

◆ Characteristic / 特點 :

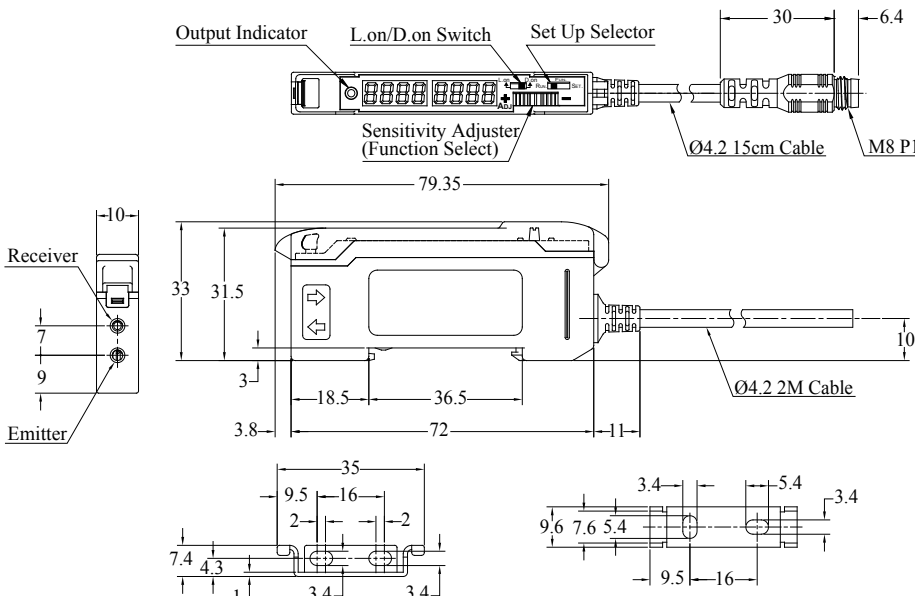
- Easy to install. / 設定方便，容易上手。
- Numeric displays, interactive prompts./ 雙數顯字型面板，且運算快。
- Applications focus on many industries, such as semiconductor assembly, handling technology and packing. / 此產品可應用在許多產業中，包含半導體、裝卸作業和包裝產業等。
- Depends on the mounting direction, the digital display of BR1 can be inverted. / BR1的雙數顯字面板，可依您裝上的方向，而作反轉調整。
- Response time selectable:(200、500、1000、5000) μ s. / 4段速度選擇:(200、500、1000、5000) μ s。



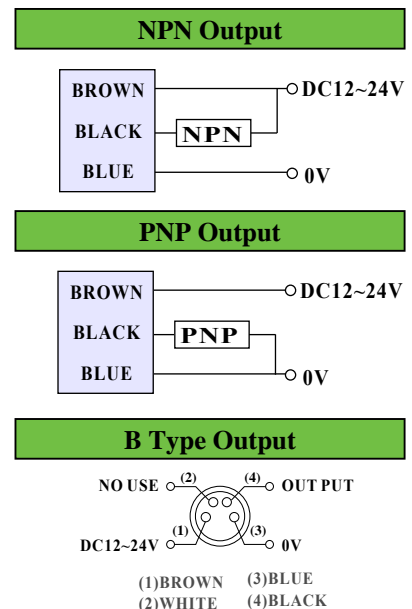
◆ Specifications / 規格表 :

Model / 型號	Pre-wired ϕ 4.2	BR1-N	BR1-P
	M8 pigtailed type	BR1-NB	BR1-PB
Emitting light / 發光源		Red LED 660nm	
Operating voltage / 工作電壓		DC12 to 24 \pm 10%	
Current Consumption / 消耗電流		45mA Max.	
Load current / 負載電流		100mA Max at DC 24V	
Output type / 輸出模式		NPN L.on / D.on	PNP L.on / D.on
Protection circuit / 保護電路		Reversed polarity protection, over-current protection	
Response time / 反應時間		on: 200 μ s, off: 200 μ s MAX (200、500、1000、5000) μ s	
Indicators / 指示燈		Output indicator : Red LED	
Sensitivity adjustment/靈敏度功能		4 Digits 0000-9999、0000-4000	
Insulation resistance / 隔離阻抗		20M Ω min. (DC500V)	
Voltage withstandability / 絕緣耐壓		AC500V 60Hz for 60 Sec.	
Operating temperature/工作溫度		- 10 $^{\circ}$ C ~ + 60 $^{\circ}$ C	
Ambient humidity / 工作溼度		35% ~ 85% RH	
Protection degree / 防水等級		IP64	
Material / 外觀材質		ABS	
Wiring method / 出線方式	BR1-□	Pre-wired ϕ 4.2 x 2M / 3-wires	
	BR1-□B	M8 pigtailed type / M8 接頭15cm電線式	
Weight / 重量	BR1-□	Approx.65 g	
	BR1-□B	Approx.30 g	

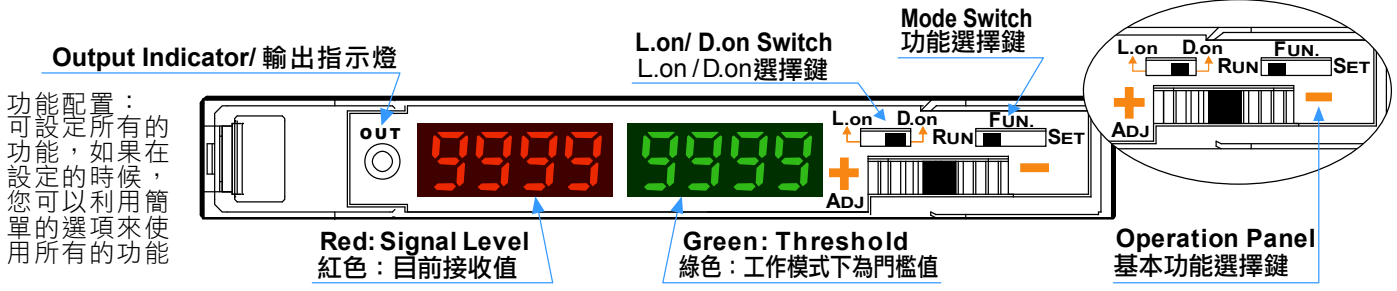
◆ Dimensions / 尺寸圖 : (unit:mm)



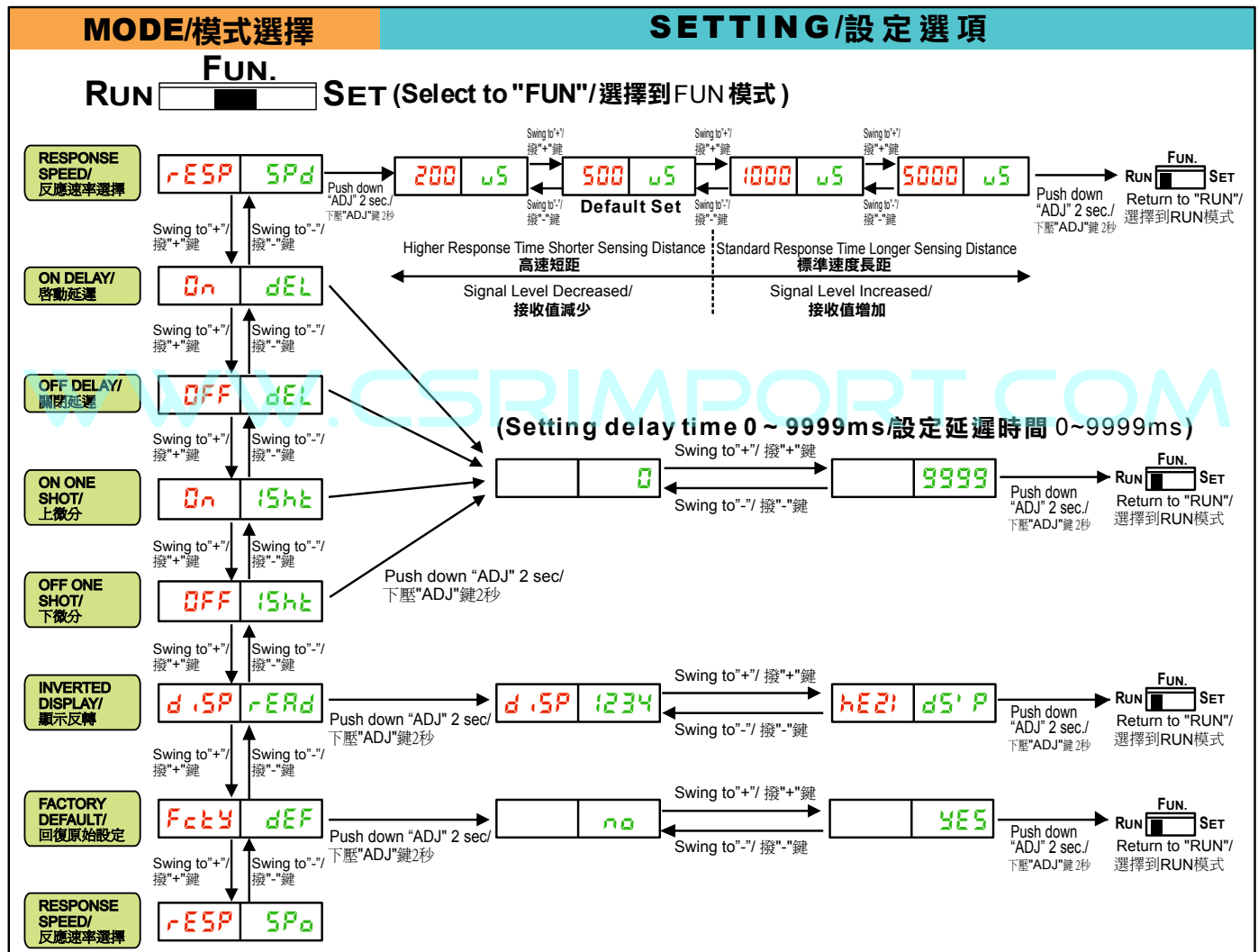
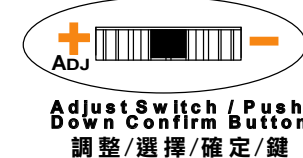
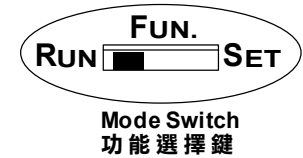
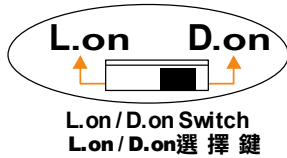
◆ Wiring diagrams / 接線圖 :



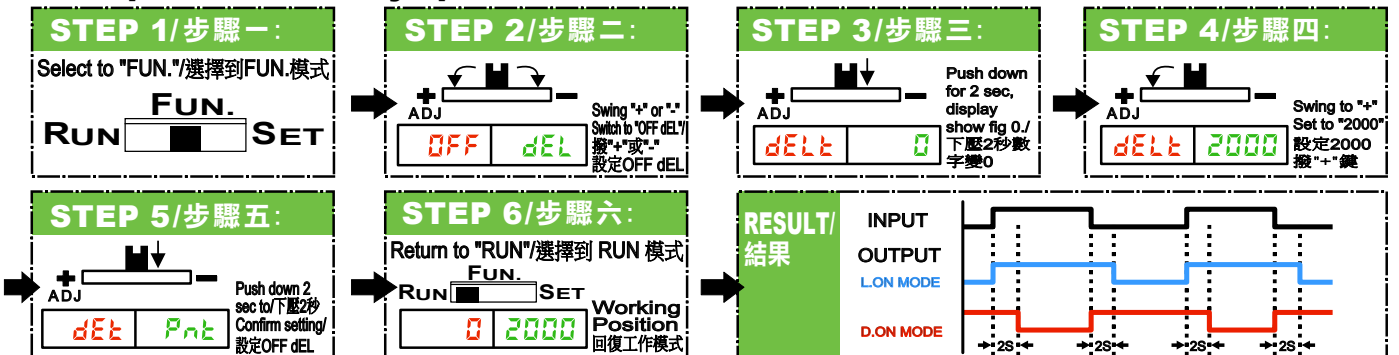
◆ MANUAL / 使用說明：



功能配置：
可設定所有的功能，如果在設定的時候，您可以利用簡單的選項來使用所有的功能



Example: Set off delay operate on 2 sec./範例:設定OFF dEL功能啟動，關閉延遲時間設定為2秒



◆ Diffuse model Setting / 反射式光纖調整

1. Set to L.on position. / 請將L.on/D.on指撥鍵，撥至L.on。



2. Select to "SET". / 功能選擇鍵撥至SET。



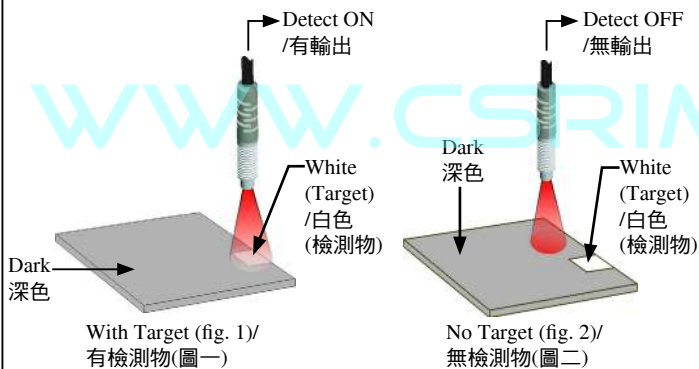
3. With Target, Push down "ADJ" 2sec, Auto-Teaching done after blinking stopped. (Fig. 1) / 光纖在有檢測物的情況下按 ADJ 兩秒(閃爍後完成教導)(圖一)。



4. Finished setting, Return to "RUN". / 完成校對後，功能選擇鍵撥至 Run。



5. If need opposite operating detection, change to D.on position. / 調整完畢後，如需反向動作，請做L.on 或 D.on 切換。



◆ Through-Beam model Setting / 對照式光纖調整：

1. Set to D.on position. / 請將L.on/D.on指撥鍵，撥至D.on。



2. Select to "SET". / 功能選擇鍵撥至SET。



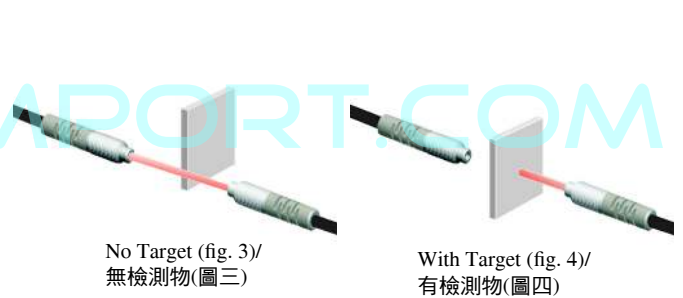
3. No Target, Push down "ADJ" 2sec, Auto-Teaching done after blinking stopped. (Fig. 3) / 光纖在有檢測物的情況下按 ADJ 兩秒(閃爍後完成教導)(圖三)。



4. Finished setting, Return to "RUN". / 完成校對後，功能選擇鍵撥至 Run。



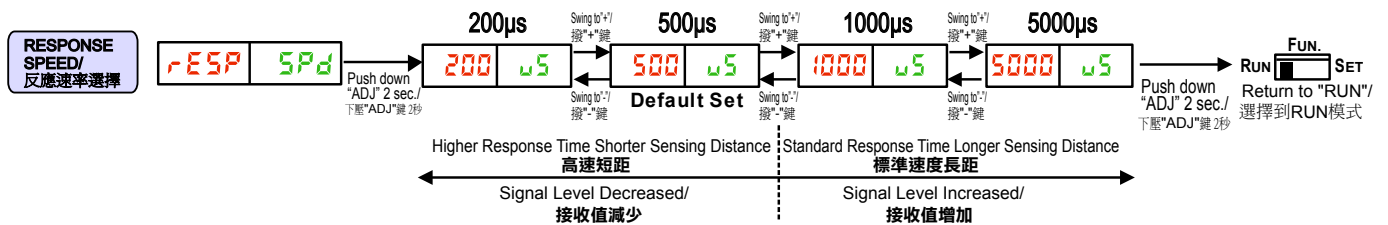
5. If need opposite operating detection, change to D.on position. / 調整完畢後，如需反向動作，請做L.on 或 D.on 切換。



◆ Response Time & Sensing Distance / 反應速率與距離：

※Refer to working area, set to correct response time & sensing distance.

※請依現場環境，做適當的距離與速率調整。



◆ Failure/教導失敗：

• Failure/教導失敗原因：

Light emission is too weak or too much. / 光源不足或光源過強。



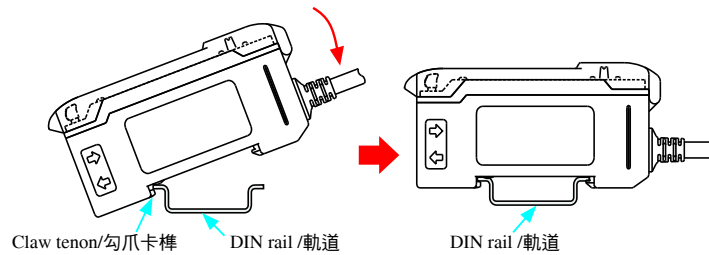
• Solution/教導失敗解決方案：

1. Set to proper Response Time & Sensing Distance. / 請選擇適當的反應速率與距離調整。
2. Choose proper models of RIKO Fiber sensors. / 請挑選合適的檢測光纖。

◆ Fiber amplifier mounting/detaching operation: / 光纖放大器軌道安裝/卸下：

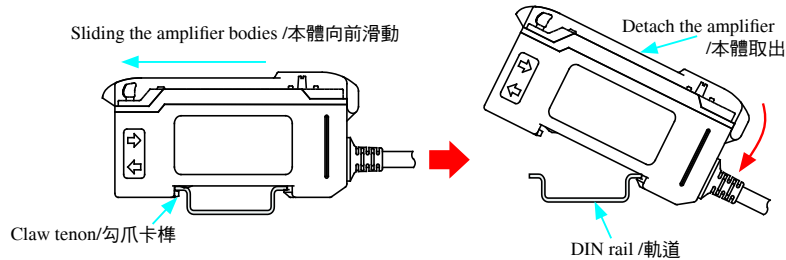
1. Mounting/安裝

* To mount each amplifier to the attached mounting bracket or DIN rail in sequence./ 將每一台依續安裝至軌道上。



2. Detaching/卸下

* To detach the amplifiers in sequence by sliding the amplifier bodies. Don't detach two amplifiers at a time./ 滑動本體，將依續將各台卸下。



◆ Precautions for correct use : / 正確的使用方法：

* Be sure to mount amplifiers to a DIN rail and use end units on both sides when more than two units are connected. Note the ambient temperature when using in a sealed machine box./ 當使用超過2個放大器時須使用鋁軌組裝在一起，在封閉機箱中注意操作溫度變化在以固定器固定兩側。

* Be sure to turn off the power before wiring finished./ 在配線完成前必須確認處於斷電狀態。

* Don't operate the amplifier in the same conduit as power cord or high voltage wire. Use separate conduit to avoid noise immunity and malfunction./ 放大器運作時不可被電源線或較高電壓線覆蓋到，須均慮到包含有雜訊或交流雜訊，避免誤動作。

* Check the power cord to make sure the power supply matches the rated voltage./ 檢查電源線以匹配固定電壓。

* Connect the ground terminal to the ground when used with a switch./ 使用市面販售開關需將接地端接地。

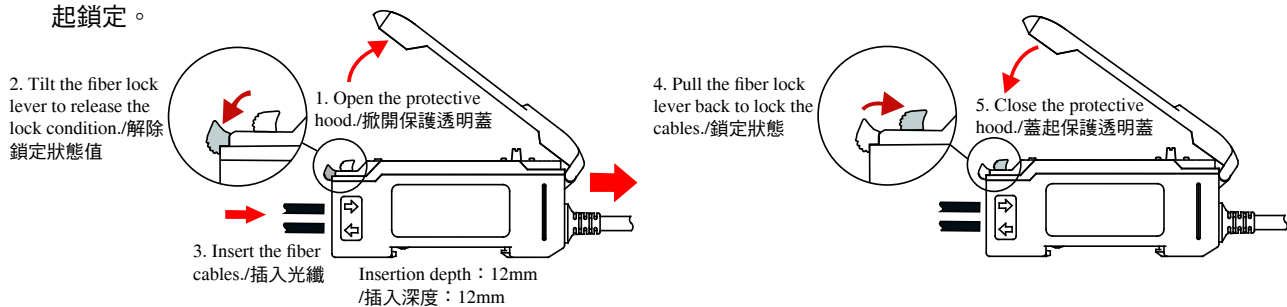
* Don't use it outdoors or at a place where outside light can irradiate the receiver directly./ 不要在戶外或外來光直接照射接收。

◆ Fiber cables fixing operation / 光纖安裝方式：

1. Insert the fiber cables / 插入光纖

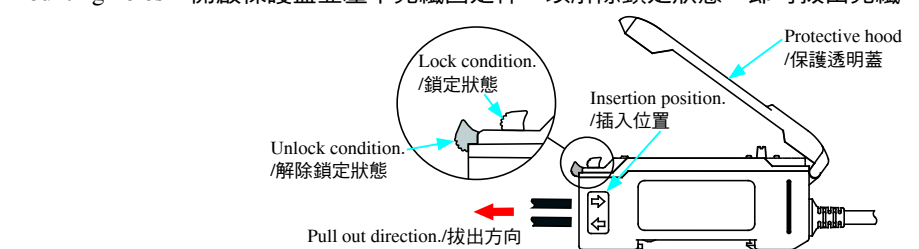
* Open the protective hood and tilt the fiber lock lever to release the lock condition. Referring to the side seal of insertion position, fully insert the fiber cables into the mounting holes until the limit. Pull the fiber lock lever back to lock the cables.

/ 開啟保護蓋並先壓下光纖固定桿以解除鎖定狀態，依照光纖放大器側面的插入位置記號插入光纖，再將光纖固定桿扳起鎖定。



2. Pull out the fiber cables / 拔出光纖

* Open the protective hood and tilt the fiber lock lever to release the lock condition. Pull the fiber cables straight out from the mounting holes.



- To protect the fiber cables from incorrect operation, **be sure to tilt the fiber lock lever to release the lock condition before pulling out the fiber cables.** / 為了維護光纖，請在更換時，**確定光纖固定桿為解除鎖定，再將光纖拔出。**
- Pull up the protective hood forcefully may damage the fixing pin of the hood (**not exceed 180 degrees**). / 用力向上扳開**保護透明蓋超過180°可能損壞外殼蓋後的固定鎖。**