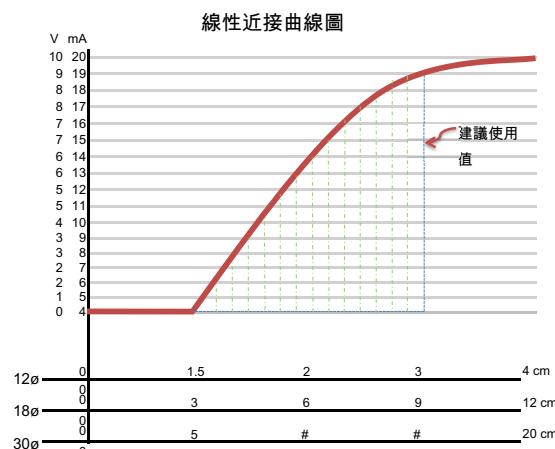
輸出方式 OUTPUT MODE

- 1.常開型 NO: NORMALLY OPEN
- 2.常閉型 NC: NORMALLY CLOSED

近接開關規格辭彙說明 Technical Specifications

內部電路保護功能 Circuit Protection Design

保護功能 Protection Circuit	短路保護迴路 Short Circuit Protection Loop.	逆極性保護迴路 Reverse Protection Loop.	突波防止迴路 Surge Wave Prevention Loop.
機種分類 Type			
DC NPN E1/E2	有 YES	有 YES	有 YES
DC PNP P1/P2	有 YES	有 YES	有 YES
交流二線式 AC 2-Wire	有 YES	無極性之區別 without reference to polarity	有 YES
M系列二線式 AC/DC 2-Wire	有 YES	無極性之區別 without reference to polarity	有 YES

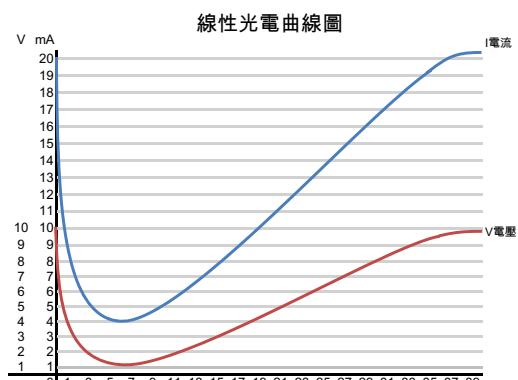
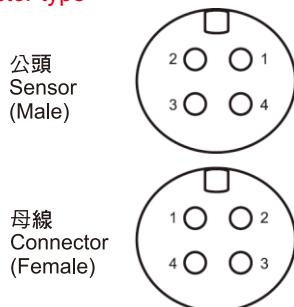


連接器腳位(Connector pin-out)

M12中繼接頭CT/防水型(AN/BN) wire connector type

近接開關

	NO	N.C.
1	棕Brown (+)	棕Brown (+)
2	黑Black (output)	黑Black (output)
3	藍Blue (-)	藍Blue (-)
4	-----	-----



結構保護等級 Grade of Protection

IP International Protection 特性記號	等級 Classification	保護程度 Protective Grade	
	4		無論從那方向來的水沫都不會有害的影響 Not affected by water bubbles from all directions.
	5		無論從那方向來的，直接噴水也不受影響的。 Not affected by water splash from all directions.
	6		無論從那方向來的，在一定壓力下直接噴水的內部也不進水的。 No penetration by direct water spray from all directions under specific water pressure.
	7		在設定的水壓條件，放入水中內部而不進水歷時30分鐘 No penetration by water ever when the object is submerged in the water for 30 minutes.
	8		可以在指定壓力的水中，長時間使用的開關 Objects which can be used for a long period of time in the water under a specific water pressure.

	Classification	保護程度 Protective Grade	
防人體和 固態異物	6		耐塵形 Protection against movement of human body and solid

MOUNTING CONDITION

安裝注意事項

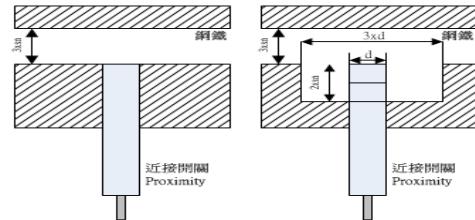
■ 齊頭型(可埋入型式)：

因檢測面齊平，故可埋設於鋼鐵中，而不受周圍之金屬影響

■ Flush type:

Since the sensing face of the proximity switch is a flush type, it can be buried in an iron or steel materials stockpile to prevent being effected by any surrounding metal objects.

flush (可埋入型式) non-flush (不可埋入型式)



■ 凸出型 (不可埋入型式)：

檢測面必須與周圍之金屬保持足夠的空間或凸出金屬表面，以免受到周圍金屬干擾而產生誤動作。

■ Non flush type:

A space should be provided between the sensing face and the surrounding metal, or the sensing face should protrude to prevent surrounding interference.

■ 相互干擾防止：

當兩個以上的進接開關面對面，或並排裝設，請保持足夠的間隔距離避免干擾發生。

■ Mutual Interference:

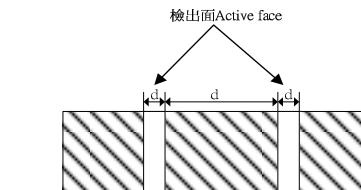
A minimum distance must be observed when identical cylindrical rectangular sensors are mounted opposite each other or in parallel.

面對面安裝時

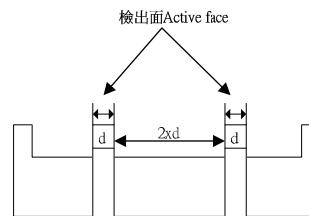
Mounted opposite each other

D=efector diameter 近接開關直徑

Sn=nominal sensing range 檢出距離



凸出型並排裝設時
non-flush mountable sensors mounted in parallel



齊頭型並排裝設時
flush mountable sensors mounted in parallel

■近接開關“規格”詞彙說明

■ Technical specifications

■ 修正係數：(參考值非絕對值)

電感式：當被測物為非金屬時，則感應距離將產生改變而縮短，
如此請參考圖表修正其檢出距離。

■ Correction Coefficaent:

Taking an electrical proximity switch as an example, the sensing distance of the electrical inductance proximity switch is shorter for a non-metal target.
In this case, please refer to the following chart for correction of pick-up distance.
(But the correction factor has on an absolute value).

■ 靜電容量式：可檢出金屬、非金屬、玻璃、液體……等，其檢出距離乃隨電離子的特性 (電導常數或非電導常數)水分含量，物體的體積等因素有密切關係，均會影響檢出距離。

■ Static capacitance proximity switch can sense almost all of the object available. However its sensing distance varies with different electrical characteristics water absorbability and the size of each object.

■ 使用時需將金屬或物體接地，否則開關會產生誤作用。

■ When using a metal sheet or any of each object as a target, please be sure to have them grounded, otherwise the switch will not function.

■ 尾部附有感度調整器，可有效的調整距離。

■ Static capacitance proximity switch is equipped with an inductance on its tail part used to effectively adjust the sensing distance.

■ 現場安裝注意事項：

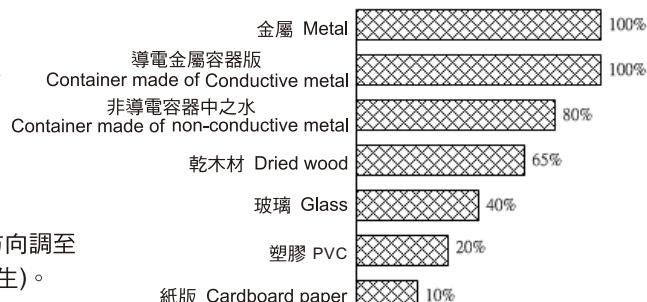
- 一、將靜電容開關安裝於現場，並將感度調整鈕，調至紅色LED為不亮的位置，最弱之感度，(被測物未接近狀態)。
- 二、再將被測物放置靜電容開關之感測面(被測物正常運作時移動之路線)在順時方向調至紅色LED亮燈位置為最佳感度(注意感度設置不可太強，否則常會有誤動作之發生)。

■ Precaution of Installation:

- Install the capacitive proximity switch in the device and adjust the sensitive knob till Red LED in gloomy light. This is the weakly sensitivity (the sensing target doen't approach)
- Put the sensing target in the sensing side of photo sensor (when the sensing target is operating and moving properly), then adjust the sensitive knob in clockwise way till Red LED in bright light. This is the best sensitivity (to avoid error operation don't set stronger sensitivity)
- 拆下外面螺絲，然後用附屬品之螺絲起子轉動內部之電位計來調整靈敏度。
Unscrew the outer screw and then use the attached screw driver to turn the inside potentiometer to adjust sensitivity.



Proximity近接開關



ANALOG PROXIMITY SWITCH

類比式近接開關

外觀 Appearance				
型號 Type	輸出方式 Out type	1 DC type- 4 ~ 20mA	HX-1204-42MA	HX-1812-42MA
		2 DC type- 20 ~ 4mA	HX-1204-42MA2	HX-1812-42MA2
		3 DC type- 0 ~ 10V	HX-1204-10V	HX-1812-10V
		4 DC type- 10 ~ 0V	HX-1204-10V2	HX-1812-10V2
感應距離 Sensing distance		1.5 ~ 4mm	3 ~ 12mm	5 ~ 20mm
設定距離 Setting distance		1.5 ~ 3mm	3 ~ 8mm	5 ~ 14mm
發光器光源 Emission		-----		
工作電壓 Current Operating voltage		DC 12 ~ 24V permissible ripple(P.P): 10%max.		
負載阻抗 Loaded impedance		電流型 Current DC 12V=500Ω, 公式 $V_{IN}-VR1 / I_{OUT}=RL$ 電壓型 Voltage 470Ω以上		
消耗電流 Current consumption		≤45mA		
標準出物體 Standard Sensing object		鐵 Ferrous metals		
安裝方法 Mounting		可埋入 Flush		
反應頻率 Response frequency		-----		
距差 Differential travel		≤3% max. of Sn		
洩漏電流 Off. state leakage current		1.1mA		
動作指示燈 Indicator		電流型 Current Operation indicator (red) 電壓型 Voltage -----		
操作溫度 operating temperature		-10°C ~ 50°C		
操作濕度 operating humidity		35 ~ 90% RH		
結構保護程度 Degree of protection		IP67		
外殼材質 Housing material		檢出面: PBT塑膠, 本體: 黃銅鍍鎳 Detection Surface: PBT material Tube: Brass nickel Plated		
出線方式 Wiring method		直徑:3.8mm 長度:2M , 3蕊 Ø:3.8mm,length:2M,3 core	直徑:4.7mm 長度:2M , 3蕊 Ø: 4.7mm, length: 2M, 3 core	
重量 Weight		80g	110g	180g
配件 Accessories		M12Ø螺母, 華司各2個, M12Ø nut and washer--each two	M18Ø螺母, 華司各2個, M18Ø nut and washer--each two	M30Ø螺母2個 M30Ø nut --each two
接線圖 Connect Diagram		外觀尺寸 Dimensions (mm)		
<pre> ANALOG OUT - - - - - 1 BROWN 棕 MAIN CIRCUIT BLACK 黑 LOAD DC 12-24V BLUE 蓝 </pre>				

ANALOG PROXIMITY SWITCH

類比式近接開關

CE



CE



CE



UT-06R-42MA

UT-06R-42MA2

UT-06R-10V

UT-06R-10V2

6mm

0~6mm

紅光 Red light

UT-06-42MA

UT-06-42MA2

UT-06-10V

UT-06-10V2

6mm

0~6mm

紅外線 Infrared type

US-40R-S42MA

US-40R-S42MA2

US-40R-S10V

US-40R-S10V2

5~40mm

5~30mm

DC 12 ~ 24V permissible ripple(P.P): 10%max.

電流型 Current DC 12V=500Ω, 公式 $V_{IN}-VR1 / I_{OUT}=RL$

電壓型 Voltage 470Ω以上

60mA

10mm 半透明體 Translucent object

白紙8x8cm white paper

1.5ms Max.

電流型 Current Operation indicator (red) 電壓型 Voltage -----

-10°C ~ 50°C

35 ~ 90% RH

IP65

ABS

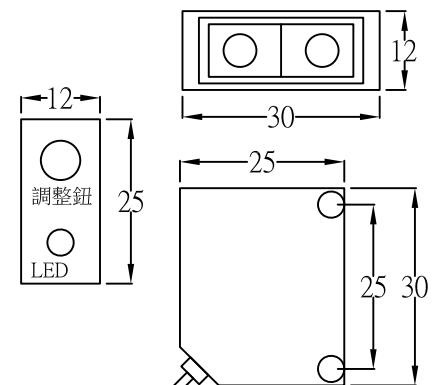
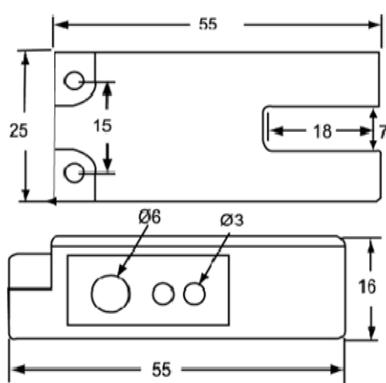
直徑:4.7mm 長度:2M , 3蕊 Ø:4.7mm, length:2M, 3 core

直徑:3.8mm 長度:2M , 3蕊
Ø: 3.8mm,length: 2M,3 core

100g

螺母, 3Ø螺絲各2個, nut and 3Ø screw--each two units

外觀尺寸 Dimensions (mm)



RANGING LONG SENSING PROXIMITY SWITCH

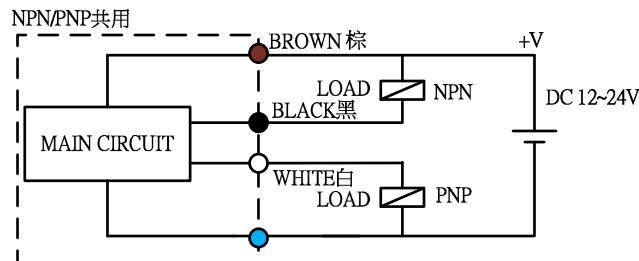
測距加長型近接開關

外觀 Appearance

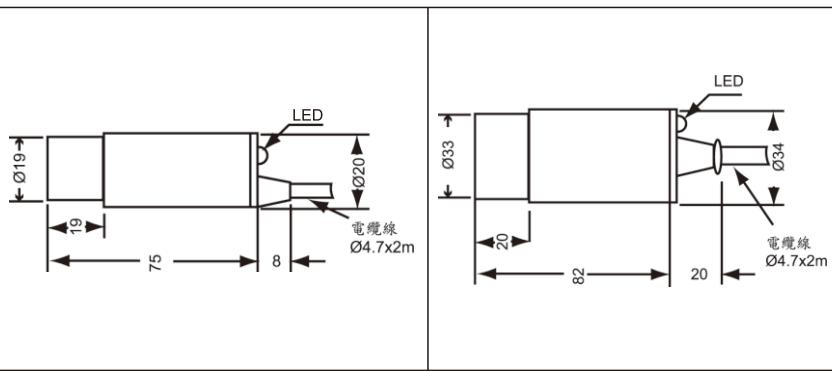


型號 Type	輸出方式 Out type	1 DC TYPE NO. NPN/PNP	HC-20-12-1	HC-34-25-1			
		2 DC TYPE NC. NPN/PNP	HC-20-12-2	HC-34-25-2			
		3					
		4					
感應距離 Sensing distance		12mm	25mm				
設定距離 Setting distance		0 ~ 8mm	0 ~ 20mm				
工作電壓 Current Operating voltage		DC 12 ~ 24V permissible ripple(P.P): 10%max.					
消耗電流 Current consumption		$\leq 15\text{mA}$					
標準出物體 Standard Sensing object		鐵 Ferrous metals					
距差 Differential travel		$\leq 3\%$ max. of Sn					
洩漏電流 OFF state leakage current		1.1mA					
安裝方法 Mounting		可埋入 Flush					
反應頻率 Response frequency		3000Hz	2000Hz				
輸出容量 Max. switching current		200mA					
正負極保護 Inverse polarity proof		Yes					
動作指示燈 Indicator		綠燈: 電源 紅燈: 輸出 Green LED: power Red LED: output					
操作溫度 Operating temperature		-25°C ~ 70°C					
出力電壓降 Voltage drop		2V max.					
結構保護程度 Degree operating temperature		IP67					
外殼材質 Housing material		ABS					
出線方式 Wiring method		直徑:4.7mm 長度:2M , 3蕊 Ø:4.7mm, length:2M, 3 core					
重量 Weight		130g	210g				
配件 Accessories		20Ø固定座 Fixed seat	34Ø固定座 Fixed seat				

接線圖 Connect Diagram

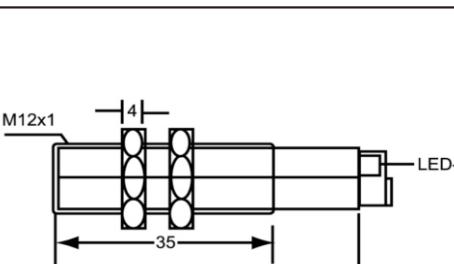
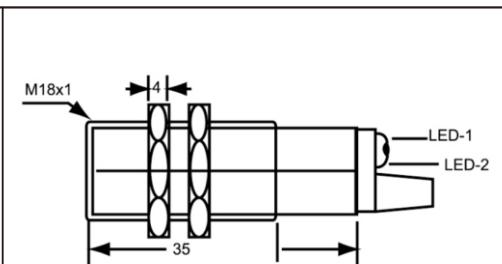
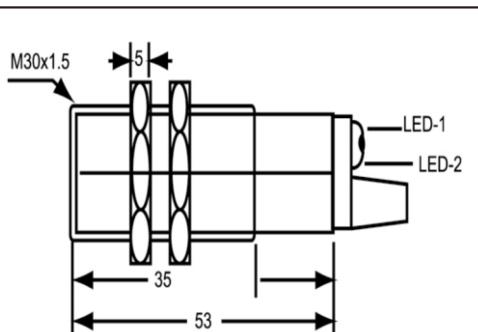


外觀尺寸 Dimensions (mm)



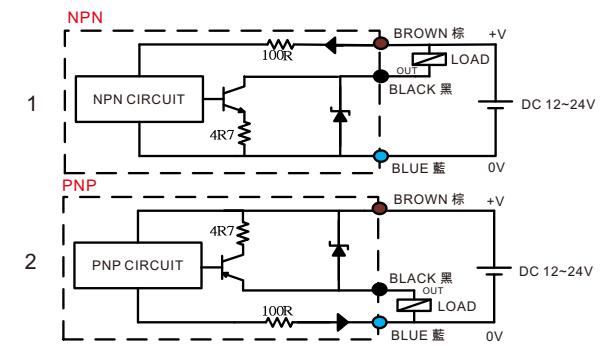
RANGING LONG SENSING PROXIMITY SWITCH

測距加長型近接開關

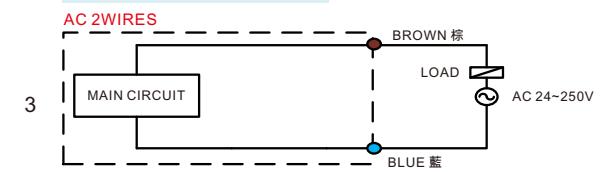
		
HX-12-06-1	HX-18-12-1	HX-30-22-1
HX-12-06-2	HX-18-12-2	HX-30-22-2
6mm	12mm	22mm
0 ~ 4mm	0 ~ 8mm	0 ~ 18mm
DC 12 ~ 24V permissible ripple(P.P): 10%max.		
$\leq 15\text{mA}$		
鐵 Ferrous metals		
$\leq 3\%$ max. of Sn		
1.1mA		
可埋入 Flush		
3000Hz	2000Hz	
200mA		
Yes		
綠燈: 電源 紅燈: 輸出 Green LED: power Red LED: output		
-25°C ~ 70°C		
2V max.		
IP67		
檢出面: PBT塑膠, 本體: 不銹鋼鍍鎳 Detection Surface: PBT material Tube: Stainless nickel Plated		
直徑:3.8mm 長度:2M , 3蕊 $\varnothing:3.8\text{mm}, \text{length}:2\text{M}, 3 \text{ core}$	直徑:4.7mm 長度:2M , 3蕊 $\varnothing:4.7\text{mm}, \text{length}:2\text{M}, 3 \text{ core}$	
100g	110g	145g
M12螺母,華司各2個 M120Øunt and washer----each two	M18螺母,華司各2個 M180Øunt and washer----each two	M30螺母2個 M30Ø unt----each two
外觀尺寸 Dimensions (mm)		
		



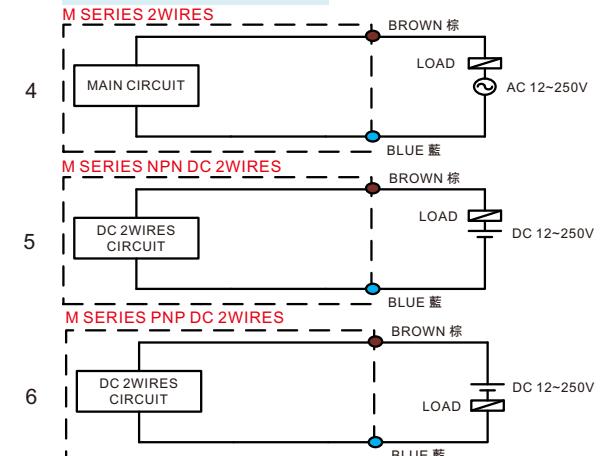
DC三線式



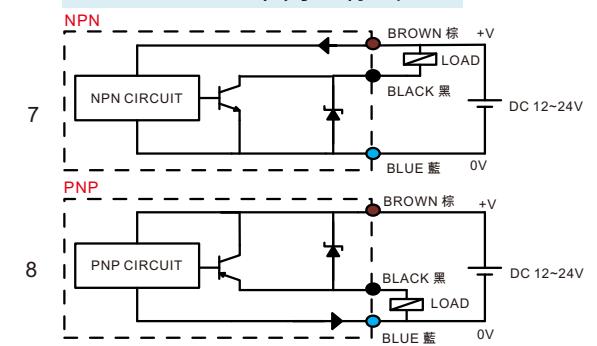
AC二線式



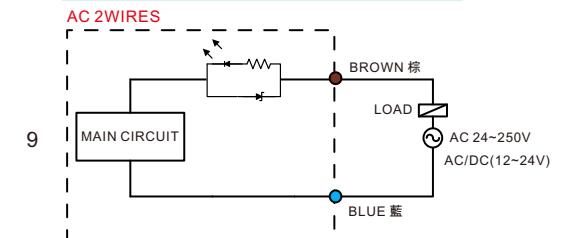
M系列二線式



MAGNETIC系列三線式



MAGNETIC系列二線式



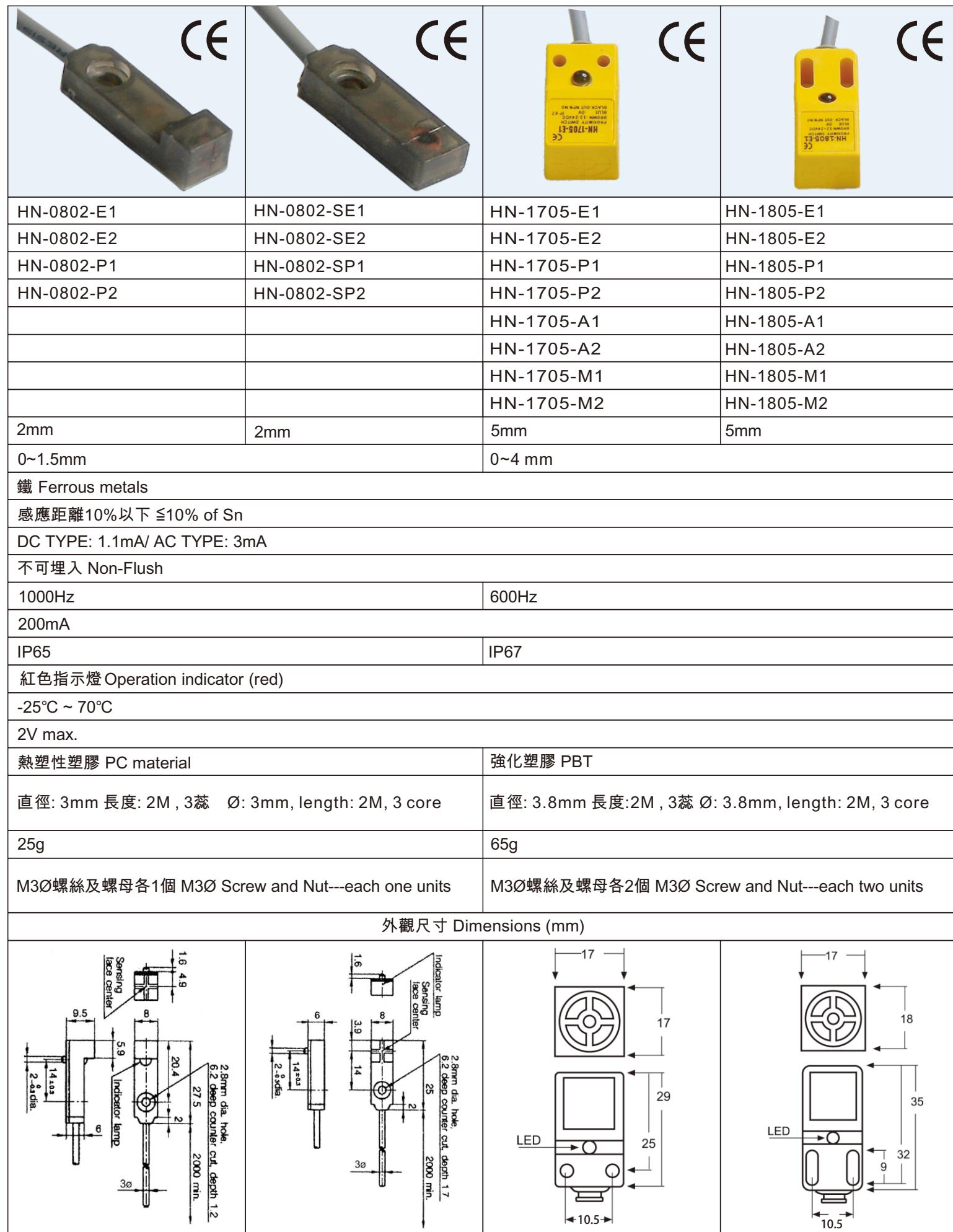
PROXIMITY SWITCH

近接開關

外觀 Appearance	
型號 Type	1 DC 三線-NPN NO
	2 DC 三線-NPN NC
	3 DC 三線-PNP NO
	4 DC 三線-PNP NC
	5 AC 二線-2 Wires-NO
	6 AC 二線-2 Wires-NC
	7 AC/DC 二線-2 Wires-NO
	8 AC/DC 二線-2 Wires-NC
感應距離	Sensing distance
設定距離	Setting distance
可檢出物體	Sensing object
距差	Differential travel
洩漏電流	OFF .state leakage current
安裝方法	Mounting
反應頻率	Response frequency
輸出容量	Max. switching current
結構保護程度	Degree of protection
動作指示燈	Indicator
操作溫度	Ambient operating temperature
出力電壓降	Voltage drop
外殼材質	Housing material
出線方式	Wiring method
重量	Weight
配件	Accessories
工作電壓 Operating Voltage	
N/P系列 DC三線: 12~24VDC Permissible ripple $\leq 10\%$	
A系列 AC二線: 24~250VAC 20/60Hz	
M系列 AC/DC二線: 12~250VAC/DC 50/60Hz	
消耗電流 Current consumption	
N/P系列 DC三線: $\leq 15\text{mA}$	
A系列 AC二線: $\leq 4\text{mA}$	
M系列 AC/DC二線: AC $\leq 4\text{mA}$ DC $\leq 15\text{mA}$	

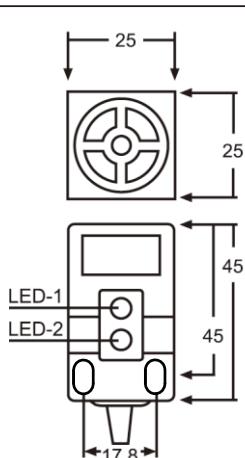
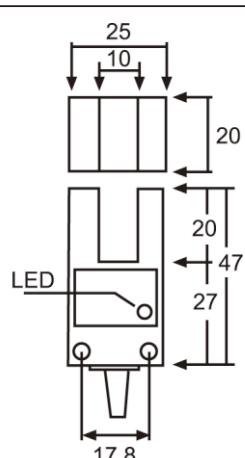
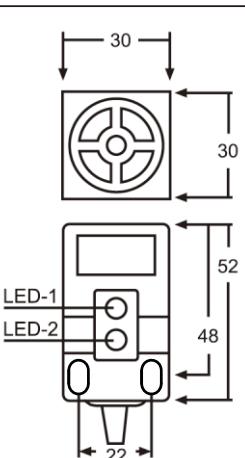
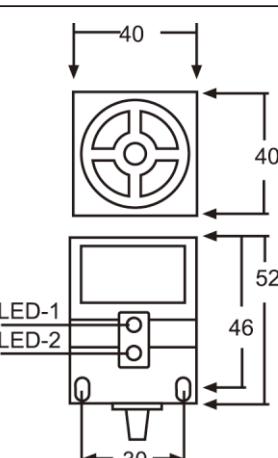
PROXIMITY SWITCH

近接開關



PROXIMITY SWITCH

近接開關

			
HN-2507-E1	HN-2510-E1	HN-3010-E1	HN-4020-E1
HN-2507-E2	HN-2510-E2	HN-3010-E2	HN-4020-E2
HN-2507-P1	HN-2510-P1	HN-3010-P1	HN-4020-P1
HN-2507-P2	HN-2510-P2	HN-3010-P2	HN-4020-P2
HN-2507-A1	HN-2510-A1	HN-3010-A1	HN-4020-A1
HN-2507-A2	HN-2510-A2	HN-3010-A2	HN-4020-A2
HN-2507-M1	HN-2510-M1	HN-3010-M1	HN-4020-M1
HN-2507-M2	HN-2510-M2	HN-3010-M2	HN-4020-M2
7mm	10mm	10mm	20mm
0~5mm	10mm	0~7mm	0~15mm
鐵 Ferrous metals			
感應距離10%以下 ≤10% of Sn			
DC TYPE: 1.1mA AC TYPE: 3mA			
不可埋入 Non-Flush			
500Hz		100Hz	
200mA			
IP67			
紅色指示燈 Operation indicator (red)			
-25°C ~ 70°C			
2V max.			
強化塑膠 PBT			
直徑: 4.7mm 長度: 2M , 3蕊 Ø: 4.7mm, length: 2M, 3 core			
110g	100g	120g	180g
M4Ø螺絲及螺母各2個 M4Ø Screw and Nut---each two units			
外觀尺寸 Dimensions (mm)			
			

PROXIMITY SWITCH

近接開關

HN-100-70-E1	HW-1805-SE1	HW-3010-SE1	HT-1202/05-E1
HN-100-70-E2	HW-1805-SE2	HW-3010-SE2	HT-1202/05-E2
HN-100-70-P1	HW-1805-SP1	HW-3010-SP1	HT-1202/05-P1
HN-100-70-P2	HW-1805-SP2	HW-3010-SP2	HT-1202/05-P2
HN-100-70-A1		HW-3010-SA1	HT-1202/05-A1
HN-100-70-A2		HW-3010-SA2	HT-1202/05-A2
HN-100-70-M1		HW-3010-SM1	HT-1202/05-M1
HN-100-70-M2		HW-3010-SM2	HT-1202/05-M2
70mm附調整鈕	5mm	10mm	2/5mm
0~50mm	4mm	0~7mm	0~1mm/ 0~4mm

Ferrous metals 鐵

感應距離10%以下 ≤10% of Sn

DC TYPE: 1.1mA AC TYPE: 3mA

不可埋入 Non-Flush

100Hz	600Hz
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200mA

IP67

紅色指示燈 Operation indicator (red)

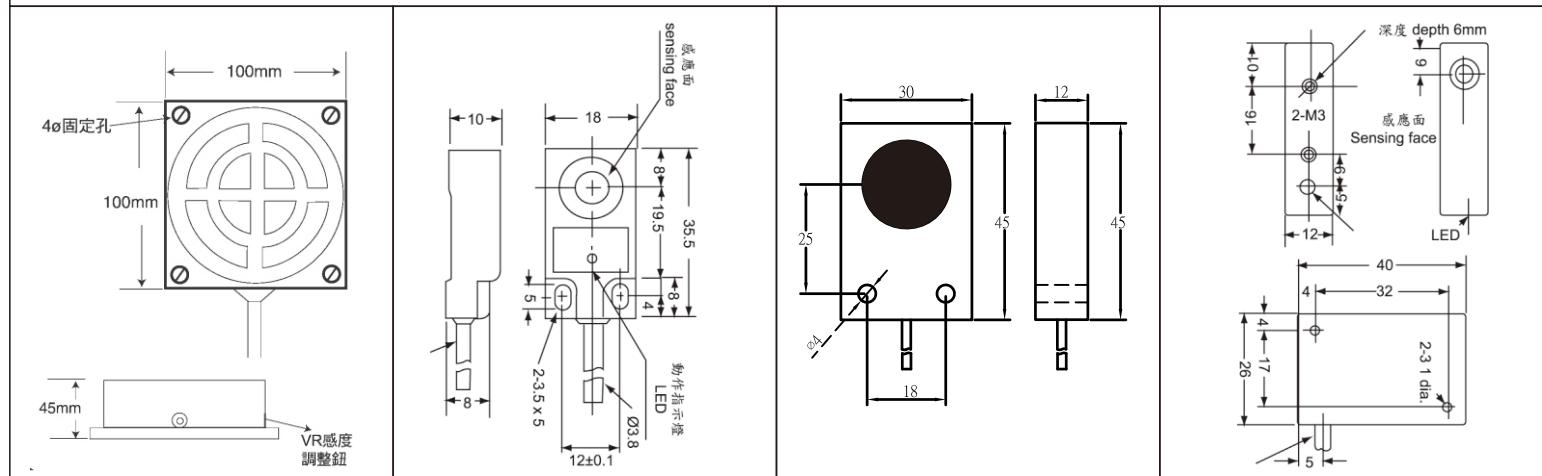
-25°C ~ 70°C

2V max.

強化塑膠 PBT

直徑: 4.7mm 長度: 2M , 3蕊 Ø: 4.7mm, length: 2M, 3 core	直徑: 3.8mm 長度: 2M , 3蕊 Ø: 3.8mm, length: 2M, 3 core		
400g	50g	90g	80g
M4Ø螺絲及螺母各4個 M4Ø Screw and Nut---each four units	M3Ø螺絲及螺母各2個 M3Ø Screw and Nut---each two units		

外觀尺寸 Dimensions (mm)



SHORT TUBE TYPE PROXIMITY SWITCH

短管型近接開關

HS-0801/08-02-E1	HS-0802-E1	HS-1202-E1	HS-1204-E1
HS-0801/08-02-E2	HS-0802-E2	HS-1202-E2	HS-1204-E2
HS-0801/08-02-P1	HS-0802-P1	HS-1202-P1	HS-1204-P1
HS-0801/08-02-P2	HS-0802-P2	HS-1202-P2	HS-1204-P2
1mm/ 2mm	2mm	2mm	4mm
0~0.5mm/ 0~1.5mm	0~1.5mm	0~1.5mm	0~3mm
Ferrous metals 鐵			
感應距離10%以下 ≤10% of Sn			
1.1mA			
可埋入 Flush	不可埋入 Non-Flush	可埋入 Flush	不可埋入 Non-Flush
1000Hz		800Hz	600Hz
200mA			
IP67			
紅色指示燈 Operation indicator (red)			
-25°C ~ 70°C			
2V max.			
強化塑膠 PBT			
直徑: 3mm 長度: 2M , 3蕊 Ø: 3mm, length: 2M, 3 core		直徑: 3.8mm 長度: 2M , 3蕊 Ø: 3.8mm, length: 2M, 3 core	
50g	50g	80g	80g
M8Ø螺母及華司各2個 M8Ø Nut and Washer---each two units		M12Ø螺母及華司各2個 M12Ø Nut and Washer---each two units	
外觀尺寸 Dimensions (mm)			

PROXIMITY SWITCH

近接開關

			
HX-0801-E1	HX-0802-E1	HX-1202-E1	HX-1204-E1
HX-0801-E2	HX-0802-E2	HX-1202-E1	HX-1204-E2
HX-0801-P1	HX-0802-P1	HX-1202-P1	HX-1204-P1
HX-0801-P2	HX-0802-P2	HX-1202-P2	HX-1204-P2
		HX-1202-A1	HX-1204-A1
		HX-1202-A2	HX-1204-A2
		HX-1202-M1	HX-1204-M1
		HX-1202-M2	HX-1204-M2
1mm	2mm	2mm	4mm
0~0.5mm	0~1.5mm	0~1.5mm	0~3mm

Ferrous metals 鐵

感應距離10%以下 ≤10% of Sn

DC TYPE: 1.1mA AC TYPE: 3mA

可埋入 Flush	不可埋入 Non-Flush	可埋入 Flush	不可埋入 Non-Flush
1000Hz		800Hz	600Hz

200mA

IP67

紅色指示燈 Operation indicator (red)

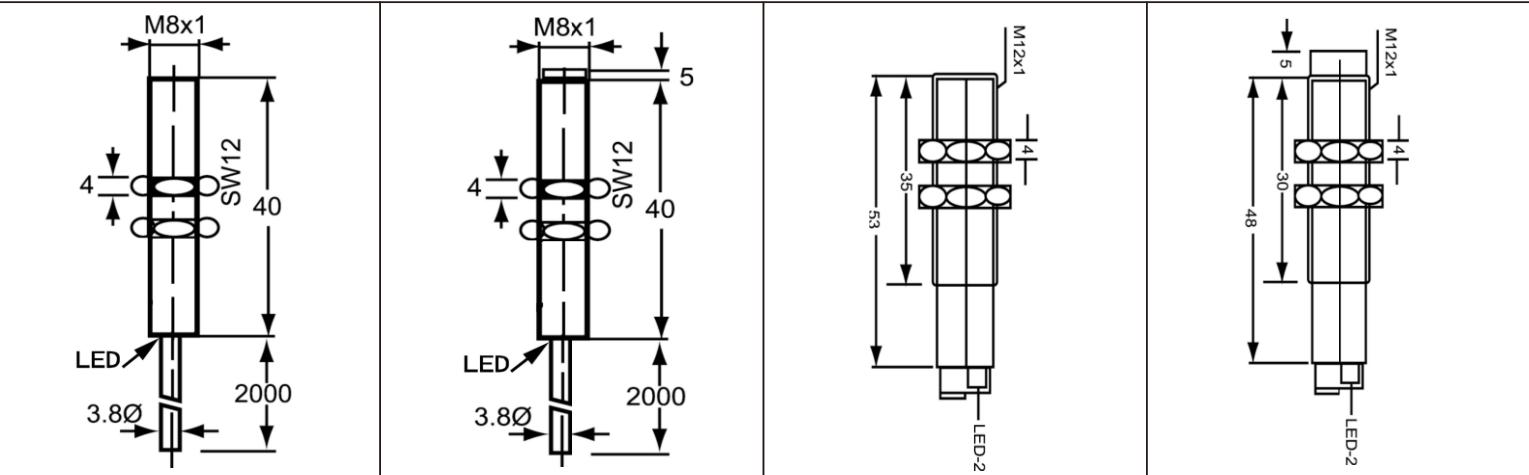
-25°C ~ 70°C

2V max.

檢出面: PBT塑膠, 本體: 黃銅鍍鎳 Detection Surface: PBT material Tube: Brass nickel Plated

直徑: 3mm 長度: 2M , 3蕊 Ø: 3mm, length: 2M, 3 core	直徑: 3.8mm 長度: 2M , 3蕊 Ø: 3.8mm, length: 2M, 3 core
50g	50g
M8Ø螺母及華司各2個 M8Ø Nut and Washer---each two units	M12Ø螺母及華司各2個 M12Ø Nut and Washer---each two units

外觀尺寸 Dimensions (mm)



PROXIMITY SWITCH

近接開關



HX-1805-E1	HX-1808-E1	HX-3010-E1	HX-3015-E1
HX-1805-E2	HX-1808-E2	HX-3010-E1	HX-3015-E2
HX-1805-P1	HX-1808-P1	HX-3010-P1	HX-3015-P1
HX-1805-P2	HX-1808-P2	HX-3010-P2	HX-3015-P2
HX-1805-A1	HX-1808-A1	HX-3010-A1	HX-3015-A1
HX-1805-A2	HX-1808-A2	HX-3010-A2	HX-3015-A2
HX-1805-M1	HX-1808-M1	HX-3010-M1	HX-3015-M1
HX-1805-M2	HX-1808-M2	HX-3010-M2	HX-3015-M2
5mm	8mm	10mm	15mm
0~4mm	0~7mm	0~8mm	0~13mm

Ferrous metals 鐵

感應距離10%以下 ≤10% of Sn

DC TYPE: 1.1mA AC TYPE: 3mA

可埋入 Flush	不可埋入 Non-Flush	可埋入 Flush	不可埋入 Non-Flush
600Hz	500Hz	200Hz	100Hz

200mA

IP67

紅色指示燈 Operation indicator (red)

-25°C ~ 70°C

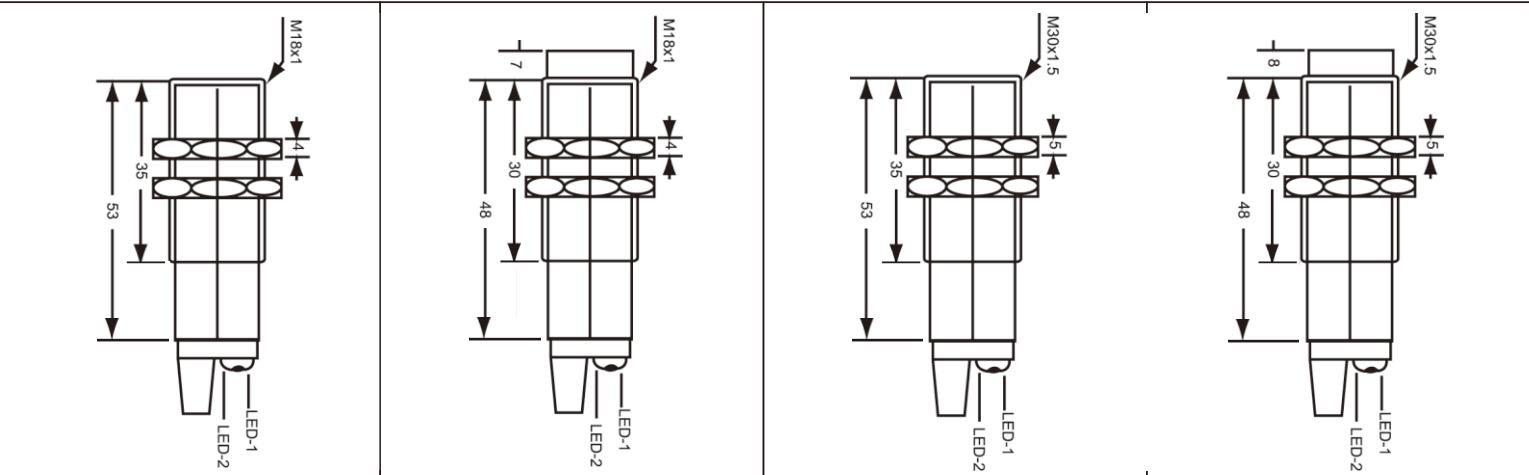
2V max.

檢出面: PBT塑膠, 本體: 黃銅鍍鎳 Detection Surface: PBT material Tube: Brass nickel Plated

直徑: 4.7mm 長度: 2M , 3蕊 Ø: 4.7mm, length: 2M, 3 core

110g	110g	145g	145g
M18Ø螺母及華司各2個 M18Ø Nut and Washer---each two units		M30Ø螺母2個 M30Ø Nut ---each two units	

外觀尺寸 Dimensions (mm)



PROXIMITY SWITCH

近接開關

HEX-1805-E1	HEX-1808-E1	HC-2008-E1	HC-3420-E1
HEX-1805-E2	HEX-1808-E2	HC-2008-E2	HC-3420-E2
HEX-1805-P1	HEX-1808-P1	HC-2008-P1	HC-3420-P1
HEX-1805-P2	HEX-1808-P2	HC-2008-P2	HC-3420-P2
HEX-1805-A1	HEX-1808-A1	HC-2008-A1	HC-3420-A1
HEX-1805-A2	HEX-1808-A2	HC-2008-A2	HC-3420-A2
HEX-1805-M1	HEX-1808-M1	HC-2008-M1	HC-3420-M1
HEX-1805-M2	HEX-1808-M2	HC-2008-M2	HC-3420-M2
5mm	8mm	8mm	20mm
0~4mm	0~7mm	0~6mm	0~16mm
鐵 Ferrous metals			
感應距離10%以下 ≤10% of Sn			
DC TYPE: 1.1mA/ AC TYPE: 3mA			
可埋入 Flush	不可埋入 Non-Flush		
600Hz	500Hz	100Hz	
200mA			
IP67			
紅色指示燈 Operation indicator (red)			
-25°C ~ 70°C			
2V max.			
ABS			
直徑: 4.7mm 長度: 2M , 3蕊 Ø: 4.7mm, length: 2M, 3 core			
80g	130g	210g	
塑膠螺母2個Plastic nuts---each two	20Ø固定座 Fixed seat	34Ø固定座 Fixed seat	
外觀尺寸 Dimensions (mm)			

PROXIMITY SWITCH WITH CONNECTOR

中繼型接頭式近接開關

HN-1705-E1CT	HN-1805-E1CT	HN-2507-E1CT	HN-3010-E1CT	HN-4020-E1CT
HN-1705-E2CT	HN-1805-E2CT	HN-2507-E2CT	HN-3010-E2CT	HN-4020-E2CT
HN-1705-P1CT	HN-1805-P1CT	HN-2507-P1CT	HN-3010-P1CT	HN-4020-P1CT
HN-1705-P2CT	HN-1805-P2CT	HN-2507-P2CT	HN-3010-P2CT	HN-4020-P2CT
HN-1705-A1CT	HN-1805-A1CT	HN-2507-A1CT	HN-3010-A1CT	HN-4020-A1CT
HN-1705-A2CT	HN-1805-A2CT	HN-2507-A2CT	HN-3010-A2CT	HN-4020-A2CT
HN-1705-M1CT	HN-1805-M1CT	HN-2507-M1CT	HN-3010-M1CT	HN-4020-M1CT
HN-1705-M2CT	HN-1805-M2CT	HN-2507-M2CT	HN-3010-M2CT	HN-4020-M2CT
5mm	5mm	7mm	10mm	20mm
0~4mm		0~5mm	0~7mm	0~15mm

鐵 Ferrous metals

感應距離10%以下 ≤10% of Sn

DC TYPE: 1.1mA AC TYPE: 3mA

不可埋入 Non-Flush

600Hz	500Hz	100Hz
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200mA

IP67

紅色指示燈 Operation indicator (red)

-25°C ~ 70°C

2V max.

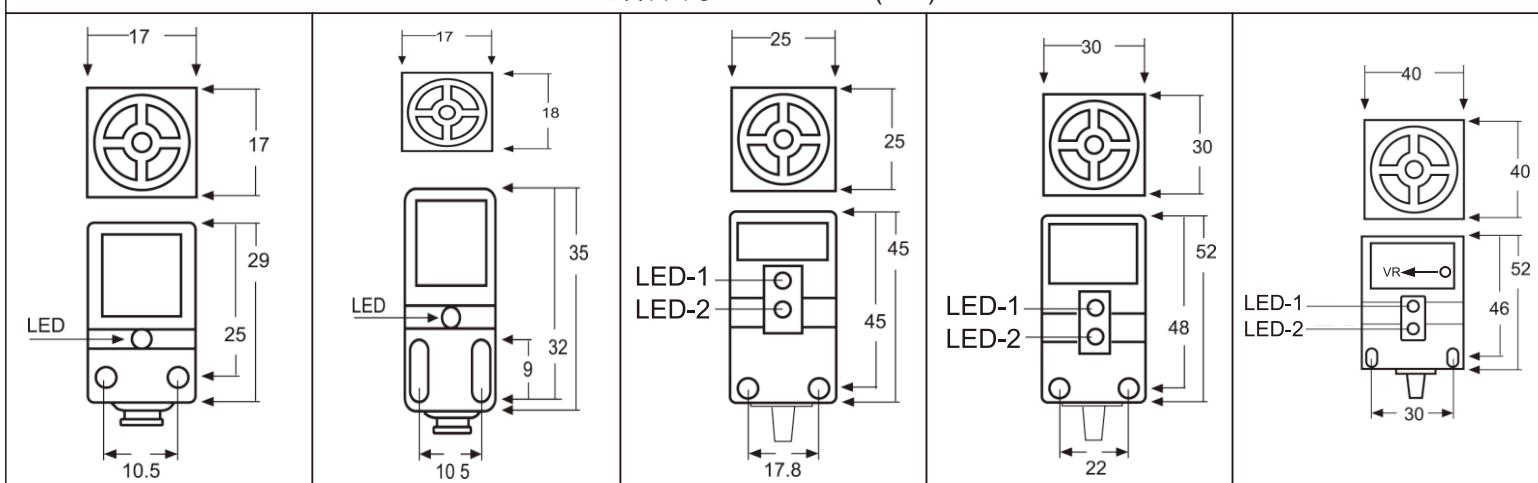
強化塑膠 PBT

直徑: 3.8mm 長度: 2M , 3蕊 Ø: 3.8mm, length: 2M, 3 core	直徑: 4.7mm 長度: 2M , 3蕊 Ø: 4.7mm, length: 2M, 3 core
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80g	125g	135g	195g
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M3Ø螺絲及螺母各2個 M3Ø Screw and Nut---each two units	M4Ø螺絲及螺母各2個 M4Ø Screw and Nut---each two units
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外觀尺寸 Dimensions (mm)



PROXIMITY SWITCH WITH CONNECTOR

中繼型接頭式近接開關

HX-0801-E1CT	HX-0802-E1CT	HX-1202-E1CT	HX-1204-E1CT
HX-0801-E2CT	HX-0802-E2CT	HX-1202-E2CT	HX-1204-E2CT
HX-0801-P1CT	HX-0802-P1CT	HX-1202-P1CT	HX-1204-P1CT
HX-0801-P2CT	HX-0802-P2CT	HX-1202-P2CT	HX-1204-P2CT
		HX-1202-A1CT	HX-1204-A1CT
		HX-1202-A2CT	HX-1204-A2CT
		HX-1202-M1CT	HX-1204-M1CT
		HX-1202-M2CT	HX-1204-M2CT
1mm	2mm	2mm	4mm
0~0.5mm	0~1.5mm	0~1.5mm	0~3mm

鐵 Ferrous metals

感應距離10%以下 ≤10% of Sn

DC TYPE: 1.1mA AC TYPE: 3mA

可埋入 Flush	不可埋入 Non-Flush	可埋入 Flush	不可埋入 Non-Flush
1000Hz		800Hz	600Hz

200mA

IP67

紅色指示燈 Operation indicator (red)

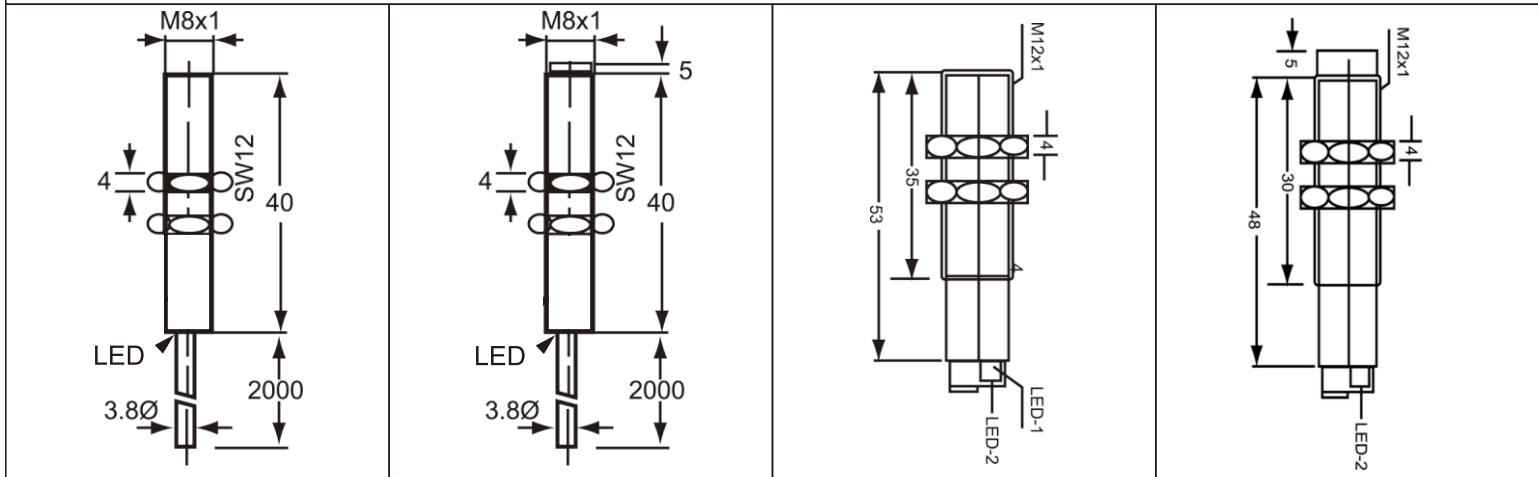
-25°C ~ 70°C

2V max.

檢出面: PBT塑膠, 本體: 黃銅鍍鎳 Detection Surface: PBT material Tube: Brass nickel Plated

直徑: 3mm 長度: 2M , 3蕊 Ø: 3mm, length: 2M, 3 core	直徑: 3.8mm 長度: 2M , 3蕊 Ø: 3.8mm, length: 2M, 3 core
65g	95g
M8Ø螺母及華司各2個 M8Ø Nut and Washer---each two units	M12Ø螺母及華司各2個 M12Ø Nut and Washer---each two units

外觀尺寸 Dimensions (mm)



PROXIMITY SWITCH WITH CONNECTOR

中繼型接頭式近接開關

HX-1805-E1CT	HX-1808-E1CT	HX-3010-E1CT	HX-3015-E1CT
HX-1805-E2CT	HX-1808-E2CT	HX-3010-E2CT	HX-3015-E2CT
HX-1805-P1CT	HX-1808-P1CT	HX-3010-P1CT	HX-3015-P1CT
HX-1805-P2CT	HX-1808-P2CT	HX-3010-P2CT	HX-3015-P2CT
HX-1805-A1CT	HX-1808-A1CT	HX-3010-A1CT	HX-3015-A1CT
HX-1805-A2CT	HX-1808-A2CT	HX-3010-A2CT	HX-3015-A2CT
HX-1805-M1CT	HX-1808-M1CT	HX-3010-M1CT	HX-3015-M1CT
HX-1805-M2CT	HX-1808-M2CT	HX-3010-M2CT	HX-3015-M2CT
5mm	8mm	10mm	15mm
0~4mm	0~7mm	0~8mm	0~13mm
鐵 Ferrous metals			
感應距離10%以下 ≤10% of Sn			
DC TYPE: 1.1mA AC TYPE: 3mA			
可埋入 Flush	不可埋入 Non-Flush	可埋入 Flush	不可埋入 Non-Flush
600Hz	500Hz	200Hz	100Hz
200mA			
IP67			
紅色指示燈 Operation indicator (red)			
-25°C ~ 70°C			
2V max.			
檢出面: PBT塑膠, 本體: 黃銅鍍鎳 Detection Surface: PBT material Tube: Brass nickel Plated			
直徑: 4.7mm 長度: 2M , 3蕊 Ø: 4.7mm, length: 2M, 3 core			
125g		155g	
M18Ø螺母及華司各2個 M18Ø Nut and Washer---each two units		M30Ø螺母2個 M30Ø Nut ---each two units	
外觀尺寸 Dimensions (mm)			

PROXIMITY SWITCH WITH CONNECTOR

中繼型接頭式近接開關

			
HEX-1805-E1CT	HEX-1808-E1CT	HC-2008-E1CT	HC-3420-E1CT
HEX-1805-E2CT	HEX-1808-E2CT	HC-2008-E2CT	HC-3420-E2CT
HEX-1805-P1CT	HEX-1808-P1CT	HC-2008-P1CT	HC-3420-P1CT
HEX-1805-P2CT	HEX-1808-P2CT	HC-2008-P2CT	HC-3420-P2CT
HEX-1805-A1CT	HEX-1808-A1CT	HC-2008-A1CT	HC-3420-A1CT
HEX-1805-A2CT	HEX-1808-A2CT	HC-2008-A2CT	HC-3420-A2CT
HEX-1805-M1CT	HEX-1808-M1CT	HC-2008-M1CT	HC-3420-M1CT
HEX-1805-M2CT	HEX-1808-M2CT	HC-2008-M2CT	HC-3420-M2CT
5mm	8mm	8mm	20mm
0~4mm	0~7mm	0~6mm	0~16mm

鐵 Ferrous metals

感應距離10%以下 ≤10% of Sn

DC TYPE: 1.1mA AC TYPE: 3mA

可埋入 Flush	不可埋入 Non-Flush	不可埋入 Non-Flush
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600Hz	500Hz	100Hz
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200mA

IP67

紅色指示燈 Operation indicator (red)

-25°C ~ 70°C

2V max.

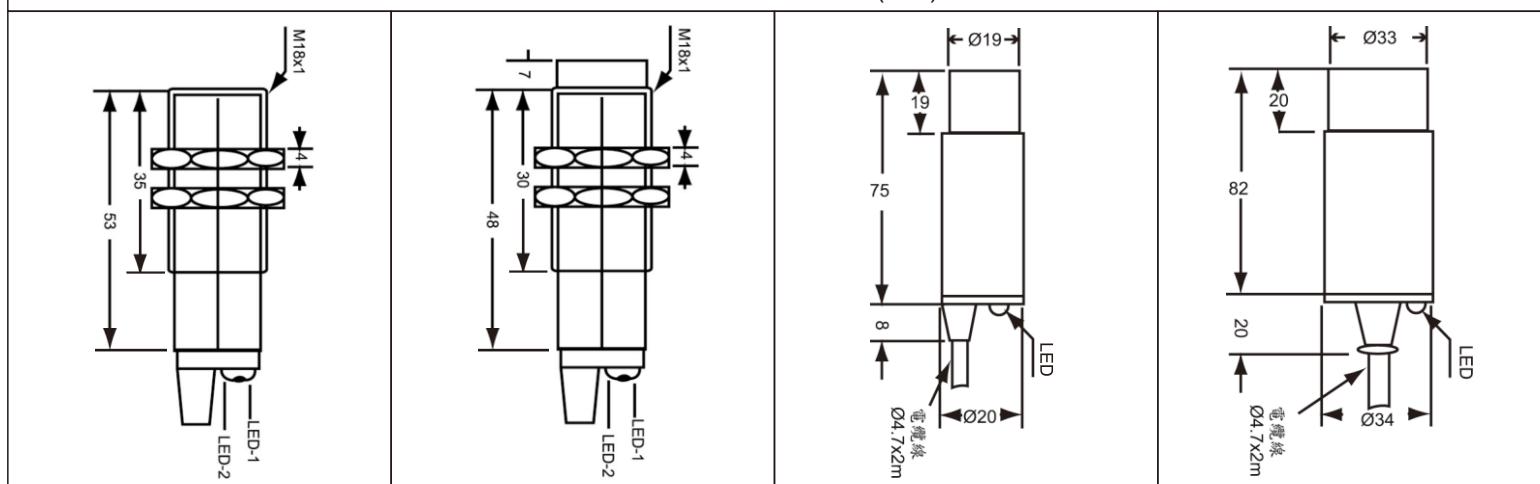
ABS

直徑: 4.7mm 長度: 2M , 3蕊 Ø: 4.7mm, length: 2M, 3 core

80g	130g	210g
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塑膠螺母2個Plastic nuts---each two	20Ø固定座 Fixed seat	34Ø固定座 Fixed seat
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外觀尺寸 Dimensions (mm)



PROXIMITY SWITCH WITH WATERPROOF TERMINALS

防水端子型近接開關

CE	CE	CE	CE	CE
HX-0801/02-8E1AN/BN	HX-0801/02-E1AN/BN	HX-1202/04-E1AN/BN	HX-1805/08-E1AN/BN	HX-3010/15-E1AN/BN
HX-0801/02-8E2AN/BN	HX-0801/02-E2AN/BN	HX-1202/04-E2AN/BN	HX-1805/08-E2AN/BN	HX-3010/15-E2AN/BN
HX-0801/02-8P1AN/BN	HX-0801/02-P1AN/BN	HX-1202/04-P1AN/BN	HX-1805/08-P1AN/BN	HX-3010/15-P1AN/BN
HX-0801/02-8P2AN/BN	HX-0801/02-P2AN/BN	HX-1202/04-P2AN/BN	HX-1805/08-P2AN/BN	HX-3010/15-P2AN/BN
			HX-1805/08-A1AN/BN	HX-3010/15-A1AN/BN
			HX-1805/08-A2AN/BN	HX-3010/15-A2AN/BN
			HX-1805/08-M1AN/BN	HX-3010/15-M1AN/BN
			HX-1805/08-M2AN/BN	HX-3010/15-M2AN/BN
1/2mm	1/2mm	2/4mm	5/8mm	10mm/ 15mm
0~0.5mm/ 0~1.5mm		0~1.5mm/ 0~3mm	0~4mm/ 0~7mm	0~8mm/ 0~12mm

鐵 Ferrous metals

感應距離10%以下 ≤10% of Sn

DC TYPE: 1.1mA AC TYPE: 3mA

可埋入 Flush/ 不可埋入 Non-Flush

1000Hz	800Hz/ 600Hz	600Hz/ 500Hz	200Hz/ 100Hz
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200mA			
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IP67

紅色指示燈 Operation indicator (red)

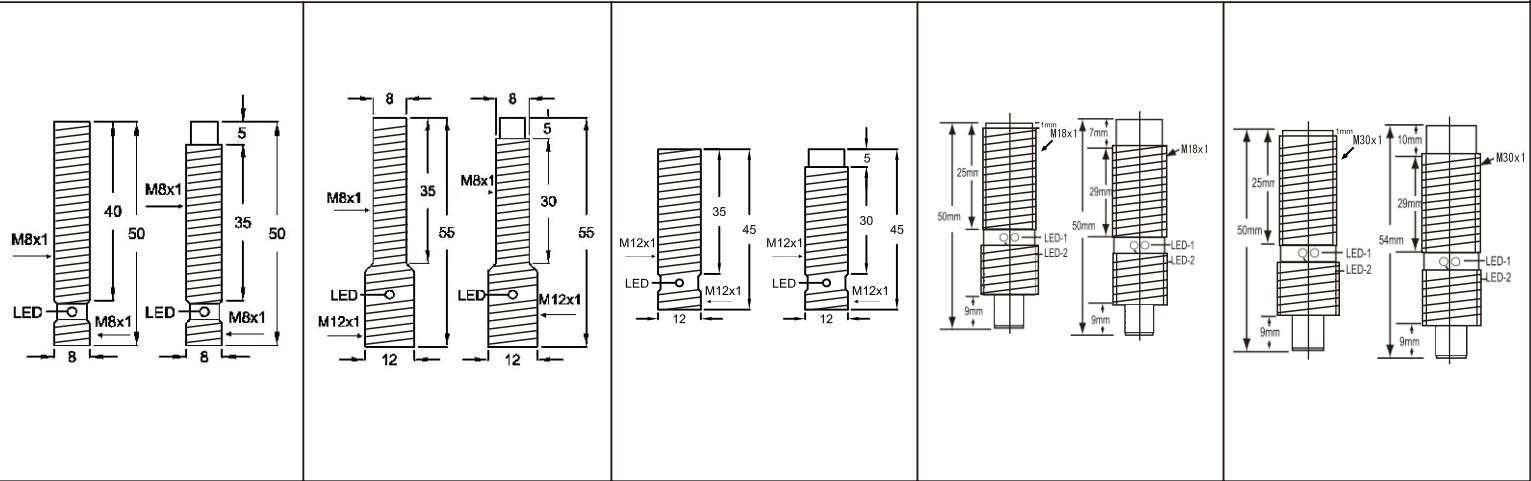
-25°C ~ 70°C

2V max.

檢出面: PBT塑膠, 本體: 黃銅鍍鎳 Detection Surface: PBT material Tube: Brass nickel Plated

直徑: 3.8mm 長度: 2M , 3蕊 Ø: 3.8mm, length: 2M, 3 core	直徑: 4.7mm 長度: 2M , 3蕊 Ø: 4.7mm, length: 2M, 3 core
65g	95g
M8Ø螺母及華司各2個 M8Ø Screw and Nut---each two units	M12Ø螺母及華司各2個 M12Ø Nut and Washer---each two
M18Ø螺母及華司各2個 M18Ø Nut and Washer---each two	M30Ø螺母及華司各2個 M30Ø Nut and Washer---each two

外觀尺寸 Dimensions (mm)



CAPACITIVE PROXIMITY SWITCH

靜電容近接開關

KN-3015-E1	KW-3010-SE1	KX-1205-E1	KX-1808-E1
KN-3015-E2	KW-3010-SE2	KX-1205-E2	KX-1808-E2
KN-3015-P1	KW-3010-SP1	KX-1205-P1	KX-1808-P1
KN-3015-P2	KW-3010-SP2	KX-1205-P2	KX-1808-P2
15mm(可調式)	10mm(可調式)	5mm	8mm(可調式)
0~13mm	0~7mm	0~4mm	0~5mm

鐵、塑膠等非金屬物 can sense almost all of the object avialable, Ferrous metals

感應距離10%以下 ≤10% of Sn

1.1mA

不可埋入 Non-Flush

60Hz

200mA

IP67

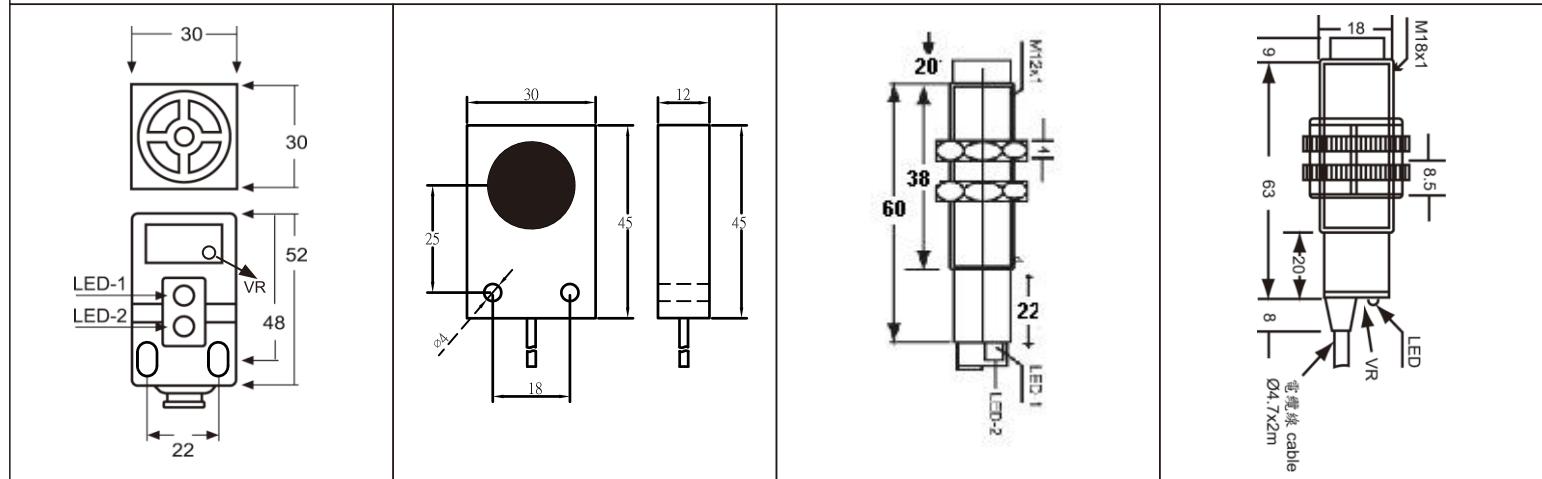
紅色指示燈 Operation indicator (red)

-25°C ~ 70°C

2V max.

強化塑膠 PBT	ABS		
直徑: 4.7mm 長度: 2M , 3蕊 Ø: 4.7mm, length: 2M, 3 core	直徑: 3.8mm 長度: 2M , 3蕊 Ø: 3.8mm, length: 2M, 3 core		直徑: 4.7mm 長度: 2M , 3蕊 Ø: 4.7mm, length: 2M, 3 core
120g	90g	130g	120g
M4Ø螺絲及螺母各2個 M4Ø Screw and Nut---each two units	M3Ø螺絲及螺母各2個 M3Ø Screw and Nut---each two units	M12Ø塑膠螺母2個 M12Ø Plastic units---each two	M18Ø塑膠螺母2個 M18Ø Plastic units---each two

外觀尺寸 Dimensions (mm)



CAPACITIVE PROXIMITY SWITCH

靜電容近接開關

KX-3020-E1	KC-2010-E1	KC-3425-E1
KX-3020-E2	KC-2010-E2	KC-3425-E2
KX-3020-P1	KC-2010-P1	KC-3425-P1
KX-3020-P2	KC-2010-P2	KC-3425-P2
		KC-3425-A1
		KC-3425-A2
20mm(可調式)	10mm(可調式)	25mm(可調式)
0~15mm	0~8mm	0~20mm
鐵、塑膠等非金屬物 can sense almost all of the object available, Ferrous metals		
感應距離10%以下 ≤10% of Sn		
1.1mA		
不可埋入 Non-Flush		
60Hz		
200mA		
IP67		
紅色指示燈 Operation indicator (red)		
-25°C ~ 70°C		
2V max.		
ABS		
直徑: 4.7mm 長度: 2M , 3蕊 Ø: 4.7mm, length: 2M, 3 core		
190g	130g	210g
M30Ø塑膠螺母2個 M30Ø Plastic units---each two	20Ø固定座 Fixed seat	34Ø固定座 Fixed seat
外觀尺寸 Dimensions (mm)		

MAGNETIC PROXIMITY SWITCH

磁感應近接開關



CE



CE

AN-20N

AN-21N

AN-20P

AN-21P

AN-20R

AN-21R

20mm

0~15mm

磁鐵 Magnet

感應距離10%以下 ≤10% of Sn

0.01mA

200Hz

100mA

IP67

紅色指示燈 Operation indicator (red)

-25°C ~ 70°C

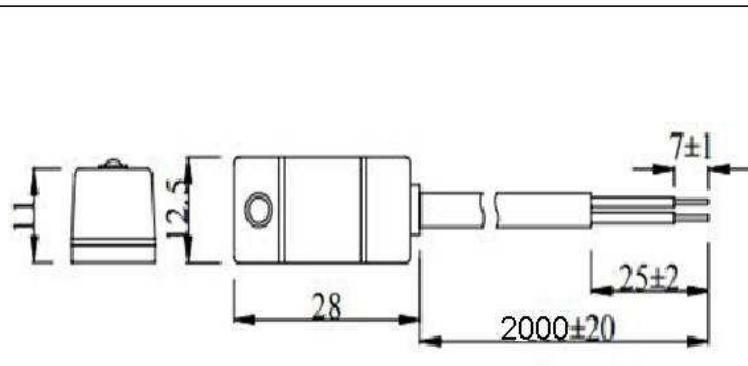
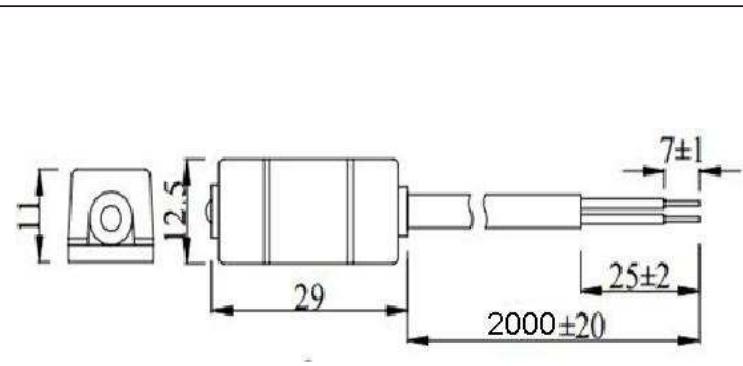
2V max.

鐵殼,塑膠底座 Iron, Base ABS

直徑: 3.8mm 長度: 2M , 3/2蕊 Ø: 3.8mm, length: 2M, 3/2 core

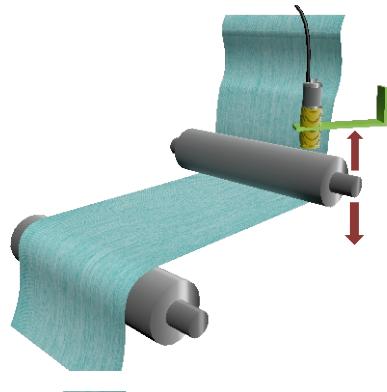
50g

外觀尺寸 Dimensions (mm)



類比近接開關應用

布匹張力檢測 Detecting Tension



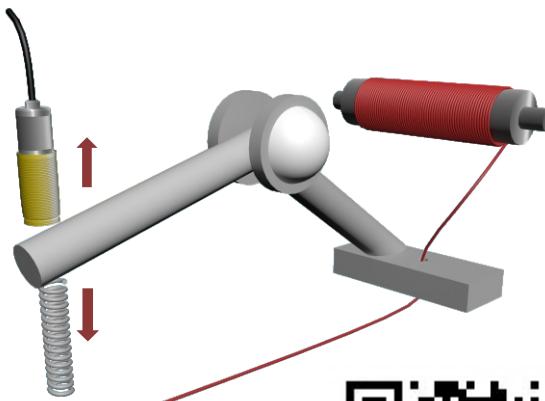
滾輪受布匹拉力牽引而上下移動，使得近接測得滾輪不同之測距，進而回饋至控制系統調控馬達速率，以達到布匹穩定之張力

The roller on the textile machine moves up and down due to different tension of the textile. The proximity switch can detect even minimal changes in position of the roller. These changes in position are reported to a control system to adjust the speed, thereby keeping the stability of the textile tension.

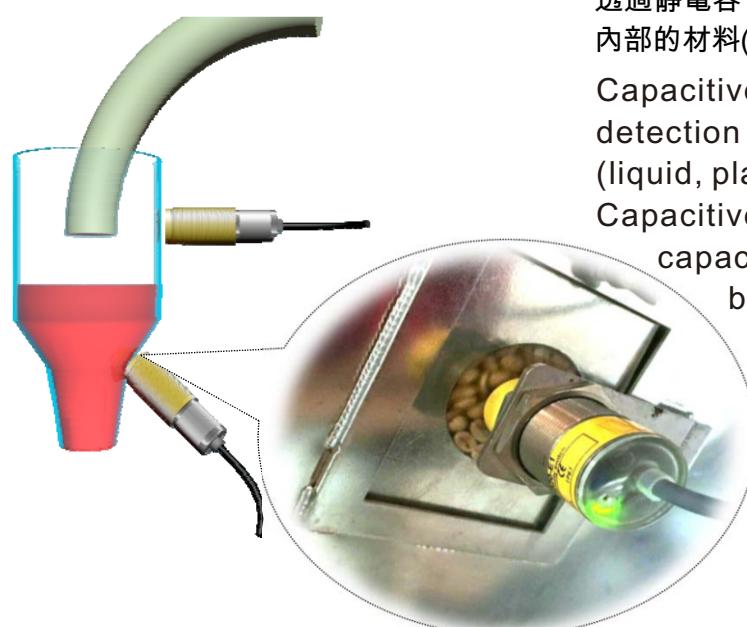
絲線張力檢測 Detecting Fiber Tension

槓桿受絲線拉力不同而上下移動，使得近接可測得不同測距，進而回饋至控制系統調控馬達速率，以達到捲線之穩定張力

The tension of the fiber cause the lever to move up and down. The proximity switch can detect even minimal changes in position of the lever. These changes in position are reported to a control system to adjust the speed, thereby keeping the stability of the fiber tension.



靜電容型開關 Capacitive Proximity Switch



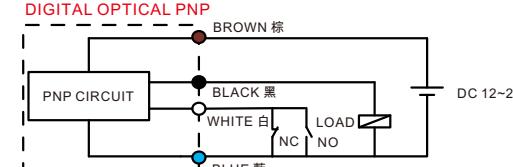
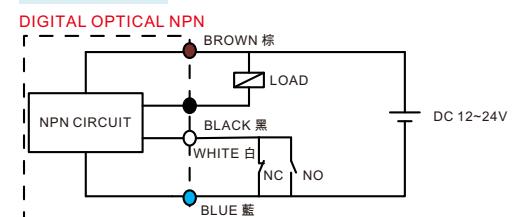
透過靜電容可檢出金屬、非金屬之特性，透過玻璃外箱可檢出內部的材料(水、塑膠、米、豆、粉、鐵等)上下限做補料的控制

Capacitive proximity sensors are used for non-contact detection of metallic objects & nonmetallic objects (liquid, plastic, wooden materials and so on).

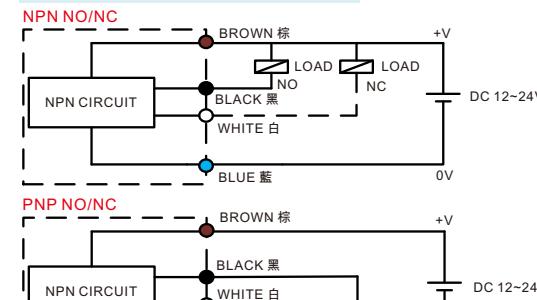
Capacitive proximity sensors use the variation of capacitance between the sensor and the object being detected. This sensitivity regulation is useful in applications, such as detection of full detected. This sensitivity regulation is useful in applications, such as detection of full containers and non-detection of empty containers.

光電開關

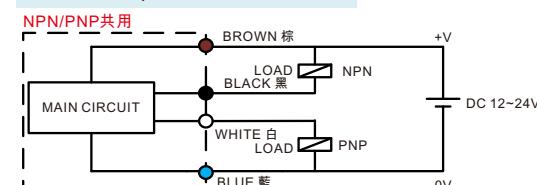
數位線路



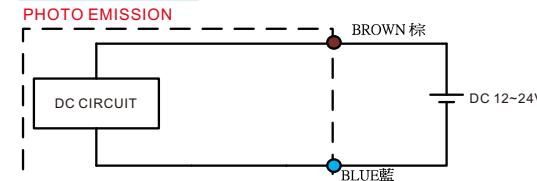
光電NO,NC共用線路



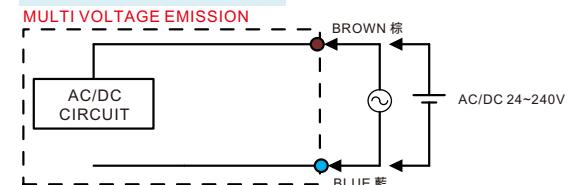
光電PNP,NPN共用線路



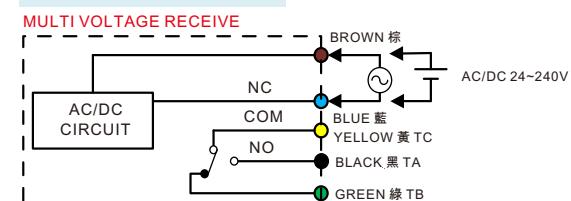
發射器線路



自由電源發射線路



自由電源接收線路

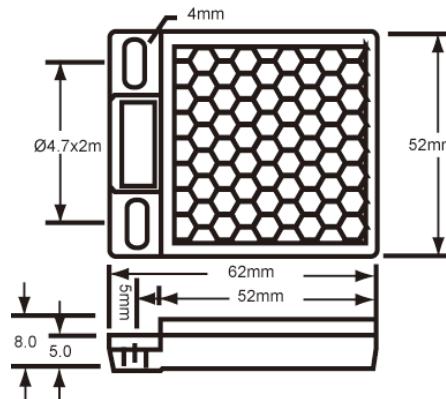


外觀 Appearance

型號 Type	輸出方式 Out type	1 NPN NO/NC
		2 PNP NO/NC
		3 NO NPN/PNP
		4 NC NPN/PNP
		5 RELAY OUTPUT 1a1b

檢出方式	Method of detection
感度調整	Sensitivity
感應距離	Sensing distance
發射器光源	Emission
工作電壓	Current operating voltage
消耗電流	Current consumption
標準檢出物	Standard Sensing object
最大負載流	Load current max.
反應頻率	Response frequency
距差	Differential travel
殘留電壓	Residual output voltage
動作指示燈	Indicator
周圍使用溫度及濕度	Ambient temperature and humidity
結構保護程度	Degree of protection
外殼材質	Housing material
出線方式	Wiring method
重量	Weight
配件	Accessories

Reflector 反射鏡片尺寸



UDN-100D-N	UDX-300D-N
UDN-100D-P	UDX-300D-P
鏡片反射型 Mirror reflex type	
附設定鈕 With Setting Button	
100cm	300cm
紅外線 Infrared type	
DC12 ~ 24V permissible ripple(P.P): 10%max.	
50mA	50mA
極透明體 Transparent	
200mA	
1000Hz	

負載200mA時低於1.2V 1L=200mA, 1.2V max. cable 2m	
綠燈: 電源 紅燈: 輸出 Green LED: power Red LED: output	
-25°C ~ 55°C, 35 ~ 90% RH	
IP65	IP67
ABS	檢出面: 壓克力塑膠, 本體: 黃銅鍍鎳 Detection Surface: Acrylic material Tube: Brass nickel Plated
直徑: 4mm 長度: 2M, 4蕊 Ø: 4mm, length: 2M, 4 core	直徑: 4.7mm 長度: 2M, 4蕊 Ø: 4.7mm, length: 2M, 4 core
120g	170g
M3Ø螺絲及螺母各2個 M3Ø Screw and Nut---each two units	M18Ø螺母及華司各2個 M18Ø Nut and Washer---each two units
外觀尺寸 Dimensions (mm)	

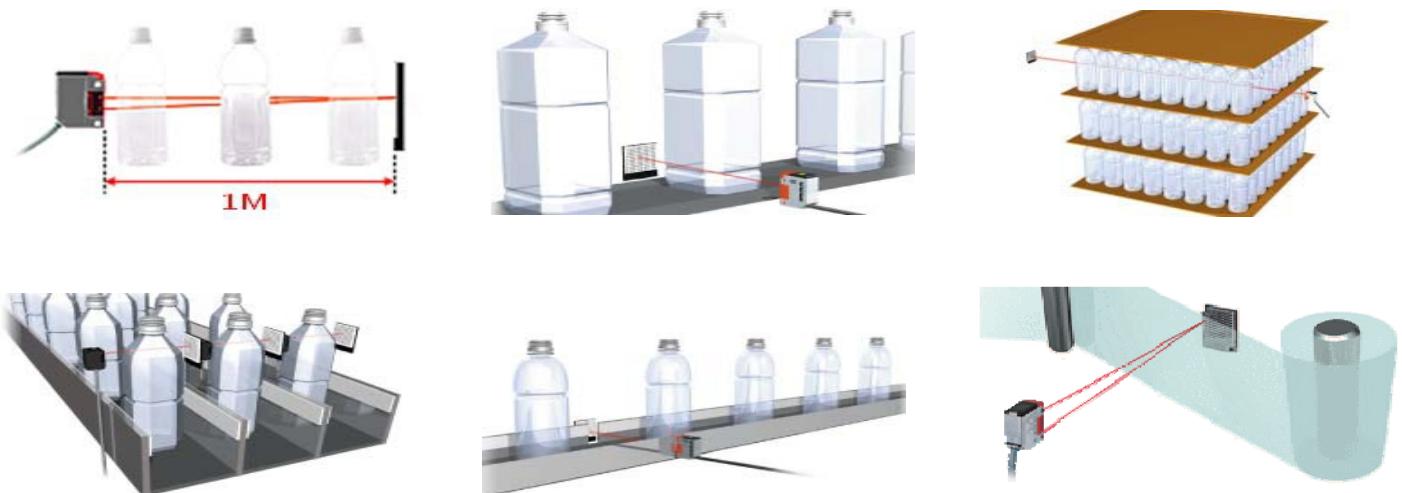
TRANSPARENT DETECTION OF PHOTOELECTRIC SENSOR

透明體檢出光電開關



簡介 Introduction

- 1 專為極透明被測物所設計之光電開關如PE薄膜、瓶子.....等半透明物。
For detecting transparent objects, such as PE film, PE bottle..etc.
- 2 數位化設計、解析度高、能正確捕捉稍微的透光度，備有鏡片反光強度指示燈。
With digital signals and high resolution for penetrability . LED indicates status of mirror reflection
- 3 最長距離3M的測距適用性高。
Maximum detecting distance: 3M.



操作流程 Operating procedures

一、感度設定 Sensitivity Settings :

1. 將光電對準反光片調至黃燈常亮。

Match the reflector opposite to the sensor till the YELLOW LED remains lit..

2. 將被測物（半透明）放至光電和反光片之間，長按 SET鍵3秒見綠燈由讀秒轉為快閃即完成（對著天空長按SET鍵3秒即回復原廠設定。）

Place the sensing object (semi-transparent) between the sensor and the reflector, press SET for 3 sec, it is done when the GREEN LED is blinking with a faster speed.
(Press SET 3 sec sensing the sky to return to ex-factory setting)

二、NO.NC之轉換 Converting NO & NC :

白色線不接為NO，將白色和藍色兩線短路，再次重開電源（開機）即完成NC轉換。

NO : Circuit without WHITE.

NC : WHITE & BLUE short , then switch on the power.

PS.

1. 綠光為電源指示燈Green LED power

2. 黃光為鏡片反光強度指示燈Yellow LED mirror reflection

3. 紅光為輸出信號指示燈Red LED output



INTERVAL SENSING PHOTO SHENSOR

區間型感測光電開關



CE



CE

UDN-20B-N

UDN-20B-P

UDX-30B-N

UDX-30B-P

直接反射型 Reflex type

附設定鈕 With Setting Button

20cm

30cm

紅外線 Infrared type

DC12 ~ 24V permissible ripple(P.P): 10%max.

60mA

50mA

白紙8x8cm white paper

200mA

1000Hz

負載200mA時低於1.2V 1L=200mA, 1.2V max. cable 2m

綠燈: 電源 紅燈: 輸出 Green LED: power Red LED: output

-25°C ~ 55°C, 35 ~ 90% RH

IP65

IP67

ABS

檢出面: 壓克力塑膠, 本體: 黃銅鍍鎳 Detection Surface:
Acrylic material Tube: Brass nickel Plated

直徑: 4mm 長度: 2M, 4蕊 Ø: 4mm, length: 2M, 4 core

直徑: 4.7mm 長度: 2M, 4蕊 Ø: 4.7mm, length: 2M, 4 core

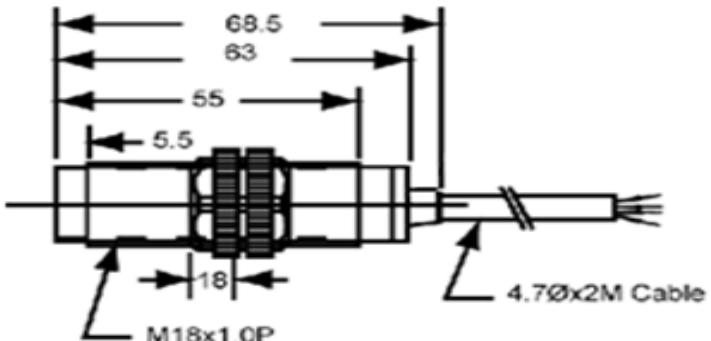
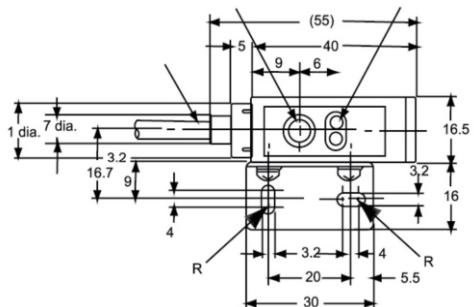
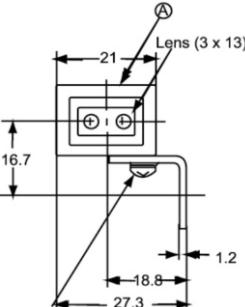
100g

150g

M3Ø螺絲及螺母各2個 M3Ø Screw and Nut---each two units

M18Ø螺母及華司各2個 M18Ø Nut and Washer---each two units

外觀尺寸 Dimensions (mm)



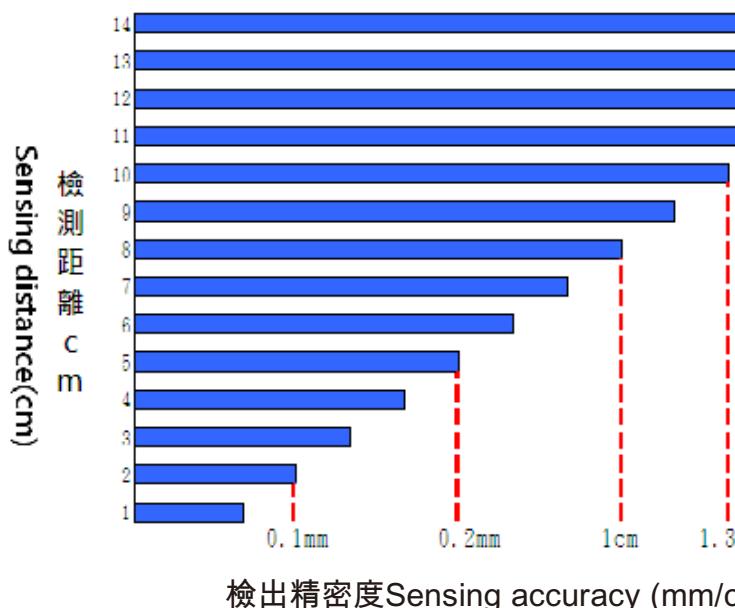
簡介 Introduction

可去除比被測物亮或同顏色的背景(背景物)最高精度可達距差0.1mm以內，最低精度距差在1公分

Background Elimination when sensing object is with similar color as the background.

※精度會隨著測距不同而改變，測距愈短，精度愈高，最適用於PCB的流程穩定檢測

Accuracy is changed by the sensing distance. The shorter the distance the better the accuracy. This model is most suitable on PCB detecting procedure.



在被測物和背景物相同顏色(白色檢出物)時所做出的距差值表，會有測距愈短距差精度愈小，測距愈長距差精度愈大

The table shows when Sensing Object is with the same color as it's background color(our standard testing object is white) the sensing accuracy rate is smaller when the distance is shorter; and the sensing accuracy rate is bigger when the distance is longer.

操作流程 Operating procedures

一、感度設定：Sensitivity Settings

1. 將光電對準被測物長按SET鍵3秒，見綠燈由慢閃轉為快閃即完成。

Focus the sensor to the sensing object, press SET for 3 sec, it is done when the GREEN LED is blinking with a faster speed.

2. 當被測物不是單一顏色而有多種顏色形態時，可將光電對準後方固定形態背景物時，做與項目1相同設定動作即可，(光電同時可偵測多種不同顏色物體之被測物。)

When the sensing object is with multicolors and different shape, we can focus the sensor to the background which is with monicolor and fixed shape and it can sense more than one sensing object with multicolors and different shape at the same time. (Kindly set according to Step 1.)

二、NO.NC之轉換 Converting NO & NC :

白色線不接為NO，將白色和藍色兩線短路，再次重開電源（開機）即完成NC轉換。

NO : Circuit without WHITE. NC : WHITE & BLUE short , then switch on the power.

DIDITAL PHOTO SENSOR

數位型光電開關



CE



CE



CE

UDN-15R-N

UDN-15R-P

直接反射型 Reflex type
附設定鈕 With Setting Button

15cm

30cm

50cm

紅外線 Infrared type

DC12 ~ 24V permissible ripple(P.P): 10%max.

50mA

白紙8x8cm white paper

200mA

1000Hz

感應距離15%以下 ≤15% of Sn

負載200mA時低於1.2V 1L=200mA, 1.2V max. cable 2m

綠燈: 電源 紅燈: 輸出 Green LED: power Red LED: output

-25°C ~ 55°C, 35 ~ 90% RH

IP65

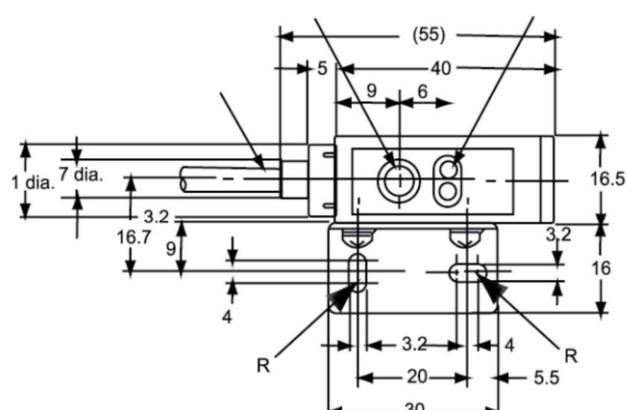
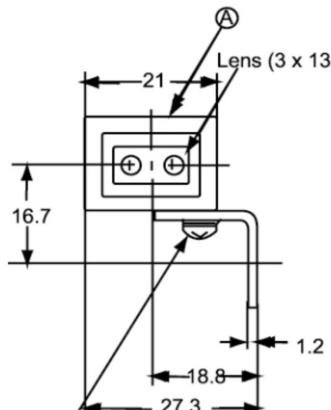
ABS

直徑: 4mm 長度: 2M, 4蕊 Ø: 4mm, length: 2M, 4 core

100g

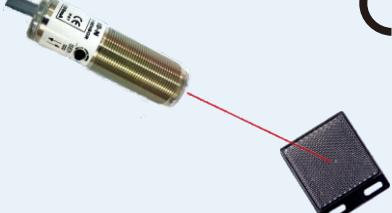
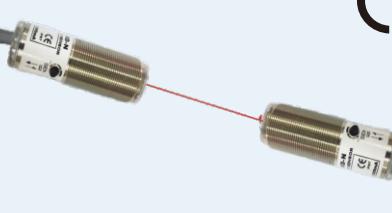
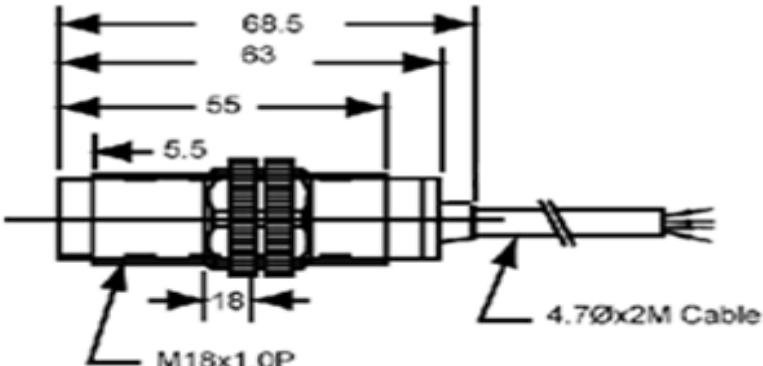
M3Ø螺絲及螺母各2個 M3Ø Screw and Nut---each two units

外觀尺寸 Dimensions (mm)



LASER PHOTO SENSOR

雷射微細檢出光電開關

		
LDX-10R-N	LDX-300D-N	LDX-5000T-N
LDX-10R-P	LDX-300D-P	LDX-5000T-P
直接反射型 Reflex type	鏡片反射型 Mirror reflex type	對照型 Through - beam type
附設定鈕 With Setting Button		
10cm	300cm	5000cm
雷射紅光 Laser red light		
DC12 ~ 24V permissible ripple(P.P): 10%max.		
60mA		
極細微體(≥ 200 微米)Extra fine (≥ 200 microns)	5mm以上物體5mm or more objects	極細微體(≥ 500 微米)Extra fine (≥ 500 microns)
200mA		
1000Hz		
感應距離15%以下 $\leq 15\%$ of Sn		
負載200mA時低於1.2V 1L=200mA, 1.2V max. cable 2m		
綠燈: 電源 紅燈: 輸出 Green LED: power Red LED: output		
-25°C ~ 55°C, 35 ~ 90% RH		
IP67		
檢出面: 壓克力塑膠, 本體: 黃銅鍍鎳 Detection Surface: Acrylic material Tube: Brass nickel Plated		
直徑: 4.7mm 長度: 2M, 4蕊 \varnothing : 4.7mm, length: 2M, 4 core		
150g	170g	300g
M18Ø螺絲及螺母各2個 M18Ø Screw and Nut---each two units		M18Ø螺母及華司各4個 M18Ø Nut and Washer---each four units
外觀尺寸 Dimensions (mm)		
		

M12 TUBULAR PHOTO SENSOR

M12圓管型光電開關

UX-05R/12R-1	UX-60D-1	UX-200T-1
UX-05R/12R-2	UX-60D-2	UX-200T-2
直接反射型 Reflex type	鏡片反射型 Mirror reflex type	對照型 Through - beam type
附單圈調整鈕 Single turn		
5/12cm	60cm	200cm
紅外線 Infrared type		
DC12 ~ 24V permissible ripple(P.P): 10%max.		
40mA		
白紙8x8cm white paper	不透明體 Opaque	
200mA		
100Hz		
感應距離15%以下 ≤15% of Sn	-----	
負載200mA時低於1.2V 1L=200mA, 1.2V max. cable 2m		
綠燈: 電源 紅燈: 輸出 Green LED: power Red LED: output		
-25°C ~ 55°C, 35 ~ 90% RH		
IP64		
ABS		
直徑: 3.8mm 長度: 2M, 4蕊 Ø: 3.8mm, length: 2M, 4 core		
50g	70g	100g
M12Ø塑膠螺母2個 M12Ø Plastic units---each two		M12Ø塑膠螺母4個 M12Ø Plastic units---each four
外觀尺寸 Dimensions (mm)		

M30 TUBULAR PHOTO SENSOR

M30圓管型光電開關

UX-100R-1	UX-500D-1	UX-1800T-1
UX-100R-2	UX-500D-2	UX-1800T-2
直接反射型 Reflex type	鏡片反射型 Mirror reflex type	對照型 Through - beam type
附單圈調整鈕 Single turn		
100cm	500cm	1800cm
紅外線 Infrared type		
DC12 ~ 24V permissible ripple(P.P): 10%max.		
40mA		
白紙8x8cm white paper	不透明體 Opaque	
200mA		
100Hz		
感應距離15%以下 ≤15% of Sn	-----	
負載200mA時低於1.2V 1L=200mA, 1.2V max. cable 2m		
綠燈: 電源 紅燈: 輸出 Green LED: power Red LED: output		
-25°C ~ 55°C, 35 ~ 90% RH		
IP67		
ABS		
直徑: 4.7mm 長度: 2M, 4蕊 Ø: 4.7mm, length: 2M, 4 core		
120g	140g	240g
M30Ø塑膠螺母2個 M30Ø Plastic units---each two		M30Ø塑膠螺母4個 M30Ø Plastic units---each four
外觀尺寸 Dimensions (mm)		

M18 SHORT PLASTIC TUBULAR PHOTO SENSOR

M18短體型光電開關

UX-40R-SN	UX-300D-SN	UX-1000T-SN	UX-2000T-SN
UX-40R-SP	UX-300D-SP	UX-1000T-SP	UX-2000T-SP
直接反射型 Reflex type	鏡片反射型 Mirror reflex type	對照型 Through - beam type	對照型 Through - beam type
附單圈調整鈕 Single turn			
40cm	300cm	1000cm	2000cm
紅外線 Infrared type			
DC12 ~ 24V permissible ripple(P.P): 10%max.			
<15mA	<15mA	<25mA	<25mA
白紙8x8cm white paper	不透明體 Opaque		
200mA			
80Hz	60Hz		
感應距離15%以下 ≤15% of Sn	-----		
負載200mA時低於1.2V 1L=200mA, 1.2V max. cable 2m			
綠燈: 電源 紅燈: 輸出 Green LED: power Red LED: output			
-25°C ~ 55°C, 35 ~ 90% RH			
IP67			
ABS			
直徑: 4.7mm 長度: 2M, 4蕊 Ø: 4.7mm, length: 2M, 4 core			
130g	150g	300g	300g
M18Ø塑膠螺母1個 M18Ø Plastic units---each one	M18Ø塑膠螺母2個 M18Ø Plastic units---each two		
外觀尺寸 Dimensions (mm)			
 Sensitivity Adj	 Indicator Red LED Power Green LED	 33mm 16mm 30mm 7mm 7mm	 23mm M18mm M18x1P

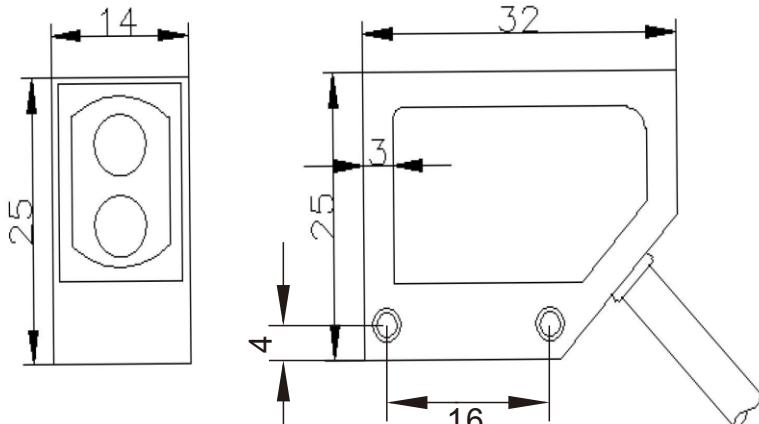
M18 TUBULAR PHOTO SENSOR

M18圓管型光電開關

UX-10R-N	UX-30R-N	UX-300D-N	UX-1000T/ 2000T-N			
UX-10R-P	UX-30R-P	UX-300D-P	UX-1000T/ 2000T-P			
UX-10R-1	UX-30R-1	UX-300D-1	UX-1000T/ 2000T-1			
UX-10R-2	UX-30R-2	UX-300D-2	UX-1000T/ 2000T-2			
直接反射型 Reflex type	直接反射型 Reflex type	鏡片反射型 Mirror reflex type	對照型 Through - beam type			
附單圈調整鈕 Single turn						
10cm	30cm	300cm	1000/ 2000cm			
紅外線 Infrared type						
DC12 ~ 24V permissible ripple(P.P): 10%max.						
<15mA	<15mA	<25mA	<25mA			
白紙8x8cm white paper	不透明體 Opaque					
200mA						
80Hz	60Hz					
感應距離15%以下 ≤15% of Sn	-----					
負載200mA時低於1.2V 1L=200mA, 1.2V max. cable 2m						
綠燈: 電源 紅燈: 輸出 Green LED: power Red LED: output						
-25°C ~ 55°C, 35 ~ 90% RH						
IP67						
本體:工程塑膠(可另選黃銅管鍍鎳) Housing:PBT material , Brass with nickel plated available						
直徑: 4.7mm 長度: 2M, 4蕊 Ø: 4.7mm, length: 2M, 4 core						
120g	140g	240g				
M18Ø塑膠螺母2個 M18Ø Plastic units---each two	M18Ø塑膠螺母4個 M18Ø Plastic units---each four					
外觀尺寸 Dimensions (mm)						
<p>Technical drawing showing the dimensions of the M18 tubular photo sensor. Key dimensions labeled are: total length 68.5, body length 63, gap 5.5, base diameter 18, and cable size 4.7Øx2M.</p>						

SMALL PENTAGON TYPE PHOTO SENSOR

小五邊型光電開關

					
US-10R-1	US-40R-1	US-200D-1	US-500T-1		
US-10R-2	US-40R-2	US-200D-2	US-500T-2		
直接反射型 Reflex type	直接反射型 Reflex type	鏡片反射型 Mirror reflex type	對照型 Through - beam type		
附單圈調整鈕 Single turn					
10cm	40cm	200cm	500cm		
紅外線 Infrared type					
DC12 ~ 24V permissible ripple(P.P): 10%max.					
40mA	50mA	40mA	50mA		
白紙8x8cm white paper					
200mA					
100Hz					
感應距離15%以下 \leq 15% of Sn					
負載200mA時低於1.2V 1L=200mA, 1.2V max. cable 2m					
綠燈: 電源 紅燈: 輸出 Green LED: power Red LED: output					
-25°C ~ 55°C, 35 ~ 90% RH					
IP65					
ABS					
直徑: 4.7mm 長度: 2M, 4蕊 \varnothing : 4.7mm, length: 2M, 4 core					
100g		120g	200g		
螺母, 3Ø螺絲各2個, nut and 3Ø screw--each two units			螺母, 3Ø螺絲各4個, nut and 3Ø screw--each four units		
外觀尺寸 Dimensions (mm)					
					

ULTRA-SMALL PHOTO SENSOR

超小型光電開關

UY-10R-N	UY-30R-N	UY-1MD-N	UY-3MT-N
直接反射型 Reflex type	直接反射型 Reflex type	鏡片反射型 Mirror reflex type	對照型 Through - beam type
附單圈調整鈕 Single turn			
10cm	30cm	100cm	300cm
紅外線 Infrared type			
DC12 ~ 24V permissible ripple(P.P): 10%max.			
<15mA			<25mA
白紙8x8cm white paper		不透明體 Opaque	
200mA			
80Hz			
感應距離15%以下 $\leq 15\%$ of Sn		-----	
負載200mA時低於1.2V 1L=200mA, 1.2V max. cable 2m			
綠燈: 電源 紅燈: 輸出 Green LED: power Red LED: output			
-25°C ~ 55°C, 35 ~ 90% RH			
IP64			
ABS			
直徑: 3mm 長度: 2M, 4蕊 Ø: 3mm, length: 2M, 4 core			
45g	65g	90g	
螺母, 3Ø螺絲各2個, nut and 3Ø screw--each two units		螺母, 3Ø螺絲各4個, nut and 3Ø screw--each four units	
外觀尺寸 Dimensions (mm)			

SMALL PHOTO SENSOR

小型光電開關

UN-15R-N	UN-30R-N	UN-200D-N	UN-200T-N
UN-15R-P	UN-30R-P	UN-200D-P	UN-200T-P
直接反射型 Reflex type	直接反射型 Reflex type	鏡片反射型 Mirror reflex type	對照型 Through - beam type
附單圈調整鈕 Single turn			
15cm	30cm	200cm	200cm
紅外線 Infrared type			
DC12 ~ 24V permissible ripple(P.P): 10%max.			
40mA以下 40mA max.			50mA以下 50mA max.
透明體,不透明體 Transparent and opaque materials	不透明體 Opaque		
200mA			
80Hz			
感應距離15%以下 ≤15% of Sn	-----		
負載200mA時低於1.2V 1L=200mA, 1.2V max. cable 2m			
綠燈: 電源 紅燈: 輸出 Green LED: power Red LED: output			
-25°C ~ 55°C, 35 ~ 90% RH			
IP65			
ABS			
直徑: 4.7mm 長度: 2M, 4蕊 Ø: 4.7mm, length: 2M, 4 core			
100g	120g	200g	
螺母, 3Ø螺絲各2個, nut and 3Ø screw--each two units	螺母, 3Ø螺絲各4個, nut and 3Ø screw--each four units		
外觀尺寸 Dimensions (mm)			
<p>Lens (3 x 13)</p>	<p>(55) 16.5 16.7 3.2 3.2 4 3.2 16.5 1 dia. 7 dia. 9 6 4 5 6 16.5 16.7 9 4 3.2 16.5 16.5 3.2 16.5 R R</p>		

MULTI VOLTAGE PHOTO SENSOR WITH AMPLIFIER

自由電源擴大器內臟型光電開關

UP-100R/ 200R	UP-300D/ 500D/ 1000D	UP-1000T/ 2000T
直接反射型 Reflex type	鏡片反射型 Mirror reflex type	對照型 Through - beam type
附單圈調整鈕 Single turn		
100/200cm	300/500/1000cm	1000/2000cm
紅外線 Infrared type		
24 ~ 240VAC/ DC 52/ 60Hz		
低於2.5W 2.5W max.		
白紙15x15cm white mat paper	不透明體 Opaque (56mm)	不透明體 Opaque (20mm)
接點輸出: AC250V, 1A (COSØ1=1) DC24V 1A, Relay output: 1A at 250VAC, 1A at 24VDC		
30Hz		
感應距離15%以下 $\leq 15\%$ of Sn	-----	

感應時LED亮 Light indicator(green)		
-25°C ~ 55°C, 35 ~ 90% RH		
IP65		
ABS		
直徑: 6mm 長度: 2M, 5蕊 Ø: 6mm, length: 2M, 5 core		
120g	140g	240g
螺母, 5Ø螺絲各2個, nut and 5Ø screw--each two units		
外觀尺寸 Dimensions (mm)		

U TYPE PHOTO SENSOR

溝型光電開關

CE

CE

CE

UT-06N-R

UT-06N-G

UT-06N

UT-06P-R

UT-06P-G

UT-06P

直接反射型 Reflex type

附單圈調整鈕 Single turn

6mm

紅光 Red

綠光 Green

紅外線 Infrared

DC12 ~ 24V permissible ripple(P.P): 10%max.

30mA

半透明體 Translucent

200mA

100Hz

負載200mA時低於1.2V 1L=200mA

綠燈: 電源 紅燈: 輸出 Green LED: power Red LED: output

-25°C ~ 55°C, 35 ~ 90% RH

IP65

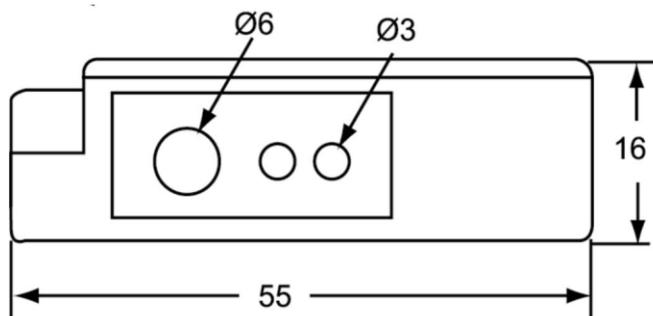
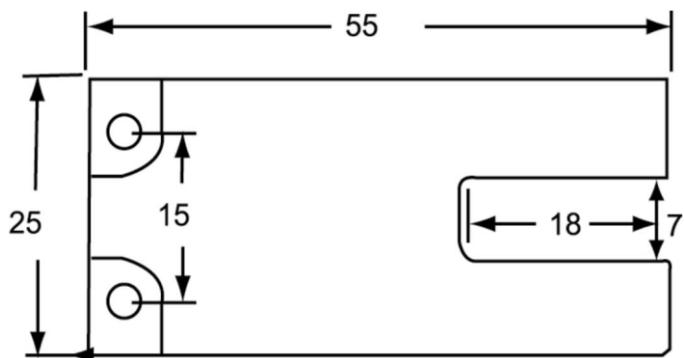
ABS

直徑: 4.7mm 長度: 2M, 4蕊 Ø: 4.7mm, length: 2M, 4 core

100g

螺母, 3Ø螺絲各2個, nut and 3Ø screw--each two units

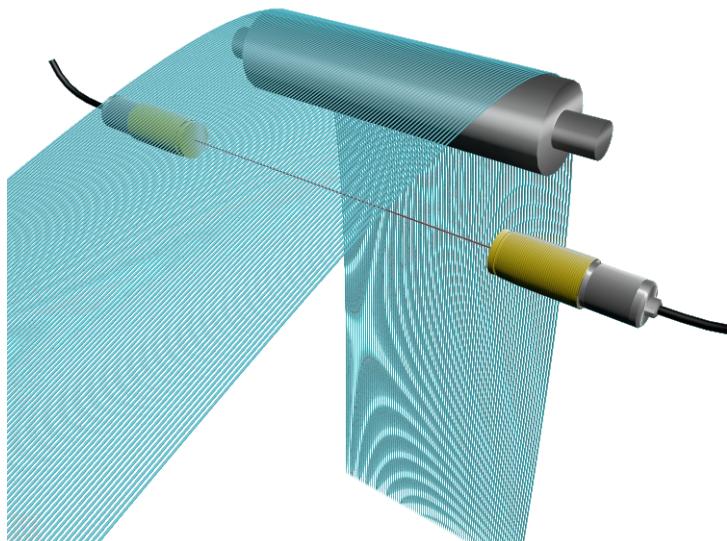
外觀尺寸 Dimensions (mm)



光電開關應用

雷射光電型-斷線檢知

Laser Photo Sensor – (Detect wire break)



可利用雷射細小之發射光束進而測得極細小之被測物，如電線、絲線等...或可透過微小孔洞檢測不受周邊機構影響。

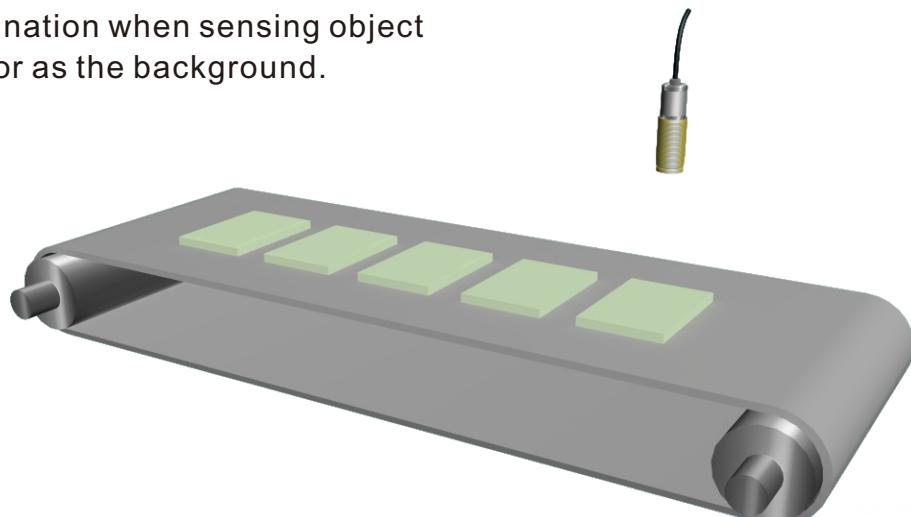
Laser Photo Sensors provide a visible red beam that simplifies alignment in small part detection and measurement applications such as fibres or wires..etc or sensing through small holes without being effected by the surroundings.



區間檢出型光電 Interval Sensing Photo Sensor

數位區間型光電可依一個固定之背景顏色，進而測得和背景相同顏色之被測物。

Background Elimination when sensing object is with similar color as the background.



MARKING & DETECTING PHOTO SENSOR

標字檢測光電開關

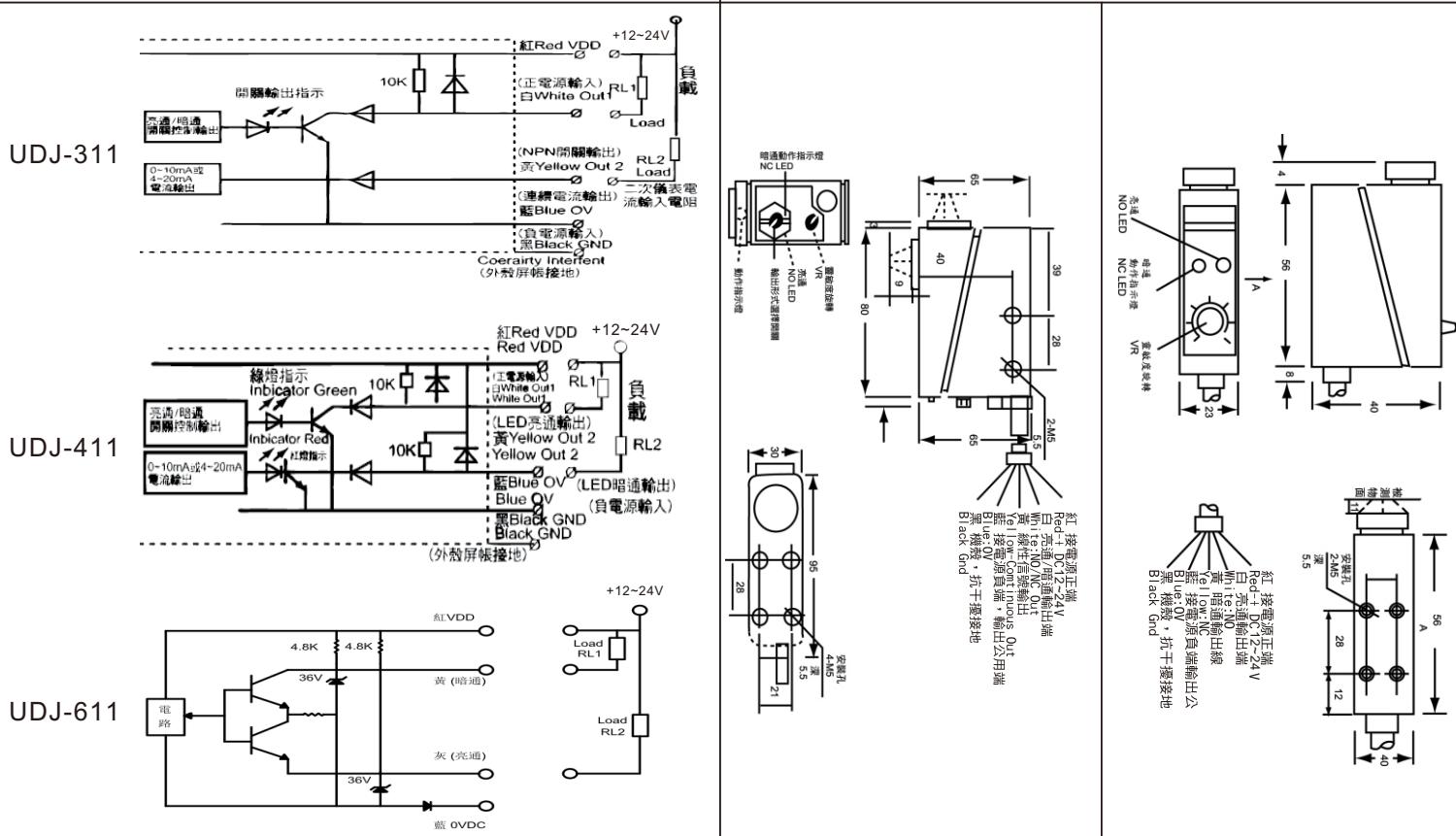
外觀 Appearance



型號	TYPE	UDJ-311 □	UDJ-411 □
輸出形式	開關輸出 Switch output 類比式信號 Analog output	亮通/暗通開關任選(NPN輸出型) NO/NC NPN 0.5~5V類比電壓信號輸出內阻為10KΩ,0~10mA(4~20mA)	
發射器光源	Emission	白光 White Light	紅光/綠光 Red Light/ Green Light
響應時間	Response time	50us	
感應距離	Sensing distance	9mm	11mm
開關輸出電流	Switch output current	<200mA	
開關輸出電壓	Switch output voltage	低電壓(通)<1.5V,高電壓(斷):電壓電源-0.7(RL=∞) Low:<1.5V,Higt:Supply Voltage -0.7(RL=∞)	
電源電壓電流	Supply voltage current	12~24VDC, <80mA	
保護功能	Protection circuit	電源反向保護, 負載短路保護 Power Loop, Load Short Circuit Loop	
周圍使用溫度	Ambient operating temperature	溫度0~50°C,日曬<10000 Lux	Sunlight: 10000 Lux Max.
外殼材質	Housing material	鑄鐵 Iron	
出線方式	Wiring method	長度:2M	length: 2M
重量	Weight	500g	200g

接線方式 Wiring method

外觀尺寸 Dimensions (mm)



MARKING & DETECTING PHOTO SENSOR

標字檢測光電開關



UDJ-611 □

亮明暗通雙輸出

白光 White Light

1us

12mm

<200mA

低電壓(通)<1.5V,高電壓(斷):電壓電源-0.7(RL=∞)

Low:<1.5V,Higt:Supply Voltage -0.7(RL=∞)

12~24VDC, <45mA

電源反向保護, 負載短路保護

Power Loop, Load Short Circuit Loop

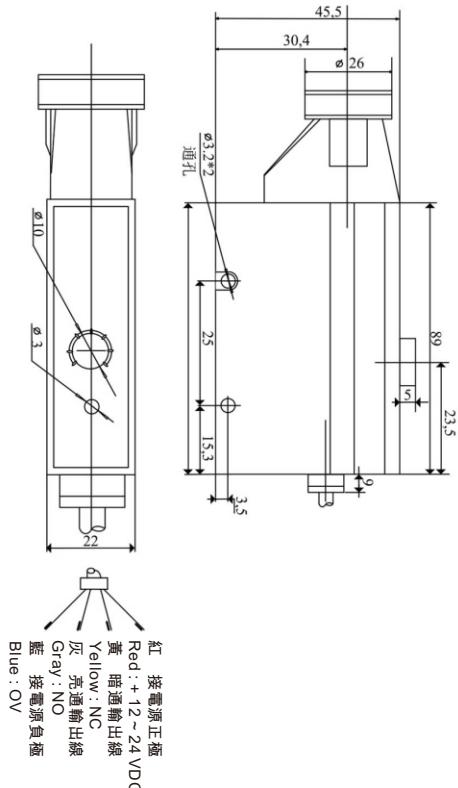
溫度0~50°C, 日照 < 10000 Lux Sunlight: 10000 Lux Max.

ABS

長度:2M length: 2M

160g

外觀尺寸 Dimensions (mm)



色採檢出能力分析

底色 \ 標誌色	黑 Black	紅 Red	橘 Orange	黃 Yellow	綠 Green	藍 Blue	白 White
白White	W.R.G	W.G	W.G	W	W.R	W.R.G	
藍Blue	W	W.R	W.G.R	W.G.R	W.G		W.G.R
綠Green	W.G	W.G.R	W.G.R	W.G.R		G	W.G.R
黃Yellow	W.G.R	W.G		W	W.R	W.G.R	W
橘Orange	W.G.R	W.G			W	W.R	W.G.R
紅Red	W.R			W.G	W.G.R	W.R	W.G
黑Black		W.R	W.G.R	W.G.R	W.G	W	W.G.R

W: 白光 R: 紅光 G: 綠光 B: 藍光
White Red Green Blue

應用例 Application

泛用於包裝機、印刷機及各種極需精準產品印刷定位機台，光電備有紅光、綠光、藍光及白光可檢測各種補色對比之印刷顏色。及白色光源更可廣泛檢測全彩之印刷顏色。

Used on packaging machine, printing machine and various types of precise positioning printing machine. It has red light, green light, blue light and white light for detecting all types of color contrast in printing. And white light is even available for detecting full colors in printing.

安裝注意事規 Installation precautions

依光電設計之最佳焦距、距離、安裝及光電鏡頭和被測標誌點成90度之最佳安裝角度。

可依印刷標誌點顏色不同，依對照表選購適合之光源。

依上述安裝後可適度微調VR，將標誌點和底色細調色差至使光電有所動作為止。

Please refer to the optimized sensing and setting distance of the sensor and kindly install at 90 degrees from the sensor lens to the sensing mark. Please refer to the different printing marks to select the suitable light source.

After installation, VR can be slightly adjusted till the sensor is operating correctly.

FIBEROPTIC PHOTO SENSOR (Body)

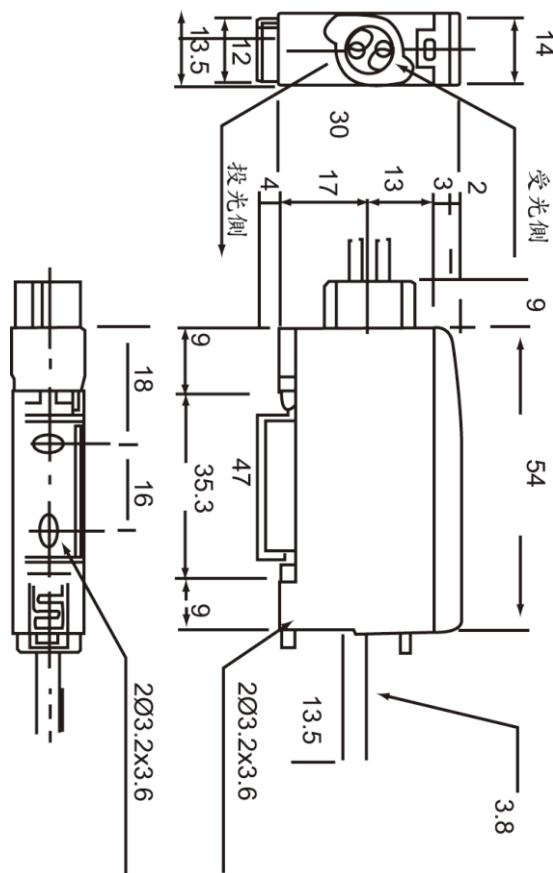
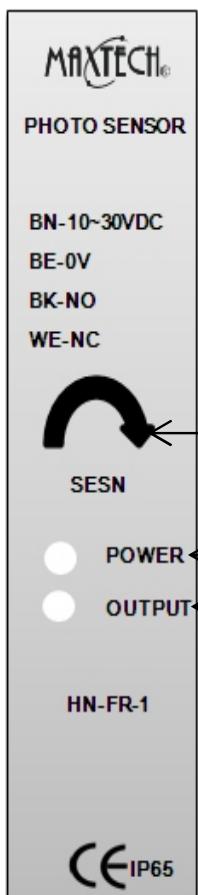
光纖式光電開關

外觀 Appearance



CE

型號	TYPE	HN-FR-1
工作電壓	Current operating voltage	DC12 ~ 24V permissible ripple(P.P): 10%max.
響應時間	Response time	1ms Max.
控制輸出	Control output load	100mA
發射器光源	Emission	Red LED 紅光
消耗電流	Current consumption	40mA Max.
動作指示燈	Indicator	綠燈: 電源 紅燈: 輸出 Green LED: power Red LED: outpot
短路保護	Short circuit proof	YES
結構保護程度	Degree of protection	IP65
周圍使用溫度	Ambient temperature	-25°C ~ 55°C
外殼材質	Housing material	ABS
出線方式	Wiring method	長度:2M length: 2M
重量	Weight	100g
面板說明	Panel Description	外觀尺寸 Dimensions (mm)



FIBEROPTIC PHOTO SENSOR (Body)

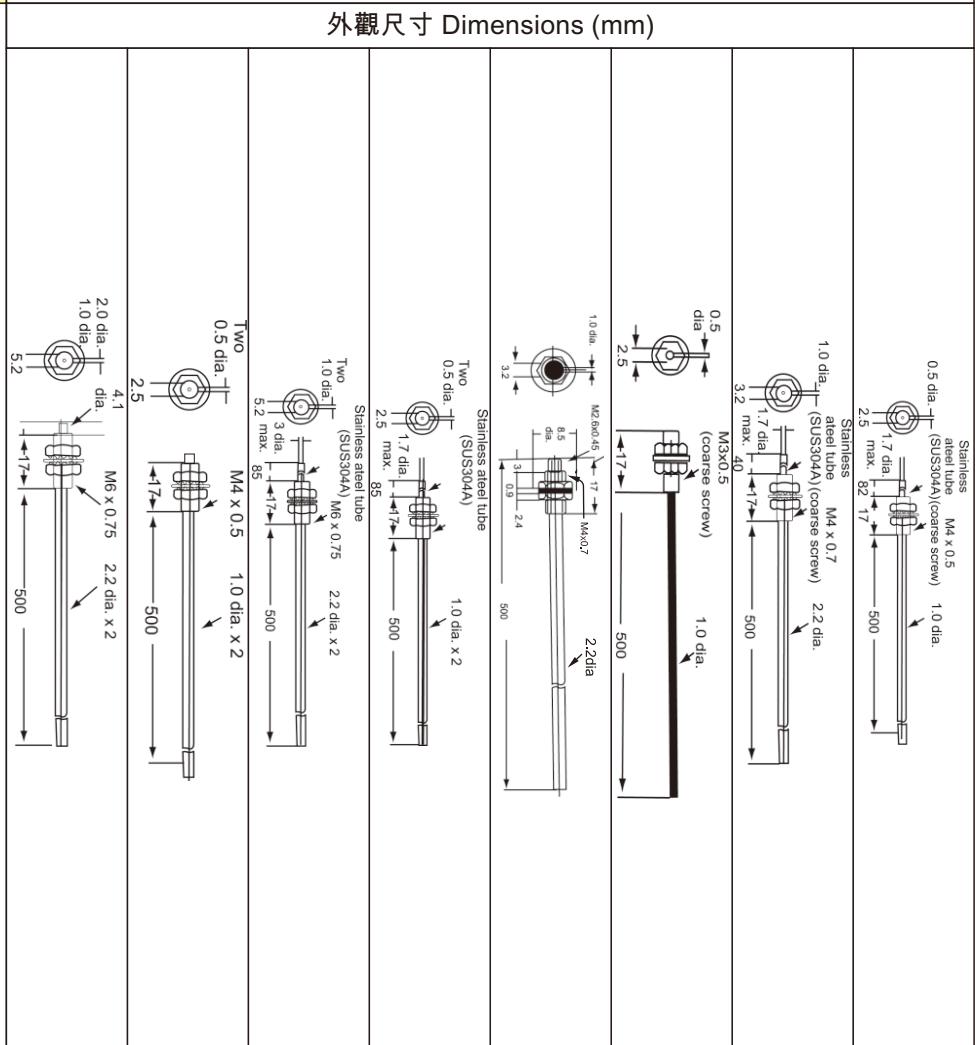
光纖式光電開關

外觀 Appearance



型號	TYPE	H-CR-05	H-CR-05A	H-CR-06	H-CR-06A	H-SP-05	H-SP-05A	H-SP-06	H-SP-06A
頭部尺寸	Fiber size	M6 screw	M4 screw	M6 screw	M4 screw	M4 screw	M3 screw	M4 screw	M4 screw
感應距離	Sensing distance	4cm	12cm	4cm	12cm	15cm	5cm	15cm	5cm
光纖圓徑	Fiber diameter	外徑2.2mm 內徑1mm	外徑1mm 內徑0.5mm	外徑2.2mm 內徑1mm	外徑1mm 內徑0.5mm	外徑2.2mm 內徑1mm	外徑1mm 內徑0.5mm	外徑2.2mm 內徑1mm	外徑1mm 內徑0.5mm
檢出方式	Method of detection	直接反射型 Reflex type				對照型 Through - beam type			
標準檢出物	Standard Sensing object	白紙3x3cm white mat paper				Opaque (1.0mm dia.)	Opaque (0.5mm dia.)	Opaque (1.0mm dia.)	Opaque (0.5mm dia.)
彎曲半徑	Bending radius	>R: 1/5mm							
周圍使用溫度	Ambient temperature	-25°C ~ 55°C							
結構保護程度	Degree of protection	IP65							
外殼材質	Housing material	Plastic							
出線方式	Wiring method	長度:1M/ 2M length: 1M/ 2M							
重量	Weight	20g							

外觀尺寸 Dimensions (Units mm)



FIBEROPTIC PHOTO SENSOR (Body)

光纖式光電開關

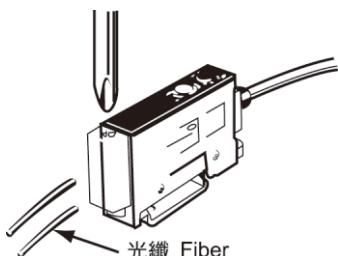
● 鎖緊光纖單元 Tightening Fiber Unit

以低於8kg-cm之扭力鎖緊光纖單元，則將大幅減低感測距離。
Tighten the fiber unit at a torque less than 8 kg-cm. Failure to do so will result in greatly reduced sensing distance.



插入光纖單元 Inserting the Fiber Unit

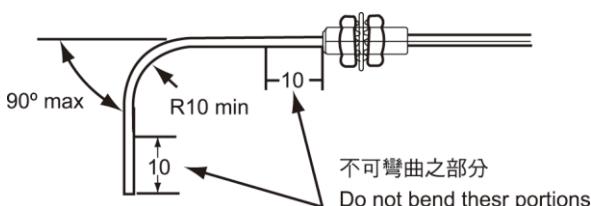
當將光纖尖端插入HN-FR當放大器之孔，在光纖接觸孔內向皮墊時，您可以感覺到輕微的阻力，輕輕地將它推到底，鎖緊放大器上固定螺絲，如下圖。When inserting the tip of each fiber into the hole on the HN-FR amplifier unit, you may feel a slight resistance when the fiber comes into contact with the rubber gasket inside the hole. Nevertheless, push in the fiber farther, until it stops. Tighten the securing screw on the amplifier, as shown below.



不鏽鋼管的彎曲弧度

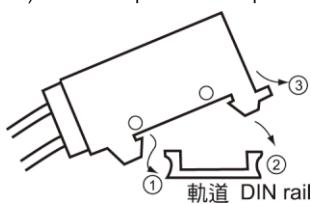
Bending Radius of Stainless Steel Tube

不鏽鋼管的彎曲弧度越大越好，最少要有10mm，最好有25mm，如果彎曲少於25mm，感到距離將減少，（隨彎曲弧度大小而定）
Bend the stainless steel tube in as large a radius as possible, at least 10mm, but preferably 25mm. If the tube is bent less than 25mm, the sensing distance will decrease, in proportion to the bending radius.



安裝放大器 Mounting Amplifier Unit

放大器上的不可動鉤掛於DIN（或艾安托架）軌之一，再把放大器往下推直到卡緊。
Engage the non-movable hook on the amplifier unit to one rail of the DIN (or other bracket) rail. Then push the amplifier unit downward, until it clicks.



要拆卸放大器，放大器倒退拉，朝向放大器的彈簧負荷鉤，再不可動鉤退出軌條：標準起子也可用來釋放放大器彈簧負荷力。

To remove the amplifier unit, pull the amplifier unit backward, towards the springloaded hook of the amplifier unit. Then lift the non-movable hook off the rail. A standard screwdriver can also be used to release the amplifier's spring-loaded catch.

配線Wiring

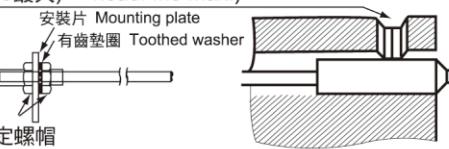
如果光電感測器得輸入／輸出與電源線、高壓線配置在相同的導管中，將導致光電感測器失敗，甚至損壞（因電噪音而起），分開配線，或使用遮蔽線做為光電感測器的輸入／輸出線。

If the Input/output lines of the photoelectric sensor are placed in the same conduit or duct as power lines or high-tension lines, the photoelectric sensor may be induced to malfunction, or even be damaged, by electrical noise. Either separate the wiring, or use shielded lines as input/output lines to the photoelectric sensor.

● Mounting sensor head

以低於8kg-cm之扭力鎖緊光纖單元，則將大幅減低感測距離。
Mount the sensor head by referring to the following figures and table.

固定螺絲 Set screw (pan head or recessed head. M3 max.)
Tightening torque: 3kgf-cm max.



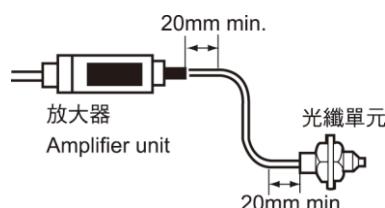
固定螺帽 Fixing nut (accessory)

螺帽直徑 Screw diameter	鎖緊扭力 Tightening torque
M3	8 kgf-cm max.
M4	
M5	10 kgf-cm max.

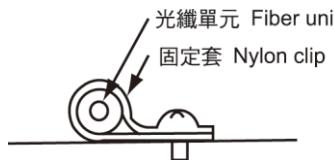
連接光纖單位 Connecting Fiber Unit

光纖單元不可加壓超過3kg，避免拉擴展光纖器，光纖單元的弧度越大越好，街頭、放大器、感測頭附近不可彎曲

Do not apply a force greater than 3 kg. to the fiber unit. avoid pulling or stretching the fiber unit. Bend the fiber unit in as large a radius as possible. Do not bend the fiber unit in the vicinity of its joint with the amplifier unit or the sensing head.



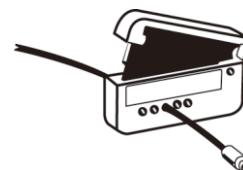
用尼龍夾安裝光纖單元，如下圖，以免過大之力直接作用在線之任何部分。
Install the fiber unit with nylon wireholders, cable ties, etc., as shown below, so that no excessive force is directly applied to any one section of the cable.



切刀 Cutter

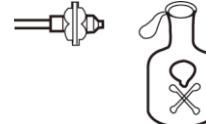
光纖電纜必須小心裁切，以保證正確的光連接，5孔切刀即用在這種精密裁切光纖線插入到想要的長度，線要插入先前未用過的孔中，用強而圓滑之動作推壓下刀片；用過的孔不可再用，否則會使得切割表面不規則大幅增加，因而縮短感測距離。

Fiber optic cable must be carefully cut to ensure proper optical connection. A fivehole cutting is supplied for this precise cut. Insert the fiber, to the desitec cutting lenght, into one of the previously unused holes in the cutter. Push down the blade in one strong, smooth, motion. Do not re-use a hole that has been used once to cut a fiber unit. The chances of a cut surface being cut irregularly greatly increase, which would in turn shorten the cable's sensing distance.



抗化學 Chemical Resistivity

光電感測器不可用在含有有機浮劑的大氣中，例如油漆稀釋蒸氣。
Do not use a photoelectric sensor in an atmosphere containing organic solvents such as paint thinner vapors.



POWER CONTROLLER

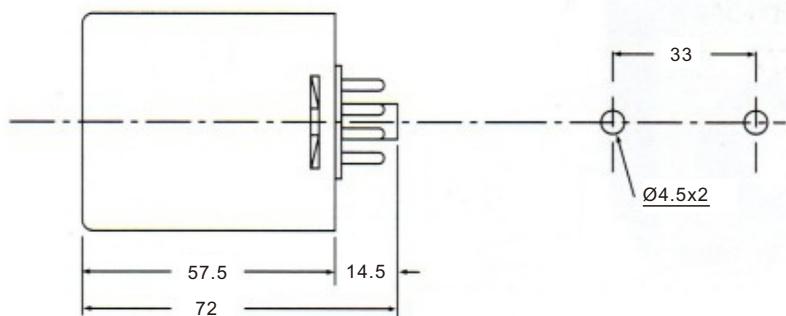
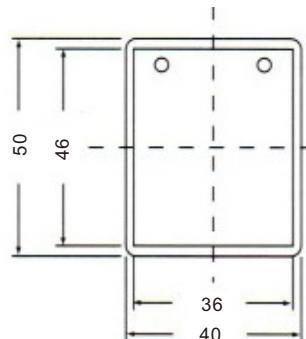
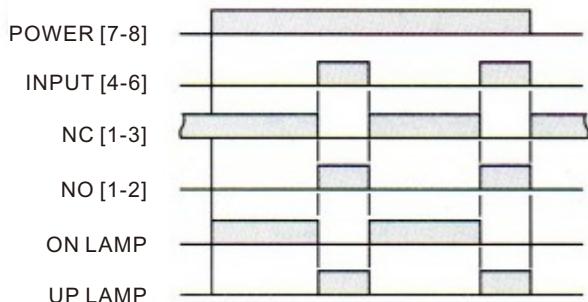
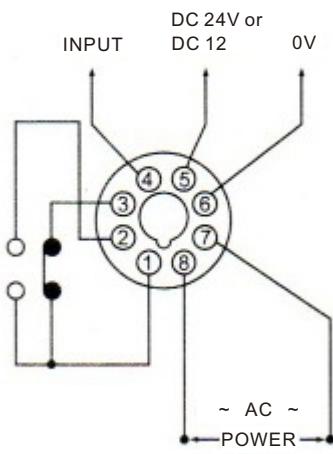
專用電源控制器

特徵 Features

- PH-01N 具有NPN與PNP 輸入可自動切換
- 廣泛的操作電壓AC 110V 或 220V可選擇
- PH-01N is equipped with NPN & PNP two input type which can be selected
- 110VAC ,220VAC two power source can be select



型號	TYPE	PH-01N
工作電壓	Current operating voltage	220VAC± 10% 50/60Hz
消耗功率	Power consumption	2VA
外加感應器額定	Ext sensor rating	DC 12V, 100mA
輸入信號	Input signal	PNP/NPN/電流輸入型 Current input type
繼電器接點額定	Relay contact rating	1C5A
周圍溫度	Ambient temperature	-25°C ~ 55°C
周圍濕度	Ambient humidity	45 ~ 85% RH
重量	Weight	130g
接線方式	Wiring method	外觀尺寸 Dimensions (mm)



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