

# NAIS

## CYLINDRICAL TYPE PHOTOELECTRIC SENSORS

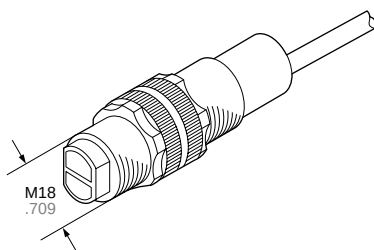
# UZC Series

### SIMPLE MOUNTING WITH A M18 THREAD



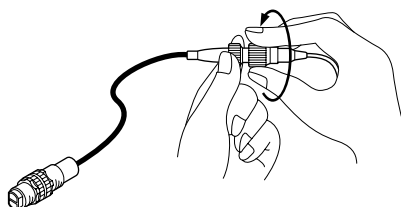
#### M18 Thread

This sensor has a M18 thread on an enclosure, which is convenient for mounting.



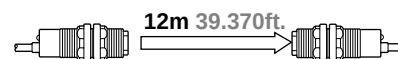
#### Easy to Replace

The sensor with a connector (UZC---A) makes its replacement easy.

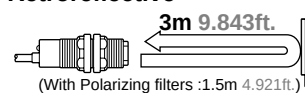


#### Long Sensing Range

##### Thru-beam



##### Retroreflective



##### Diffuse reflective



#### Wide Product Range

##### Supply voltage

- q AC type (24 to 240V AC)
- w DC type (10 to 30V DC)

##### Output

- q NPN open-collector transistor
- w PNP open-collector transistor
- e AC non-contact (thyristor) output

##### Connection

- q Cable type
- w Connector type

A total of 32 models are available.

#### Environment Resistant

IP67 achieved by total encapsulation.  
Strong resistance against vibration by resin encapsulation.  
Connector protection is also IP67.

#### Convenient Options

**Side-view attachment** (For the thru-beam sensors only)  
Light is bent to a right angle when this attachment is used.

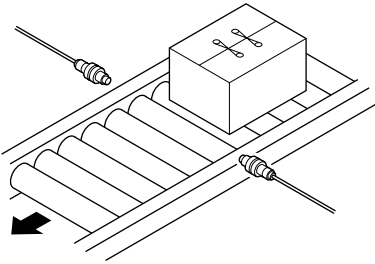


**Slit mask** (For the thru-beam sensors only)  
It is convenient for detecting small objects or enhancing sensing accuracy.

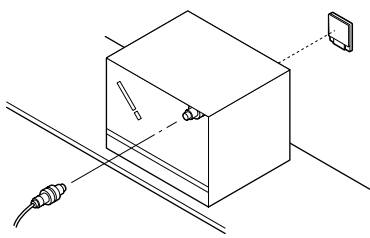


## APPLICATIONS

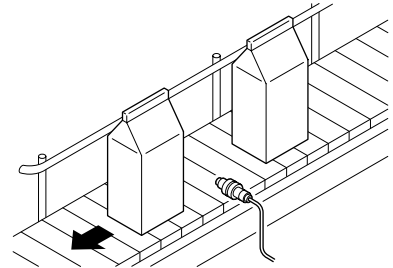
### Cardboard boxes sensing



### Specular objects sensing



### Milk packs sensing



## ORDER GUIDE

|         |                         | Appearance (*1) | Sensing range      | Model No. | Supply voltage         | Output                            | Output operation                                               |
|---------|-------------------------|-----------------|--------------------|-----------|------------------------|-----------------------------------|----------------------------------------------------------------|
| DC type | Thru-beam               |                 | 12m 39.370ft.      | UZC200    | 10 to 30V DC           | NPN open-collector transistor     | Light-ON/Dark-ON<br>Selected by an operation mode control wire |
|         |                         |                 |                    | UZC2005   |                        | PNP open-collector transistor     |                                                                |
|         | Retroreflective (*1)    |                 | 3m 9.843ft. (*1)   | UZC250    |                        | NPN open-collector transistor     |                                                                |
|         |                         |                 |                    | UZC2505   |                        | PNP open-collector transistor     |                                                                |
|         | With polarizing filters |                 | 1.5m 4.921ft. (*1) | UZC240    |                        | NPN open-collector transistor     |                                                                |
|         |                         |                 |                    | UZC2405   |                        | PNP open-collector transistor     |                                                                |
|         | Diffuse reflective      |                 | 120mm 4.724inch    | UZC230    |                        | NPN open-collector transistor     |                                                                |
|         |                         |                 |                    | UZC2305   |                        | PNP open-collector transistor     |                                                                |
| AC type | Thru-beam               |                 | 12m 39.370ft.      | UZC101    | 24 to 240V AC<br>± 10% | AC non-contact (thyristor) output | Light-ON                                                       |
|         |                         |                 |                    | UZC102    |                        |                                   | Dark-ON                                                        |
|         | Retroreflective (*1)    |                 | 3m 9.843ft. (*1)   | UZC151    |                        |                                   | Light-ON                                                       |
|         |                         |                 |                    | UZC152    |                        |                                   | Dark-ON                                                        |
|         | With polarizing filters |                 | 1.5m 4.921ft. (*1) | UZC141    |                        |                                   | Light-ON                                                       |
|         |                         |                 |                    | UZC142    |                        |                                   | Dark-ON                                                        |
|         | Diffuse reflective      |                 | 120mm 4.724inch    | UZC131    |                        |                                   | Light-ON                                                       |
|         |                         |                 |                    | UZC132    |                        |                                   | Dark-ON                                                        |

Cautions : A reflector is not supplied with the retroreflective sensor. Purchase a reflector separately.

(\*1) : The sensing range of the retroreflective sensor is the figure using a UZZ112 reflector.

## ORDER GUIDE

### Connector Type

The sensor with a connector is also available. When ordering this type, add suffix "A" at the end of the model number. Purchase a mating cable separately.  
e.g.) The connector type of **UZZ2005** is "**UZZ2005A**".

### Mating cable

| Type                     | Model No.      | Description          |                                                                                                          |
|--------------------------|----------------|----------------------|----------------------------------------------------------------------------------------------------------|
| For DC type sensors (*1) | <b>UZZ8211</b> | Length: 2m 6.562ft.  | For the emitter of the thru-beam sensor (2 cores) (*2)                                                   |
|                          | <b>UZZ8212</b> | Length: 5m 16.404ft. |                                                                                                          |
|                          | <b>UZZ8231</b> | Length: 2m 6.562ft.  | For the emitter/receiver of the thru-beam, retroreflective and diffuse reflective sensors (4 cores) (*2) |
|                          | <b>UZZ8232</b> | Length: 5m 16.404ft. |                                                                                                          |
| For AC type sensors (*1) | <b>UZZ8111</b> | Length: 2m 6.562ft.  | For the emitter of the thru-beam sensor (2 cores)                                                        |
|                          | <b>UZZ8112</b> | Length: 5m 16.404ft. |                                                                                                          |
|                          | <b>UZZ8121</b> | Length: 2m 6.562ft.  | The receiver of the thru-beam, retroreflective and diffuse reflective sensors (3 cores)                  |
|                          | <b>UZZ8122</b> | Length: 5m 16.404ft. |                                                                                                          |

(\*1) : Mating cables for the DC and AC type sensors are not compatible with each other as connector dimensions are different.

(\*2) : When using an input emission disable, use **UZZ823** of 4 cores.

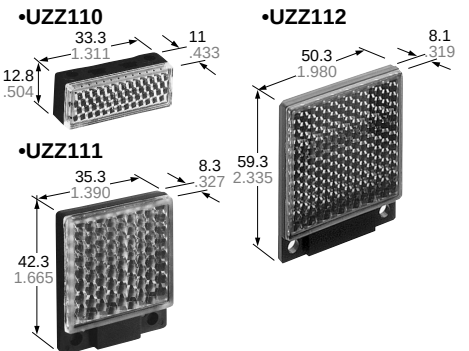
## OPTION

| Component                                            | Model No. | Description                                                                                                     |                             |                                                                             |
|------------------------------------------------------|-----------|-----------------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------------------------------------------------------|
| Slit mask<br>(For thru-beam sensor only)             | UZZ802    | 11.6×0.5mm<br>.457×.020inch                                                                                     | When fitted to the emitter  | Sensing range: 3m 9.843ft.<br>Min. sensing object: ø8mm ø.315inch           |
|                                                      |           |                                                                                                                 | When fitted to the receiver | Sensing range: 2.5m 8.202ft.<br>Min. sensing object: ø8mm ø.315inch         |
|                                                      |           |                                                                                                                 | When fitted to both sides   | Sensing range: 0.8m 2.625ft.<br>Min. sensing object: 10×0.7mm .394×.028inch |
|                                                      |           | 11.6×1.5mm<br>.457×.059inch                                                                                     | When fitted to the emitter  | Sensing range: 5m 16.404ft.<br>Min. sensing object: ø8mm ø.315inch          |
|                                                      |           |                                                                                                                 | When fitted to the receiver | Sensing range: 4.5m 14.764ft.<br>Min. sensing object: ø8mm ø.315inch        |
|                                                      |           |                                                                                                                 | When fitted to both sides   | Sensing range: 2m 6.562ft.<br>Min. sensing object: 10×2mm .394×.079inch     |
|                                                      |           | 11.6×3mm<br>.457×.118inch                                                                                       | When fitted to the emitter  | Sensing range: 7.5m 24.606ft.<br>Min. sensing object: ø8mm ø.315inch        |
|                                                      |           |                                                                                                                 | When fitted to the receiver | Sensing range: 7m 22.966ft.<br>Min. sensing object: ø8mm ø.315inch          |
|                                                      |           |                                                                                                                 | When fitted to both sides   | Sensing range: 4.5m 14.764ft.<br>Min. sensing object: 10×3mm .394×.118inch  |
| Side-view attachment<br>(For thru-beam sensor only)  | UZZ801    | Light is bent to a right angle with this attachment.<br>Sensing range (when fitted to both side) : 8m 26.247ft. |                             |                                                                             |
| Reflector<br>(For retroreflective sensor only)       | UZZ112    | Sensing range: 3m 9.843ft. [UZZ250□ & UZZ15□], 1.5m 4.921ft. [UZD240□ & UZD14□]                                 |                             |                                                                             |
|                                                      | UZZ111    | Sensing range: 2m 6.562ft. [UZZ250□ & UZZ15□], 1.2m 3.937ft. [UZD240□ & UZD14□]                                 |                             |                                                                             |
|                                                      | UZZ110    | Sensing range: 1m 3.281ft. [UZZ250□ & UZZ15□], 0.7m 2.297ft. [UZD240□ & UZD14□]                                 |                             |                                                                             |
| Reflector mounting bracket                           | UZZ1100   | Protective mounting bracket for UZZ110<br>Protects the reflector from damage and keeps an exact alignment.      |                             |                                                                             |
|                                                      | UZZ1110   | For UZZ111                                                                                                      |                             |                                                                             |
|                                                      | UZZ1120   | For UZZ112                                                                                                      |                             |                                                                             |
| Reflective tape<br>(For retroreflective sensor only) | UZZ102    | Sensing range: 0.7m 2.297ft. [UZZ250□ & UZZ15□], 0.4m 1.312ft. [UZD240□ & UZD14□]                               |                             |                                                                             |
|                                                      | UZZ101    | Sensing range: 0.5m 1.640ft. [UZZ250□ & UZZ15□]                                                                 |                             |                                                                             |

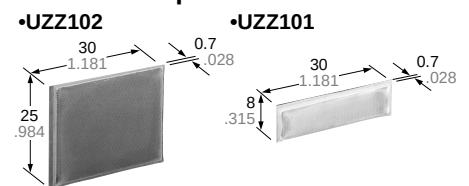
### Side-view attachment



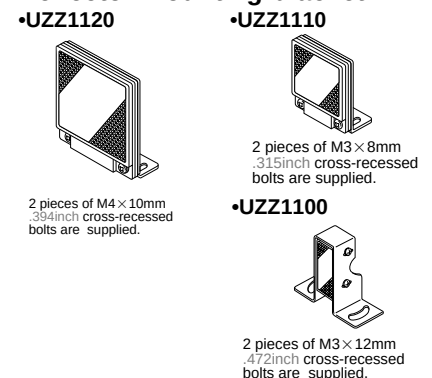
### Reflector



### Reflective tape



### Reflector mounting bracket



## SPECIFICATIONS

### DC type sensors

| Sensing mode                                        |                     | Thru-beam                                                                                                                                                                      | Retroreflective (*1)                                                                                                                         |                                                                        | Diffuse reflective                                                                                                                                                                |                                           |  |
|-----------------------------------------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--|
|                                                     |                     |                                                                                                                                                                                | With polarizing filters                                                                                                                      |                                                                        |                                                                                                                                                                                   |                                           |  |
| Data                                                | Model No.           | NPN Output                                                                                                                                                                     | UZC200                                                                                                                                       | UZC250                                                                 | UZC240                                                                                                                                                                            | UZC230                                    |  |
|                                                     |                     | PNP Output                                                                                                                                                                     | UZC2005                                                                                                                                      | UZC2505                                                                | UZC2405                                                                                                                                                                           | UZC2305                                   |  |
| Sensing range                                       |                     | 12m 39.370ft.                                                                                                                                                                  |                                                                                                                                              | 3m 9.843ft. (*2)                                                       | 1.5m 4.921ft. (*2)                                                                                                                                                                | 120mm 4.724inch (*3)                      |  |
| Sensing object                                      |                     | Opaque object of min. $\phi$ 8mm $\phi$ .315inch                                                                                                                               |                                                                                                                                              | Opaque & translucent objects of min. $\phi$ 50mm $\phi$ 1.969inch (*2) | Opaque, translucent & specular objects of min. $\phi$ 50mm $\phi$ 1.969inch (*2)                                                                                                  | Opaque, translucent & transparent objects |  |
| Hysteresis                                          |                     | —————                                                                                                                                                                          |                                                                                                                                              |                                                                        |                                                                                                                                                                                   | 15% or less of an operation range         |  |
| Repeatability (vertical direction for a light axis) |                     | 0.1mm .004inch or less                                                                                                                                                         |                                                                                                                                              |                                                                        |                                                                                                                                                                                   | 0.3mm .012inch or less                    |  |
| Supply voltage                                      |                     | 10 to 30V DC Ripple P-P : $\pm$ 10% or less                                                                                                                                    |                                                                                                                                              |                                                                        |                                                                                                                                                                                   |                                           |  |
| Consumption                                         |                     | Emitter: 20mA or less<br>Receiver: 25mA or less                                                                                                                                |                                                                                                                                              | 25mA or less                                                           |                                                                                                                                                                                   |                                           |  |
| Output                                              |                     | <NPN output type><br>NPN open-collector transistor<br>Current sink: Max. 100mA<br>Applied voltage: 30V DC or less<br>Residual voltage: 1.5V DC or less (at 100mA current sink) |                                                                                                                                              |                                                                        | <PNP output type><br>PNP open-collector transistor<br>Current source: Max. 100mA<br>Applied voltage: 30V DC or less<br>Residual voltage: 1.5V DC or less(at 100mA current source) |                                           |  |
|                                                     |                     | Output operation                                                                                                                                                               |                                                                                                                                              | Selection of Light-ON/Dark-ON by a control input wire                  |                                                                                                                                                                                   |                                           |  |
|                                                     |                     | Short-circuit protection                                                                                                                                                       |                                                                                                                                              | Equipped                                                               |                                                                                                                                                                                   |                                           |  |
| Response time                                       |                     | 2ms or less                                                                                                                                                                    |                                                                                                                                              |                                                                        |                                                                                                                                                                                   |                                           |  |
| Emission disable function                           |                     | Equipped                                                                                                                                                                       |                                                                                                                                              | —————                                                                  |                                                                                                                                                                                   |                                           |  |
| Operation indicator                                 |                     | Red LED (turns on when the output is in the ON state) Thru-beam sensor is provided to the receiver.                                                                            |                                                                                                                                              |                                                                        |                                                                                                                                                                                   |                                           |  |
| Emission indicator                                  |                     | Red LED (turns on at the emitting)<br>Equipped with the emitter                                                                                                                |                                                                                                                                              | —————                                                                  |                                                                                                                                                                                   |                                           |  |
| Environmental resistance                            | Protection          |                                                                                                                                                                                | IP67 (IEC)                                                                                                                                   |                                                                        |                                                                                                                                                                                   |                                           |  |
|                                                     | Ambient temperature |                                                                                                                                                                                | -25 to + 55°C -13 to + 131°F (with no dew nor ice condensation), Storage: -30 to + 70°C -22 to + 158°F                                       |                                                                        |                                                                                                                                                                                   |                                           |  |
|                                                     | Ambient humidity    |                                                                                                                                                                                | 35 to 85%RH, Storage: 35 to 85%RH                                                                                                            |                                                                        |                                                                                                                                                                                   |                                           |  |
|                                                     | Ambient light       |                                                                                                                                                                                | Sun light: 11,000 $\ell\times$ at the light-receiving face, Incandescent light: 3,500 $\ell\times$ at the light-receiving face               |                                                                        |                                                                                                                                                                                   |                                           |  |
|                                                     | Noise               |                                                                                                                                                                                | Power line: 240Vp with 0.5 $\mu$ s pulse duration<br>Radiation: 300Vp with 0.5 $\mu$ s pulse duration (by a noise simulator)                 |                                                                        |                                                                                                                                                                                   |                                           |  |
|                                                     | Dielectric          |                                                                                                                                                                                | 1,000V AC applied between the live parts and enclosure for 1 min.                                                                            |                                                                        |                                                                                                                                                                                   |                                           |  |
|                                                     | Insulation          |                                                                                                                                                                                | Min. 20M $\Omega$ applied between the live parts and enclosure at 250V DC                                                                    |                                                                        |                                                                                                                                                                                   |                                           |  |
|                                                     | Vibration           |                                                                                                                                                                                | 1.5mm .059inch {Max. 10G} amplitude at the frequency of 10 to 500Hz in each of X, Y and Z directions for 2 hours each in the power OFF state |                                                                        |                                                                                                                                                                                   |                                           |  |
|                                                     | Shock               |                                                                                                                                                                                | 500m/s² {approx. 50G} impulse in each of X, Y and Z directions for 3 times each in the power OFF state                                       |                                                                        |                                                                                                                                                                                   |                                           |  |
| Emitting element                                    |                     | Infrared LED (modulated)                                                                                                                                                       |                                                                                                                                              |                                                                        | Red LED (modulated)                                                                                                                                                               | Infrared LED (modulated)                  |  |
| Material                                            |                     | Enclosure: PBT (gray), Lens: Polycarbonate                                                                                                                                     |                                                                                                                                              |                                                                        | Enclosure: PBT (gray), Font cover: Acrylic                                                                                                                                        |                                           |  |
| Cable                                               |                     | 0.34mm² $\times$ 4 cores with 2m 6.562ft. of cabtyre cable (3 cores for the emitter only)                                                                                      |                                                                                                                                              |                                                                        |                                                                                                                                                                                   |                                           |  |
| Cable extension                                     |                     | Extensible up to 100m 328.084ft. by using. 0.34mm² or more cable (Thru-beam sensor: each of an emitter and a receiver)                                                         |                                                                                                                                              |                                                                        |                                                                                                                                                                                   |                                           |  |
| Weight                                              |                     | Emitter: Approx. 90g 3.175oz<br>Receiver: Approx. 100g 3.527oz                                                                                                                 |                                                                                                                                              | Approx. 100g 3.527oz                                                   |                                                                                                                                                                                   |                                           |  |
| Accessories                                         |                     | Nut: 4 pcs.                                                                                                                                                                    |                                                                                                                                              | Nut: 2 pcs.                                                            |                                                                                                                                                                                   |                                           |  |

(\*1): A reflector is not supplied with the retroreflective sensor. Purchase a reflector separately.

(\*2): The sensing range and sensing object of the retroreflective sensor is the figure using a **UZZ112** reflector (optional).

(\*3): The sensing range of the diffuse reflective sensor is the figure using an object of non-glossy white paper (200×200mm 7.874×7.874inch).

## SPECIFICATIONS

### AC type sensors

| Sensing mode                                        |                     |          | Thru-beam                                                                                                                                                          | Retroreflective (*1)                                                                 |                                                                                                | Diffuse reflective                        |
|-----------------------------------------------------|---------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-------------------------------------------|
|                                                     |                     |          |                                                                                                                                                                    | With polarizing filters                                                              |                                                                                                |                                           |
| Data                                                | Model No.           | Light-ON | UZC101                                                                                                                                                             | UZC151                                                                               | UZC141                                                                                         | UZC131                                    |
|                                                     |                     | Dark-ON  | UZC102                                                                                                                                                             | UZC152                                                                               | UZC142                                                                                         | UZC132                                    |
| Sensing range                                       |                     |          | 12m 39.370ft.                                                                                                                                                      | 3m 9.843ft. (*2)                                                                     | 1.5m 4.921ft. (*2)                                                                             | 120mm 4.724inch (*3)                      |
| Sensing object                                      |                     |          | Opaque object of min. $\phi 8\text{mm}$ $\phi 3.15\text{inch}$                                                                                                     | Opaque & translucent objects of min. $\phi 50\text{mm}$ $\phi 1.969\text{inch}$ (*2) | Opaque, translucent & specular objects of min. $\phi 50\text{mm}$ $\phi 1.969\text{inch}$ (*2) | Opaque, translucent & transparent objects |
| Hysteresis                                          |                     |          |                                                                                                                                                                    |                                                                                      |                                                                                                | 15% or less of an operation range         |
| Repeatability (vertical direction for a light axis) |                     |          | 0.1mm .004inch or less                                                                                                                                             |                                                                                      |                                                                                                | 0.3mm .012inch or less                    |
| Supply voltage                                      |                     |          | 24 to 240V AC $\pm 10\%$                                                                                                                                           |                                                                                      |                                                                                                |                                           |
| Consumption                                         |                     |          | Emitter: 1.5VA or less<br>Receiver: 2.5VA or less                                                                                                                  | 2.7VA or less                                                                        |                                                                                                |                                           |
| Output                                              |                     |          | AC non-contact (thyristor output)<br>Load current: 5 to 200mA<br>Applied voltage: 24 to 240V AC $\pm 10\%$<br>Residual voltage: Max. 4V AC (at 200mA load current) |                                                                                      |                                                                                                |                                           |
| Response time                                       |                     |          | 20ms or less                                                                                                                                                       |                                                                                      |                                                                                                |                                           |
| Operation indicator                                 |                     |          | Red LED (turns on when the output is in the ON state) Thru-beam sensor is provided to the receiver                                                                 |                                                                                      |                                                                                                |                                           |
| Power indicator                                     |                     |          | Red LED (turns on when the power is supplied)<br>Equipped with the emitter                                                                                         |                                                                                      |                                                                                                |                                           |
| Environmental resistance                            | Protection          |          | IP67 (IEC)                                                                                                                                                         |                                                                                      |                                                                                                |                                           |
|                                                     | Ambient temperature |          | −25 to + 55°C −13 to + 131°F (with no dew nor ice condensation), Storage: −30 to + 70°C −22 to + 158°F                                                             |                                                                                      |                                                                                                |                                           |
|                                                     | Ambient humidity    |          | 35 to 85%RH, Storage: 35 to 85%RH                                                                                                                                  |                                                                                      |                                                                                                |                                           |
|                                                     | Ambient light       |          | Sun light: 11,000 lx at the light-receiving face, Incandescent light: 3,500 lx at the light-receiving face                                                         |                                                                                      |                                                                                                |                                           |
|                                                     | Noise               |          | Power line: 1,500Vp with 0.5μs pulse duration<br>Radiation: 300Vp with 0.5μs pulse duration (by a noise simulator)                                                 |                                                                                      |                                                                                                |                                           |
|                                                     | Dielectric          |          | 1,500V AC applied between the live parts and enclosure for 1 min.                                                                                                  |                                                                                      |                                                                                                |                                           |
|                                                     | Insulation          |          | Min. 20MΩ applied between the live parts and enclosure at 500V DC                                                                                                  |                                                                                      |                                                                                                |                                           |
|                                                     | Vibration           |          | 1.5mm .059inch {Max. 10G} amplitude at the frequency of 10 to 500Hz in each of X, Y and Z directions for 2 hours each in the power OFF state                       |                                                                                      |                                                                                                |                                           |
|                                                     | Shock               |          | 500m/s <sup>2</sup> {approx. 50G} impulse in each of X, Y and Z directions for 3 times each in the power OFF state                                                 |                                                                                      |                                                                                                |                                           |
| Emitting element                                    |                     |          | Infrared LED (modulated)                                                                                                                                           |                                                                                      | Red LED (modulated)                                                                            | Infrared LED (modulated)                  |
| Material                                            |                     |          | Enclosure: PBT (gray), Lens: Polycarbonate                                                                                                                         |                                                                                      | Enclosure: PBT (gray), Font cover: Acrylic                                                     |                                           |
| Cable                                               |                     |          | 0.34mm <sup>2</sup> ×3 cores with 2m 6.562ft. of cabtyre cable (2 cores for the emitter only)                                                                      |                                                                                      |                                                                                                |                                           |
| Cable extension                                     |                     |          | Extensible up to 100m 328.084ft. by using. 0.34mm <sup>2</sup> or more cable (Thru-beam sensor: each of an emitter and a receiver)                                 |                                                                                      |                                                                                                |                                           |
| Weight                                              |                     |          | Emitter: Approx. 90g 3.175oz<br>Receiver: Approx. 100g 3.527oz                                                                                                     | Approx. 100g 3.527oz                                                                 |                                                                                                |                                           |
| Accessories                                         |                     |          | Nut: 4 pcs.                                                                                                                                                        | Nut: 2 pcs.                                                                          |                                                                                                |                                           |

(\*1): A reflector is not supplied for the retroreflective sensor. Purchase a reflector separately.

(\*2): The sensing range and sensing object of the retroreflective sensor is the figure using a **UZZ112** reflector (optional).

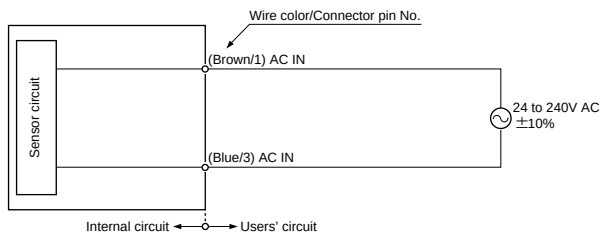
(\*3): The sensing range of the diffuse reflective sensor is the figure using an object of non-glossy white paper (200  $\times$  200mm 7.874  $\times$  7.874inch).



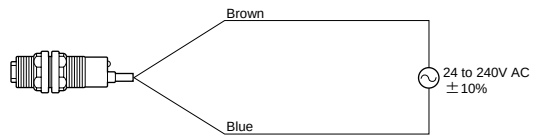
## TYPICAL WIRING DIAGRAMS

### AC non-contact output type

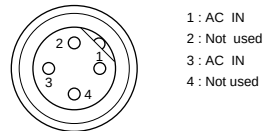
#### Emitter of thru-beam sensor



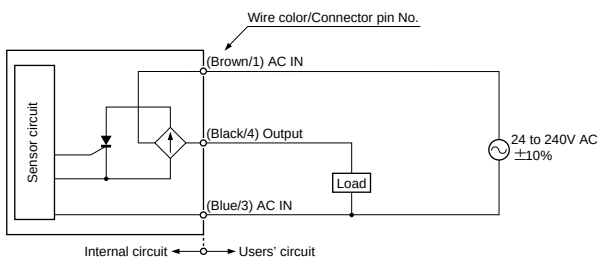
#### Emitter of thru-beam sensor



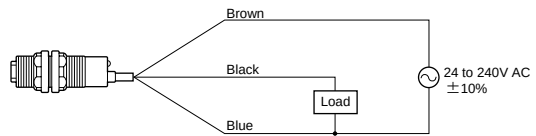
#### Connection Diagram of Connector Pin



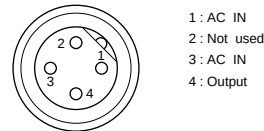
#### Receiver of thru-beam, retroreflective & diffuse reflective sensor



#### Receiver of thru-beam, retroreflective & diffuse reflective sensor



#### Connection Diagram of Connector Pin



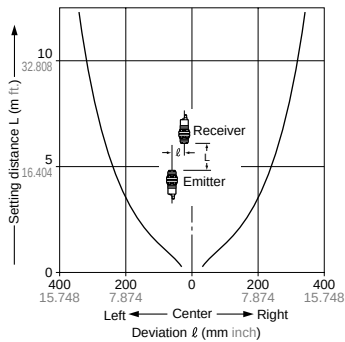
## SENSING FIELDS

These are typical sensing fields, which may vary slightly from unit to unit.

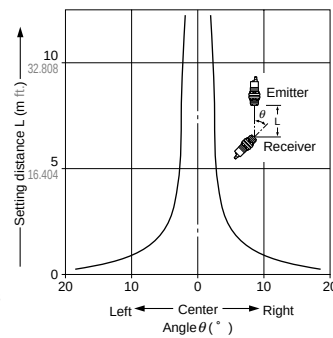
### UZC200 UZC10

#### Thru-beam

##### Parallel deviation



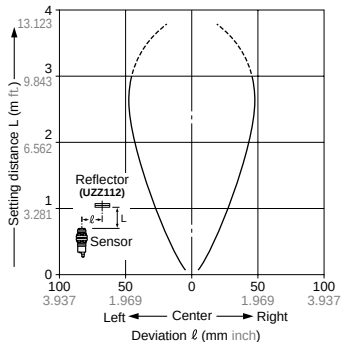
##### Angular deviation



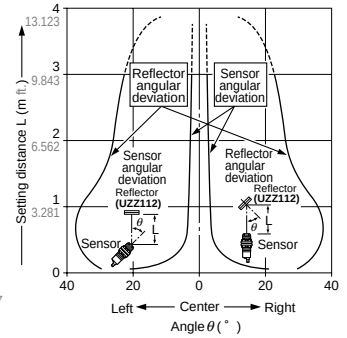
### UZC250 UZC15

#### Retroreflective

##### Parallel deviation



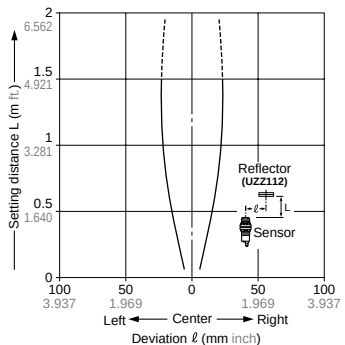
##### Angular deviation



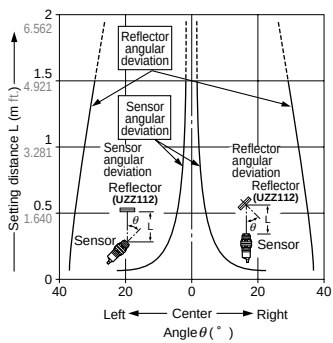
### UZC240 UZC14

#### Retroreflective

##### Parallel deviation



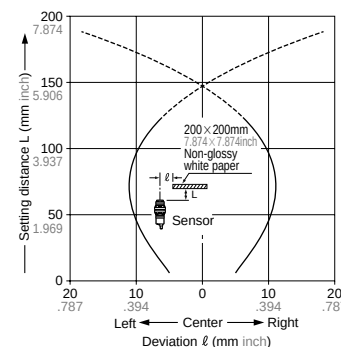
##### Angular deviation



### UZC230 UZC13

#### Diffuse reflective

##### Sensing field



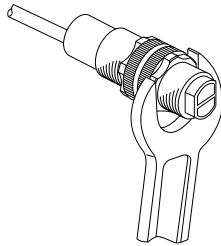
## PRECAUTIONS FOR PROPER USE



These products are **not** safety sensors and are **not** designed or intended to be used to protect life and prevent bodily injury or property damage.

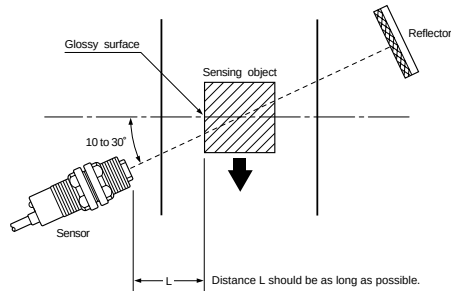
### Mounting

Tightening torque must not exceed 2N·m{20.4kgf·cm}.



### Setting of UZC250□ and UZC15□

When detecting a glossy object, mount the sensor at an angle of 10° to 30° against the surface on the object.



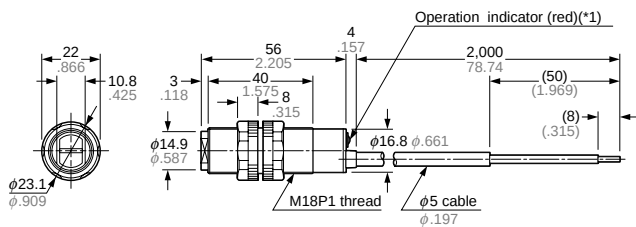
### Others

Do not use the sensor output signal for 50ms immediately after the power is supplied to the sensor.

## DIMENSIONS (Unit: mm inch)

### UZC200□, UZC250□ UZC230□

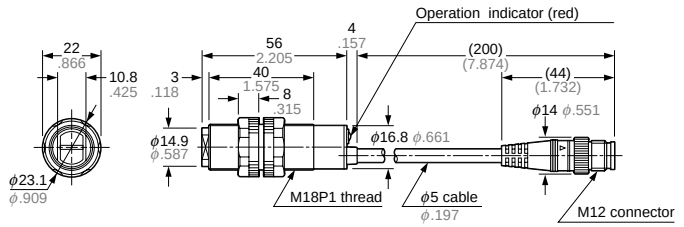
Sensor



(\*1): It is the emitting indicator (red) for the emitter of the thru-beam sensor.

### UZC200□A, UZC250□A UZC230□A

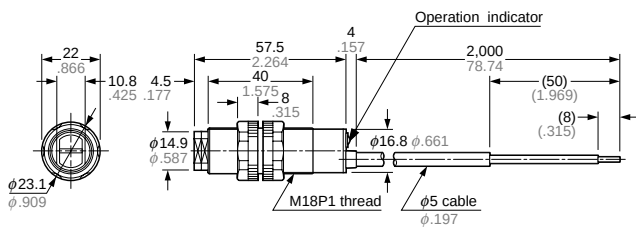
Sensor



(\*1): It is the emitting indicator (red) for the emitter of the thru-beam sensor.

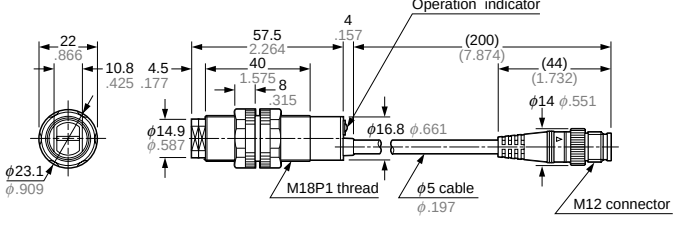
### UZC240□

Sensor



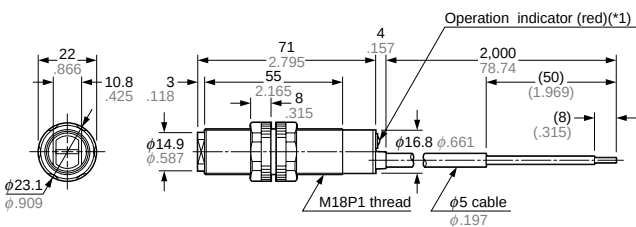
### UZC240□A

Sensor



### UZC10□, UZC15□ UZC13□

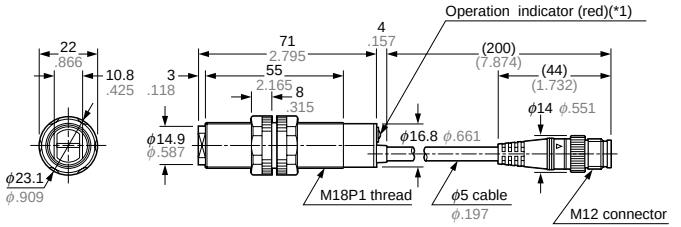
Sensor



(\*1): It is the power indicator (red) for the emitter of the thru-beam sensor.

### UZC10□A, UZC15□A UZC13□A

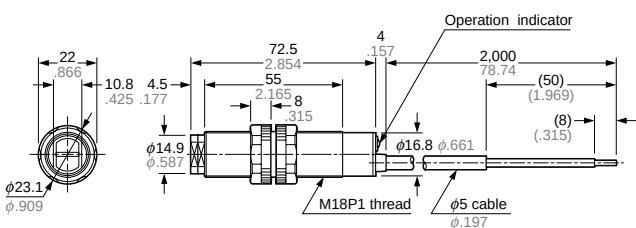
Sensor



(\*1): It is the power indicator (red) for the emitter of the thru-beam sensor.

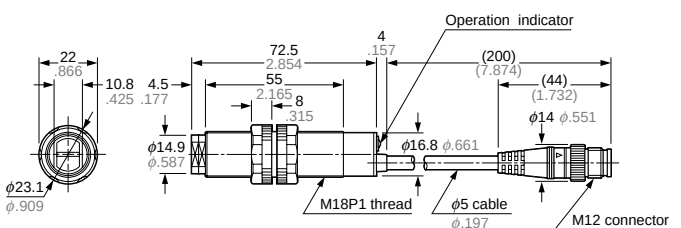
### UZC14□

Sensor



### UZC14□A

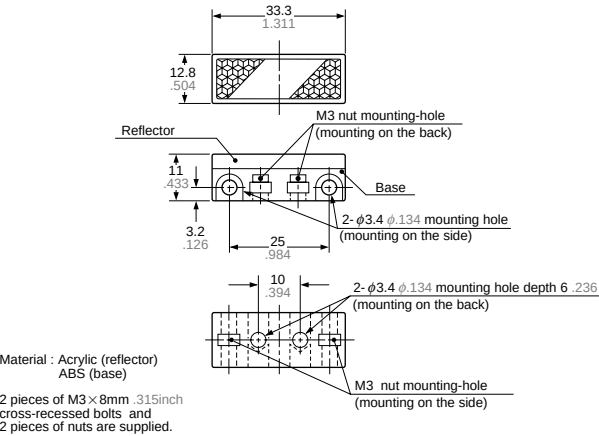
Sensor



**DIMENSIONS (Unit: mm inch)**

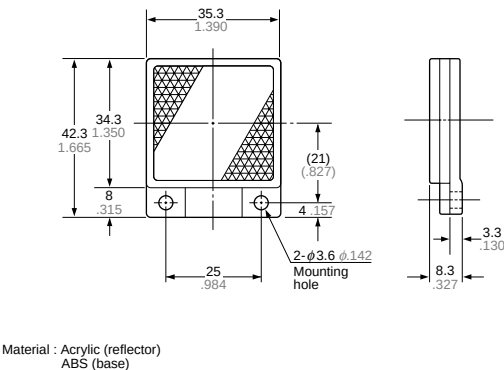
**UZZ110**

**Reflector (option)**



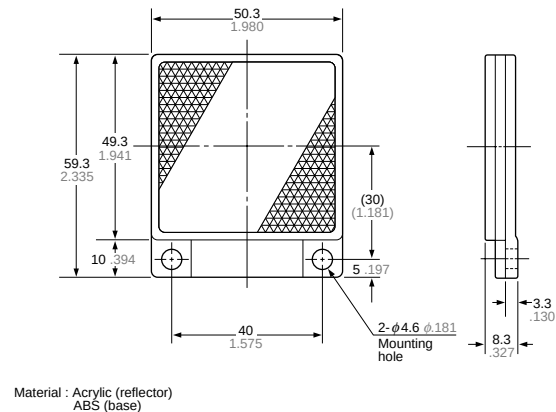
**UZZ111**

**Reflector (option)**



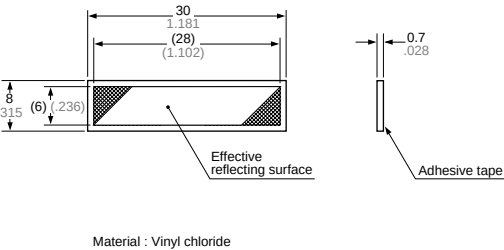
**UZZ112**

**Reflector (option)**



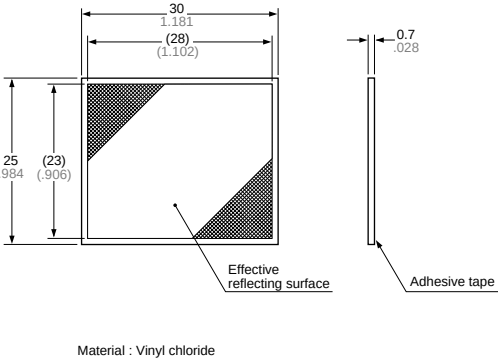
**UZZ101**

**Reflective tape (option)**



**UZZ102**

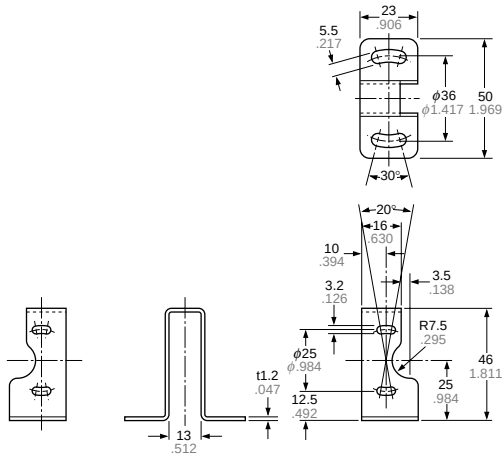
**Reflective tape (option)**



## DIMENSIONS (Unit: mm inch)

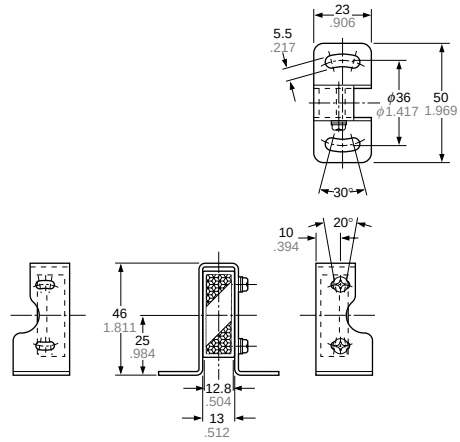
### UZZ1100

#### Mounting bracket for UZZ110 reflector (option)



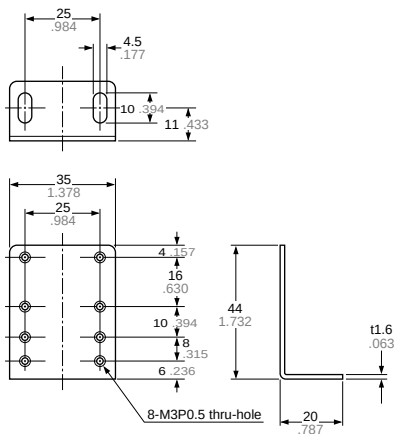
Material : SUS304  
2 pieces of M3×12mm .472inch  
cross-recessed bolts are supplied.

#### Mounting drawing



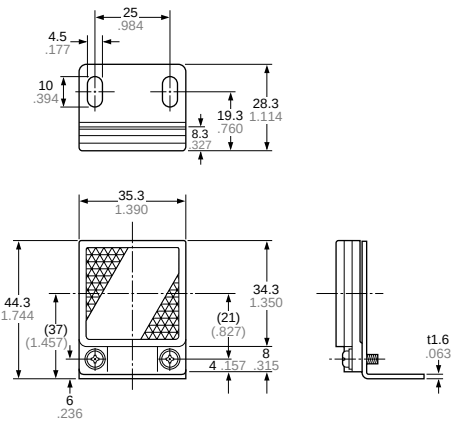
### UZZ1110

#### Mounting bracket for UZZ111 reflector (option)



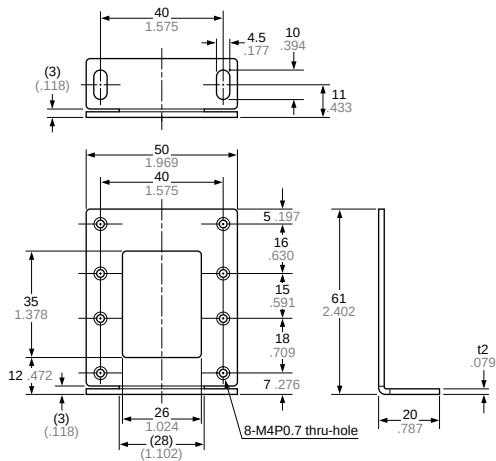
Material : SPCC  
2 pieces of M3×8mm .315inch  
cross-recessed bolts are supplied.

#### Mounting drawing



### UZZ1120

#### Mounting bracket for UZZ112 reflector (option)



Material : SPCC  
2 pieces of M4×10mm .394inch  
cross-recessed bolts are supplied.

#### Mounting drawing

