

## ENGLISH

**Photoelectric Proximity Sensor**  
with background suppression  
**Operating Instructions**

### Safety Specifications

- No safety component in accordance with EU machine guidelines. For use in NFPA 79 applications only. UL-listed adapters providing field wiring leads are available.
- UL: The device shall be supplied from an isolating transformer having a secondary overcurrent protective device that complies with UL 248 to be installed in the field rated either:
  - max 5 amps for voltages 0 ~ 20 V (0 ~ 28.3 V peak), or
  - 100 / Vp for voltages of 20 ~ 30 V (28.3 ~ 42.4 V peak).
 Alternatively, they can be supplied from a Class 2 power supply. UL Environmental Rating: Enclosure type 1
- Read the operating instructions before starting operation.
- Connection, assembly, and settings only by competent technicians.
- Protect the device against moisture and soiling when operating.

### Proper Use

The WTB4S-3 Inox Hygiene photoelectric proximity sensor is an optoelectronic sensor and is used for optical, non-contact detection of objects, animals, and people.

### Starting Operation

**1** Maintain direction in which object moves relative to sensor (VR = advance direction).

Check application conditions such as sensing distance and reflectance of the object to be scanned and the background.

### 2 Setting the sensing distance

Place object in light beam (x = distance to object, y = distance to background), press teach button until the yellow LED indicator blinks. Sensor is ready to operate. Recommendation: If colours are detected differently or dark objects are detected, assign a safety margin to the sensing distance of 10 % of this distance.

### Maintenance

SICK photoelectric sensors do not require any maintenance. We recommend that you clean the external lens surfaces and check the screw connections and plug-in connections at regular intervals.

# SICK

8013581.1E52 0122 COMAT

# WTB4S-3 Inox Hygiene

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Chile  
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Phone +41 41 619 29 39

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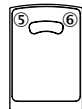
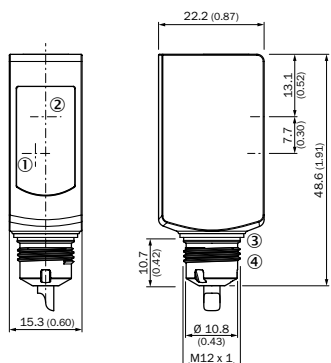
Turkey  
Phone +90 (216) 528 50 00  
United Arab Emirates  
Phone +971 (0) 4 88 65 878

United Kingdom  
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USA  
Phone +1 800.325.7425

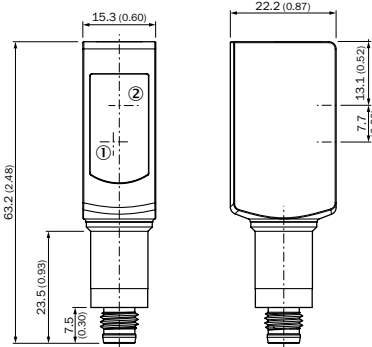
Vietnam  
Phone +65 6744 3732

## A

WTB4S-3Xxxx5H

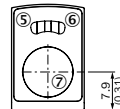
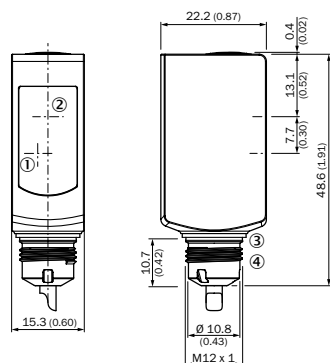


- Middle of optical axis receiver / Mitte der Optikachse, Empfänger
- Middle of optical axis sender / Mitte der Optikachse, Sender
- Sealing ring (max tightening torque 6 Nm) / Dichtungsring (max. Anzugsdrehmoment 6 Nm)
- M12-adapter thread / M12-Adapter-Gewinde
- LED yellow: status of received light beam / LED gelb: Lichtempfangsanzeige
- LED green: power on / LED grün: Versorgungsspannung

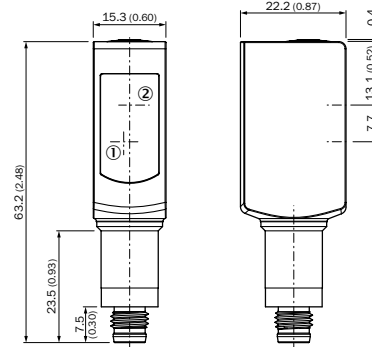


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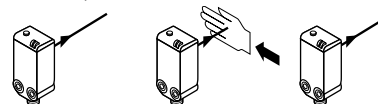
WTB4S-3Xxxx2H  
WTB4S-3Xxxx4H



- Middle of optical axis receiver / Mitte der Optikachse, Empfänger
- Middle of optical axis sender / Mitte der Optikachse, Sender
- Sealing ring (max tightening torque 6 Nm) / Dichtungsring (max. Anzugsdrehmoment 6 Nm)
- M12-adapter thread / M12-Adapter-Gewinde
- LED yellow: status of received light beam / LED gelb: Lichtempfangsanzeige
- LED green: power on / LED grün: Versorgungsspannung
- Teach-in button / Teach-in-Taste



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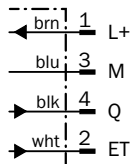
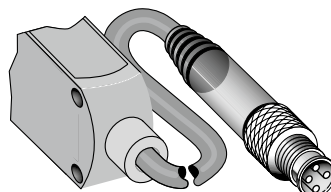


## B

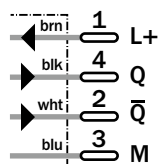
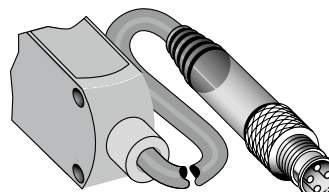
WTB4S-3H

**Safety note: / Sicherheitshinweis:**  
Connect and secure cable receptacle tension-free. / Beim Anschließen muss die Leitung spannungsfrei sein.  
**Only for versions with connecting cable: / Nur für Varianten mit Anschlussleitung:**  
The following apply for connection: brn = brown, blu = blue, blk = black, wht = white. / Erläuterungen zu den Anschlussdiagrammen: brn = braun, blu = blau, blk = schwarz, wht = weiß

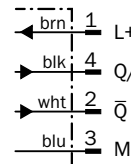
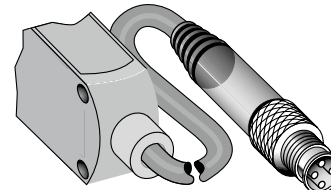
### Teach via cable / Teach-in via Leitung



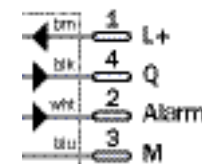
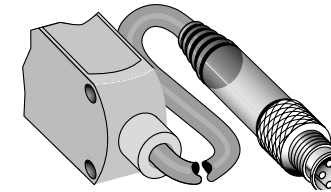
### Teach-in button or fix adjustment / Teach-in-Taste oder fixe Einstellung



### Teach-in button + IO-Link / Teach-in-Taste + IO-Link



### Teach-in button + alarm output / Teach-in-Taste + Alarmausgang



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BZ 104-49

## DEUTSCH

**Reflexions-Lichttaster**  
mit Hintergrundaussblendung  
**Betriebsanleitung**

### Sicherheitshinweise

- Kein Sicherheitsbauteil gemäß EU-Maschinenrichtlinie. Nur zur Verwendung in Anwendungen gemäß NFPA 79. Von UL gelistete Adapter mit Anschlusskabeln sind verfügbar.
- UL: The device shall be supplied from an isolating transformer having a secondary overcurrent protective device that complies with UL 248 to be installed in the field rated either:
  - max 5 amps for voltages 0 ~ 20 V (0 ~ 28.3 V peak), or
  - 100 / Vp for voltages of 20 ~ 30 V (28.3 ~ 42.4 V peak).
 Alternatively, they can be supplied from a Class 2 power supply. UL Environmental Rating: Enclosure type 1
- Vor der Inbetriebnahme die Betriebsanleitung lesen.
- Anschluss, Montage und Einstellung nur durch Fachpersonal.
- Gerät bei Inbetriebnahme vor Feuchte und Verunreinigung schützen.

### Bestimmungsgemäße Verwendung

Der Reflexions-Lichttaster WTB4S-3 Inox Hygiene ist ein optoelektronischer Sensor und wird zum optischen, berührungslosen Erfassen von Sachen, Tieren und Personen eingesetzt.

### Inbetriebnahme

**Nur bei den Steckerversionen:**  
Leitungsdose spannungsfrei aufstecken und festschrauben.

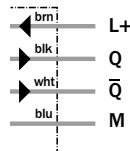
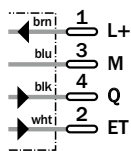
**1** Bewegungsrichtung des Objektes relativ zum Taster einhalten (VR = Vorzugsrichtung). Einsatzbedingungen wie Tastweite und Remissionsvermögen des Tastgutes sowie des Hintergrundes überprüfen.

### 2 Einstellung Tastweite

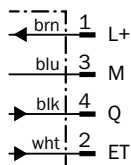
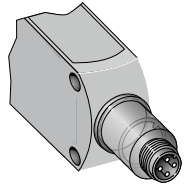
Objekt in den Strahlengang bringen (x = Abstand zum Objekt, y = Abstand zum Hintergrund), Teach-Knopf drücken, bis gelbe Anzeige-LED blinkt. Sensor einsatzbereit. Empfehlung: Sollen farblich unterschiedliche oder dunkle Objekte erkannt werden, empfiehlt es sich, die Tastweite mit einem Sicherheitsaufschlag von 10 % der Tastweite zu versehen.

### Wartung

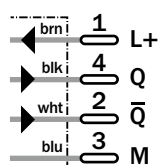
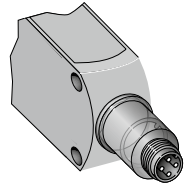
SICK-Lichttaster sind wartungsfrei. Wir empfehlen, in regelmäßigen Abständen  
- die optischen Grenzflächen zu reinigen,  
- Verschraubungen und Steckverbindungen zu überprüfen.



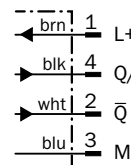
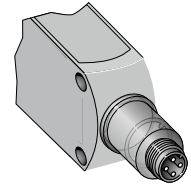
### Teach via cable / Teach-in via Leitung



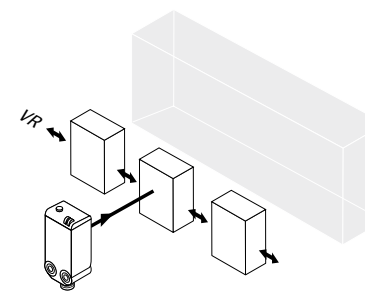
### Teach-in button or fix adjustment / Teach-in-Taste oder fixe Einstellung



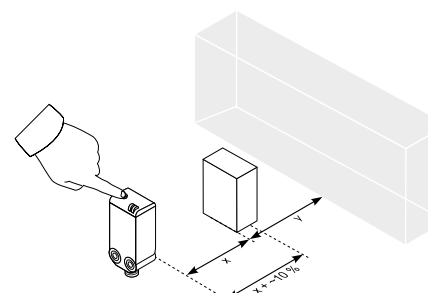
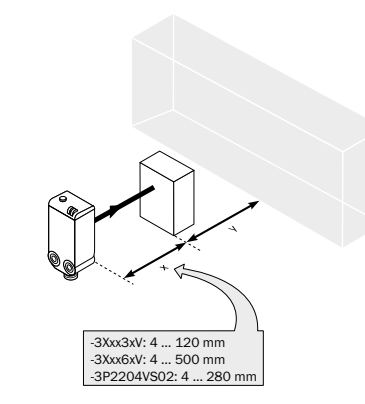
### Teach-in button + IO-Link / Teach-in-Taste + IO-Link



## 1



## 2



FRANÇAIS
<b>Détecteur réflex</b> <p>avec élimination de l' arrière-plan</p> <b>Instructions de Service</b>

### Conseils de sécurité

- N'est pas un composant de sécurité au sens de la directive européenne concernant les machines. Pour utilisation dans des applications NFPA 79 uniquement. Des adaptateurs repertoriés UL fournissant des fils de câblage de terrain sont disponibles.
- UL: The device shall be supplied from an isolating transformer having a secondary overcurrent protective device that complies with UL 248 to be installed in the field rated either:
  - a) max 5 amps for voltages 0 ~ 20 V (0 ~ 28.3 V peak), or
  - b) 100 / Vp for voltages of 20 ~ 30 V (28.3 ~ 42.4 V peak).Alternatively, they can be supplied from a Class 2 power supply.
UL Environmental Rating: Enclosure type 1
- Lire les Instructions de Service avant la mise en marche.
- Installation, raccordement et réglage ne doivent être effectués que par du personnel qualifié.
- Lors de la mise en service, protéger l'appareil de l'humidité et des saletés.

### Utilisation correcte

Le détecteur réflex WTB4S-3 Inox Hygiene est un capteur optoélectronique qui s'utilise pour la saisie optique de choses, d'animaux et de personnes sans aucun contact.

### Mise en service

**Seulement pour les versions à connecter:**

Enficher la boîte à conducteurs sans aucune tension et la visser.

- Respecter le sens de déplacement de l'objet par rapport au détecteur. (VR = sens privilégié). Vérifier les conditions d'utilisation telles que distance de détection et facteur de luminance du matériel à détecter et de l'arrière-plan.

- Réglage Distance de détection**
Placer l'objet sur la trajectoire du rayon (x = distance à l'objet, y = distance à l'arrière-plan), appuyer sur le bouton Apprentissage jusqu'à ce que la LED jaune clignote. Le capteur est prêt à fonctionner.
Recommandation : si on doit détecter des objets sombres ou de dif-férentes couleurs, il est recommandé pour plus de sécurité de majorer la distance de détection de 10 %.

### Maintenance

Les détecteurs de lumière SICK ne nécessitent pas d'entretien. Nous recommandons, à intervalles réguliers,
- de nettoyer les surfaces optiques,
- de contrôler les assemblages vissés et les connexions à fiche et à prise.

DANSK
<b>Refleksions-lystaster</b> <p>med baggrundsudtoning</p> <b>Driftsvejning</b>

### Português

PORTUGUÊS
<b>Foto-célula de reflexão no objeto</b> <p>com supressão do segundo plano</p> <b>Instruções de operação</b>

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### Instruções de segurança

- Não se trata de elemento de segurança segundo a Diretiva Máquinas da União Europeia. Somente para o uso em aplicações NFPA 79. Estão disponíveis adaptadores listados pela UL com fios de cabeamento de campo.
- UL: The device shall be supplied from an isolating transformer having a secondary overcurrent protective device that complies with UL 248 to be installed in the field rated either:
  - a) max 5 amps for voltages 0 ~ 20 V (0 ~ 28.3 V peak), or
  - b) 100 / Vp for voltages of 20 ~ 30 V (28.3 ~ 42.4 V peak).Alternatively, they can be supplied from a Class 2 power supply.
UL Environmental Rating: Enclosure type 1
- Antes do comissionamento dev ler as instruções de operação.
- Conexões, montagem e ajuste devem ser executados exclusivamente por pessoal devidamente qualificado.
- Guardar o aparelho ao abrigo de umidade e sujidade.

### Utilização devida

A foto-célula de reflexão no objeto WTB4S-3 Inox Hygiene é um sensor optoeletrônico que é utilizado para a análise ótica, sem contato, de obje-tos, animais e pessoas.

### Comissionamento

**Vale somente para as versões com conetores:**

- Manter o sentido do movimento do objeto em relação à tecla (VR = sentido preferencial).

Controlar os parâmetros de operação, como sejam: raio de exploração e capacidade de remissão, tanto do objeto a analisar como do fundo.

### Ajuste da distância de exploração

Colocar o objeto na trajetória do raio (x = distância até o objeto, y = distância até o fundo), apertar o botão Teach até que o LED amarelo apresente luz intermitente. Sensor está em stand-by.

Recomendação: caso sejam reconhecidos objetos de cores diferentes ou objetos escuros, recomenda-se dotar a distância de exploração de uma margem de segurança de 10 % da distância de exploração.

### Manutenção

Os sensores de luz SICK não requerem manutenção. Recomendamos que se faça, em intervalos regulares,

- a limpeza das superfícies óticas,
- e um controle às conexões rosçadas e uniões de conetores.

ITALIANO
<b>Sensore luminoso a riflessione</b> <p>con sfondo invisibile</p> <b>Istruzioni per l'uso</b>

### Avvertimenti di sicurezza

- Non componente di sicurezza secondo la Direttiva macchine EN. Solo per utilizzo in applicazioni NFPA 79. Sono disponibili adattatori elencati in UL per terminali dei cablaggi di campo.
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  - b) 100 / Vp for voltages of 20 ~ 30 V (28.3 ~ 42.4 V peak).Alternatively, they can be supplied from a Class 2 power supply.
UL Environmental Rating: Enclosure type 1
- Leggere prima della messa in esercizio.
- Allacciamento, montaggio e regolazione solo da parte di personale qualificato.
- Durante la messa in esercizio proteggere da umidità e sporcizia.

### Impiego conforme allo scopo

Il sensore luminoso a riflessione WTB4S-3 Inox Hygiene è un sensore optoelettronico che viene impiegato per il rilevamento ottico a distanza di oggetti, animali e persone.

### Messa in esercizio

**Solo con spine:**

Inserire scatola esente da tensione e avvitare stringendo.

- Mantenere la direzione dell'oggetto in relazione al sensore (VR = direzione preferenziale). Verificare le condizioni di impiego quali distanza di ricezione e riflettanza dell'oggetto e dello sfondo.

- Impostazione distanza di ricezione**
Portare l'oggetto nel raggio di luce (x = distanza dall'oggetto, y = dis-tanza dallo sfondo), premere il tasto Teach finché il LED giallo comincia a lampeggiare. Il sensore è pronto per il funzionamento. Suggerimento: per rilevare oggetti di colori diversi o scuri, è consigliabile aumentare la distanza di ricezione di un margine di sicurezza del 10 %.

### Manutenzione

Le barriere luminose SICK non richiedono manutenzione. Si consiglia
- di pulire regolarmente le superfici ottiche limite,
- di controllare regolarmente gli avvitamenti e i collegamenti a spina.

DANSK
<b>Refleksions-lystaster</b> <p>med baggrundsudtlichting</p> <b>Gebruiksaaunjizing</b>

PORTUGUÊS
<b>Foto-célula de reflexão no objeto</b> <p>com supressão do segundo plano</p> <b>Instruções de operação</b>

### Português

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### Comissionamento

**Vale somente para as versões com conetores:**

- Manter o sentido do movimento do objeto em relação à tecla (VR = sentido preferente).

Controlar os parâmetros de operação, como amplitude de palpación e capacidade de remisión, del producto a detectar, así como también del fondo.

### Ajuste del alcance de palpación

Colocar el objeto en la trayectoria del rayo (x = distancia con el objeto, y = distancia con el fondo), pulsar el botón Teach hasta que parpadee el indicador LED amarillo. Sensor listo para el trabajo. Recomendación: Si hubieras de detectarse objetos de diferentes colores u oscuros, es recomendable entonces dotar el alcance de palpación con una tolerancia de palpación del 10 %.

### Mantenimiento

Los palpadores de luz SICK están exentos de mantenimiento. Recomendamos a intérvalos regulares
- limpiar las superficies ópticas
- controlar las prensaestopas y las bases de conexión.

ESPÁÑOL
<b>Barrera de luz de reflexión</b> <p>con enmascaramiento de fondo</p> <b>Manual de Servicio</b>

### Observaciones sobre seguridad

- No es elemento constructivo de seguridad según la Directiva UE sobre maquinaria. Para uso exclusivo en aplicaciones NFPA 79. Hay disponibles adaptadores con homologación UL para el cableado de campo.
- UL: The device shall be supplied from an isolating transformer having a secondary overcurrent protective device that complies with UL 248 to be installed in the field rated either:
  - a) max 5 amps for voltages 0 ~ 20 V (0 ~ 28.3 V peak), or
  - b) 100 / Vp for voltages of 20 ~ 30 V (28.3 ~ 42.4 V peak).Alternatively, they can be supplied from a Class 2 power supply.
UL Environmental Rating: Enclosure type 1
- Leer el Manual de Servicio antes de la puesta en marcha.
- Conexión, montaje y ajuste solo por personal técnico.
- A la puesta en marcha proteger el aparato contra humedad y suciedad.

### Empleo para usos debidos

El barrera de luz de reflexión WTB4S-3 Inox Hygiene es un sensor opto-electrónico empleado para la detección óptica y sin contacto de objetos, animales y personas.

### Puesta en marcha

**Solo en conectores:**

Insertar y atornillar bien la caja de conexiones sin tensión.

- Conservar el sentido de movimiento del objeto relativo al palpador. (VR = Sentido preferente). Comprobar las condiciones de trabajo, como amplitud de palpación y capacidad de remisión, del producto a detectar, así como también del fondo.

Controlar los parámetros de operación, como sean: radio de exploración e capacidad de remisión, tanto do objeto a analizar como do fundo.

Colocar o objeto na trajetória do raio (x = distância con el objeto, y = distancia con el fondo), pulsar el botón Teach hasta que parpadee el indicador LED amarillo. Sensor listo para el trabajo. Recomendación: Si hubieras de detectarse objetos de diferentes colores u oscuros, es recomendable entonces dotar el alcance de palpación con una tolerancia de palpación del 10 %.

### Mantenimiento

Los palpadores de luz SICK están exentos de mantenimiento. Recomendamos a intérvalos regulares
- limpiar las superficies ópticas
- controlar las prensaestopas y las bases de conexión.

汉语
<b>对比度探测器</b> <p><b>背景遮光标记</b></p> <b>操作规程</b>

### 安全使用说明

- 使用前阅读操作规程。
- 只允许专业人员进行接线,安装及调整。
- 使用时应防潮湿防污染。
- 按照 EU-机器规程无保护元件。只用于 NFPA 79 应用。可提供 UL 列出的适配器 (带现场配线引线)。
- UL: The device shall be supplied from an isolating transformer having a secondary overcurrent protective device that complies with UL 248 to be installed in the field rated either:
  - a) max 5 amps for voltages 0 ~ 20 V (0 ~ 28.3 V peak), or
  - b) 100 / Vp for voltages of 20 ~ 30 V (28.3 ~ 42.4 V peak).Alternatively, they can be supplied from a Class 2 power supply.
UL Environmental Rating: Enclosure type 1

### 参量使用

WTB4S-3 Inox Hygiene 漫反射型光电开关是一个光电传感器,用于光学地,无接触地检测物体,动物和人.

### 投入使用

用滑块锁紧 (无电) 插上电缆插座,拧紧.

- 保持物体相对于传感器的运动方向 (VR=优先方向)。检查使用条件, 例如待扫描物体和背景感应距离和漫反射能力。

- 设定感知距离
放置物件, 将光斑对准物件, 物件上可见到红色发射光斑。将感知距离旋置到最小, 然后增大感知距离, 直到受光指示灯亮起。
建议: 为保险起见, 将感知距离增加10 %。

### 维护

SICK-漫反射型光电开关全部免维护我们建议,
-定期地清洁光学反光面,
-检查螺丝拧紧和插头.