

CHELIC Gap Sensor PS-01 Series

For your safety, please read the following before using.

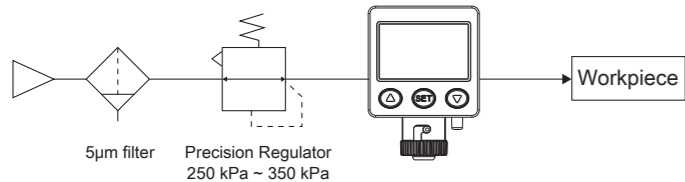
- Do not use corrosive or flammable gas or liquid with this product.
- Please use within the rated pressure range. Do not apply pressure beyond recommended maximum withstand pressure, permanent damage to the pressure sensor may occur.
- Do not drop, hit or allow excessive shock. Even if switch body appears undamaged, internal components may be broken and can cause malfunction.
- Turn power off before connecting wiring. Wrong wiring or short circuit will damage and / or cause malfunction.
- Do not use in environment containing steam or oil vapor.
- This product is not explosion-proof rated. Do not use in atmosphere containing flammable or explosive gases.
- Wiring for pressure sensor should avoid power source line and high voltage line. If use in the same circuit, noise may cause malfunction.
- Optimal operating conditions: Tube O.D. 6.0 mm, tubing length < 1.5 meter, detection nozzle dimension $\varnothing 1.5\text{mm}$.

A. SPECIFICATIONS

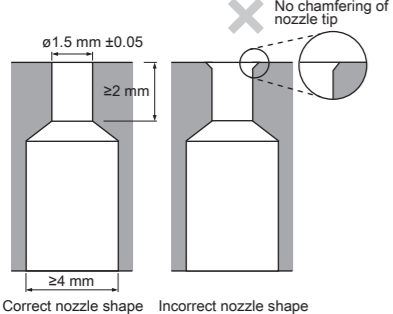
TYPE	PS-01-G-02	PS-01-G-04
Detection distance	0.01 ~ 0.10 mm	
Fluid	Clean air, Non-corrosive/Non-flammable gas (*1)	
Withstand pressure	600 kPa	
Operating pressure range	250 to 350 kPa	
Power supply	12 to 24V DC $\pm 10\%$, Ripple(p-p) 10% or less	
Current consumption	$\leq 20\text{mA}$	
Switch output	NPN : open collector 1 output Max. load current: 125mA Max. Supply voltage: 30V DC Residual voltage: $\leq 1.5\text{V}$	PNP : open collector 1 output Max. load current: 125mA Max. Supply voltage: 24V DC Residual voltage: $\leq 1.5\text{V}$
Consumption flow rate	$\leq 8\text{ L/min @ 300kPa}$	
Repeatability	$\pm 5\ \mu\text{m}$	
Hysteresis	Adjustable 1~30 digits	
Output short circuit protection	Yes	
Display	3 1/2 digital, 7 segment LCD display (White) (Sampling rate : 5 times / sec.)	
Switch on indicator	White Indicator 1 : OUT	
Detection nozzle	$\varnothing 1.5\text{ mm}$ (*2)	
Piping specifications	Supply port	Rc1/8" (*3)
	Detection port	Rc1/8" (*3)
Environment	Enclosure	IP65
	Ambient temp. range	Operation: 0 ~ 50°C, Storage: -10 ~ 60°C (No condensation or freezing)
	Ambient humidity range	Operation/Storage: 35 ~ 85% RH (No condensation)
	Vibration	Total amplitude 1.5mm, 10Hz~55Hz~10Hz scan for 1 minute, two hours each direction of X, Y and Z
Lead wire	$\varnothing 4$ Oil-resistance cable (PVC) - 26 AWG (0.15 mm ²) - 3 cores	
Weight	Approx. 115g (with 2 meter lead wire)	

[NOTE :] *1 *2 *3

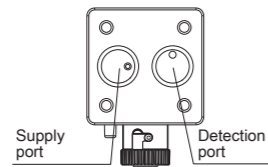
*1. The internal port of this product is very precise. To prevent foreign matter from entering, please use air filter to clean air (5 μm or less) and install precision regulator.



*2. Detection nozzle

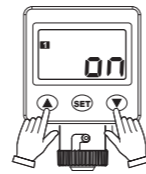


*3. Product back



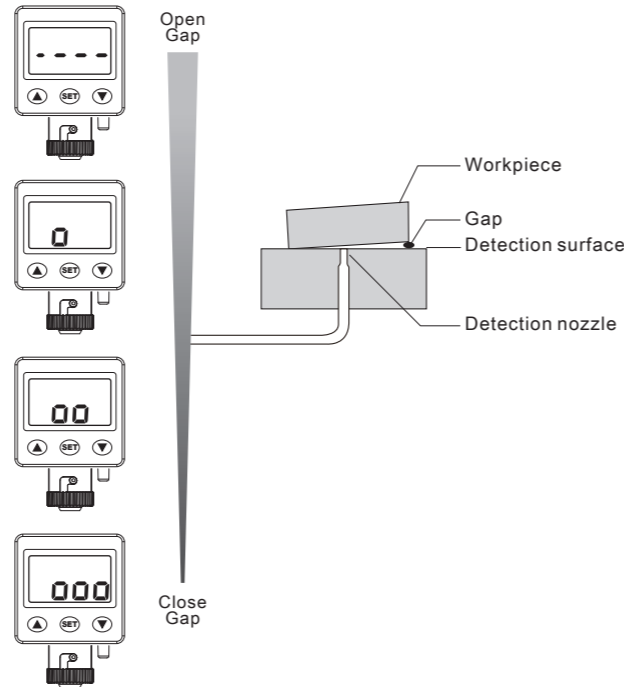
B. WORKING POINT SETTING

Press the Δ + ∇ button at the same time until the "On" is shown, and blink one time then release the buttons to complete working point setting.

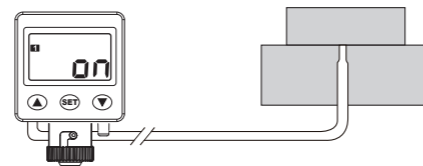


C. MEASUREMENT MODE DISPLAY DESCRIPTION

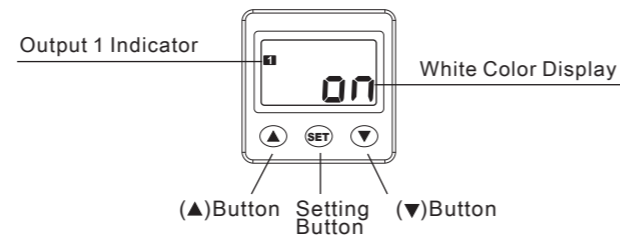
⊙ Workpiece in incorrect position



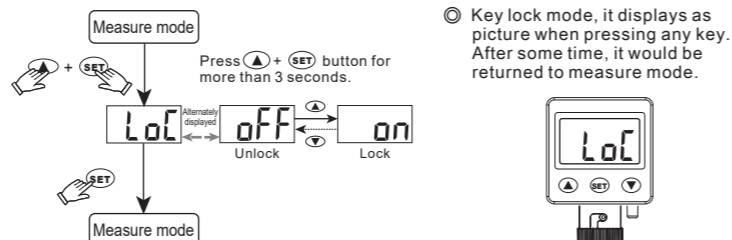
⊙ Workpiece in correct position
The display shows "on".



D. PANEL DESCRIPTION

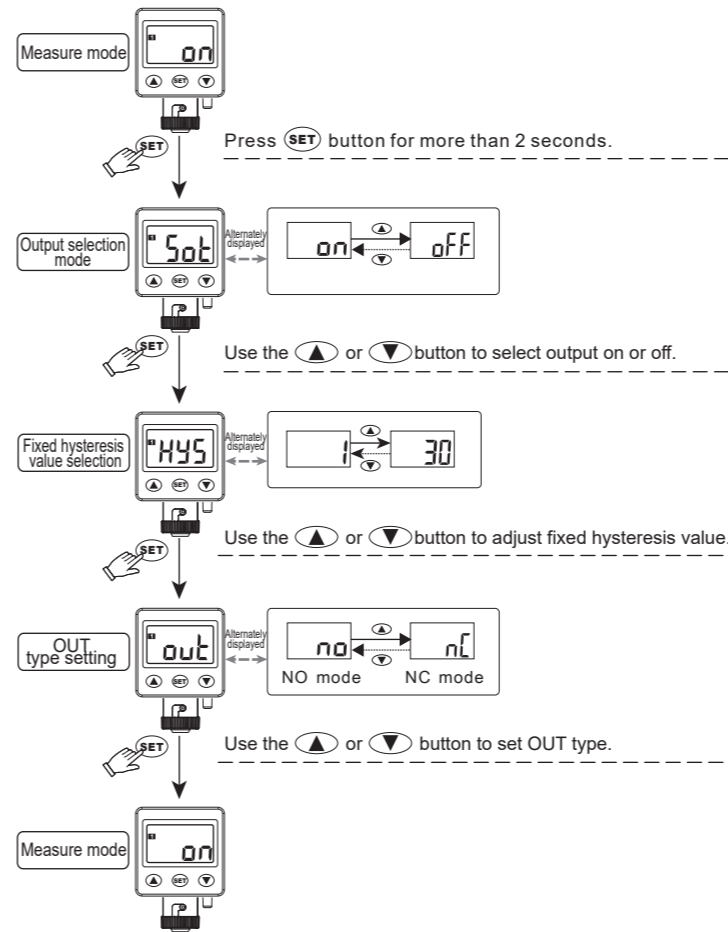


E. KEY LOCK/UNLOCK MODE

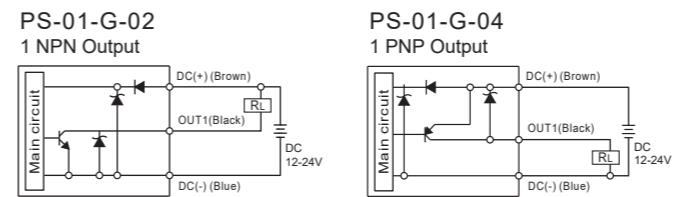


⊙ Key lock mode, it displays as picture when pressing any key. After some time, it would be returned to measure mode.

F. SETTING MODE



G. OUTPUT CIRCUIT WIRING DIAGRAMS



H. ORDERING INFORMATION

PS - 01 - G - 02 - RC

Rated Distance Range

G : 0.01 ~ 0.10 mm

Output Specifications

02 : 1 NPN Output
04 : 1 PNP Output

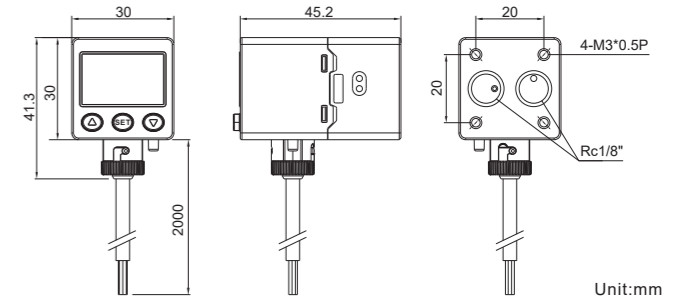
Pressure Port

RC : Rc1/8"

Optional Parts

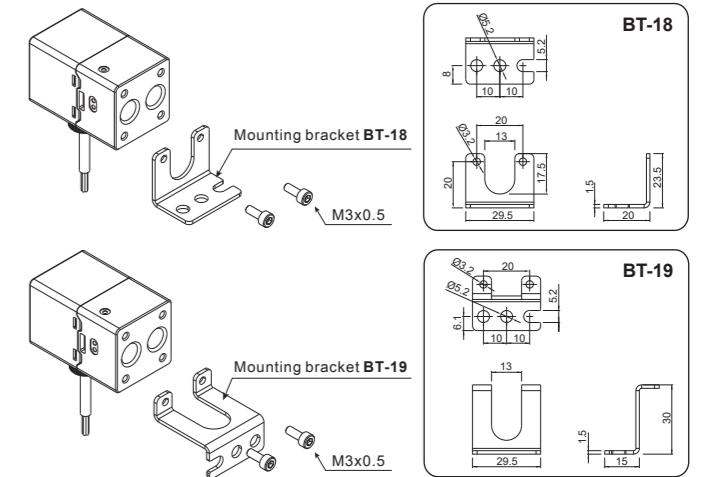
BT-18 : Mounting bracket
BT-19 : Mounting bracket
PA-E : Panel adapter
PA-F : Panel adapter + Front protective lid

I. DIMENSIONS

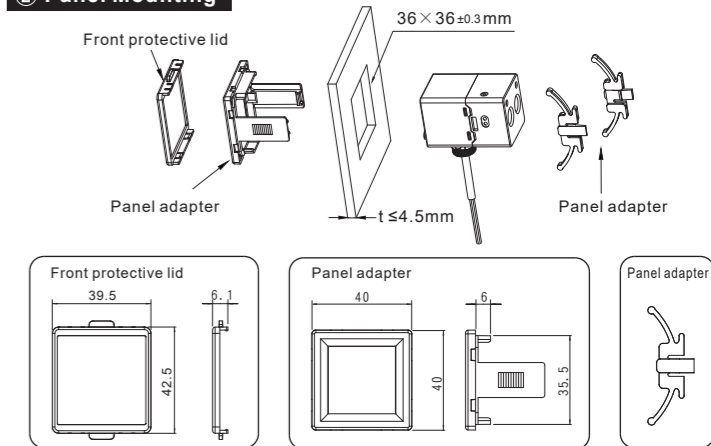


J. OPTIONAL PARTS DIMENSIONS

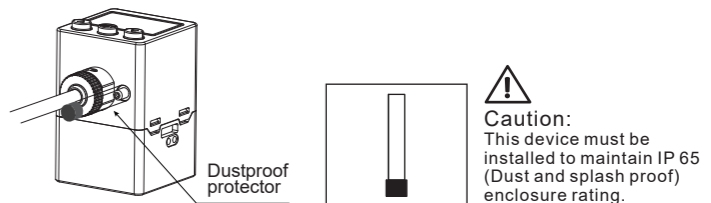
① Mounting Bracket



② Panel Mounting



③ Accessory



Caution:
This device must be installed to maintain IP 65 (Dust and splash proof) enclosure rating.

K. ERROR CODE INSTRUCTION

Error Type	Error code	Error Condition	Troubleshooting
Excess load current error	out Er1	Output load current is more than 125 mA	Turn power off and check the cause of overload current or lower the current load under 125 mA, then restart.
System error	Er5	Internal system error	Turn power off, and then restart. If error condition remains, please return to factory for inspection.
Applied pressure error	Err	Supply pressure is exceed the upper limit of pressure setting.	Adjust the pressure within setting pressure range.

使用本產品應注意事項：

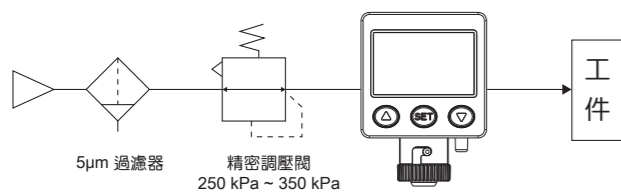
- 禁止使用於腐蝕性及易燃性的氣體或任何液體。
- 請在規格表內的額定壓力範圍內使用，若供給之壓力超過最大耐壓會使本產品損壞，導致功能異常。
- 裝設本產品時，請勿用力撞擊或從高處掉落，即使外觀未受損害也可能因內部零件損壞而導致功能異常。
- 在連接本產品於電路控制系統時，應先關掉電源，因為錯誤的接線或短路會導致本產品損壞。
- 本產品請勿使用在有水氣或油霧的環境中。
- 本系列產品並未有防爆驗證，請勿使用於空氣中含有爆炸性氣體或粉塵環境中。
- 不可將連接本產品的導線與電源線或其它高壓電線纏綁在一起，以避免雜訊的干擾，而影響到本產品的功能。
- 最佳操作條件：φ6氣管，長度小於1.5M，檢測噴嘴尺寸1.5mm。

A. 規格表

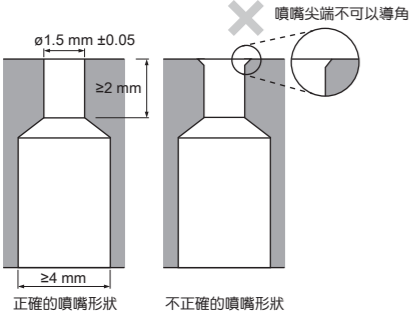
型號	PS-01-G-02	PS-01-G-04
檢測距離	0.01~0.10 mm	
流體	潔淨空氣，非腐蝕性，不可燃性 (*1)	
耐壓	600 kPa	
操作壓力範圍	250 to 350 kPa	
電源電壓	12 to 24V DC ±10%，漣波峰值 10% 以下	
消費電流	≤ 20mA	
開關輸出	1 NPN 開集極輸出 最大負載電流：125mA 最大供應電壓：30V DC 內部壓降：≤ 1.5V	1 PNP 開集極輸出 最大負載電流：125mA 最大供應電壓：24V DC 內部壓降：≤ 1.5V
消耗流量	≤ 8 L/min @ 300kPa	
重複精度	± 5 μm	
應差	可調 1~30 digits	
輸出短路保護	有	
顯示畫面	3 ½ 位, 7 段 LCD 顯示 (白色) (取樣率: 5 次 / 秒)	
動作顯示燈	白色指示燈 1: OUT	
檢測噴嘴	φ1.5 mm (*2)	
配管規格	入氣口徑 Rc1/8" (*3)	檢測口徑 Rc1/8" (*3)
耐環境	IP防護等級	IP 65
	周圍溫度	動作: 0 ~ 50°C, 保存: -10 ~ 60°C (無水露及不結冰狀況下)
	周圍濕度	動作及保存: 35 ~ 85% RH (無水露)
耐振動	複振幅 1.5mm, 每1分鐘 10Hz~55Hz~10Hz, X、Y、Z 每個方向各2小時	
電線接頭	Ø4 耐油 PVC - 26 AWG (0.15 mm²) - 3 芯	
重量	約 115g (包含2公尺電線)	

[NOTE:] *1 *2 *3

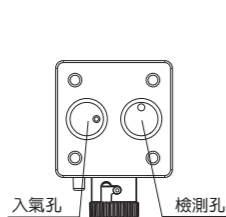
*1. 本產品內部孔徑十分精密，為防止異物進入，請務必使用過濾器清潔空氣(5μm以下)



*2. 檢測噴嘴設計

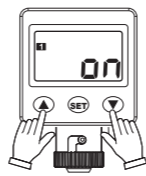


*3. 產品背面



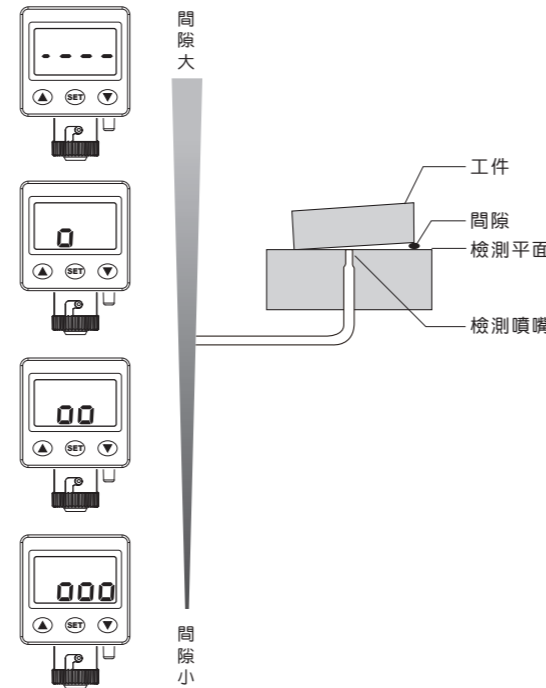
B. 動作點設定

在量測模式下同時按▲ + ▼ 鍵直到顯示為"on"，放開則結束歸零設定。閃爍一次出現"ON"，放開則動作點設定完畢。

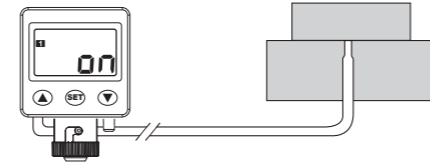


C. 量測模式顯示說明

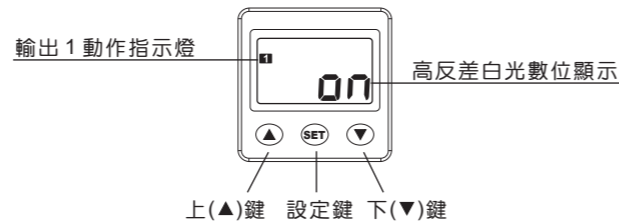
◎ 工件位置未達定位



◎ 工件到達定位
開關動作



D. 面板說明

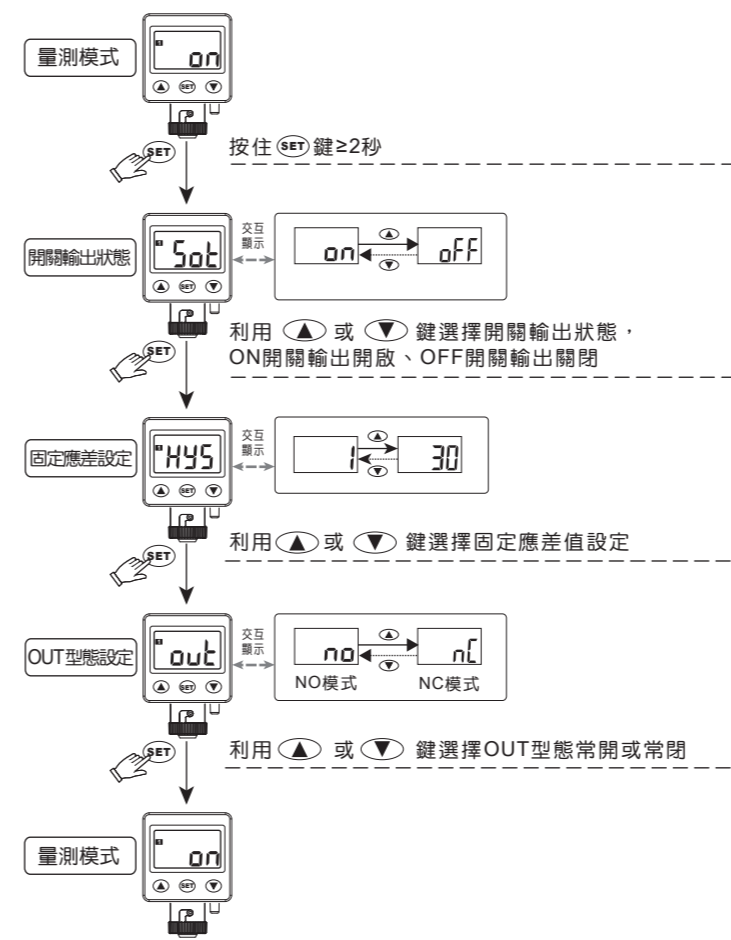


E. 按鍵鎖定功能

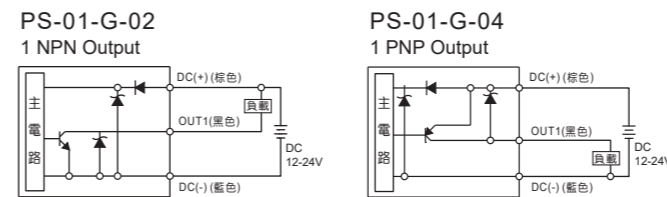


◎ 當啟動鎖鍵功能時，按任意鍵畫面會顯示如圖，一段時間後回到量測畫面。

F. 設定模式



G. 輸出電路接線圖



H. 型號規格說明

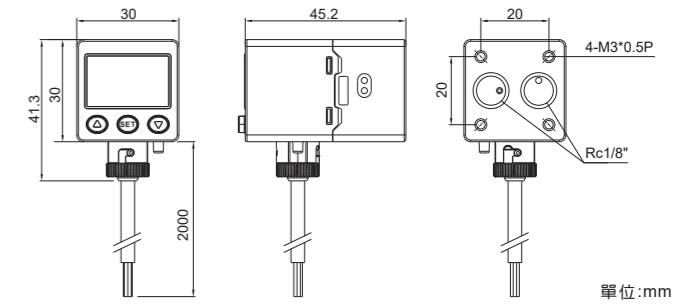
PS-01-G-02-RC

- 檢測距離
G: 0.01 ~ 0.10 mm
- 輸出類型
02: 1 NPN 輸出
04: 1 PNP 輸出
- 接管口徑
RC: Rc1/8"

配件類型 (選購)

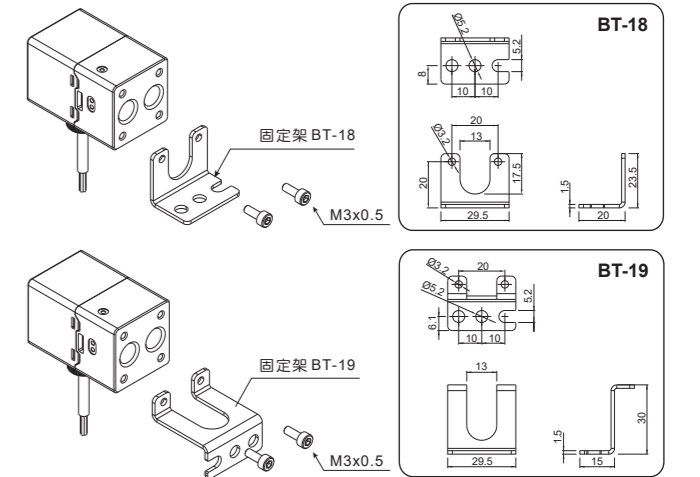
- BT-18: 固定架
- BT-19: 固定架
- PA-E: 面板接合器
- PA-F: 面板接合器 + 前保護蓋

I. 外觀尺寸

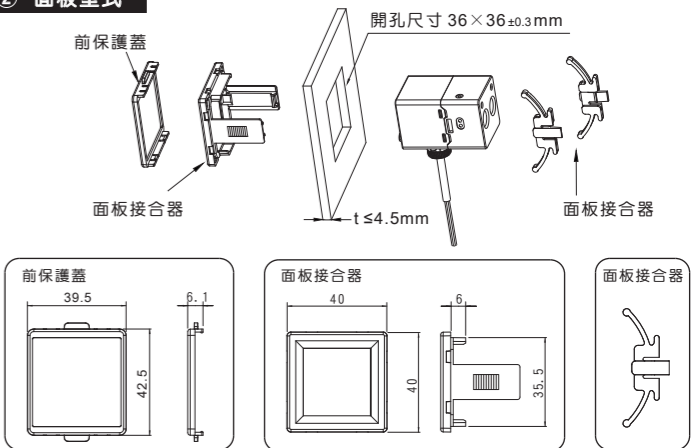


J. 配件類型/尺寸圖

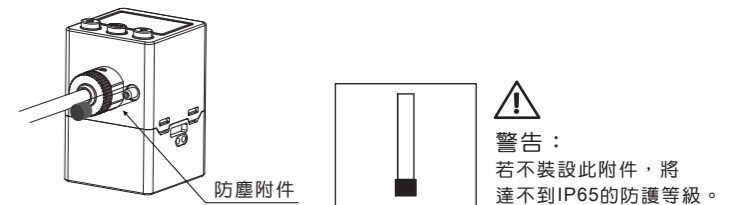
① 固定架



② 面板型式



③ 防塵附件



K. 錯誤訊息說明

錯誤名稱	錯誤顯示	錯誤說明	解決
過電流錯誤	out Err1	輸出1負載電流超過125mA	關掉電源，檢查負載電流過大的原因或將負載電流降至125mA以內再重啟電源。
系統錯誤	Err5	內部系統錯誤	切斷電源並重新供電，若無回復正常狀態則需送回原廠分析。
使用壓力錯誤	Err	使用的壓力超過壓力設定值的上限	供給壓力請調整在使用壓力範圍內。