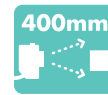
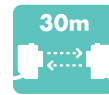


# Easy Mount Photoelectric Sensor

# FXE



CE



## SALIENT FEATURES

- ◆ Sensitivity Adjustable
- ◆ Upto 30 Meters sensing
- ◆ IP-67, Shock Resistant- 100G
- ◆ M18 Threaded Front Mounting
- ◆ Light ON/ Dark ON - Dual Output

## Model Number Legend

**FXE** -  -    -

**1**   **2**   **3**   **4**   **5**

### 1. Series

FXE

### 2. Type

T: Through Beam  
R: Retro Reflective  
D: Diffuse Reflective

### 3. Sensing Distance

400: 400 mm  
3.5M: 3.5 Meter  
30M: 30 Meter

### 4. Output

ND: NPN - NO, NC Dual Output  
PD: PNP - NO, NC Dual Output

### 5. Connection

2M: 2m Cable  
M8C: M8 Connector  
M12J3: M12 Junction Connector with 0.3m extension

### #. Accessories included

Mounting Nut (M18): 1 Set  
Mounting Screws : 1 Set  
Reflector (V-61) : 1 No. (with FXE-R models only)

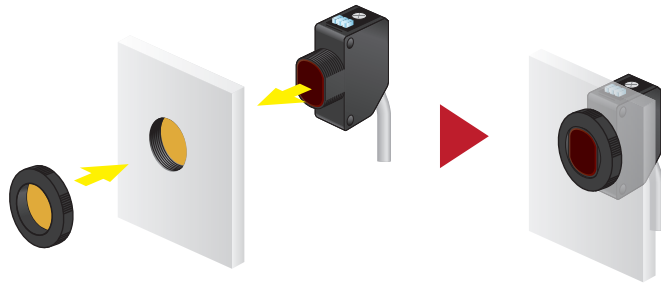
### Example:

FXE-T-30MPD-2M

FXE Series - Through Beam Type - 30 meter Sensing Distance, PNP NO, NC Dual Outputs - 2m 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



### ◆ M18 Threaded Mounting!

The FXE Series sensors can simply be mounted by inserting it into an M18 opening. The sensor head has a threaded surface and an M18 locking nut is provided. This makes mounting this unit Easy and Fast!

Also Conventional bracket mounting holes are also provided in the sensor body for added flexibility.

## Ratings and Specifications

Sensing Type		Through Beam		Retro-Reflective		Diffuse Reflective	
Output Type		NPN	PNP	NPN	PNP	NPN	PNP
Models	Cable	FXE-T-30MND-2M	FXE-T-30MPD-2M	FXE-R-3.5MND-2M	FXE-R-3.5MPD-2M	FXE-D-400ND-2M	FXE-D-400PD-2M
	Connector	FXE-T-30MND-M8C	FXE-T-30MPD-M8C	FXE-R-3.5MND-M8C	FXE-R-3.5MPD-M8C	FXE-D-400ND-M8C	FXE-D-400PD-M8C
	Junction Connector	FXE-T-30MND-M12J3	FXE-T-30MPD-M12J3	FXE-R-3.5MND-M12J3	FXE-R-3.5MPD-M12J3	FXE-D-400ND-M12J3	FXE-D-400PD-M12J3
Sensing Distance		30 Meters		3.5 Meters		400 mm	
Light Source		Red LED					
Hysteresis		-				20% max.	
Spot Size		Ø 610mm/ 30 m		Ø 75mm/ 3.5 m		Ø 12mm/ 400mm	
Response Time		500 µs					
Sensitivity Adjustment		Built-in externally adjustable 1 turn pot.					
Operation Mode		Light ON and Dark ON outputs provided					
Supply Voltage		10 - 30 VDC (Ripple Max 10%)					
Current Consumption		Emitter: max. 15mA; Receiver: max. 20mA		max. 30mA			
Protection Circuits		Reverse Polarity, Transient Voltages, Output Overcurrent indication					
Control Output		NO, NC - NPN or PNP open collector output (depending on model)					
Control Output Rating		Load Voltage: max. 30 VDC; Load Current: max 100mA					
Operation Indication		GREEN: Stable; YELLOW: Output ON; RED: Alarm - Overload / Through Beam Emitter Green Only					
Shock Resistance		100 G- X,Y, Z three directions					
Environmental Illuminance		Sunlight: 10,000 lux, Lamp: 3,000 lux					
Ambient Temperature		Operation: -25° ~ 55°C; Storage: -40° ~ 70°C (non- freezing; non- condensing)					
Ambient Humidity		Operation: 35 ~ 85% RH; Storage: 35 ~ 90% RH (non- condensing)					
Protection Class		IP67					
Weight		approx. 10g without cable					
Material		Housing: ABS with Glass, Lens: PMMA or Eqv.					

Note: The sensing distance for Retro Reflective models is when used with V-61 Reflector.  
The sensing distance for Diffuse Reflective models is calculated when using 200\*200mm 90% reflective white object

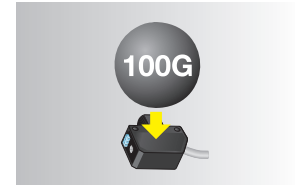
## Product Highlights

FXE

### ◆ Rugged & Waterproof

The sensor has an IP67 construction making it suitable for use in places where it may be exposed to water spray.

The sensor has a rigid design and superior construction for high resistance to mechanical shocks upto 100G.



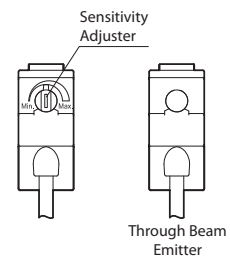
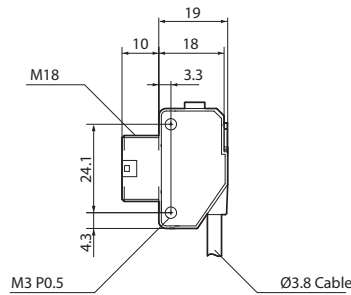
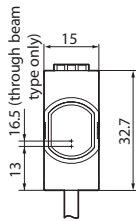
Proximity Sensors

Photoelectric Sensors

## Sensor Dimension Drawing

### Outgoing Cable Type & M12 Junction Connector Type

- ◆ FXE-T-30MND-2M
- ◆ FXE-T-30MPD-2M
- ◆ FXE-T-30MND-M12J3
- ◆ FXE-T-30MPD-M12J3
- ◆ FXE-R-3.5MND-2M
- ◆ FXE-R-3.5MPD-2M
- ◆ FXE-R-3.5MND-M12J3
- ◆ FXE-R-3.5MPD-M12J3
- ◆ FXE-D-400ND-2M
- ◆ FXE-D-400PD-2M
- ◆ FXE-D-400ND-M12J3
- ◆ FXE-D-400PD-M12J3

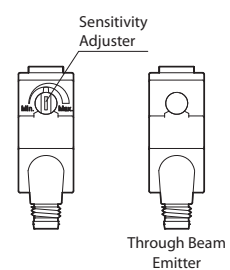
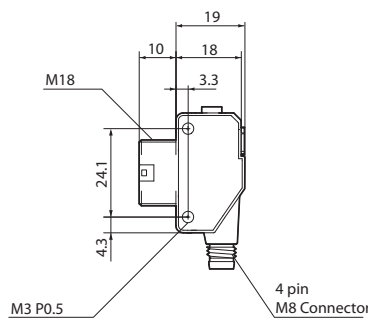
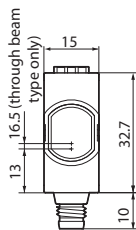


Measurement Sensors

Vision & Safety Sensors

### Connector Type

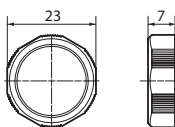
- ◆ FXE-T-30MND-M8C
- ◆ FXE-T-30MPD-M8C
- ◆ FXE-R-3.5MND-M8C
- ◆ FXE-R-3.5MPD-M8C
- ◆ FXE-D-400ND-M8C
- ◆ FXE-D-400PD-M8C



Control

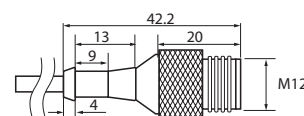
Weighing

### Locking Nut



M18- 1 Nut

### M12 Junction Connector

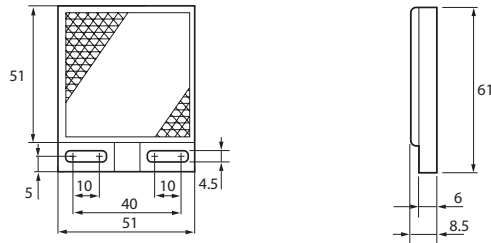


All dimensions are in mm

## Sensor Dimension Drawing

### Reflector

Ordering Code: V-61



## Nomenclature

### Through Beam Receiver, Retro-reflective, Diffuse Types



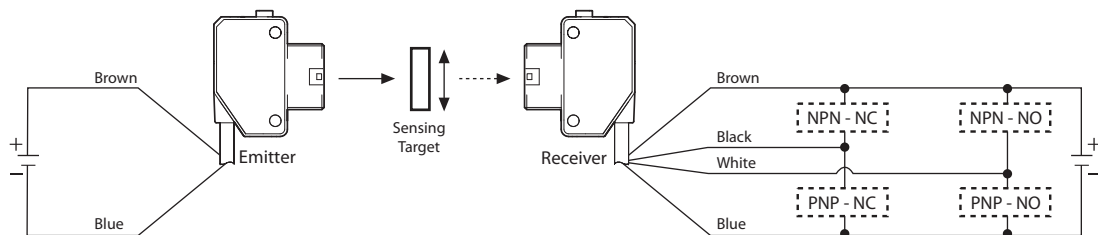
### Through Beam Emitter



## Connection

### • Cable & Junction Connector

#### ◆ Through Beam

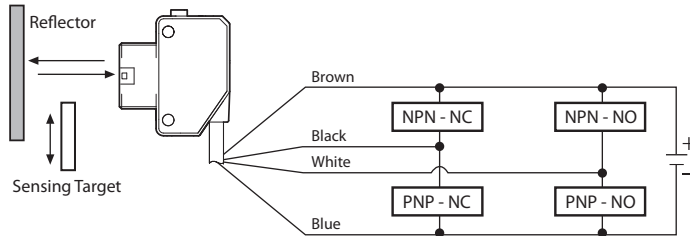


# Connection

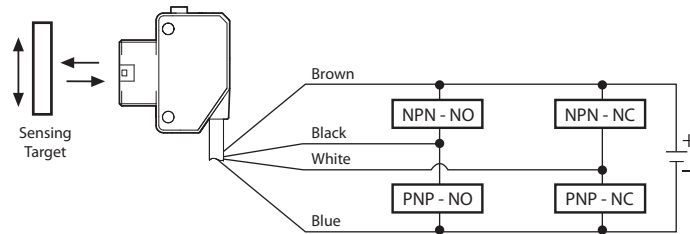
FXE

## • Cable & Junction Connector

### ◆ Retro Reflective



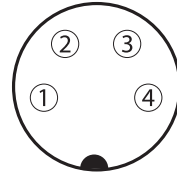
### ◆ Diffuse Reflective



- Brown : DC 10~30V
- Blue : 0 V
- Black : Control Output (Light ON)
- White : Control Output (Dark ON)

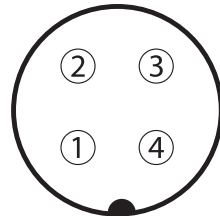
## • M8 Connector \*

### ◆ All Types



## • M12 Junction Connector \*

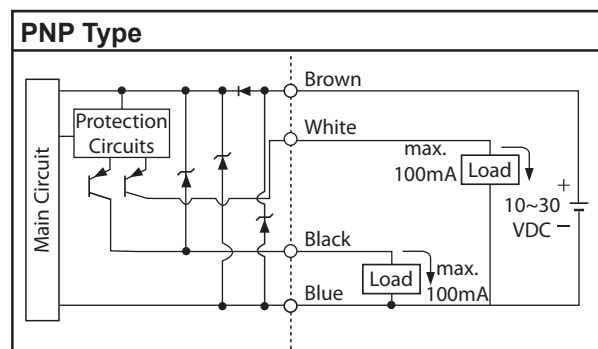
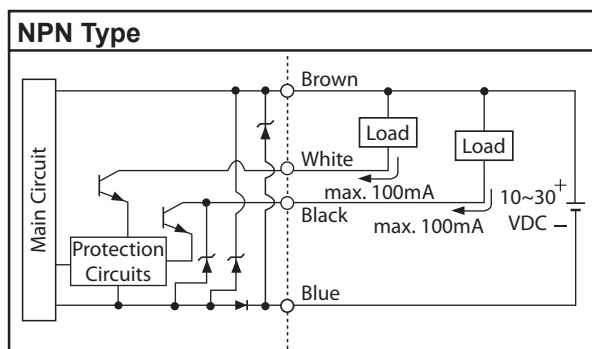
### ◆ All Types



- 1 : DC 10~30V
- 2 : Control Output (Dark ON)
- 3 : 0 V
- 4 : Control Output (Light ON)

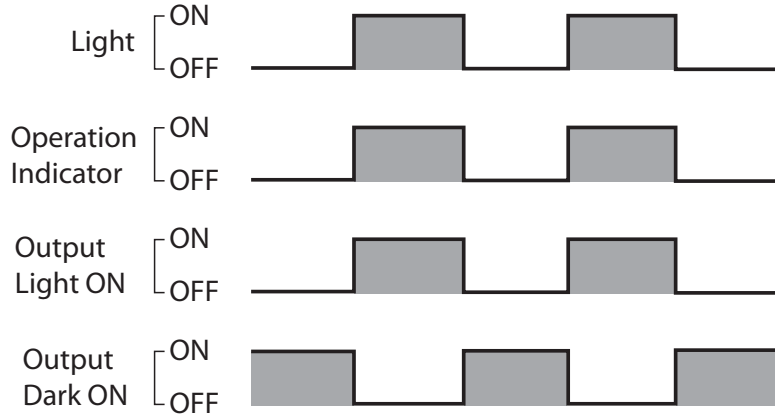
Note: \* - Connector Cable is not supplied along with unit

# Control Output Diagram



- Brown : DC 10~30V
- Blue : 0 V
- Black : Control Output (Light ON)
- White : Control Output (Dark ON)

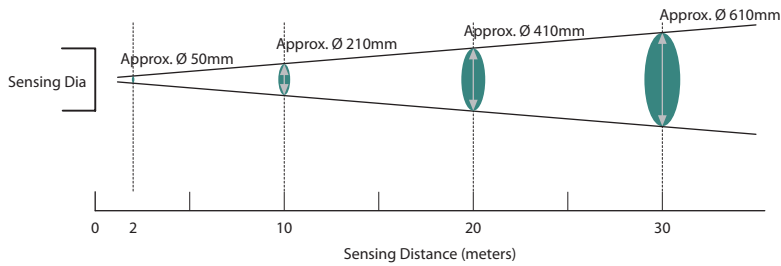
## Operation Type



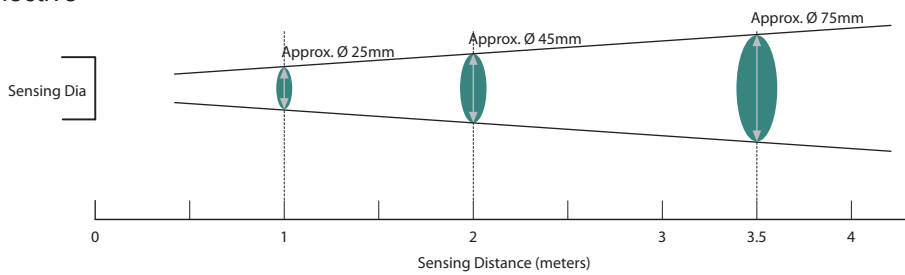
## Operational Data

### Spot Size

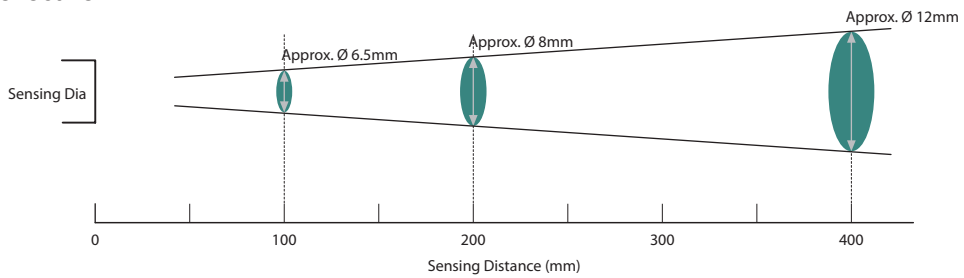
#### ◆ Through Beam



#### ◆ Retro Reflective



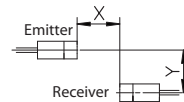
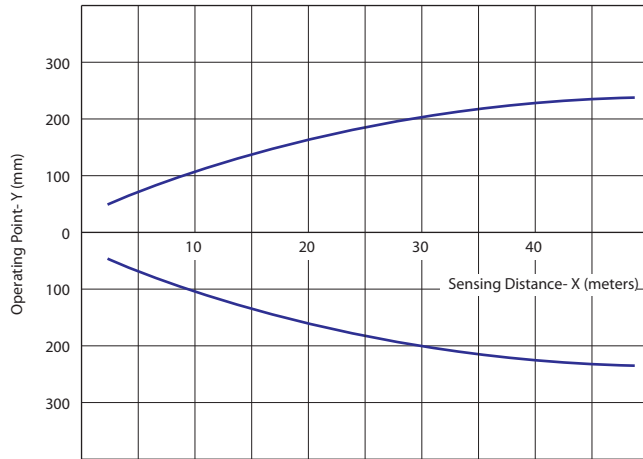
#### ◆ Diffuse Reflective



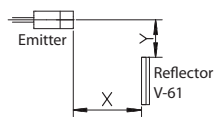
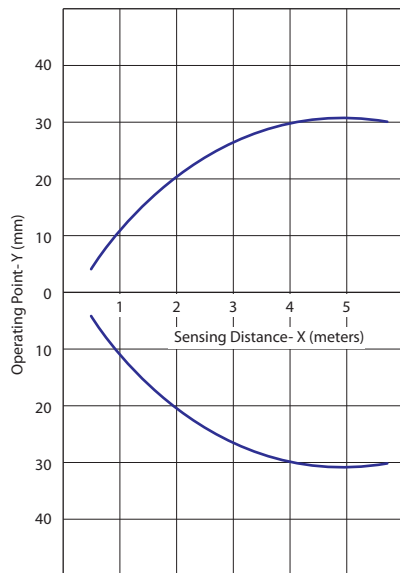
**Operational Data**

**Parallel Shifting Characteristic**

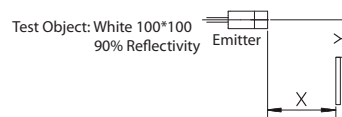
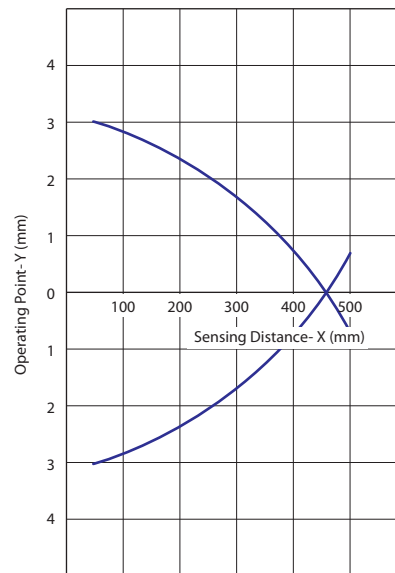
◆ **Through Beam**



◆ **Retro Reflective**



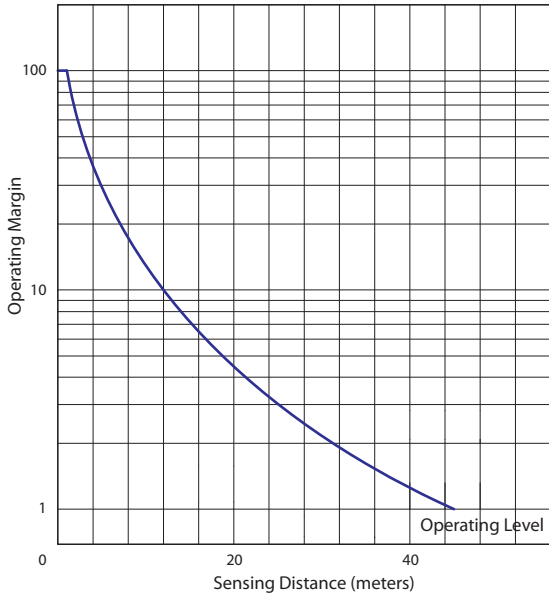
◆ **Diffuse Reflective**



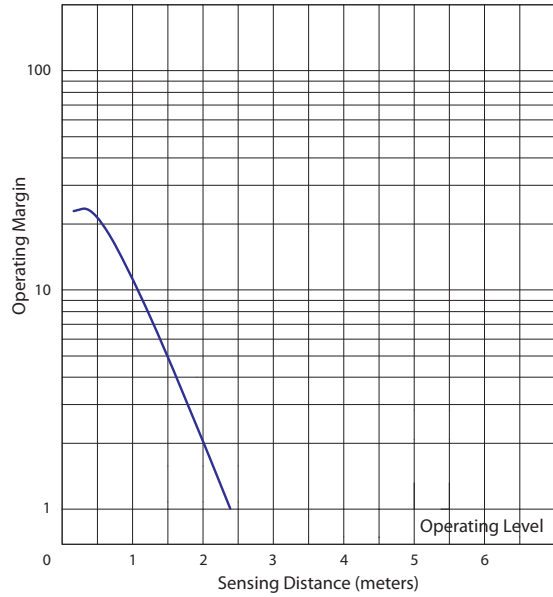
# Operational Data

## Excess Gain Characteristic

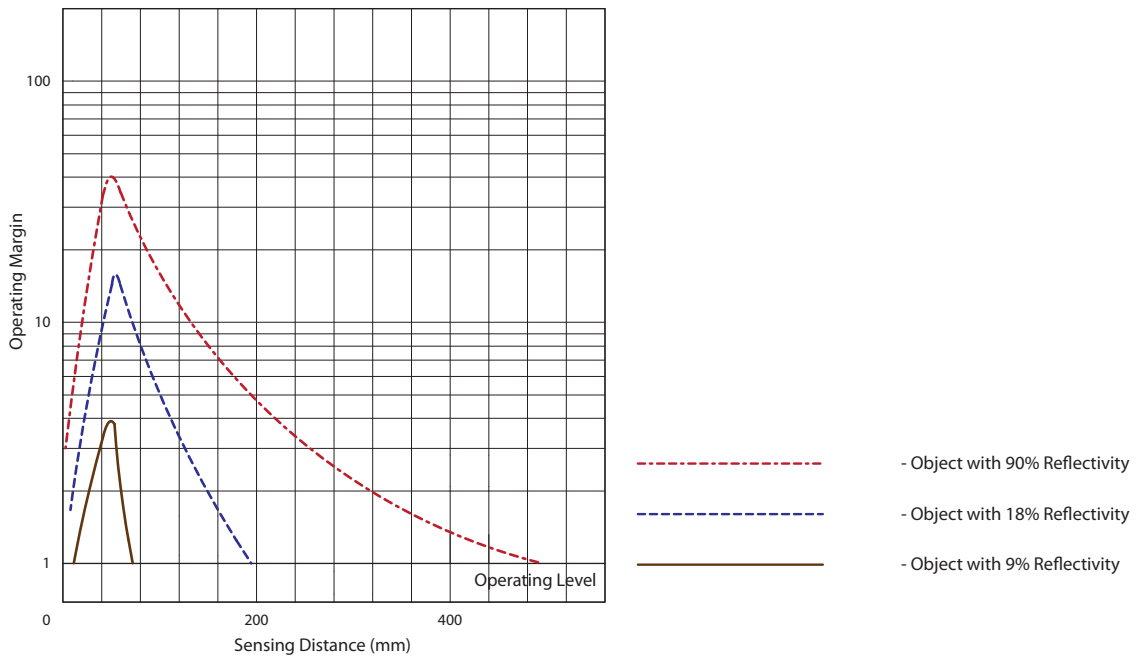
### ◆ Through Beam



### ◆ Retro Reflective



### ◆ Diffuse Reflective



Proximity Sensors

Photoelectric Sensors

Measurement Sensors

Vision & Safety Sensors

Control

Weighing

Automation

Components



## Operation Mode Adjustment

FXE

The FXE sensors come with dual output. Hence the need for selection between Light ON/ Dark ON models is eliminated.  
 The wire Black carries the Output NO/ Light ON.  
 The wire White carries the Output NC/ Dark ON.

## Sensitivity Adjustment

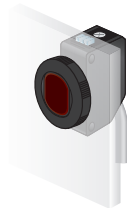


The sensitivity adjuster is to be rotated in the clockwise direction to increase the sensitivity and rotated in the anti-clockwise direction to decrease the sensitivity.

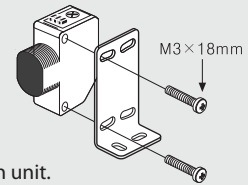
Note: The adjuster is a 1 turn pot. Attempting to rotate the adjuster beyond the free 360° rotation will cause sensor failure.

## Mounting

Sensor can be mounted on an M18 cutout. The locking nut holds the unit in position.



Sensor can be mounted on bracket. Screw size M3 is to be used for mounting of sensor to the bracket\*.



\*: Bracket is not supplied along with unit.

Cat. No. FXE-512

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