

# OS10S SERIES PHOTOELECTRIC SENSOR

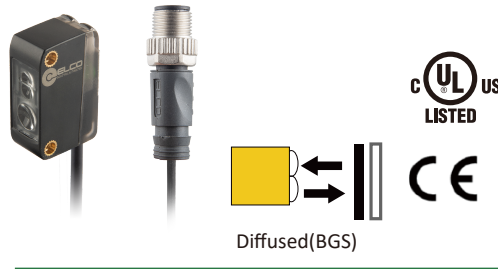


## Product Description:

- High performance small square type photoelectric sensor, standard mounting aperture 25.4mm , Infrared laser 1m TOF type BGS diffuse reflection
- Suitable for logistics, photovoltaic, lithium, AGV and other industries

## Product features:

- 1m TOF type diffuse reflection button teaching detection distance, adjustable between light-on and dark-on
- Equipped with red LED light source
- IP67 protection rating



| Type                                | Distance    | Detection light source | Indicated light source | Output | Connection                 | Wiring |
|-------------------------------------|-------------|------------------------|------------------------|--------|----------------------------|--------|
| OS10S-AK1000CN6-*-Q12 <sup>1)</sup> | 50mm-1000mm | Infrared VCSEL         | Red LED                | NPN    | *m pigtail + M12 Connector | Fig.1  |
| OS10S-AK1000CP6-*-Q12 <sup>1)</sup> | 50mm-1000mm | Infrared VCSEL         | Red LED                | PNP    | *m pigtail + M12 Connector | Fig.2  |

Note 1): \* refers to the pigtail cable length in meters. Example:0.3 represents 0.3 meters pigtail.

## TECHNICAL SPECIFICATION

|                                  |                      |                               |                                                                             |
|----------------------------------|----------------------|-------------------------------|-----------------------------------------------------------------------------|
| OPERATING VOLTAGE                | 10...30VDC Class 2   | AMBIENT TEMPERATURE OPERATION | -20°C...+60°C                                                               |
| LIGHT SOURCE TYPE                | Infrared VCSEL 940nm | AMBIENT TEMPERATURE STORAGE   | -40°C...+70°C                                                               |
| OUTPUT CHARACTERISTIC            | PNP/NPN              | UL TEMPERATURE                | 50°C                                                                        |
| LOAD CURRENT                     | ≤100mA               | CIRCUIT PROTECTION            | Short-circuit protection, Reverse polarity protection, Over-load protection |
| OPERATING FREQUENCY              | 30Hz                 | PROTECTION DEGREE             | IP67                                                                        |
| ADJUSTMENT OF OPERATING DISTANCE | Button Settings      | HOUSING MATERIAL              | PC+PBT, PMMA                                                                |
| DETECTION LIGHT SPOT SIZE@1M     | 40mm*20mm            | CONNECTING TYPE               | *m pigtail + M12 Connector                                                  |
|                                  |                      | INDICATED LIGHT SOURCE        | Red LED                                                                     |

## SAFETY PRECAUTIONS

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>⚠ DANGEROUS</b> | This product is for the purpose of object detection only, Do not use this product for the purpose of protecting human body or human body parts. This product should not be used as an explosion-proof product. Do not use this product in dangerous places or in the environment of potentially explosive gases. Failure to use the control or adjustment device or perform the steps in accordance with this regulation may result in harmful radiation exposure.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>⚠ WARN</b>      | Ce produit est à des fins de détection d'objets seulement. N'utilisez pas ce produit dans le but de protéger le corps humain ou des parties du corps humain. Ce produit ne doit pas être utilisé comme produit antidéflagrant. Ne pas utiliser ce produit dans des endroits dangereux ou dans l'environnement de gaz potentiellement explosifs. La non-utilisation du dispositif de commande ou de réglage ou l'exécution des étapes conformément au présent règlement peut entraîner une exposition aux rayonnements nocifs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>NOTICE</b>      | This product is a sensor with DC power supply. Please do not apply AC power supply. If AC voltage applied, the product may explode or catch fire. Ce produit est un capteur avec alimentation cc. Veuillez ne pas appliquer d'alimentation en courant alternatif. En cas de tension le produit peut exploser ou prendre feu. Do not use the same wiring with the power cord and high-voltage line. Otherwise the main module may fail or be damaged due to noise. When using a commercially available switching regulator, be sure to ground the housing ground terminal and the ground terminal. Please do not use this product outdoors. N'utilisez pas le même câblage avec le cordon d'alimentation et la ligne à haute tension, sinon le module principal peut tomber en panne ou être endommagé en raison du bruit. Lorsque vous utilisez un régulateur de commutation disponible dans le commerce, assurez-vous de mettre à la terre le terminal d'habitation et le terminal de terre. Veuillez ne pas utiliser ce produit à l'extérieur. |

Maintain Disassemble; please return to Elco

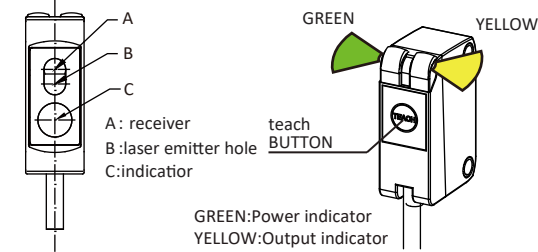
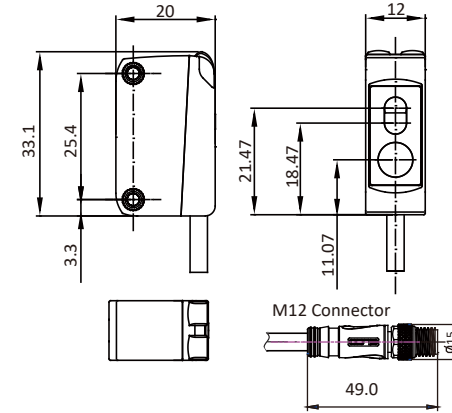
Laser label Pasting on packing bag



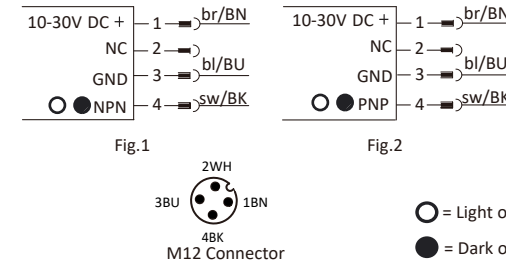
# OS10S SERIES PHOTOELECTRIC SENSOR



## DIMENSIONS

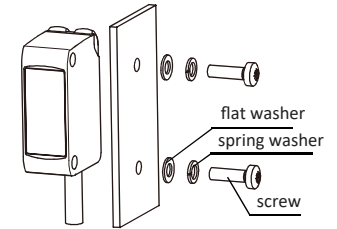


## ELECTRICAL CONNECTION



## INSTALL

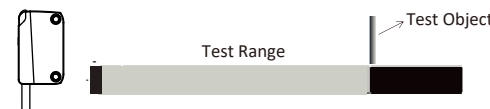
Recommended to use M3\*0.5 screw for fastening  
Tightening torque ≤ 0.5N.m



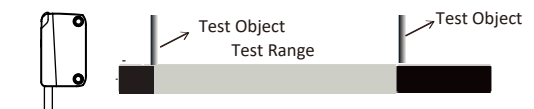
## OS10S SERIES PRODUCT INSTRUCTIONS:

1. Single point mode setting: press and hold the key for more than 3 seconds and less than 8 seconds the green light flashes 3 times. The setting is successful. The adjustable range is 100mm-1000mm.
2. Window mode setting: place the target at the required nearest sensing distance as the nearest threshold (≥ 70mm), Short press the key (more than 200ms, less than 2S) and the yellow light flashes; Place the target at the required farthest distance as the farthest threshold (≤ 1000mm), Short press the key, the green light flashes three times, and the setting is successful; Set the maximum distance and complete the operation within 10s, otherwise yellow light and green flashing alternately and exits automatically.
3. Light to dark switching setting: Long press the button more than 8 seconds the green light flashes 3 times to switch the current light to dark switching state. The alternating flashing of yellow and green lights indicates a failed setting.
4. There should be no fingerprints and stains on the surface of the window. It should be cleaned, otherwise it will affect the performance of the product.
5. The product cannot be used with ordinary transparent glass or acrylic sheets. And the product will be sensitive to the above objects.

## SINGLE POINT MODE



## WINDOW MODE



## OS10S系列光电传感器

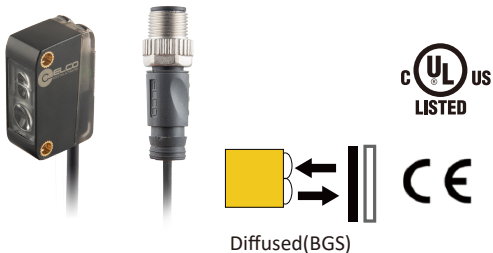


### 产品说明:

- 高性能小型光电传感器,标准安装孔径25.4mm,红外激光1m的TOF型BGS漫反射
- 适用于物流输送、光伏、锂电、AGV等行业

### 产品特点:

- 1m TOF型漫反射按键示教检测距离,亮暗通可调
- 可提供红光指示光源
- IP67防护等级



| 型号                                  | 检测距离          | 检测光源    | 指示光源  | 输出方式 | 连接方式                | 接线图 |
|-------------------------------------|---------------|---------|-------|------|---------------------|-----|
| OS10S-AK1000CN6-*-Q12 <sup>1)</sup> | 50mm...1000mm | 红外VCSEL | 红光LED | NPN  | *m pigtail + M12连接器 | 图1  |
| OS10S-AK1000CP6-*-Q12 <sup>1)</sup> | 50mm...1000mm | 红外VCSEL | 红光LED | PNP  | *m pigtail + M12连接器 | 图2  |

注1):\*表示猪尾巴长度,单位米,例如:\*为0.3米猪尾巴。

### 技术参数

|           |                    |       |                      |
|-----------|--------------------|-------|----------------------|
| 工作电压      | 10...30VDC Class 2 | 工作温度  | -20°C...+60°C        |
| 光源        | 红外VCSEL 940nm      | 环境温度  | -40°C...+70°C        |
| 输出特性      | PNP/NPN            | UL 温度 | 50°C                 |
| 负载电流      | ≤100mA             | 保护电路  | 短路保护、反极性保护<br>输出过载保护 |
| 开关频率      | 30Hz               | 防护等级  | IP67                 |
| 检测距离设定    | 按键设定               | 外壳    | PC+PBT,PMMA          |
| 1米处检测光斑尺寸 | 40mm*20mm          | 连接方式  | *m pigtail+M12连接器    |
| 指示光源      | 红光LED              |       |                      |

### 安全防护措施

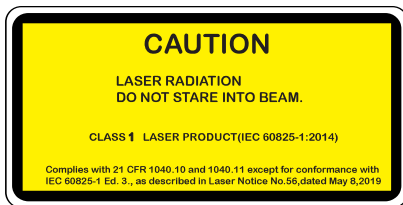
|     |                                                                                                                                                                                   |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ▲危险 | <ul style="list-style-type: none"><li>●本产品仅供目标物检测之用,请勿将本产品用于保护人体或人体部位等目的。</li><li>●本产品不得作为防爆产品使用,请勿在危险场所或潜在爆炸气体的环境中使用本产品。</li><li>●若不按规定使用控制或调整装置、或执行各步操作,就可能引起有害的辐射照射。</li></ul> |
| ▲警告 | <ul style="list-style-type: none"><li>●本产品是采用直流供电的传感器,请勿施加交流电源,如果施加交流电压,则可能导致产品爆炸或起火。</li></ul>                                                                                   |
| 注意  | <ul style="list-style-type: none"><li>●请勿与电源线和高压线使用同一配线,否则可能因噪音声导致主模块发生故障或受损。</li><li>●使用市面所售的开关稳压器时,请务必将壳体接地端子和接地端子接地。</li><li>●请勿在室外使用本产品。</li></ul>                            |

### 维修

禁止客户拆解产品,请返厂维修

### 激光标识

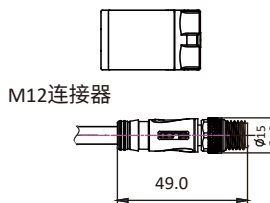
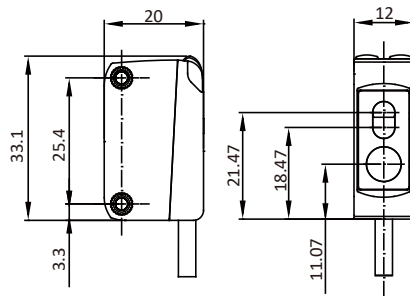
放入包装袋中



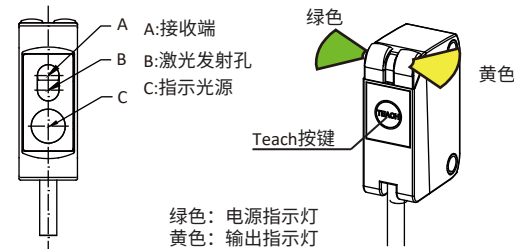
## OS10S系列光电传感器



### 外形尺寸

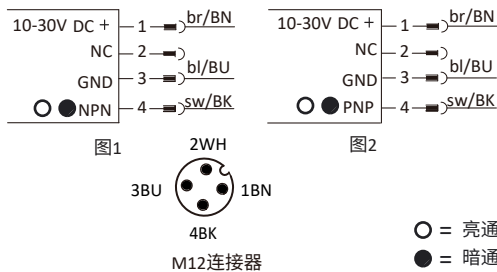


M12连接器



绿色: 电源指示灯  
黄色: 输出指示灯

### 接线图



### OS10S系列产品使用说明

- 1.单点模式设置: 长按按键3秒以上, 8秒以下, 绿灯闪烁3次, 设置成功。可设置范围为100mm-1000mm。
- 2.窗口模式设置: 将目标放置到要求最近的感应距离作为最近阈值 (≥70mm) 短按按键 (200ms以上, 3s以下) 黄灯闪烁; 将目标放置到要求的最远距离作为最远阈值 (≤1000mm), 短按按键, 绿灯闪烁三下, 设置成功; 设置最远距离需在10s内完成操作, 否则黄绿灯交替闪烁交替闪烁后自动退出。
- 3.亮暗通切换: 长按按键8秒以上, 绿灯闪烁3次, 设置成功。黄绿灯交替闪烁表示设置失败。
- 4.产品不可透过普通透明玻璃或亚克力板使用, 产品会对上述物体有感应。
- 5.视窗表面不可有脏污, 需清理干净, 否则影响产品性能。

### 单点模式:



### 窗口模式:

