

Inductive Ring Proximity Sensor

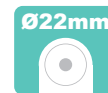
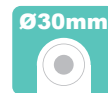
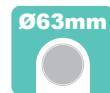
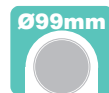
Screw Pass Sensor

PIR



SALIENT FEATURES

- ◆ Ring Ø15-99mm
- ◆ Min Object Ø2mm
- ◆ Dual LED Indication
- ◆ Sensitivity Adjustable
- ◆ User NPN/PNP selectable



Model Number Legend

PIR - □ □ □ - □
 1 2 3 4

1. Series

PIR

2. Ring Diameter

- 15D: Ø 15mm
- 22D: Ø 22mm
- 30D: Ø 30mm
- 63D: Ø 63mm
- 99D: Ø 99mm

3. Output

- UNP: NPN/ PNP- NO, NC Selectable Dual Output
- ND: NPN - NO, NC Dual Output
- PD: PNP - NO, NC Dual Output

4. Connection

- 2M: 2m Cable
- M12C: M12 Connector

#. Accessories included

Mounting Screw & Nut: 1 Pair

Example:

PIR-30DUNP-2M

PIR Series - 30mm diameter sensing hole, Dual Selectable Outputs (NPN-NO, PNP-NC or NPN-NC, PNP-NO) - 2 meter Cable

NOTE: Contact us for models not shown in catalogue.
 Connector cables are sold separately; look in CC series catalogue for the same (www.inno.sg/cc).

Product Highlights

◆ High-speed Detection

The PIR sensor can detect a minimum object of Ø2mm. This makes it an ideal choice for detection of screws and other small metal parts that need counting. It can also be used to detect any break in the wire.



◆ NPN/ PNP Selectable Outputs*

The PIR sensor realizes the difficulty in stocking of different models for different output requirements. To eliminate this the PIR series features built-in selectable outputs. Dual outputs with option of either NPN-NO, PNP-NC or PNP-NO, NPN-NC is provided. The output type is changed by changing the power supply polarity to the sensor.

* - This feature is available only in PIR-15/22/30DUNP-_ models.
 ** - This feature is available only in PIR-63/99D_-_ models.

◆ Off-delay Timer**

The PIR sensor has a built-in off-delay timer switch which can be switched on to add a 100ms delay before switching off the output. This is useful in detecting high-speed small parts. The output is held for 100ms after the part passes, thus making it easier for the controller to pick-up the signal.

Ratings and Specifications

| Ring Size | | Ø 15mm | Ø 22mm | Ø 30mm | Ø 63mm | Ø 99mm |
|----------------------|--------------------|---|-----------------|-----------------|---|--------------|
| Model | 2 meter cable | PIR-15DUNP-2M | PIR-22DUNP-2M | PIR-30DUNP-2M | PIR-63DND-2M | PIR-99DND-2M |
| | | - | - | - | PIR-63DPD-2M | PIR-99DPD-2M |
| | M12 Jn. Connector | PIR-15DUNP-M12C | PIR-22DUNP-M12C | PIR-30DUNP-M12C | - | - |
| | | - | - | - | - | - |
| Min. object size | | min. Ø2mm | min. Ø3mm | | min. Ø5mm | min. Ø10mm |
| Response Frequency | | 1500Hz | | | 200Hz | 100Hz |
| Sensing Objects | | Ferrous or non-ferrous moving metal object (sensitivity lowers with non-ferrous metals) | | | | |
| Supply Voltage | | 10 - 30 VDC (incl. Ripple 10%) | | | | |
| Current Consumption | | max. 15mA | | | | |
| Output | Type | NPN-NO, PNP-NC or NPN-NC, PNP-NO (user selectable) | | | NPN or PNP - NO, NC (by model) | |
| | Switching Capacity | max. 100mA at 24VDC | | | | |
| Output Adjustment | | Sensitivity Adjustment by 12 turn pot. | | | Sensitivity Adjustment by pot.; 100ms Off-delay Timer by switch | |
| Indication | | Operation: Dual RED LEDs | | | Operation: RED LED | |
| Protection Circuits | | Reverse power supply polarity protection, reversed output polarity protection | | | | |
| Vibration Resistance | | 10 - 55Hz, 1mm for 2 hours in X, Y, Z directions (destruction) | | | | |
| Shock Resistance | | 20 G (10 times) in X, Y, Z direction for 3 times (destruction) | | | | |
| Ambient Temperature | | Operation: -25° ~ 60° C; Storage: -30° ~ 70° C (non-freezing; non-condensing) | | | | |
| Ambient Humidity | | Operation: 40 ~ 85% RH; Storage: 35 ~ 95% RH (non-condensing) | | | | |
| Protection Class | | IP66 | | | IP65 | |
| Weight | Cable Type | approx. 86g | approx. 85g | approx. 81g | approx. 220g | approx. 710g |
| | Connector Type | approx. 50g | approx. 49g | approx. 45g | - | - |
| Material | | ABS/ PMMA eqv./ Resin | | | | |

Product Highlights

PIR

◆ Dual LEDs*

Two High bright LEDs are provided in the rear of the sensor for output indication. The LEDs glow only when an object is sensed, irrespective of the power polarity.



◆ Sensitivity Adjustable*

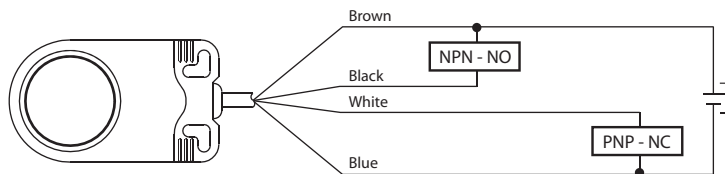
A 12 turn high precision potentiometer is provided for sensitivity adjustment. This ensures very fine adjustments of sensitivity in comparison with a single turn pot. This helps to differentiate between objects with little difference in size.



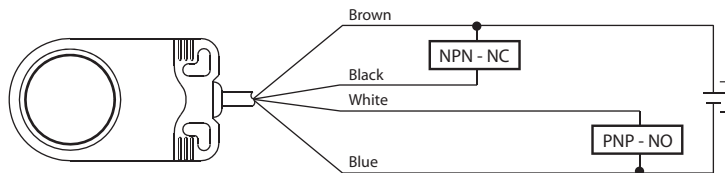
Connection

• Cable Type

◆ PIR- 15/22/30 DUNP-2M

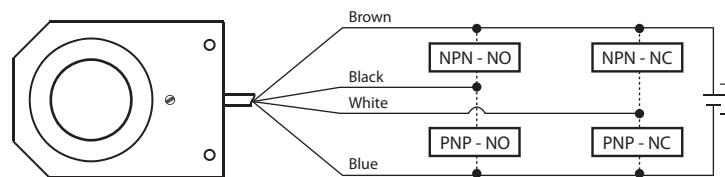


Power Polarity Normal
Brown : +ve
Blue : -ve



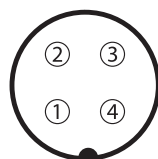
Power Polarity Reversed
Brown : -ve
Blue : +ve

◆ PIR- 63/99 D_-2M



• M12 Connector

◆ PIR- 15/22/30 DUNP-M12J3



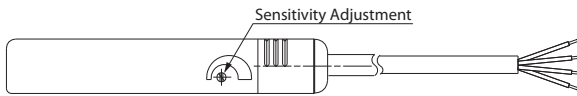
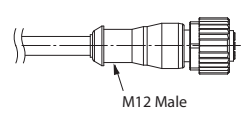
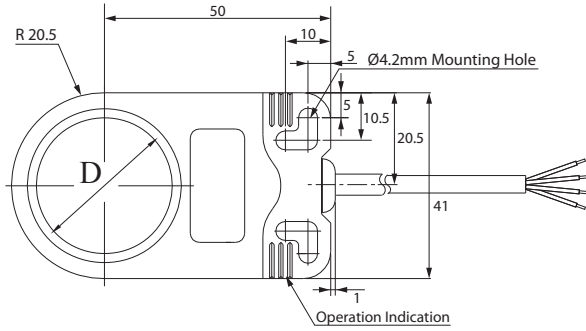
- 1 : DC 10~30V
- 2 : Control Output - PNP (NO/NC)
- 3 : 0V
- 4 : Control Output - NPN (NO/NC)

Note: Connector Cable is not supplied along with unit

Sensor Dimension Drawing

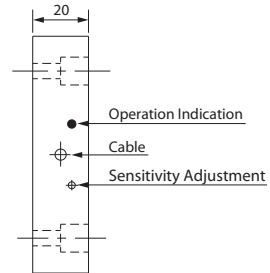
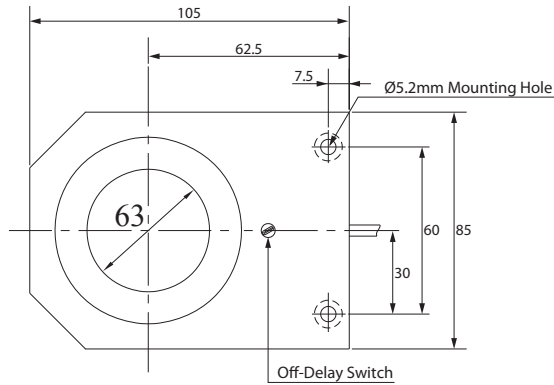
- ◆ PIR-15DUNP-2M
- ◆ PIR-22DUNP-2M
- ◆ PIR-30DUNP-2M

- ◆ PIR-15DUNP-M12C
- ◆ PIR-22DUNP-M12C
- ◆ PIR-30DUNP-M12C

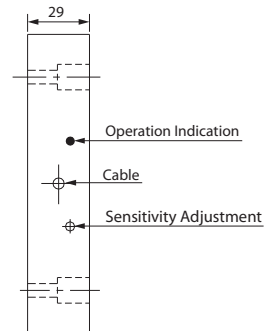
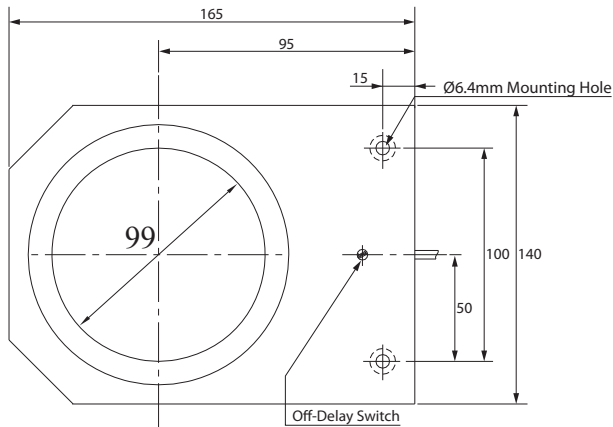


| Model No. | Ring Diameter |
|-----------------------|---------------|
| PIR-15DUNP- <u> </u> | 15mm |
| PIR-22DUNP- <u> </u> | 22mm |
| PIR-30DUNP- <u> </u> | 30mm |

- ◆ PIR-63D _-2M



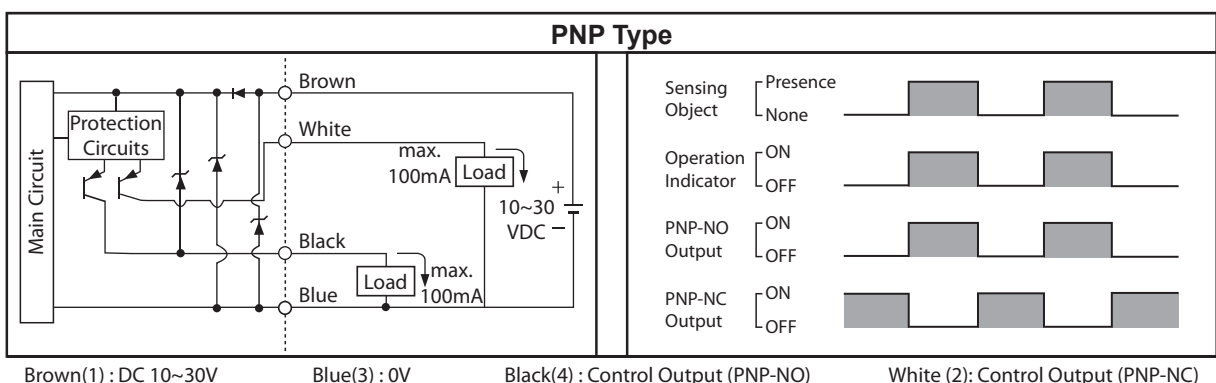
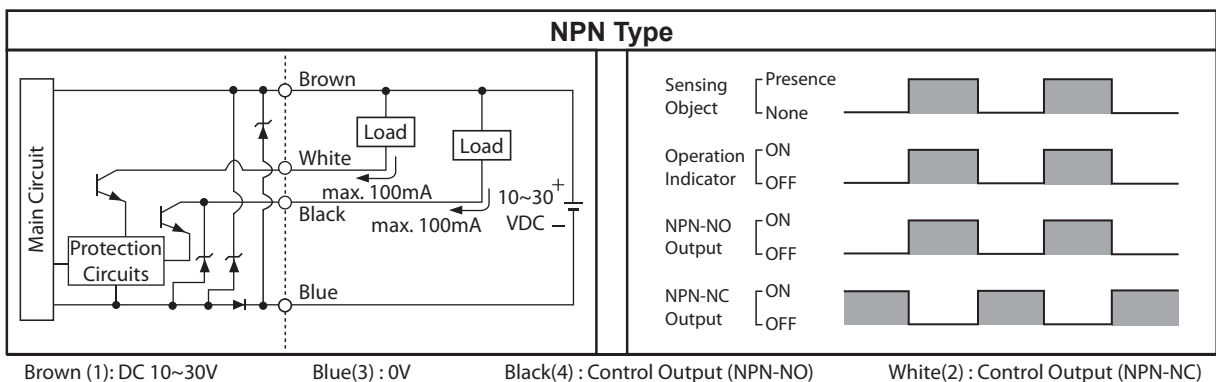
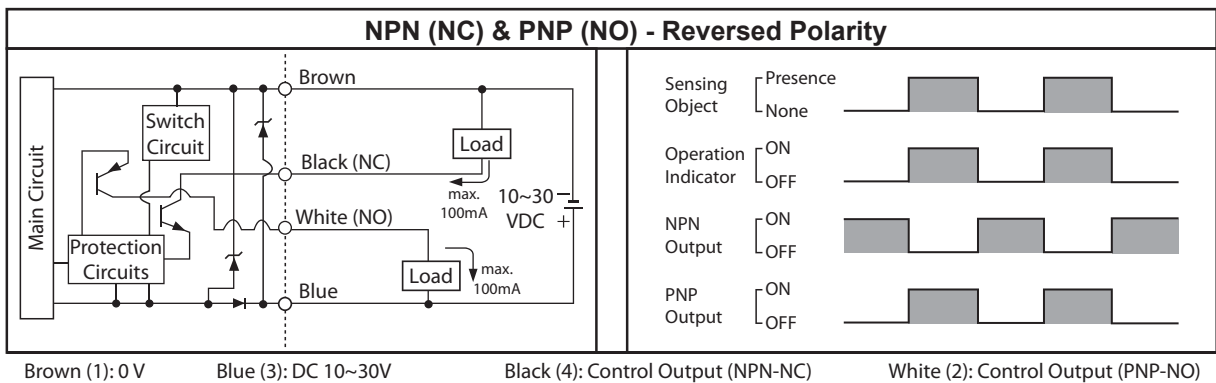
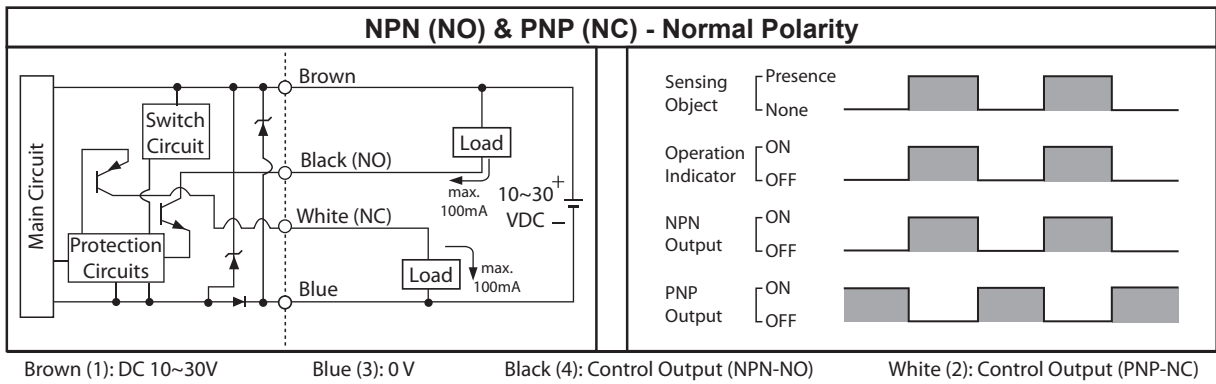
- ◆ PIR-99D _-2M



All dimensions are in mm

Control Output Diagram

PIR



Proximity Sensors

Photoelectric Sensors

Measurement Sensors

Vision & Safety Sensors

Control

Weighing

Automation

Components

Operation Mode Adjustment

The PIR-15/22/30DUNP- _ models have dual user selectable output modes.

When the power polarity is normal i.e. Brown - +ve, Blue- 0V the output is NPN-NO & PNP-NC.

When the power polarity is reversed i.e. Brown - 0V, Blue- +ve the output is NPN-NC & PNP-NO.

The PIR-63/99D_ - _ models have fixed dual outputs; either PNP-NO, PNP-NC or NPN-NO, NPN-NC as per model.

Sensitivity Adjustment



The sensitivity adjuster is to be rotated in the clockwise direction to increase the sensitivity to detect smaller objects and rotated in the anti-clockwise direction to decrease the sensitivity to detect only large objects.

Note: The adjuster is a 12 turn pot. Attempting to rotate the adjuster beyond the free rotation will cause sensor failure.

Proximity
Sensors

Photoelectric
Sensors

Measurement
Sensors

Vision & Safety
Sensors

Control

Weighing

Automation

Components

Exclusively Represented by:

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