

## LASER SAFETY



**WARNING: The SH-LP laser pointer uses a red laser light beam that can be potentially dangerous to the human eye.**

**Do not stare directly at the light beams.**



### ITALIANO

LA LUCE LASER È VISIBILE ALL'OCCHIO UMANO E VIENE EMESSA DALLA FINESTRA INDICATA NELLA FIGURA.

LUCE LASER NON FISSARE IL FASCIO APPARECCHIO LASER DI CLASSE 2 MASSIMA POTENZA D'USCITA: 1 mW LUNGHEZZA D'ONDA EMESSA: 630-680 nm CONFORME A EN 60825-1 (2014).

### DEUTSCH

DIE LASER-STRABLUNG IST FÜR DAS MENSCHLICHE AUGEN SICHTBAR UND WIRD AM STRAHLAUS TRITTSFENSTER AUSGESENDET (SIEHE BILD).

LASERSTRABLUNG NICHT IN DEN STRAHL BLICKEN PRODUKT DER LASERKLASSE 2 MAXIMALE AUSGANGSLEISTUNG: 1 mW WELLENLÄGE: 630-680 nm ENTSpricht MIT EN 60825-1 (2014).

### FRANÇAIS

LE RAYON LASER EST VISIBLE À L'OEIL NU ET IL EST ÉMIS PAR LA FENÊTRE DÉSIGNÉE SUR L'ILLUSTRATION DANS LA FIGURE.

RAYON LASER EVITER DE REGARDER LE RAYON APPAREIL LASER DE CLASSE 2 PUISSANCE DE SORTIE: 1 mW LONGUEUR D'ONDE EMISSION: 630-680 nm CONFORME A EN 60825-1 (2014).

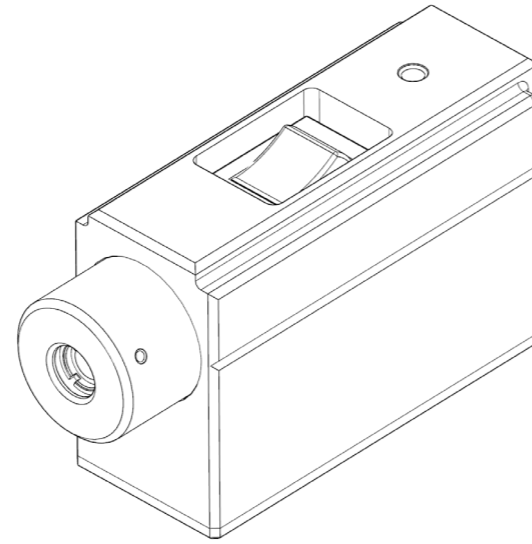
### ESPAÑOL

A LUZ LÁSER ES VISIBLE AL OJO HUMANO Y ES EMITIDA POR LA VENTANA INDICADA EN LA FIGURA.

RAYO LÁSER NO MIRAR FIJO EL RAYO APARATO LÁSER DE CLASE 2 MÁXIMA POTENCIA DE SALIDA: 1 mW LONGITUD DE ONDA EMITIDA: 630-680 nm CONFORME A EN 60825-1 (2014).

## SH-LP

## INSTRUCTION MANUAL



**DATA SENSING**

Laser Pointer

## GENERAL INFORMATION

Thanks to its completely new housing and fixing system SH-LP laser pointer can be installed in all SH4 mainly and some SG safety light curtain profiles. Thanks to a specially designed CLIP-ON fixing bracket the laser pointer can be inserted into the two lateral grooves.

### Highlights

- To be used to help the mechanical alignment of TX and RX unit of safety light curtain;
- Suitable for SG2 MUTING, SG4 EXTENDED, SG BODY COMPACT and SH4 profiles;
- Installation performed through the two lateral grooves of the safety light curtain housing without screws;
- Clip-on insertion;
- No adjustment required.

### Typical applications

SH-LP laser pointer is advised to be used to ease TX and RX mechanical alignment process in the following installation conditions:

- Multi-beam body/access protection safety light curtain whose operating distance is more than 50m;
- Multi-beam body/access protection safety light curtain installed with deviating mirrors to perform perimetric protections;
- Finger or hand protection safety light curtains installed with deviating mirrors to protect different sides of a machine.

### Package Contents

The package contains the following items:

Laser Pointer (1 pcs)
CLIP-ON bracket (1 pcs)
Battery AAA 1,5 V (2 pcs)
Screws UNI 5931 M4x8 (2 pcs)
Instruction manual (1 pcs)
Laser labels (6 pcs)

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### Patents

See [www.patents.datasensing.com](http://www.patents.datasensing.com) for patent list.

This product is covered by one or more of the following patents:

Utility patents: IT1363719, IT1427575, US10188007

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## ENGLISH

The following information is provided to comply with the rules imposed by international authorities and refers to the correct use of your device.

### STANDARD LASER SAFETY REGULATIONS

This product conforms to the applicable requirements of both CDRH 21 CFR 1040.10, CFR 1040.11 and EN 60825-1 at the date of manufacture. For installation, use and maintenance, it is not necessary to open the device.



**WARNING: Do not attempt to open or otherwise service any components in the optics cavity. Opening or servicing any part of the optics cavity by unauthorized personnel may violate laser safety regulations. The optics system is a factory only repair item. Use of controls or adjustments or performance of procedures other than those specified herein may result in exposure to hazardous visible laser light. Use of optical systems with the scanner will increase eye hazard. Optical instruments include binoculars, microscopes, eye glasses and magnifying glasses.**

The product utilizes a low-power laser diode. Although staring directly at the laser beam momentarily causes no known biological damage, avoid staring at the beam as one would with any very strong light source, such as the sun. Avoid that the laser beam hits the eye of an observer, even through reflective surfaces such as mirrors, etc.

## ITALIANO

Le seguenti informazioni vengono fornite dietro direttive delle autorità internazionali e si riferiscono all'uso corretto del terminale.

### NORMATIVE STANDARD PER LA SICUREZZA LASER

Questo prodotto risulta conforme alle normative vigenti sulla sicurezza laser alla data di produzione: CDRH 21 CFR 1040.10, CFR 1040.11 e EN 60825-1. Non si rende mai necessario aprire l'apparecchio per motivi di installazione, utilizzo o manutenzione.



**ATTENZIONE: Non tentare di accedere allo scomparto contenete i componenti ottici o di farne la manutenzione. L'apertura dello scomparto, o la manutenzione di qualsiasi parte ottica da parte di personale non autorizzato, potrebbe violare le norme della sicurezza. Il sistema ottico può essere riparato solamente alla fabbrica. L'utilizzo di procedure o regolazioni differenti da quelle descritte nella documentazione può provocare un'esposizione pericolosa a luce laser visibile. L'uso di strumenti ottici assieme allo scanner può aumentare il pericolo di danno agli occhi. Tali strumenti ottici includono cannocchiali, microscopi, occhiali e lenti di ingrandimento.**

Il prodotto utilizza un diodo laser a bassa potenza. Sebbene non siano noti danni riportati dall'occhio umano in seguito ad una esposizione di breve durata, evitare di fissare il raggio laser così come si eviterebbe qualsiasi altra sorgente di luminosità intensa, ad esempio il sole. Evitare inoltre di dirigere il raggio laser negli occhi di un osservatore, anche attraverso superfici riflettenti come gli specchi.

## DEUTSCH

Die folgenden Informationen stimmen mit den Sicherheitshinweisen überein, die von internationalen Behörden auferlegt wurden, und sie beziehen sich auf den korrekten Gebrauch vom Terminal.

### NORM FÜR DIE LASERSICHERHEIT

Dies Produkt entspricht am Tag der Herstellung den gültigen EN 60825-1 und CDRH 21 CFR 1040.10, CFR 1040.11 Normen für die Lasersicherheit. Es ist nicht notwendig, das Gerät wegen Betrieb oder Installations- und Wartungs-Arbeiten zu öffnen.



**ACHTUNG: Unter keinen Umständen darf versucht werden, die Komponenten im Optikhohlraum zu öffnen oder auf irgendeine andere Weise zu warten. Das Öffnen bzw. Warten der Komponenten im Optikhohlraum durch unbefugtes Personal verstößt gegen die Laser-Sicherheitsbestimmungen. Das Optiksistem darf nur werkseitig repariert werden. Jegliche Änderungen am Gerät sowie Vorgehensweisen, die nicht in dieser Betriebsanleitung beschrieben werden, können ein gefährliches Laserlicht verursachen. Die Verwendung von Optiksystemen mit diesem Scanner erhöht die Gefahr einer Augenbeschädigung. Zu optischen Instrumenten gehören unter anderem Ferngläser, Mikroskope, Brillen und Vergrößerungsgläsern.**

Der Produkt benutzt eine Laserdiode. Obwohl zur Zeit keine Augenschäden von kurzen Einstrahlungen bekannt sind, sollten Sie es vermeiden für längere Zeit in den Laserstrahl zu schauen, genauso wenig wie in starke Lichtquellen (z.B. die Sonne). Vermeiden Sie es, den Laserstrahl weder gegen die Augen eines Beobachters, noch gegen reflektierende Oberflächen zu richten.

## FRANÇAIS

Les informations suivantes sont fournies selon les règles fixées par les autorités internationales et se réfèrent à une correcte utilisation du terminal

### NORMES DE SECURITE LASER

Ce produit est conforme aux normes de sécurité laser en vigueur à sa date de fabrication: CDRH 21 CFR 1040.10, CFR 1040.11 et EN 60825-1. Il n'est pas nécessaire d'ouvrir l'appareil pour l'installation, l'utilisation ou l'entretien.



**ATTENTION: Ne pas essayer d'ouvrir ou de réparer les composants de la cavité optique. L'ouverture de la cavité optique ou la réparation de ses composants par une personne non qualifiée peut entraîner le non respect des règles de sécurité relatives au laser. Le système optique ne peut être réparé qu'en usine. L'utilisation de procédures ou réglages différents de ceux donnés ici peut entraîner une dangereuse exposition à lumière laser visible. L'utilisation d'instruments optiques avec le scanner augmente le danger pour les yeux. Les instruments optiques comprennent les jumelles, les microscopes, les lunettes et les verres grossissants.**

Le produit utilise une diode laser. Aucun dommage aux yeux humains n'a été constaté à la suite d'une exposition au rayon laser. Éviter de regarder fixement le rayon, comme toute autre source lumineuse intense telle que le soleil. Éviter aussi de diriger le rayon vers les yeux d'un observateur, même à travers des surfaces réfléchissantes (miroirs, par exemple).

## ESPAÑOL

Las informaciones siguientes son presentadas en conformidad con las disposiciones de las autoridades internacionales y se refieren al uso correcto del terminal.

### NORMATIVAS ESTÁNDAR PARA LA SEGURIDAD LÁSER

Este aparato resulta conforme a las normativas vigentes de seguridad láser a la fecha de producción: CDRH 21 CFR 1040.10, CFR 1040.11 y EN 60825-1. No es necesario abrir el aparato para la instalación, la utilización o la manutención.



**ATENCIÓN: No intente abrir o de ninguna manera dar servicio a ninguno de los componentes del receptáculo óptico. Abrir o dar servicio a las piezas del receptáculo óptico por parte del personal no autorizado podría ser una violación a los reglamentos de seguridad. El sistema óptico se puede reparar en la fábrica solamente. La utilización de procedimientos o regulaciones diferentes de aquellas descritas en la documentación puede causar una exposición peligrosa a la luz láser visible. El uso de sistemas ópticos con el escáner aumentará el riesgo de daños oculares. Los instrumentos ópticos incluyen binoculares, microscopios, lentes y lupas.**

El producto utiliza un diodo láser de baja potencia. Aunque no se conocen daños en el ojo humano después de una exposición a corto plazo, evite mirar el rayo láser de la misma manera que evitaría cualquier otra fuente de luz intensa, como el sol. También evite dirigir el rayo láser a los ojos de un observador, incluso a través de superficies reflectantes como espejos.

The laser pointer is powered by two 1.5 V AAA type batteries, take care to respect right polarity.

### Battery replacement

With a common cross head screw driver remove the 2 TSP UNI 7688 M2,5x8 screws from bottom closing cap then remove it to have access to the battery box; put off the battery box, extract the two batteries and replace with new ones. Place the battery box in its place, close with the cap and firmly tighten the screws:



- Exhausted batteries are designated for separate collection at an appropriate collection point.
- Do not dispose of as household waste.
- For more information, contact the local authorities in charge of waste management.

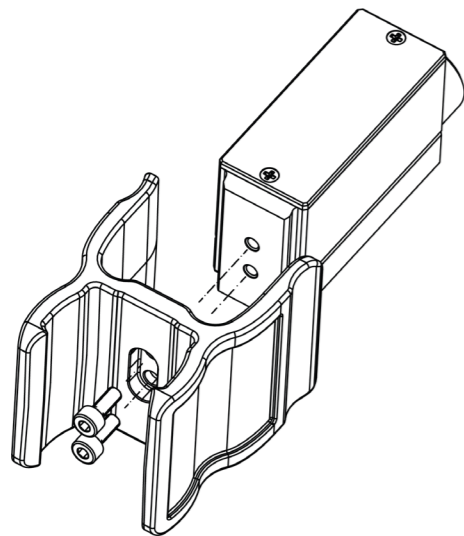
## INSTRUCTIONS

### Installation

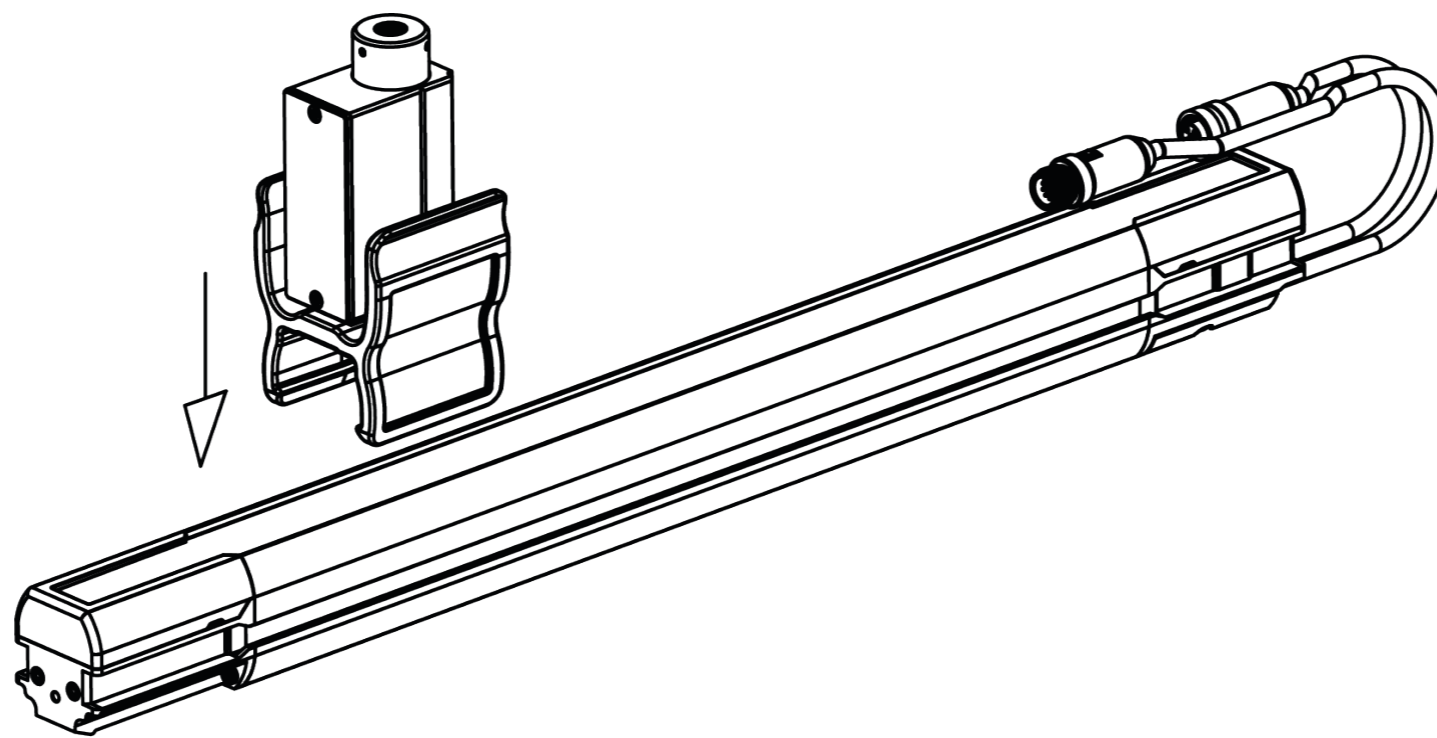
- Install the emitting and receiving units of the SH/SG series safety device in the defined positions (refer to MECHANICAL MOUNTING chapter of the safety light curtain instructions manual). The use of floor stands is recommended, verifying that they are firmly fixed and that their axis is perpendicular to the floor.
- SH-LP laser pointer is installed on SH4 and SG safety light curtains profiles using the two lateral grooves.

### MECHANICAL MOUNTING

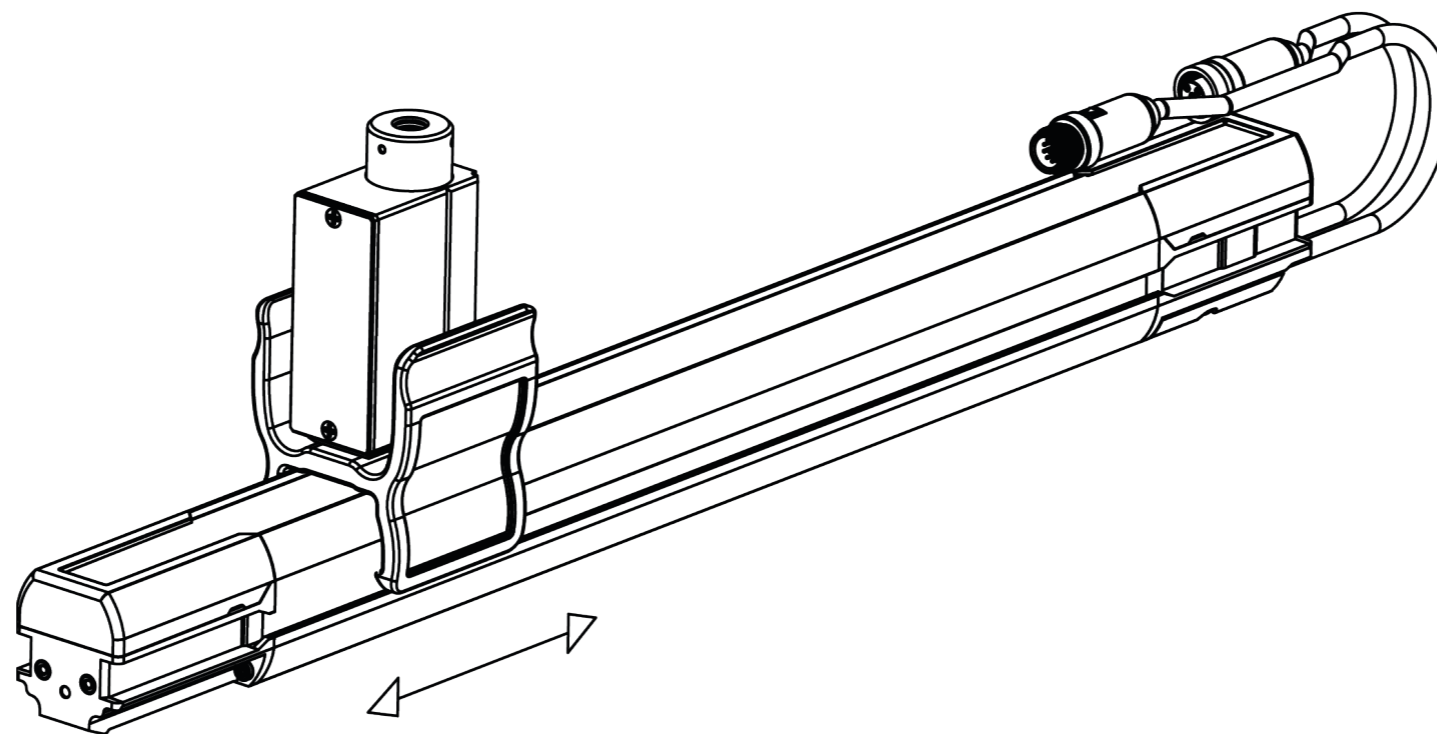
Fix the bracket to the laser pointer using the M4x8 screws:



Clip-on the Laser Pointer to the lateral grooves of the safety light curtain housing:



Slide the Laser Pointer along the lateral grooves of the safety light curtain:



### ALIGNMENT

1. Power on the laser pointer rotating pushing the dedicated switch. Orientate the emitting unit in order that the laser beam hits the receiving unit at the same height of the pointer.



**NOTE:** The holes of the fixing bracket or the orientable supports or the rotating brackets, available as accessories, can be used to orientate the unit, allowing angle adjustment along the vertical unit axis. If necessary the inclination of the floor stand can be changed by simply mounting washers under the base.

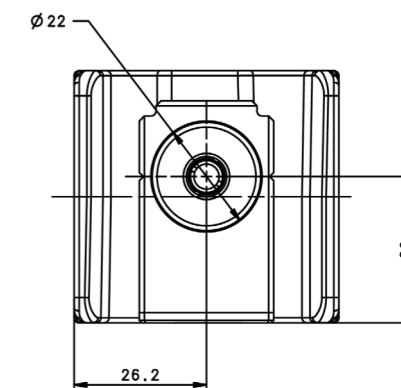
2. Repeat this procedure inserting the pointer in the lower part of the emitting unit; if necessary repeat this procedure until the desired result is obtained.
3. Insert the laser pointer in the upper part of the receiving unit and orient this unit in order that the laser beam hits the emitting unit as indicated.
4. Repeat this procedure inserting the laser pointer in the lower part of the receiving unit. After this operation, fix the position of the light curtain remove the laser pointer from controlled area and switch on the safety device and verify the correct alignment. Finally, centre the laser pointer transversal position keeping it close to the front panel, fix defiantly.



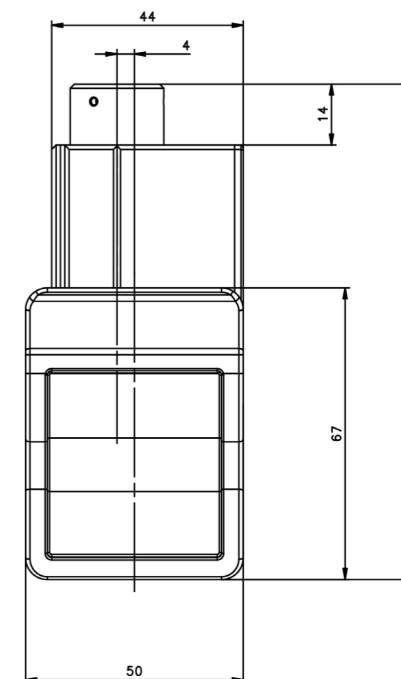
**NOTE:** The laser pointer, due to mechanical tolerance problems in the matching with the light curtain housing, provides an approximate indication and hence small corrections may be necessary in the unit alignment, following the ALIGNMENT PROCEDURE described in the safety light curtain product reference guide.

## OVERALL DIMENSIONS

### Front view



### Side view



### Bottom view

