

# Cylindrical Type Proximity Sensor

## Cylindrical type proximity sensor

### ■ Features

- Improved the noise resistance with dedicated IC
- Reverse power polarity (DC 3-wire), surge (AC/DC), overcurrent protection (DC)
- Long life cycle and reliable simple operation
- Red LED status indication
- IP67 rated waterproof structure (IEC standard)
- Replacer for micro switches and limit switches

 Please read "Caution for your safety" in operation manual before using.



### ■ Specifications

#### ● DC 2-wire type

| Model                               | PRT08-1.5DO<br>PRT08-1.5DC                                                        | PRT08-2DO<br>PRT08-2DC | PRT12-2DO<br>PRT12-2DC | PRT12-4DO<br>PRT12-4DC | PRT18-5DO<br>PRT18-5DC | PRT18-8DO<br>PRT18-8DC | PRT30-10DO<br>PRT30-10DC | PRT30-15DO<br>PRT30-15DC |
|-------------------------------------|-----------------------------------------------------------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|--------------------------|--------------------------|
| Sensing distance                    | 1.5mm ±10%                                                                        | 2mm ±10%               | 2mm ±10%               | 4mm ±10%               | 5mm ±10%               | 8mm ±10%               | 10mm ±10%                | 15mm ±10%                |
| Hysteresis                          | Max. 10% of sensing distance                                                      |                        |                        |                        |                        |                        |                          |                          |
| Standard sensing target             | 8×8×1mm(Iron)                                                                     |                        | 12×12×1mm(Iron)        |                        | 18×18×1mm<br>(Iron)    | 25×25×1mm<br>(Iron)    | 30×30×1mm<br>(Iron)      | 45×45×1mm<br>(Iron)      |
| Setting distance                    | 0 ~ 1.05mm                                                                        | 0 ~ 1.4mm              | 0 ~ 1.4mm              | 0 ~ 2.8mm              | 0 ~ 3.5mm              | 0 ~ 5.6mm              | 0 ~ 7mm                  | 0 ~ 10.5mm               |
| Power supply<br>(Operation voltage) | 24VDC<br>(10–30VDC)                                                               |                        |                        |                        |                        |                        |                          |                          |
| Leakage current                     | Max. 0.6mA                                                                        |                        |                        |                        |                        |                        |                          |                          |
| Response frequency(★1)              | 1.5kHz                                                                            | 1kHz                   | 1.5kHz                 | 500Hz                  |                        | 350Hz                  | 400Hz                    | 200Hz                    |
| Residual voltage                    | Max. 7V                                                                           |                        |                        |                        |                        |                        |                          |                          |
| Affection by Temp.                  | ±10% Max. for sensing distance at +20℃ (For PRT08 series : ±20% Max.)             |                        |                        |                        |                        |                        |                          |                          |
| Control output                      | 2 ~ 100mA                                                                         |                        |                        |                        |                        |                        |                          |                          |
| Insulation resistance               | Min. 50MΩ (at 500VDC mega)                                                        |                        |                        |                        |                        |                        |                          |                          |
| Dielectric strength                 | 1500VAC 50/60Hz for 1minute                                                       |                        |                        |                        |                        |                        |                          |                          |
| Vibration                           | 1mm amplitude at frequency of 10 ~ 55Hz in each of X, Y, Z directions for 2 hours |                        |                        |                        |                        |                        |                          |                          |
| Shock                               | 500m/s <sup>2</sup> (50G) in X, Y, Z direction for 3 times                        |                        |                        |                        |                        |                        |                          |                          |
| Indicator                           | Operation indicator (Red LED)                                                     |                        |                        |                        |                        |                        |                          |                          |
| Ambient temperature                 | –25 ~ +70℃ (at non–freezing status)                                               |                        |                        |                        |                        |                        |                          |                          |
| Storage temperature                 | –30 ~ +80℃ (at non–freezing status)                                               |                        |                        |                        |                        |                        |                          |                          |
| Ambient humidity                    | 35 ~ 95%RH                                                                        |                        |                        |                        |                        |                        |                          |                          |
| Protection circuit                  | Surge, Overcurrent protection circuit                                             |                        |                        |                        |                        |                        |                          |                          |
| Protection                          | IP67 (IEC standard)                                                               |                        |                        |                        |                        |                        |                          |                          |
| Cable spec.                         | φ 3.5×2P, 2m                                                                      |                        | φ 4×2P, 2m             |                        | φ 5×2P, 2m             |                        |                          |                          |
| Approval                            | CE                                                                                |                        |                        |                        |                        |                        |                          |                          |
| Unit weight                         | Approx.36g                                                                        | Approx.36g             | Approx.63g             | Approx.63g             | Approx.122g            | Approx.122g            | Approx.181g              | Approx.181g              |

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

(A)  
Counter

(B)  
Timer

(C)  
Temp.  
controller

(D)  
Power  
controller

(E)  
Panel  
meter

(F)  
Tacho/  
Speed/  
Pulse  
meter

(G)  
Display  
unit

(H)  
Sensor  
controller

(I)  
Switching  
power  
supply

(J)  
Proximity  
sensor

(K)  
Photo  
electric  
sensor

(L)  
Pressure  
sensor

(M)  
Rotary  
encoder

(N)  
Stepping  
motor &  
Driver &  
Controller

(O)  
Graphic  
panel

(P)  
Field  
network  
device

(Q)  
Production  
stoppage  
models &  
replacement

# PR Series

## ●DC 3-wire type

|                       |                                                                                                                      |                                                                                                      |                                                                                        |                                                                                                                  |                                                                                                      |                                                                                                      |                                                                                                              |                                                                                                              |                 |
|-----------------------|----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-----------------|
| Model                 | PR08-1.5DN<br>PR08-1.5DP<br>PR08-1.5DN2<br>PR08-1.5DP2<br>PRL08-1.5DN<br>PRL08-1.5DP<br>PRL08-1.5DN2<br>PRL08-1.5DP2 | PR08-2DN<br>PR08-2DP<br>PR08-2DN2<br>PR08-2DP2<br>PRL08-2DN<br>PRL08-2DP<br>PRL08-2DN2<br>PRL08-2DP2 | PR12-2DN<br>PR12-2DP<br>PR12-2DN2<br>PR12-2DP2<br>PRS12-2DN<br>PRS12-2DP<br>PRS12-2DN2 | PR12-4DN<br>PR12-4DP<br>PR12-4DN2<br>PR12-4DP2<br>PRS12-4DN<br>PRS12-4DP<br>PRS12-4DN2<br>PRL12-4DN<br>PRL12-4DP | PR18-5DN<br>PR18-5DP<br>PR18-5DN2<br>PR18-5DP2<br>PRL18-5DN<br>PRL18-5DP<br>PRL18-5DN2<br>PRL18-5DP2 | PR18-8DN<br>PR18-8DP<br>PR18-8DN2<br>PR18-8DP2<br>PRL18-8DN<br>PRL18-8DP<br>PRL18-8DN2<br>PRL18-8DP2 | PR30-10DN<br>PR30-10DP<br>PR30-10DN2<br>PR30-10DP2<br>PRL30-10DN<br>PRL30-10DP<br>PRL30-10DN2<br>PRL30-10DP2 | PR30-15DN<br>PR30-15DP<br>PR30-15DN2<br>PR30-15DP2<br>PRL30-15DN<br>PRL30-15DP<br>PRL30-15DN2<br>PRL30-15DP2 |                 |
|                       | Sensing distance                                                                                                     | 1.5mm ±10%                                                                                           | 2mm ±10%                                                                               | 2mm ±10%                                                                                                         | 4mm ±10%                                                                                             | 5mm ±10%                                                                                             | 8mm ±10%                                                                                                     | 10mm ±10%                                                                                                    | 15mm ±10%       |
|                       | Hysteresis                                                                                                           | Max. 10% of sensing distance                                                                         |                                                                                        |                                                                                                                  |                                                                                                      |                                                                                                      |                                                                                                              |                                                                                                              |                 |
|                       | Standard sensing target                                                                                              | 8×8×1mm(Iron)                                                                                        |                                                                                        | 12×12×1mm(Iron)                                                                                                  |                                                                                                      | 18×18×1mm(Iron)                                                                                      | 25×25×1mm(Iron)                                                                                              | 30×30×1mm(Iron)                                                                                              | 45×45×1mm(Iron) |
|                       | Setting distance                                                                                                     | 0 ~ 1.05mm                                                                                           | 0 ~ 1.4mm                                                                              | 0 ~ 1.4mm                                                                                                        | 0 ~ 2.8mm                                                                                            | 0 ~ 3.5mm                                                                                            | 0 ~ 5.6mm                                                                                                    | 0 ~ 7mm                                                                                                      | 0 ~ 10.5mm      |
|                       | Power supply (Operation voltage)                                                                                     | 12-24VDC<br>(10-30VDC)                                                                               |                                                                                        |                                                                                                                  |                                                                                                      |                                                                                                      |                                                                                                              |                                                                                                              |                 |
|                       | Leakage current                                                                                                      | Max. 10mA                                                                                            |                                                                                        |                                                                                                                  |                                                                                                      |                                                                                                      |                                                                                                              |                                                                                                              |                 |
|                       | Response frequency(★1)                                                                                               | 1.5kHz                                                                                               | 1kHz                                                                                   | 1.5kHz                                                                                                           | 500Hz                                                                                                |                                                                                                      | 350Hz                                                                                                        | 400Hz                                                                                                        | 200Hz           |
|                       | Residual voltage                                                                                                     | Max. 1.5V                                                                                            |                                                                                        |                                                                                                                  |                                                                                                      |                                                                                                      |                                                                                                              |                                                                                                              |                 |
| Affection by Temp.    | ±10% Max. for sensing distance at +20℃ within temperature range of -25 ~ +70℃, PR08 Series:Max. ±20%                 |                                                                                                      |                                                                                        |                                                                                                                  |                                                                                                      |                                                                                                      |                                                                                                              |                                                                                                              |                 |
| Control output        | 200mA                                                                                                                |                                                                                                      |                                                                                        |                                                                                                                  |                                                                                                      |                                                                                                      |                                                                                                              |                                                                                                              |                 |
| Insulation resistance | Min. 50MΩ (at 500VDC mega)                                                                                           |                                                                                                      |                                                                                        |                                                                                                                  |                                                                                                      |                                                                                                      |                                                                                                              |                                                                                                              |                 |
| Dielectric strength   | 1500VAC 50/60Hz for 1minute                                                                                          |                                                                                                      |                                                                                        |                                                                                                                  |                                                                                                      |                                                                                                      |                                                                                                              |                                                                                                              |                 |
| Vibration             | 1mm amplitude at frequency of 10 ~ 55Hz in each of X, Y, Z directions for 2 hours                                    |                                                                                                      |                                                                                        |                                                                                                                  |                                                                                                      |                                                                                                      |                                                                                                              |                                                                                                              |                 |
| Shock                 | 500m/s <sup>2</sup> (50G) in X, Y, Z direction for 3 times                                                           |                                                                                                      |                                                                                        |                                                                                                                  |                                                                                                      |                                                                                                      |                                                                                                              |                                                                                                              |                 |
| Indicator             | Operation indicator (Red LED)                                                                                        |                                                                                                      |                                                                                        |                                                                                                                  |                                                                                                      |                                                                                                      |                                                                                                              |                                                                                                              |                 |
| Ambient temperature   | -25 ~ +70℃ (at non-freezing status)                                                                                  |                                                                                                      |                                                                                        |                                                                                                                  |                                                                                                      |                                                                                                      |                                                                                                              |                                                                                                              |                 |
| Storage temperature   | -30 ~ +80℃ (at non-freezing status)                                                                                  |                                                                                                      |                                                                                        |                                                                                                                  |                                                                                                      |                                                                                                      |                                                                                                              |                                                                                                              |                 |
| Ambient humidity      | 35 ~ 95%RH                                                                                                           |                                                                                                      |                                                                                        |                                                                                                                  |                                                                                                      |                                                                                                      |                                                                                                              |                                                                                                              |                 |
| Protection circuit    | Surge, Reverse power polarity, Overcurrent protection circuit                                                        |                                                                                                      |                                                                                        |                                                                                                                  |                                                                                                      |                                                                                                      |                                                                                                              |                                                                                                              |                 |
| Protection            | IP67 (IEC standard)                                                                                                  |                                                                                                      |                                                                                        |                                                                                                                  |                                                                                                      |                                                                                                      |                                                                                                              |                                                                                                              |                 |
| Cable spec.           | φ 3.5×3P, 2m                                                                                                         |                                                                                                      | φ 4×3P, 2m                                                                             |                                                                                                                  | φ 5×3P, 2m                                                                                           |                                                                                                      |                                                                                                              |                                                                                                              |                 |
| Approval              | CE                                                                                                                   |                                                                                                      |                                                                                        |                                                                                                                  |                                                                                                      |                                                                                                      |                                                                                                              |                                                                                                              |                 |
| Unit weight           | Approx. 36g                                                                                                          | Approx. 36g                                                                                          | PR:Approx. 70g<br>PRS:Approx. 68g                                                      | PR:Approx. 70g<br>PRS:Approx. 68g                                                                                | PR:Approx. 119g<br>PRL:Approx. 150g                                                                  | PR:Approx. 118g<br>PRL:Approx. 150g                                                                  | PR:Approx. 184g<br>PRL:Approx. 222g                                                                          | PR:Approx. 181g<br>PRL:Approx. 227g                                                                          |                 |

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

## ●AC 2-wire type

| Model                            | PR12-2AO<br>PR12-2AC                                                              | PR12-4AO<br>PR12-4AC | PR18-5AO<br>PR18-5AC<br>PRL18-5AO<br>PRL18-5AC | PR18-8AO<br>PR18-8AC<br>PRL18-8AO<br>PRL18-8AC | PR30-10AO<br>PR30-10AC<br>PRL30-10AO<br>PRL30-10AC | PR30-15AO<br>PR30-15AC<br>PRL30-15AO<br>PRL30-15AC |
|----------------------------------|-----------------------------------------------------------------------------------|----------------------|------------------------------------------------|------------------------------------------------|----------------------------------------------------|----------------------------------------------------|
| Sensing distance                 | 2mm ±10%                                                                          | 4mm ±10%             | 5mm ±10%                                       | 8mm ±10%                                       | 10mm ±10%                                          | 15mm ±10%                                          |
| Hysteresis                       | Max. 10% of sensing distance                                                      |                      |                                                |                                                |                                                    |                                                    |
| Standard sensing target          | 12×12×1mm (Iron)                                                                  |                      | 18×18×1mm (Iron)                               | 25×25×1mm (Iron)                               | 30×30×1mm (Iron)                                   | 45×45×1mm (Iron)                                   |
| Setting distance                 | 0 ~ 1.4mm                                                                         | 0 ~ 2.8mm            | 0 ~ 3.5mm                                      | 0 ~ 5.6mm                                      | 0 ~ 7mm                                            | 0 ~ 10.5mm                                         |
| Power supply (Operation voltage) | 100~240VAC<br>(85~264VAC)                                                         |                      |                                                |                                                |                                                    |                                                    |
| Leakage current                  | Max. 2.5mA                                                                        |                      |                                                |                                                |                                                    |                                                    |
| Response frequency(★1)           | 20Hz                                                                              |                      |                                                |                                                |                                                    |                                                    |
| Residual voltage                 | Max. 10V                                                                          |                      |                                                |                                                |                                                    |                                                    |
| Affection by Temp.               | ±10% Max. for sensing distance at +20℃ within temperature range of -25 ~ +70℃     |                      |                                                |                                                |                                                    |                                                    |
| Control output                   | 5 ~ 150mA                                                                         |                      | 5 ~ 200mA                                      |                                                |                                                    |                                                    |
| Insulation resistance            | Min. 50MΩ (at 500VDC mega)                                                        |                      |                                                |                                                |                                                    |                                                    |
| Dielectric strength              | 2500VAC 50/60Hz for 1minute                                                       |                      |                                                |                                                |                                                    |                                                    |
| Vibration                        | 1mm amplitude at frequency of 10 ~ 55Hz in each of X, Y, Z directions for 2 hours |                      |                                                |                                                |                                                    |                                                    |
| Shock                            | 500m/s <sup>2</sup> (50G) in X, Y, Z direction for 3 times                        |                      |                                                |                                                |                                                    |                                                    |
| Indicator                        | Operation indicator (Red LED)                                                     |                      |                                                |                                                |                                                    |                                                    |
| Ambient temperature              | -25 ~ +70℃ (at non-freezing status)                                               |                      |                                                |                                                |                                                    |                                                    |
| Storage temperature              | -30 ~ +80℃ (at non-freezing status)                                               |                      |                                                |                                                |                                                    |                                                    |
| Ambient humidity                 | 35 ~ 95%RH                                                                        |                      |                                                |                                                |                                                    |                                                    |
| Protection circuit               | Surge protection circuit                                                          |                      |                                                |                                                |                                                    |                                                    |
| Protection                       | IP67 (IEC standard)                                                               |                      |                                                |                                                |                                                    |                                                    |
| Cable spec.                      | ø 4×2P, 2m                                                                        |                      | ø 5×2P, 2m                                     |                                                |                                                    |                                                    |
| Approval                         | CE                                                                                |                      |                                                |                                                |                                                    |                                                    |
| Unit weight                      | Approx. 66g                                                                       | Approx. 66g          | PR : Appox. 130g<br>PRL : Appox. 150g          | PR : Appox. 130g<br>PRL : Appox. 150g          | PR : Appox. 185g<br>PRL : Appox. 224g              | PR : Appox. 117g<br>PRL : Appox. 222g              |

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

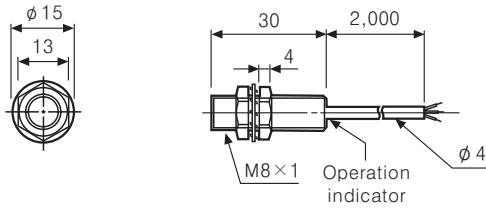
# Cylindrical Type Proximity Sensor

## ■ Dimensions

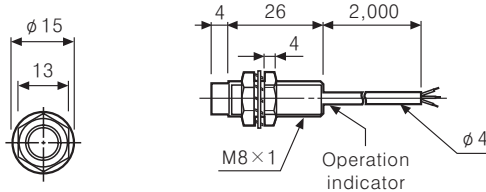
(Unit:mm)

|     |                                          |
|-----|------------------------------------------|
| (A) | Counter                                  |
| (B) | Timer                                    |
| (C) | Temp. controller                         |
| (D) | Power controller                         |
| (E) | Panel meter                              |
| (F) | Tacho/ Speed/ Pulse meter                |
| (G) | Display unit                             |
| (H) | Sensor controller                        |
| (I) | Switching power supply                   |
| (J) | Proximity sensor                         |
| (K) | Photo electric sensor                    |
| (L) | Pressure sensor                          |
| (M) | Rotary encoder                           |
| (N) | Stepping motor & Driver & Controller     |
| (O) | Graphic panel                            |
| (P) | Field network device                     |
| (Q) | Production stoppage models & replacement |

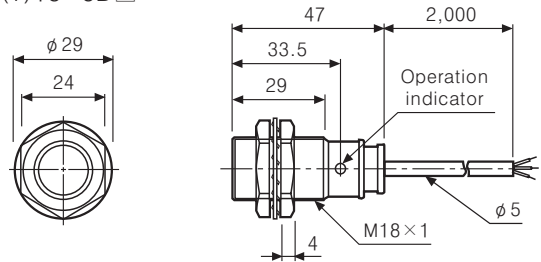
### ●PR(T)08-1.5D□



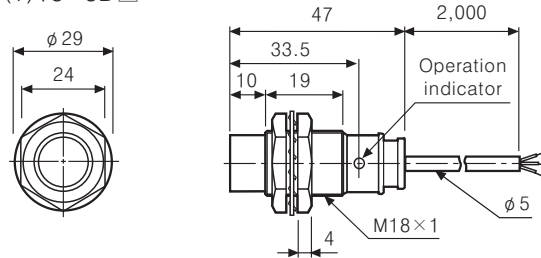
### ●PR(T)08-2D□



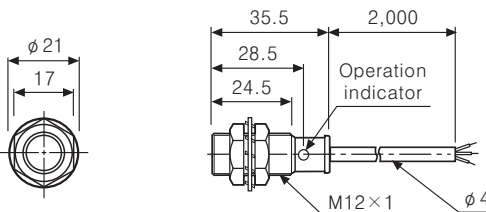
### ●PR(T)18-5D□



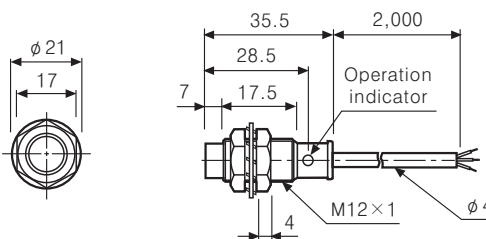
### ●PR(T)18-8D□



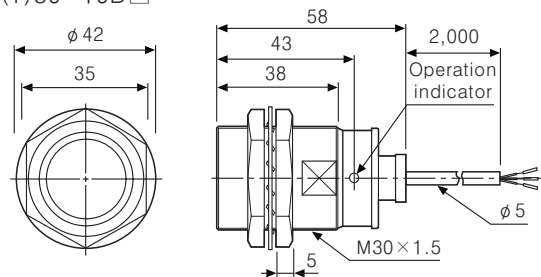
### ●PRS12-2D□



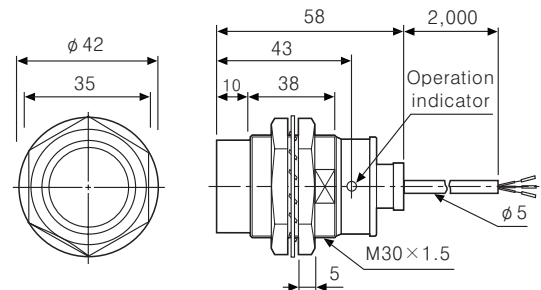
### ●PRS12-4D□



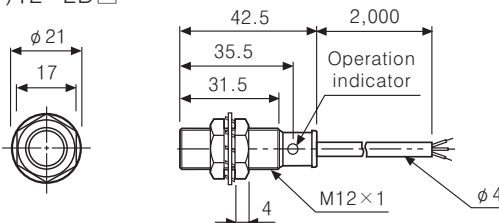
### ●PR(T)30-10D□



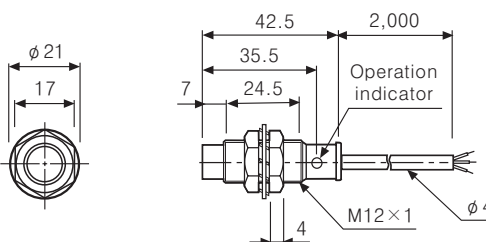
### ●PR(T)30-15D□



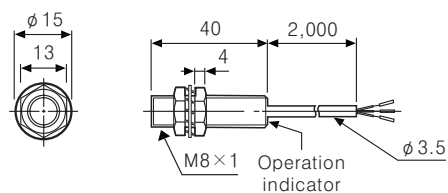
### ●PR(T)12-2D□



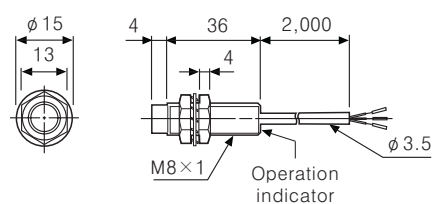
### ●PR(T)12-4D□



### ●PRL08-1.5D□



### ●PRL08-2D□

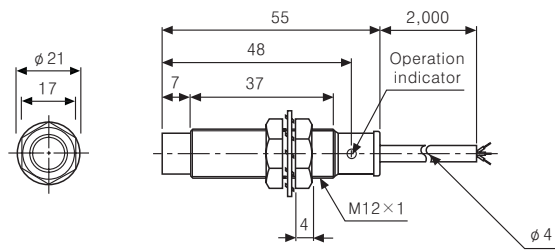


# PR Series

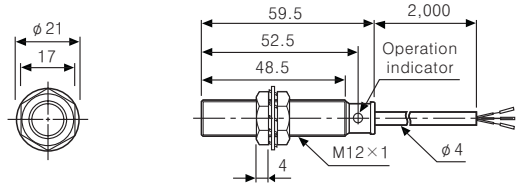
## ■ Dimensions

(Unit:mm)

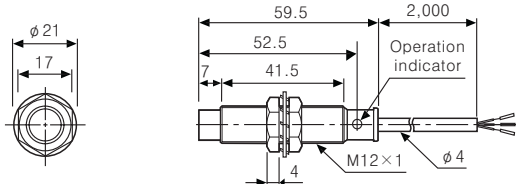
### ●PRL12-4D□



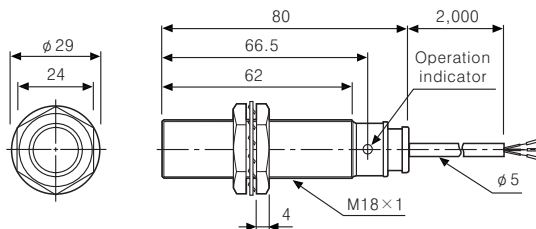
### ●PR12-2A□



### ●PR12-4A□

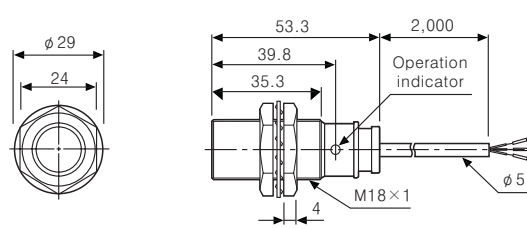


### ●PRL18-5D□

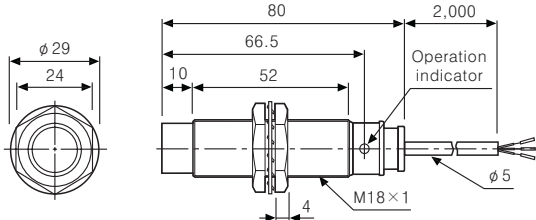


### ●PRL18-5A□

### ●PR18-5A□

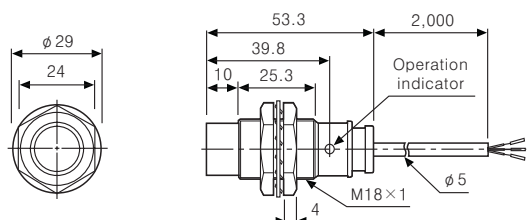


### ●PRL18-8D□

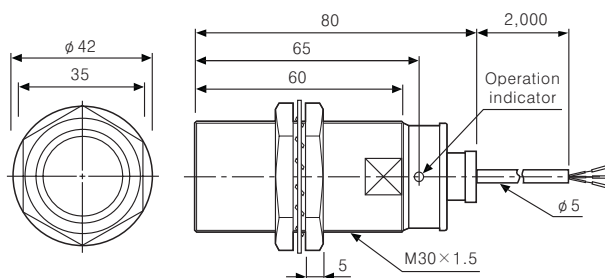


### ●PRL18-8A□

### ●PR18-8A□

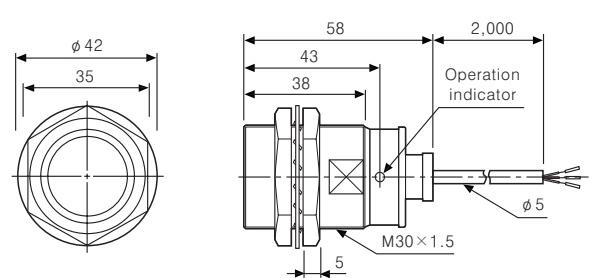


### ●PRL30-10D□

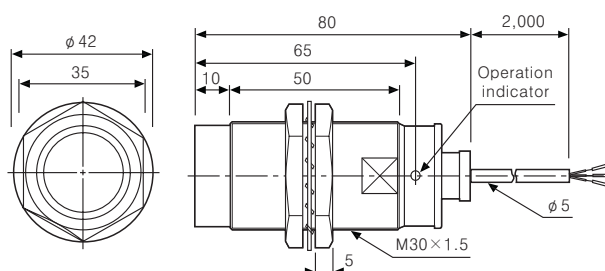


### ●PRL30-10A□

### ●PR30-10A□

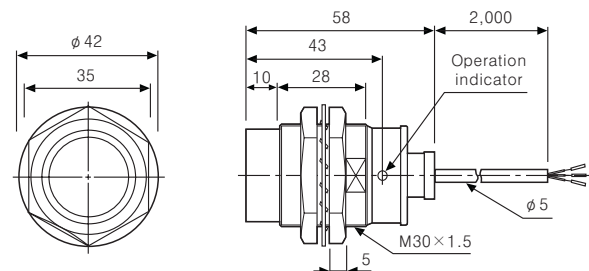


### ●PRL30-15D□



### ●PRL30-15A□

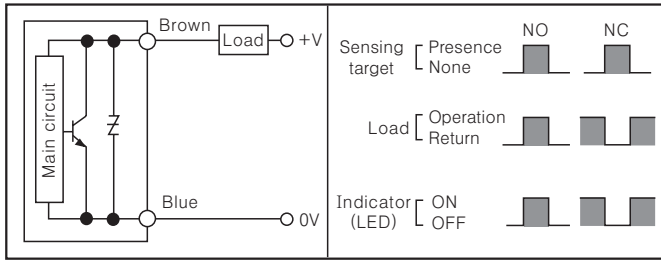
### ●PR30-15A□



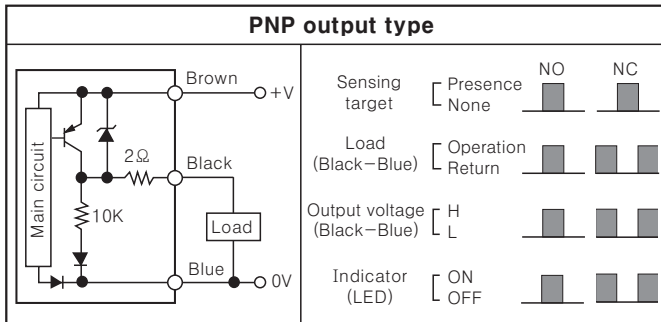
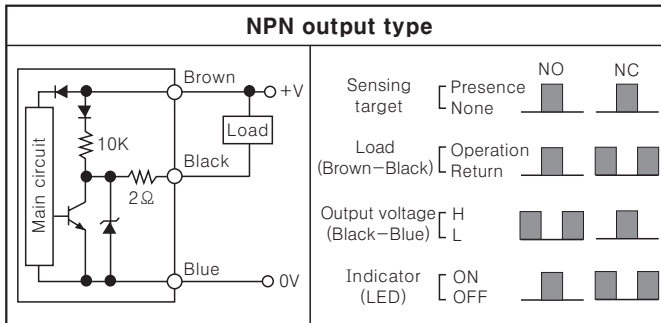
# Cylindrical Type Proximity Sensor

## ■ Control output diagram

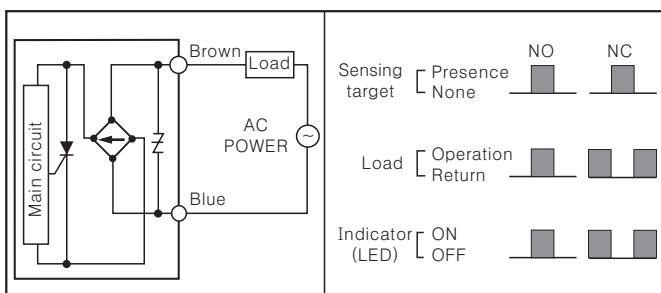
### ◎ DC 2-wire type



### ◎ DC 3-wire type

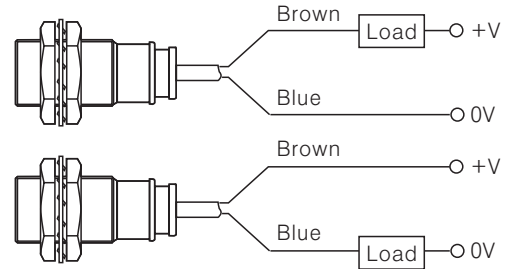


### ◎ AC 2-wire type



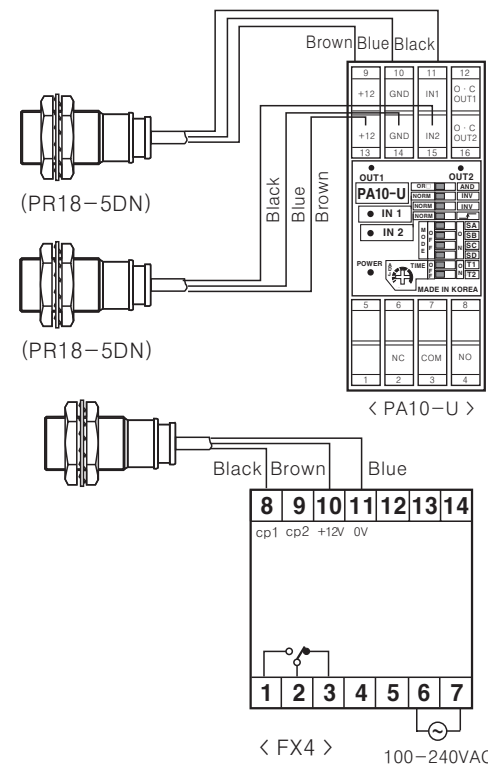
## ■ Connections

### ◎ DC 2-wire type

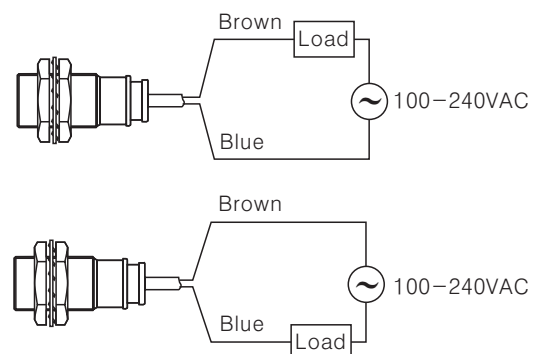


※ The load can be connected to either wire.

### ◎ DC 3-wire type



### ◎ AC 2-wire type



※ The load can be connected to either wire.

(A) Counter

(B) Timer

(C) Temp. controller

(D) Power controller

(E) Panel meter

(F) Tacho/Speed/Pulse meter

(G) Display unit

(H) Sensor controller

(I) Switching power supply

(J) Proximity sensor

(K) Photo electric sensor

(L) Pressure sensor

(M) Rotary encoder

(N) Stepping motor & Driver & Controller

(O) Graphic panel

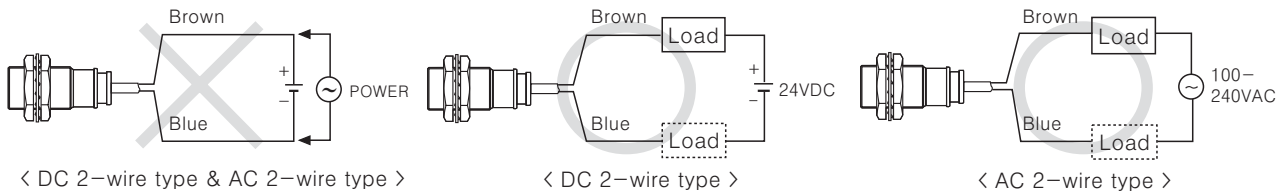
(P) Field network device

(Q) Production stoppage models & replacement

# PR Series

## ■ Proper usage

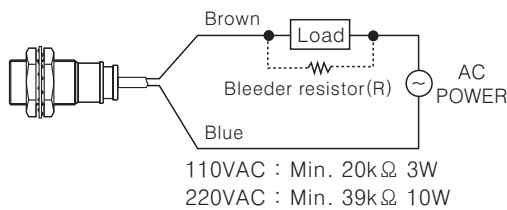
### ◎ Load connections



When using DC or AC 2-wire type proximity sensor, the load must be connected, otherwise internal components may be damaged. And the load can be connected to either wire.

### ◎ In case of the load current is small

#### ● AC 2-wire type

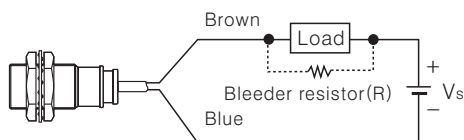


It may cause return failure of load by residual voltage. If the load current is under 5mA, please make sure the residual voltage is less than the return voltage of the load by connecting a bleeder resistor in parallel with the load as shown in the diagram.

$$R = \frac{V_s}{I} (\Omega) \quad P = \frac{V_s^2}{R} (W)$$

[ I: Action current of load, R: Bleeder resistance, P: Permissible power ]

#### ● DC 2-wire type



Please make the current on proximity sensor smaller than the return current of load by connecting a bleeder resistor in parallel.

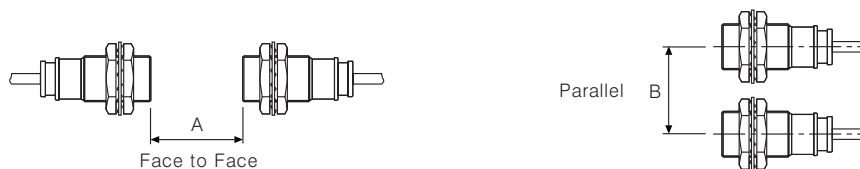
※ W value of Bleeder resistor should be bigger for proper heat dissipation.

$$R = \frac{V_s}{I_o - I_{off}} (\Omega) \quad P = \frac{V_s^2}{R} (W)$$

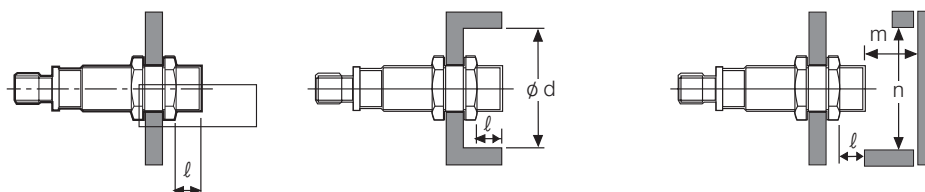
[ Vs : Power supply, Io : Min. action current of proximity sensor  
Ioff : Return current of load, P : Number of Bleeder resistance watt ]

### ◎ Mutual-interference & Influence by surrounding metals

When several proximity sensors are mounted closely, malfunction may be caused due to mutual interference. Therefore, be sure to keep a minimum distance between the two sensors, as below charts.



When sensors are mounted on metallic panel, it is required to protect the sensors from being affected by any metallic object except target. Therefore, be sure to provide a minimum distance as below chart.



(Unit:mm)

| Model<br>Item | PR08-1.5D□<br>PRT08-1.5D□ | PR08-2D□<br>PRT08-2D□ | PR(T)12-2D□<br>PRS12-2D□<br>PR12-2A□ | PR(T)12-4D□<br>PRS12-4D□<br>PR12-4A□ | PR(T)18-5D□<br>PRL18-5D□<br>PR18-5A□<br>PRL18-5A□ | PR(T)18-8D□<br>PRL18-8D□<br>PR18-8A□<br>PRL18-8A□ | PR(T)30-10D□<br>PRL30-10D□<br>PR30-10A□<br>PRL30-10A□ | PR(T)30-15D□<br>PRL30-15D□<br>PR30-15A□<br>PRL30-15A□ |
|---------------|---------------------------|-----------------------|--------------------------------------|--------------------------------------|---------------------------------------------------|---------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|
| A             | 9                         | 12                    | 12                                   | 24                                   | 30                                                | 48                                                | 60                                                    | 90                                                    |
| B             | 16                        | 24                    | 24                                   | 36                                   | 36                                                | 54                                                | 60                                                    | 90                                                    |
| l             | 0                         | 8                     | 0                                    | 11                                   | 0                                                 | 14                                                | 0                                                     | 15                                                    |
| φd            | 8                         | 24                    | 12                                   | 36                                   | 18                                                | 54                                                | 30                                                    | 90                                                    |
| m             | 4.5                       | 6                     | 6                                    | 12                                   | 15                                                | 24                                                | 30                                                    | 54                                                    |
| n             | 12                        | 24                    | 18                                   | 36                                   | 27                                                | 54                                                | 45                                                    | 90                                                    |



**Стандарт  
Электрон  
Связь**

Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

Благодаря сотрудничеству с мировыми поставщиками мы осуществляем комплексные и плановые поставки широчайшего спектра электронных компонентов.

Собственная эффективная логистика и склад в обеспечивает надежную поставку продукции в точно указанные сроки по всей России.

Мы осуществляем техническую поддержку нашим клиентам и предпродажную проверку качества продукции. На все поставляемые продукты мы предоставляем гарантию .

Осуществляем поставки продукции под контролем ВП МО РФ на предприятия военно-промышленного комплекса России , а также работаем в рамках 275 ФЗ с открытием отдельных счетов в уполномоченном банке. Система менеджмента качества компании соответствует требованиям ГОСТ ISO 9001.

Минимальные сроки поставки, гибкие цены, неограниченный ассортимент и индивидуальный подход к клиентам являются основой для выстраивания долгосрочного и эффективного сотрудничества с предприятиями радиоэлектронной промышленности, предприятиями ВПК и научно-исследовательскими институтами России.

С нами вы становитесь еще успешнее!

**Наши контакты:**

**Телефон:** +7 812 627 14 35

**Электронная почта:** [sales@st-electron.ru](mailto:sales@st-electron.ru)

**Адрес:** 198099, Санкт-Петербург,  
Промышленная ул, дом № 19, литера Н,  
помещение 100-Н Офис 331