

## ◆ Characteristic / 特點：

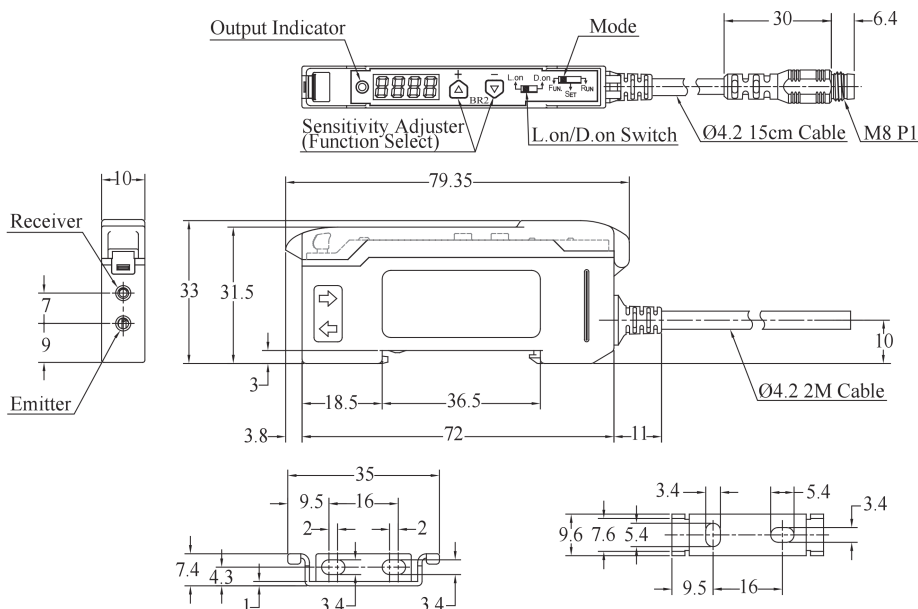
- Press 2sec. Automatic sensitivity setting.  
/ 按住2秒以上，自動設定感度。
- Signal pulse H/L : General distance/ long distance.  
/ 二種功率(H/L)：一般距離/長距離 可調整。
- 3 light-sources : Red light/ Blue light/ Green light.  
/ 三種發光源(紅,藍,綠)，可應用許多產業。
- NP model : NPN+PNP L.on/D.on 4-in-1 outputs.  
/ 新型NP電路：NPN/PNP All in one.。



## ◆ Specifications / 規格表：

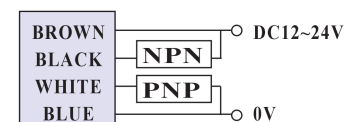
| Model / 型號                      | Pre-wired $\phi$ 4.2 | BR2-N                                                                                  | BR2-P           | BR2-NP                             | BR2-11NP       | BR2-22NP        |
|---------------------------------|----------------------|----------------------------------------------------------------------------------------|-----------------|------------------------------------|----------------|-----------------|
|                                 | M8 pigtailed type    | BR2-NB                                                                                 | BR2-PB          | BR2-NPB                            | BR2-11NPB      | BR2-22NPB       |
| Emitting light / 發光源            |                      | Red LED 660nm                                                                          |                 |                                    | Blue LED 470nm | Green LED 530nm |
| 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 | NPN L.on / D.on<br>PNP L.on / D.on |                |                 |
| Protection circuit / 保護電路       |                      | Reversed polarity protection, over-current protection                                  |                 |                                    |                |                 |
| Response time / 反應時間            |                      | on 0.5 ms, off 0.5ms                                                                   |                 |                                    |                |                 |
| Indicators / 指示燈                |                      | Output indicator : Red LED                                                             |                 |                                    |                |                 |
| Sensitivity adjustment/靈敏度功能    |                      | 3 Digitals 000-999                                                                     |                 |                                    |                |                 |
| Insulation resistance / 隔離阻抗    |                      | 20M $\Omega$ min. (DC500V)                                                             |                 |                                    |                |                 |
| Voltage withstandabiligy / 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        |                      | IP50                                                                                   |                 |                                    |                |                 |
| Material / 外觀材質                 |                      | ABS                                                                                    |                 |                                    |                |                 |
| Wiring method / 出線方式            | BR2-□                | N/P : Pre-wired $\phi$ 4.2 x 2 M / 3-wires<br>NP : Pre-wired $\phi$ 4.2 x 2 M/ 4-wires |                 |                                    |                |                 |
|                                 | BR2-□B               | M8 pigtailed type / M8 接頭15cm電線式                                                       |                 |                                    |                |                 |
| Weight / 重量                     | BR2-□                | Approx.65 g                                                                            |                 |                                    |                |                 |
|                                 | BR2-□B               | Approx.25 g                                                                            |                 |                                    |                |                 |

## ◆ Dimensions / 尺寸圖：(unit:mm)



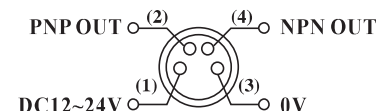
## ◆ Wiring diagrams / 接線圖：

### NP Output



※ NPN & PNP SYNC. OUT

### NPB Output



(1) BROWN (3) BLUE  
(2) WHITE (4) BLACK

※ NPN & PNP SYNC. OUT

## ◆ Manual / 使用說明:

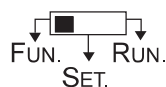
Output Indicator/輸出指示燈

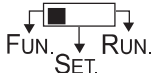
Mode Switch/功能選擇鍵

Sensitivity Adjuster (Function Select)  
/敏感度調整L.on/D.on Switch  
L.on/D.on選擇鍵

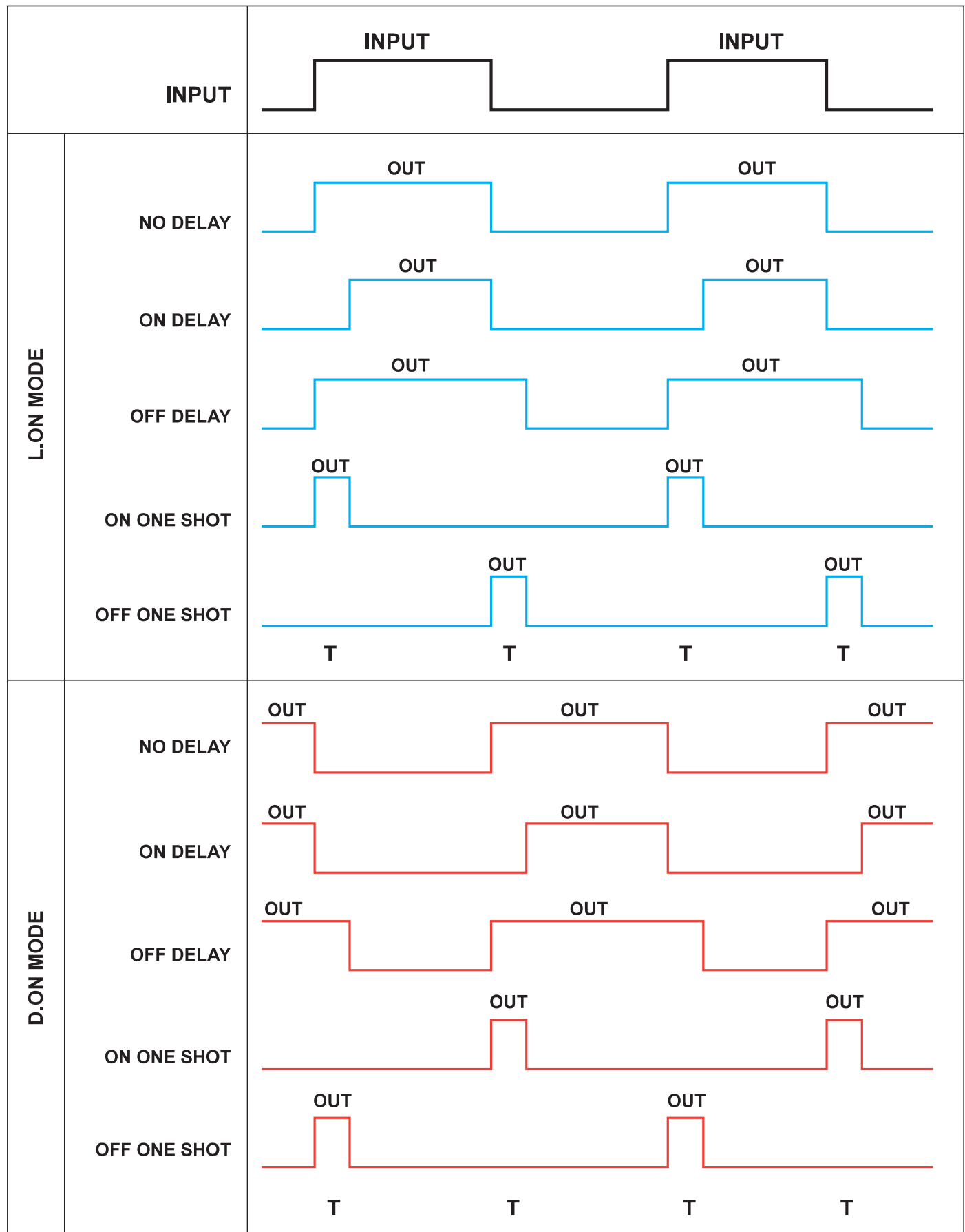
功能配置：可設定所有的功能

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

Please select FUN./  
選擇到FUN.模式Mode Switch/  
模式選擇鍵Function Switch/  
功能設定鍵

| Mode Switch/模式選擇鍵                                                                                       |                                                                                                                                                                                            | 設定選項                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                            |                                                                                              |  |
|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|--|
|  signal pulse/<br>感測距離 |   standard/<br>標準距離      |  long pulse/<br>加長距離                                                                                                                                                                                                                                                                                                       |                                                                                                            |                                                                                              |  |
|                       |   50% power/<br>一半功率 |  standard/<br>標準功率                                                                                                                                                                                                                                                                                                       |                                                                                                            |                                                                                              |  |
|                      |   no delay/<br>無延遲   |  on delay/<br>開啓延遲                                                                                                                                                                                                                                                                                                       |  off delay/<br>關閉延遲   |                                                                                              |  |
|                                                                                                         |  on one shot/<br>上微分觸發                                                                                  |  off one shot/<br>下微分觸發                                                                                                                                                                                                                                                                                                  |                                                                                                            |                                                                                              |  |
|                      |   2ms                |  20ms                                                                                                                                                                                                                                                                                                                     |  50ms                 |  100ms  |  |
|                                                                                                         |  500ms                                                                                                  |  1s                                                                                                                                                                                                                                                                                                                       |  5s                   |  10s    |  |
|                      |   obverse/<br>視窗正向   |  reverse/<br>視窗反向                                                                                                                                                                                                                                                                                                        |                                                                                                            |                                                                                              |  |
| Please select SET./<br>選擇到SET.模式                                                                        |                                                                                                                                                                                            | Please select   to adjust sensing distance./<br>選擇上下調整鍵   設定感應數值 |                                                                                                            |                                                                                              |  |
| Please select RUN./<br>選擇到RUN.模式                                                                        |                                                                                                                                                                                            | Operating mode/<br>開始工作模式                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                            |                                                                                              |  |
| Example: To make BR2 on-delay 5 s, when it is in operating situation. / 範例: 設定時間通電延遲5秒                  |                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                            |                                                                                              |  |
| Step1/步驟一:<br>Please select FUN./<br>選擇到 FUN. 模式                                                        | Step2/步驟二:<br>Minus Button/<br>模式選擇鍵                                                                                                                                                       | Step3/步驟三:<br>Plus Button/<br>功能設定鍵                                                                                                                                                                                                                                                                                                                                                                          | Step4/步驟四:<br>Minus Button/<br>模式選擇鍵                                                                       | Step5/步驟五:<br>Plus Button/<br>功能設定鍵                                                          |  |
|                      |  delay/<br>時間延遲設定                                                                                       |  on delay/<br>開啓延遲                                                                                                                                                                                                                                                                                                        |  delay time/<br>延遲秒數設定 |  5s /5秒 |  |

### ◆ Operation timing chart / 時序圖：



燈號與輸出同步

DELAY TIME : 2ms ; 20ms ; 50ms ; 100ms ; 500ms

DELAY TIME : 1S ; 5S ; 10S

## ◆ Side mounting of amplifier / 放大器固定之組裝：

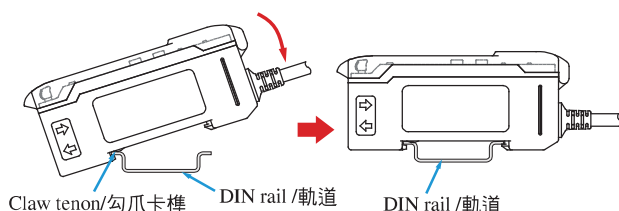
\* Attached mounting bracket. Fixing it up by 2pcs M3 screws. The torque must be 0.8Nm or less. /內附托架，並使用M3螺絲穿過固定孔旋緊，但扭力不可超過0.8Nm。



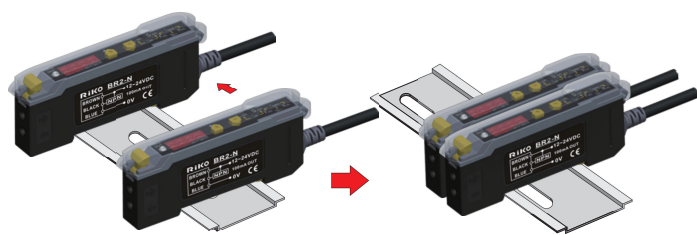
## ◆ Fiber amplifier mounting/detaching operation / 光纖放大器安裝方式：

### 1. Mounting / 安裝

(1) To mount each amplifier to the attached mounting bracket or DIN rail in sequence. /將每一台依序裝至軌道上。

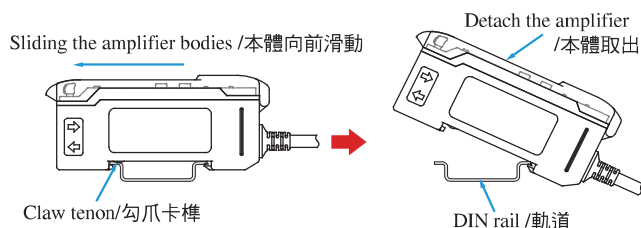


(2) To connect two amplifiers close together by sliding the amplifier bodies. /滑動本體，依序將放大器密和即可。



### 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，依序將各台卸下。



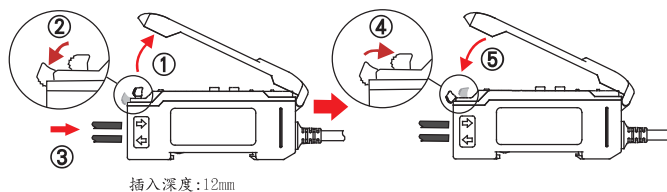
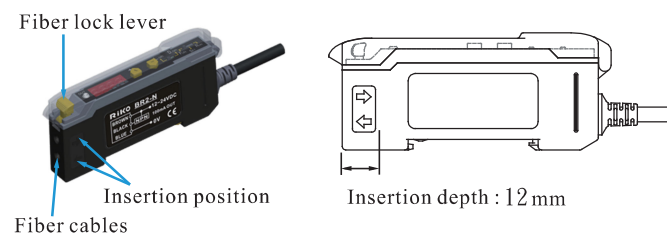
Be sure to switch off the power supply when mounting or detaching the amplifier.

/當您要安裝或卸下光纖放大器時，請先確認電源已關閉。

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

### 1. Insert the fiber cables / 插入光纖

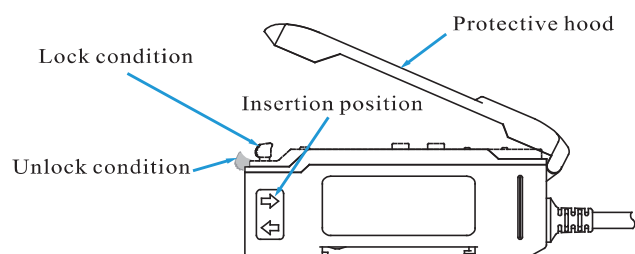
Open the protective hood and tilt the fiber lock lever to release the lock condition. Referring to the side seal of insertion position, fully insert the fiber cables into the mounting holes until the limit. Pull the fiber lock lever back to lock the cables. /開啟保護蓋並先壓下光纖固定桿，以解除鎖定狀態，依照光纖放大器側面插入位置記號插入光纖，再將光纖固定桿扳起鎖定。



- ① Open the protective hood./ 掀開保護透明蓋。
- ② Tilt the fiber lock lever to release the lock condition./ 解除鎖定狀態。
- ③ Insert the fiber cables./ 插入光纖。
- ④ Pull the fiber lock lever back to lock the cables./ 鎖定狀態。
- ⑤ Close the protective hood./ 蓋起保護透明蓋。

### 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. /開啟保護蓋並光纖固定桿，以解除鎖定狀態，即可拔出光纖。



1. 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後，再將光纖拔出。

2. 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。