

CCH

INDUSTRIAL SENSORS & SAFETY PRODUCTS



PRODUCT CATALOGUE

2D LiDAR / Safety Laser Scanners
Safety Light Curtains / Safety Relay Modules

CCH Shanghai Technology & Intelligence Co., Ltd.

International sales

Manufactured by CCH Technology & Intelligence Co., Ltd.

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Engineering industrial sensing



CCH Technology & Intelligence Co., Ltd. is based in the Hangzhou Airport Economic Demonstration Zone, China. The company develops, manufactures and supplies industrial sensors and controllers, translating research and development into practical automation solutions.

The product portfolio includes safety light curtains, safety laser scanners, LiDAR sensors and safety relay modules. The core team has an average of 15 years of experience in industrial sensor development, manufacturing and application engineering.

Manufacturing & development

- More than 5,000 m² of electronics manufacturing space, equipped with precision SMT production lines and MV-6e OMNI 3D AOI inspection.
- Dedicated R&D; facilities and laboratories for EMC, temperature and humidity, vibration, shock and ingress-protection testing.
- Development and manufacturing resources to support project-specific customization.



Company certificates and recognitions reproduced from the Chinese catalogue.

Our vision

To advance industrial sensing through technology, innovation and consistent quality. CCH combines an experienced team, modern equipment, controlled production processes and quality systems to serve industrial customers worldwide.

YB Series 2D LiDAR



Compact single-plane LiDAR based on direct Time-of-Flight (dToF) measurement. Designed for industrial ranging, area monitoring and, on raw-data models, mobile robot navigation and localization.

- Consistent scanning-plane alignment and compact housing.
- Low power consumption for mobile and embedded equipment.
- Angular resolution down to 0.1° on selected models.
- Up to four simultaneous configuration-software users.
- Near-window detection and resistance to interference from other scanners.

Technical specifications

Parameter	Specification
Scanning angle	270°
Scanning-plane alignment	Pitch $\pm 0.5^\circ$; roll $\pm 0.5^\circ$
Distance error	± 2 cm (typical)
Repeatability	± 4 mm, 1 sigma (10% black velvet, measured at 600 mm)
Operating voltage / start-up	9–28 V DC / 10 s typical
Power consumption	<2 W (manufacturer-confirmed update)
Operating / storage temperature	–10 to +50 °C / –40 to +70 °C; no window frost or fog
Operating / storage humidity	35–85% RH / 35–95% RH
Ingress protection / ambient light	IP65 / 100,000 lux
Dimensions	52 × 52 × 70 mm
Vibration	10–55 Hz; amplitude 0.35 $\pm$ 0.05 mm; 20 sweeps per X/Y/Z axis
Shock	10 g; 16 ms pulse; 1,000 impacts per X/Y/Z axis

Typical distance-error test: black velvet, white paper and reflective tape are positioned at the same distance at different angles. The source specifies ± 2 cm deviation from actual distance and a maximum inter-material difference of 2 cm.

YB model selection

Example: YB27-25CE

Code	Meaning
YB / 27	YB series / 270° scanning angle
15 / 25 / 35 / 40	Nominal range in metres at 70% reflectivity
C / H	Standard / high-performance version
E / S / D / R	Ethernet raw data / switching output / switching + raw data / RS232 raw data

Output type	Models	Range @ 70%	Resolution / scan frequency
Ethernet UDP	YB27-15CE YB27-25CE	15 m 25 m	Default 0.15° @ 20 Hz; configurable combinations listed below
Ethernet UDP	YB27-25HE YB27-35HE YB27-40HE	25 / 35 / 40 m	Default 0.1° @ 25 Hz
Switching (S)	YB27-15CS YB27-25CS	15 / 25 m	0.3° @ 20/25/30/40 Hz; default 30 Hz
Switching (S)	YB27-25HS YB27-35HS YB27-40HS	25 / 35 / 40 m	0.3° @ 20/25/30/40/50 Hz; default 30 Hz
Combined (D)	YB27-15CD YB27-25CD	15 / 25 m	Default 0.3° @ 30 Hz; supports 20/25/30/40 Hz
Combined (D)	YB27-25HD YB27-35HD YB27-40HD	25 / 35 / 40 m	20/25/30/40/50 Hz; default switching mode 0.3° @ 30 Hz; measurement mode 0.1° default
RS232 raw data	YB27-15CR YB27-25CR	15 / 25 m	Default 0.5° @ 30 Hz; 0.5/1/2° @ 20/25/30/40/50 Hz

CE combinations: 0.15/0.2/0.25/0.3/0.33/0.5° @ 20 Hz; 0.2/0.25/0.3/0.33/0.5° @ 25 Hz; 0.25/0.3/0.33/0.5° @ 28/30 Hz; 0.33/0.5° @ 40 Hz; 0.5° @ 50 Hz.

HE combinations: 0.1/0.15/0.2/0.25/0.3/0.33/0.5° @ 20/25/28/30 Hz; 0.15/0.2/0.25/0.3/0.33/0.5° @ 40 Hz; 0.2/0.25/0.3/0.33/0.5° @ 50 Hz.

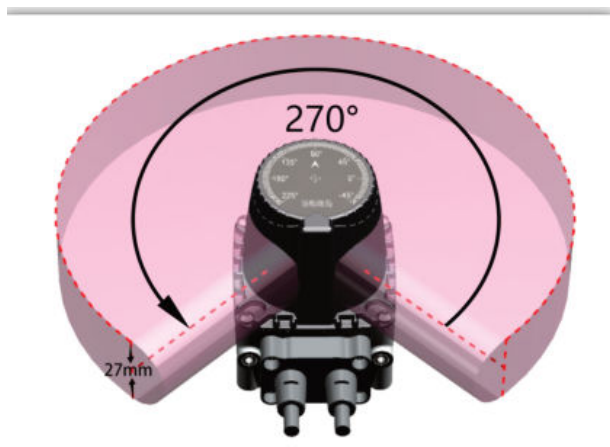
S and D models: configurable PNP/NPN switching (PNP default); user-defined fields; response time 67–536 ms (2–16 scans), 67 ms default; four input signals select 16 field groups. Model names above follow this supplied catalogue.

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06

YB performance & configuration



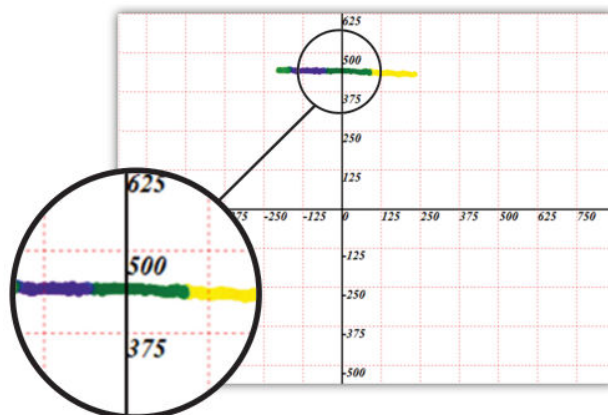
Near-window detection

The optical design supports detection close to the scanning window. A 270° scan provides area monitoring and contour measurement, with a range of up to 40 m at 70% reflectivity on selected models.

Keep the installation clearance around the optical window free of obstructions. Use raw-data models where navigation data is required.

Measurement across materials

The configuration software uses colour coding to distinguish target reflectivity, helping users inspect measurement results across different materials in the same plane.

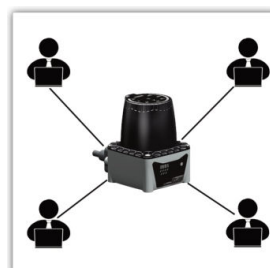


Flexible setup

Configure angular resolution, scan speed and operating mode in the software. Available settings depend on the model; compatible combinations are listed on page 05.

Multi-user monitoring

Up to four terminals can access the configuration software simultaneously for setup and status monitoring. The factory default is two users.



YB dimensions & mounting

All dimensions in millimetres



Switching + raw data

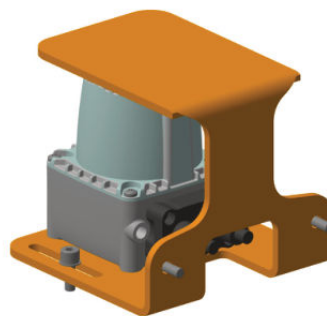
D variants combine configurable switching outputs with Ethernet UDP measurement data. A single sensor can support area monitoring and navigation-data acquisition, reducing additional hardware and simplifying integration.



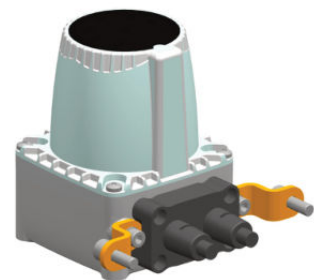
Sensor body: 52 × 52 × 70 mm



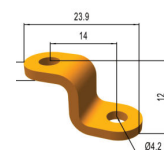
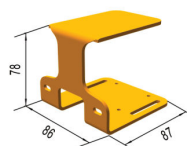
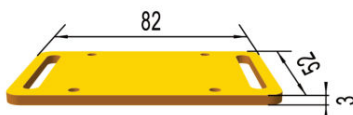
Horizontal bracket



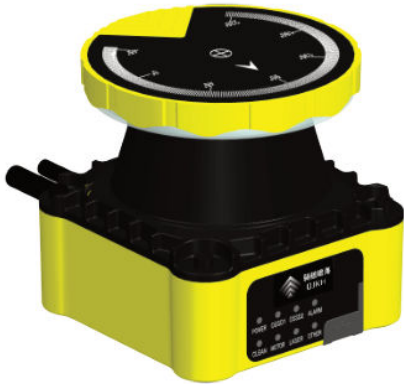
Protective-cover bracket



Vertical bracket



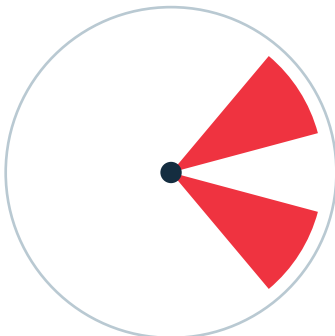
SH Safety Laser Scanners



SH series scanners use a 276° scanning field for protective monitoring in AGVs, automated storage and industrial work areas. Six models are TÜV Rheinland certified to Type 3 ESPE, SIL 2, PL d and Category 3. See page 12 for the certified configuration.

- Window-contamination indicator for easier maintenance.
- Angular resolution of 0.1°.
- Low power demand and resistance to interference from other scanners.

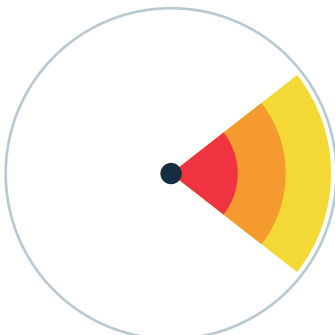
Two protective-field modes



PP

PP: two protective fields

Two protective fields provide separate monitoring areas associated with OSSD1 and OSSD2.



PAA

PAA: protective + two warning fields

One protective field and two warning levels support staged responses. The field strategy can be selected to suit the machine application.

Field management: up to 64 stored field groups, including sector and polygon shapes; groups can be assigned to monitoring instances. The source states field-strategy switching in less than 50 ms; this is separate from the scanner response time.

SH technical specifications

Parameter	Specification
Safety classification	Type 3 (IEC 61496); SIL 2 (IEC 61508); Cat. 3 / PL d (ISO 13849)
Safety outputs (OSSD)	PNP; ON: $I_{OUT} \leq 100 \text{ mA}$, $V_{OUT} \geq V_{CC} - 2 \text{ V}$; OFF: $I_{OUT} < 1 \text{ mA}$, $V_{OUT} < 2 \text{ V}$. Overcurrent protection; capacitive load $\leq 0.5 \mu\text{F}$. OFF when an object or fault is detected.
Auxiliary output	PNP; maximum 100 mA; ON voltage $\geq V_{CC} - 2 \text{ V}$; OFF leakage $< 1 \text{ mA}$ and voltage $< 2 \text{ V}$; overcurrent protection
Laser / scanning angle	905 nm; Class 1 laser product / 276°
Angular resolution / distance error	0.1° / $\pm 2 \text{ cm}$ typical
Repeatability	$\pm 4 \text{ mm}$, 1 sigma; 10% black velvet at 600 mm
Response time / scan rate	100 ms (configurable) / 30 Hz
Object resolution / tolerance zone	70 mm at maximum protective-field radius / 65 mm
Additional distance ZR	350 mm; source condition: retroreflector within 6 m of the protective field
Supply / start-up / power	24 V DC $\pm 20\%$ / 10 s typical / $< 4 \text{ W}$, no load
Dimensions / weight / housing colour	80 × 80 × 79.5 mm / 420 g / yellow
Operating / storage temperature	-10 to $+50^\circ\text{C}$ / -40 to $+70^\circ\text{C}$; no window frost or fog
Operating / storage humidity	35–95% RH / 35–95% RH
Ingress protection / ambient light	IP65 / 3,000 lux (white light)
Vibration	10–55 Hz; $0.35 \pm 0.05 \text{ mm}$; 20 sweeps per X/Y/Z axis. Source also lists 5M1 (IEC 60721-3-5): 1.5 mm, 2–9 Hz.
Shock	10 g, 16 ms, 1,000 ± 10 impacts per X/Y/Z axis; 5M1 (IEC 60721-3-5): 50 m/s ² , 11 ms

Paired OSSD outputs: OSSD1.A/B form one pair and OSSD2.A/B form the second pair. One or two pairs are selected through configuration. Typical error test uses black velvet, white paper and reflective tape at a common distance of 59 cm, with a maximum inter-material difference of 2 cm.

Certification references: EN IEC 61496-1:2020; EN IEC 61496-3:2025; EN ISO 13849-1:2023; EN ISO 13849-2:2012; IEC 61508-1:2010 through IEC 61508-7:2010. EMC: EN IEC 61326-1:2021. Certified HW: V1.0; SW: V1000. See page 12 for certificate numbers and covered models.

SH model selection

Six models | 64 field groups | Example: SH27-05D

Code	Meaning
SH / 27	SH series / 276° scanning angle
03 / 05	3 m / 5 m protective radius at 1.8% reflectivity
S / D / P	PNP switching / PNP switching + Ethernet data / PROFINET

Model	Output	Protective ¹	Warning ²	Measurement ³
SH27-03S	PNP	3 m	10 m	40 m
SH27-05S	PNP	5 m	20 m	60 m
SH27-03D	PNP + Ethernet	3 m	10 m	40 m
SH27-05D	PNP + Ethernet	5 m	20 m	60 m
SH27-03P	PROFINET	3 m	10 m	40 m
SH27-05P	PROFINET	5 m	20 m	60 m

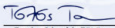
Reflectivity: ¹ 1.8% · ² 10% · ³ 70%. Measurement range is separate from the safety-rated protective distance.

Configuration	All six listed models
Static / dynamic inputs	6 groups (12 inputs) / 4 groups (8 inputs)
Contour-recognition settings	4
Maximum static field groups	64
Maximum monitoring field groups	256
Safety classification	Type 3 ESPE; SIL 2; PL d; Category 3

SH TÜV Rheinland certification

Type 3 ESPE / SIL 2 / PL d / Category 3

CERTIFICATE of Conformity Directive 14/30/EU Electromagnetic Compatibility	
Registration No.:	AE 50706558 0001
Report No.:	CN251J00D 001
Holder:	CCH Technology & Intelligence Co., Ltd Building No. 3, No. 626, Guangsh 1st Road, Xiaoshan District Hangzhou City Zhejiang P.R. China
Product:	Laser Equipment (SH-type Safety LIDAR)
Type designation and serial number are listed on the next page(s)	
This certificate of conformity is based on an evaluation of a sample of the above mentioned product. This is to certify that the tested sample is in conformity with all provisions of Annex I of Council Directive 2014/30/EU. This certificate does not imply assessment of the production of the product and does not certify the use of a TÜV Rheinland mark of conformity. The holder of the certificate is authorized to use this certificate in connection with the EC declaration of conformity according to the a.m. Directive. This is not an EU-Type Examination Certificate.	
Date:	2025-12-16
TÜV Rheinland LGA Products GmbH • Tillystraße 2 • 90431 Nürnberg	

EC Type-Examination Certificate	
	
according to Directive 2006/42/EC Article 13(b) and Article 12(4)(a) on safety of machinery referred to in Annex IV	
Certificate No.:	KS 69268937 0001
Test Report No.:	R26703241 0001
Certificate holder:	OCB Technology & Intelligence Co., Ltd. Building No. 3, G. 028, Guangjia tai Road, Xiaoshan District, Hangzhou City, Zhejiang, 311241, P.R. China
Product:	Machinery Electro-sensitive protective equipment
Identification:	Model / type reference SR27-03S, SR27-05S, SR27-03S, SR27-05S, SR27-03P, SR27-03P, SR27-05P (SS-type Safety LiDAR) For type documentation see annex of this certificate.
	Rating 24/2008 VDE0 1P65; Pt. II; Category 3; Type 3 ESPE; SIL 2; EN HDN V500 / Pt. II; SW version: V1000
	Trademark 
	Remark The product fulfills the requirements for the following standards: EN IEC 61496-1:2015, IEC 61508-1:2010, IEC 61508-2:2010, IEC 61508-3:2010 The following standards are in the scope of accreditation: EN ISO 13849-1:2012, EN ISO 13849-2:2012.
Tested according to:	2006/42/EC Annex I EN IEC 61496-1:2015 EN ISO 13849-1:2012 EN ISO 13849-2:2012
Valid until:	2011-09-14
This type-examination certificate refers to the above mentioned product. This is to certify that the test sample is in conformity with the requirements of Annex I of the Directive. The Certificate Holder is entitled to use this certificate in connection with the EC Declaration of Conformity of the product in accordance with Annex I of the Directive. The certificate does not imply assessment of the series-production of the product and does not permit the use of a TÜV Rheinland mark of conformity. The certificate is valid only if it is provided that the test specifications and construction of the product remain unchanged during the period of validity.	
Certificate body  Tamsa Lázaro Tótos	
Date of issue: 2006-09-15	
TÜV Rheinland Intertek RLT - Product Certification Body - H-1143 Budapest, Gliwice 01, 47-01 - www.tuv.rwth-aachen.de Notified under no. 1050 in EU	
Product certification body accredited by ENAC under No. RA-6036-03/2024K.	
Validity of certificate can be checked on www.CERTIFIED.com	

Seite 1 Page 1 of 1

Zertifikat *Certificate*

Zertifizierungsnummer Certificate No.:

R50748197-0001

Berichtsummenummer Report No.:

CN26NP556-001

Genehmigungsjahresangabe License Holder:

CCH Technology Intelligence Co., Ltd
Building No. 3, No. 628, Guangang 1st Road,
Xiaoshan District
Hangzhou City
Zhejiang
P.R. China

Fertigungsstätte Manufacturing Site:

CCH Technology Intelligence Co., Ltd
Building No. 3, No. 628, Guangang 1st Road, Xiaoshan
District
Hangzhou City
Zhejiang
P.R. China

Prüfzeichen Test Mark:

Test-Mark
Safety
Regulation-Product
Surveillance

www.tuv.com
EN 11346:2016

Geprüft nach Tested according to:

EN IEC 61496-1:2020

EN IEC 61496-2:2025

EN ISO 13849-1:2023

EN ISO 13849-2:2012

Geräteidentifikation

Product Identification

Produkt: Protective Equipment

Product: Electro-sensitive protective equipment

Model: Modelle sind auf nächste(n) Seite(n) gelistet
Type: *Type designation(s) are listed on the next page(s)*

Technische Daten: 242288 VDC; IP66; 3; 4; Category 1; 3; 2 ESPE; 5SL 2;

Technical Data: M4 version: V5.0; M5 version: V3000

Gültig ab:

Valid from:

Ausstellungsdatum: 2026-09-17

Date of issue:

Zertifizierungsstelle:

Certification body:

Luft
Bo Liu

Das Zertifikat ist ein vom Prüfer und Zertifizierungsunternehmen signiertes und in Übereinstimmung mit den Vorschriften der geltenden Normen genehmigtes Dokument, das die Konformität eines Produktes mit den Anforderungen der zugeordneten Normen bestätigt. Es ist gültig, wenn das Produkt in Übereinstimmung mit den Anforderungen der zugeordneten Normen hergestellt wird. Die Zertifizierung ist ein freiwilliges Verfahren zur Nachweise der Konformität mit den Anforderungen der zugeordneten Normen. Die Zertifizierung ist ein freiwilliges Verfahren zur Nachweise der Konformität mit den Anforderungen der zugeordneten Normen. Die Zertifizierung ist ein freiwilliges Verfahren zur Nachweise der Konformität mit den Anforderungen der zugeordneten Normen.

TÜV Rheinland IGA Products GmbH, Thyllstraße 2, 90431 Nürnberg

Head Office: TÜV Rheinland GmbH, Thyllstraße 2, 90431 Nürnberg

Fax: +49 221 806-3555

www.tuv.com

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EMC conformity

EC type-examination

TÜV Mark

Document	Certificate number	Issued / validity
EMC conformity	AE 50706558 0001	Issued 2025-12-16
EC type-examination (MD)	M3 69268937 0001	Issued 2026-09-15 Valid until 2031-09-14
TÜV Mark	R 50748197 0001	Issued 2026-09-17

Covered models: SH27-03S, SH27-05S, SH27-03D, SH27-05D, SH27-03P and SH27-05P.

Certified configuration: 24 V DC $\pm 20\%$; IP65; HW V1.0; SW V1000.

Safety standards: EN IEC 61496-1:2020; EN IEC 61496-3:2025; EN ISO 13849-1:2023; EN ISO 13849-2:2012. The TÜV Mark annex also records evaluation against IEC 61508-1:2010 through IEC 61508-7:2010.

EMC standard: EN IEC 61326-1:2021.

SH dimensions & laser safety



Class 1 laser product

The Class 1 laser certificate reproduced here is retained from the original catalogue. Functional safety and EMC certificates are shown on page 12.

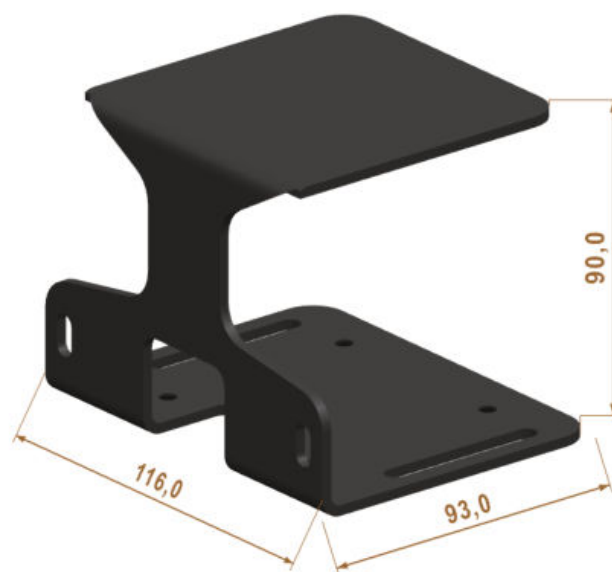
Mechanical specifications

Width × depth × height:
80 mm × 80 mm × 79.5 mm

Weight: **420 g**



Sensor body; dimensions in mm



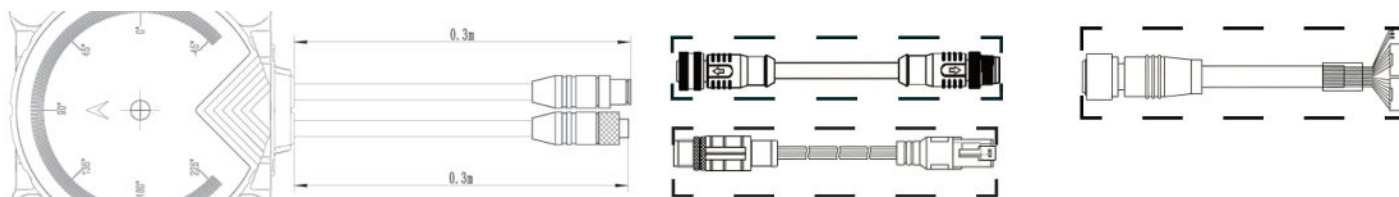
Matching protective mounting bracket

SH connections & accessories

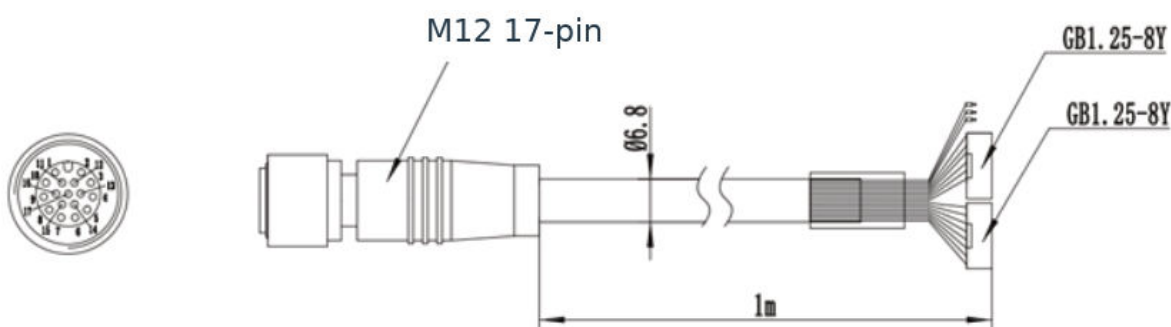
Power / I/O: M12, 17-pin male connector on a 0.3 m cable.

Network: M12, 4-pin female connector on a 0.3 m cable.

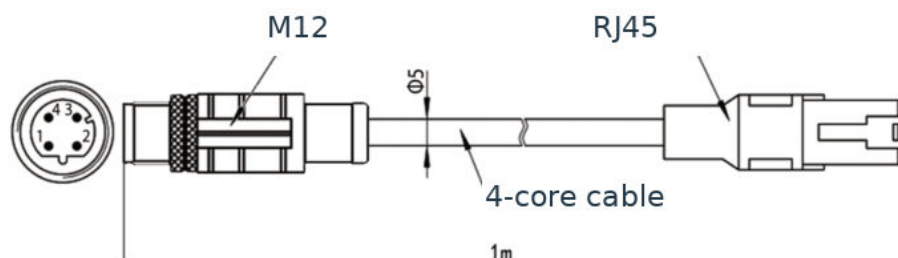
Standard single-ended power cable: 1 m.



Sensor connection leads | Optional double-ended extension | Single-ended power lead



Power cable assembly, 1 m standard length



Accessory	Model	Supply
Single-ended power extension, 1 m	SH-BZM12-1M	Standard
Single-ended power extension, 2 m	SH-BZM12-2M	Optional
Double-ended extension, 2 m	M12-MSDX-2M	Optional
Double-ended extension, 5 m	M12-MSDX-5M	Optional
M12-RJ45 network cable, 1 m	SH-RJ45YCX-1M	Standard
M12-RJ45 network cable, 2 m	SH-RJ45YCX-2M	Optional

ENT Safety Light Curtains

ENT safety light curtains use optical synchronization in a compact housing for machine safeguarding. The source lists TÜV certification and Type 4, Category 4, PL e and SIL 3 performance for applicable configurations.

- Optical synchronization simplifies wiring.
- IP65 enclosure protection.
- Vibration-resistant design.
- Resistance to optical and electromagnetic interference.



Vibration and ageing tests



IP65 protection

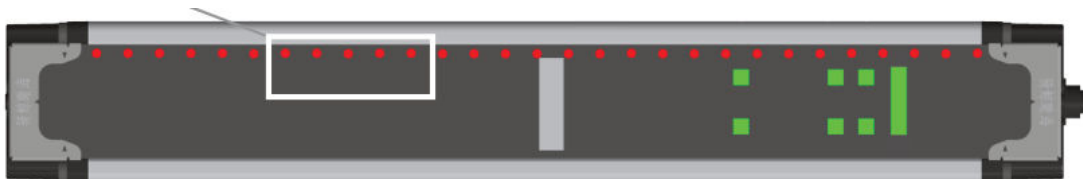


Interference resistance

Simple configuration & diagnostics

Infrared configuration allows selection of PNP or NPN output. Alignment-strength indicators help with commissioning, while segment indicators show the operating status of different parts of the light curtain for faster fault location.

Indicator functions: segment status, alignment strength, optical synchronization channel, output type, near/far mode, device status and beam clear/blocked status.



Receiver with segment-status and alignment indicators

ENT mounting options

Standard model suffix: /ZC | Other mounting arrangements available as options



ZC / Front & side

Standard. Combined front/side mounting bracket.



ZJ / Right-angle

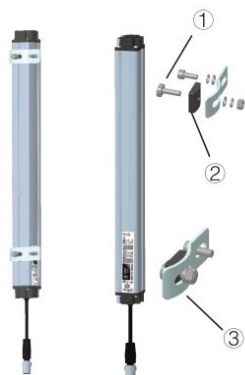
Right-angle mounting bracket.

GZ / Tube mounting

T-bolt, tube clamp, steel tube, adjustment base and mounting base.

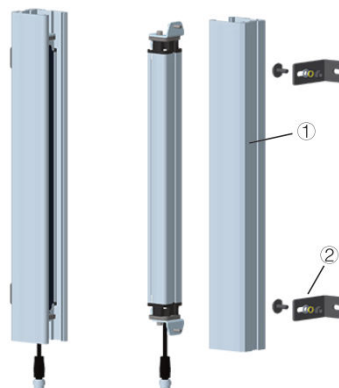
ENT mounting hardware

All dimensions in millimetres



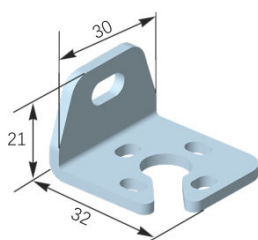
TC / T-slot mounting

T-bolts and adjustable T-slot brackets.

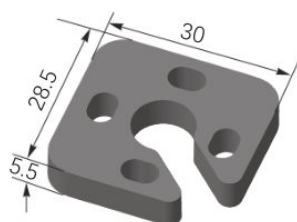


FZ / Protective cover

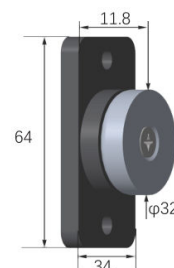
Cover and cover brackets fitted to the T-slot mounting arrangement.



Front/side bracket



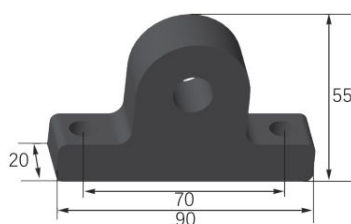
Vibration pad



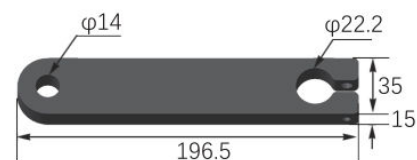
Magnetic bracket



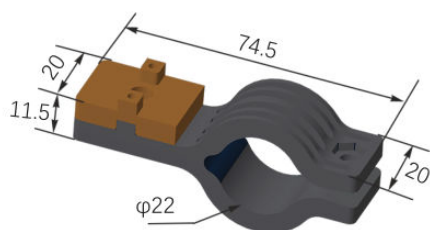
L-shaped bracket



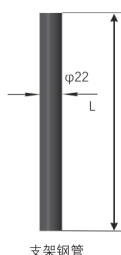
Swivel-arm base



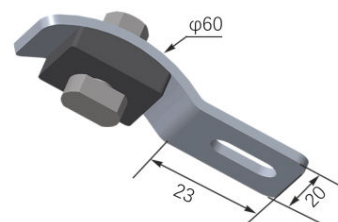
Swivel arm



Tube clamp

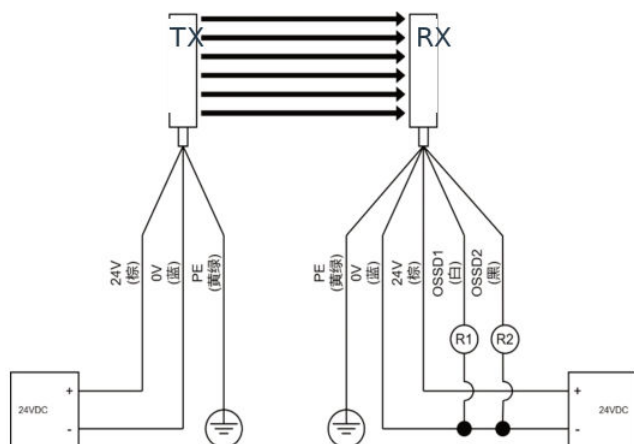


Steel support tube

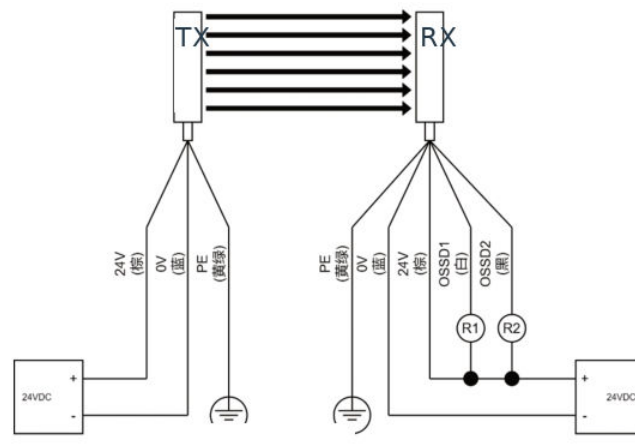


T-slot bracket

ENT wiring & certification

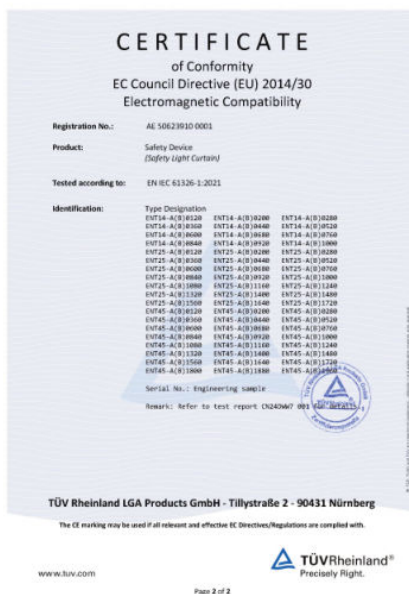


PNP wiring

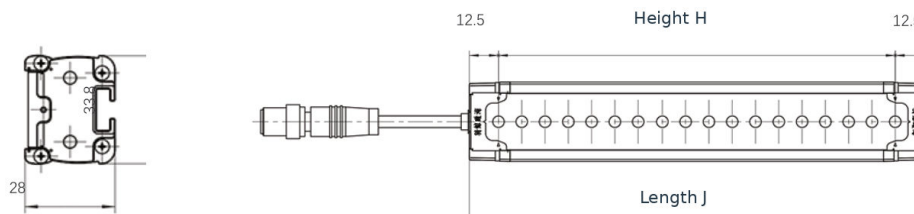


NPN wiring

TX: transmitter; RX: receiver. Wire colours: 24 V = brown; 0 V = blue; PE = shield; OSSD1 = black; OSSD2 = white. Confirm the model wiring diagram before installation.



Certificate lookup: www.tuv.com | sgs-tuev-saar.com (certificate database)



Cross-section: 33.8 x 28 mm. H = protective height; l = overall body length; 12.5 mm at each end.

ENT technical specifications

Parameter	Specification
Safety / enclosure	Type 4; Category 4; PL e; SIL 3 / IP65 (applicable configurations)
Light source	Infrared LED, 850 nm centre wavelength
Beam spacing / resolution	10 / 20 / 40 mm spacing; 14 / 25 / 45 mm resolution
Protective height	ENT14 / ENT25: 120–1960 mm; ENT45: 120–3960 mm; 80 mm increments
Sensing distance	A: 0–10 m; B: 0–16 m; C: 0–5 m
Operating / storage temperature	–10 to +55 °C, no window frost or fog / –40 to +70 °C
Operating / storage humidity	35–85% RH / 35–95% RH
Ambient light immunity	White light: 3,000 lux; incandescent: 3,000 lux; sunlight: 10,000 lux
Vibration / shock	10–55 Hz; 0.35 ±0.05 mm; 20 sweeps per X/Y/Z axis / 10 g; 16 ms; 1,000 impacts per axis
Cross-section / supply	34 × 28 mm (rounded) / 24 V DC ±20%
Operating current	Transmitter <200 mA; receiver <200 mA, no load
Response time / start-up	6.0–30.8 ms, beam-count dependent / <3 s
PNP outputs	Two outputs; load ≤100 mA; ON ≥VCC–2 V; OFF leakage ≤1 mA and residual ≤1 V, excluding cable effects
NPN outputs	Two outputs; load ≤100 mA; ON ≤2 V; OFF leakage ≤1 mA; source lists residual ≤2 V, excluding cable effects
Diagnostics / protection	Power-up and continuous self-test; diagnostic interval <10 min; diagnostic coverage ≥99%; overvoltage filtering and output short-circuit protection

Source references include EN/IEC 61496-1/-2:2020, EN/IEC 61508, EN/ISO 13849 and GB 4584. Use applicable certificates for exact editions and scope.

ENT ordering guide

Complete model example: ENT14-A0120/ZC

ENT14-A0120/ZC

Code segment	Meaning
ENT	ENT safety light curtain series
14 / 25 / 45	Detection resolution in millimetres
A / B / C	Sensing distance: 0–10 m / 0–16 m / 0–5 m
0120	Protective height: 120 mm, written as four digits
/ZC	Standard combined front/side mounting bracket

Complete standard model range

Series	Protective height	Distance classes	Models
ENT14	120–1960 mm, step 80 mm	A / B / C	72
ENT25	120–1960 mm, step 80 mm	A / B / C	72
ENT45	120–3960 mm, step 80 mm	A / B / C	147

The following four pages list all 291 standard model codes with /ZC mounting. Other mounting arrangements are shown on pages 16–17. A complete model without an individual transmitter/receiver identifier denotes a transmitter/receiver pair.

Cable accessory	Model
Single-ended cable, 3 m / 5 m	ENT-YCX-3M / ENT-YCX-5M
Double-ended extension, 5 m / 10 m	ENT-SDX-5M / ENT-SDX-10M

ENT14 standard models

14 mm resolution | Default mounting: /ZC | Protective height in mm

Height	A / 0-10 m	B / 0-16 m	C / 0-5 m
120	ENT14-A0120/ZC	ENT14-B0120/ZC	ENT14-C0120/ZC
200	ENT14-A0200/ZC	ENT14-B0200/ZC	ENT14-C0200/ZC
280	ENT14-A0280/ZC	ENT14-B0280/ZC	ENT14-C0280/ZC
360	ENT14-A0360/ZC	ENT14-B0360/ZC	ENT14-C0360/ZC
440	ENT14-A0440/ZC	ENT14-B0440/ZC	ENT14-C0440/ZC
520	ENT14-A0520/ZC	ENT14-B0520/ZC	ENT14-C0520/ZC
600	ENT14-A0600/ZC	ENT14-B0600/ZC	ENT14-C0600/ZC
680	ENT14-A0680/ZC	ENT14-B0680/ZC	ENT14-C0680/ZC
760	ENT14-A0760/ZC	ENT14-B0760/ZC	ENT14-C0760/ZC
840	ENT14-A0840/ZC	ENT14-B0840/ZC	ENT14-C0840/ZC
920	ENT14-A0920/ZC	ENT14-B0920/ZC	ENT14-C0920/ZC
1000	ENT14-A1000/ZC	ENT14-B1000/ZC	ENT14-C1000/ZC
1080	ENT14-A1080/ZC	ENT14-B1080/ZC	ENT14-C1080/ZC
1160	ENT14-A1160/ZC	ENT14-B1160/ZC	ENT14-C1160/ZC
1240	ENT14-A1240/ZC	ENT14-B1240/ZC	ENT14-C1240/ZC
1320	ENT14-A1320/ZC	ENT14-B1320/ZC	ENT14-C1320/ZC
1400	ENT14-A1400/ZC	ENT14-B1400/ZC	ENT14-C1400/ZC
1480	ENT14-A1480/ZC	ENT14-B1480/ZC	ENT14-C1480/ZC
1560	ENT14-A1560/ZC	ENT14-B1560/ZC	ENT14-C1560/ZC
1640	ENT14-A1640/ZC	ENT14-B1640/ZC	ENT14-C1640/ZC
1720	ENT14-A1720/ZC	ENT14-B1720/ZC	ENT14-C1720/ZC
1800	ENT14-A1800/ZC	ENT14-B1800/ZC	ENT14-C1800/ZC
1880	ENT14-A1880/ZC	ENT14-B1880/ZC	ENT14-C1880/ZC
1960	ENT14-A1960/ZC	ENT14-B1960/ZC	ENT14-C1960/ZC

24 protective heights × 3 distance classes = 72 complete models on this page.

ENT25 standard models

25 mm resolution | Default mounting: /ZC | Protective height in mm

Height	A / 0-10 m	B / 0-16 m	C / 0-5 m
120	ENT25-A0120/ZC	ENT25-B0120/ZC	ENT25-C0120/ZC
200	ENT25-A0200/ZC	ENT25-B0200/ZC	ENT25-C0200/ZC
280	ENT25-A0280/ZC	ENT25-B0280/ZC	ENT25-C0280/ZC
360	ENT25-A0360/ZC	ENT25-B0360/ZC	ENT25-C0360/ZC
440	ENT25-A0440/ZC	ENT25-B0440/ZC	ENT25-C0440/ZC
520	ENT25-A0520/ZC	ENT25-B0520/ZC	ENT25-C0520/ZC
600	ENT25-A0600/ZC	ENT25-B0600/ZC	ENT25-C0600/ZC
680	ENT25-A0680/ZC	ENT25-B0680/ZC	ENT25-C0680/ZC
760	ENT25-A0760/ZC	ENT25-B0760/ZC	ENT25-C0760/ZC
840	ENT25-A0840/ZC	ENT25-B0840/ZC	ENT25-C0840/ZC
920	ENT25-A0920/ZC	ENT25-B0920/ZC	ENT25-C0920/ZC
1000	ENT25-A1000/ZC	ENT25-B1000/ZC	ENT25-C1000/ZC
1080	ENT25-A1080/ZC	ENT25-B1080/ZC	ENT25-C1080/ZC
1160	ENT25-A1160/ZC	ENT25-B1160/ZC	ENT25-C1160/ZC
1240	ENT25-A1240/ZC	ENT25-B1240/ZC	ENT25-C1240/ZC
1320	ENT25-A1320/ZC	ENT25-B1320/ZC	ENT25-C1320/ZC
1400	ENT25-A1400/ZC	ENT25-B1400/ZC	ENT25-C1400/ZC
1480	ENT25-A1480/ZC	ENT25-B1480/ZC	ENT25-C1480/ZC
1560	ENT25-A1560/ZC	ENT25-B1560/ZC	ENT25-C1560/ZC
1640	ENT25-A1640/ZC	ENT25-B1640/ZC	ENT25-C1640/ZC
1720	ENT25-A1720/ZC	ENT25-B1720/ZC	ENT25-C1720/ZC
1800	ENT25-A1800/ZC	ENT25-B1800/ZC	ENT25-C1800/ZC
1880	ENT25-A1880/ZC	ENT25-B1880/ZC	ENT25-C1880/ZC
1960	ENT25-A1960/ZC	ENT25-B1960/ZC	ENT25-C1960/ZC

24 protective heights × 3 distance classes = 72 complete models on this page.

ENT45 standard models / 1 of 2

45 mm resolution | Default mounting: /ZC | Protective height in mm

Height	A / 0-10 m	B / 0-16 m	C / 0-5 m
120	ENT45-A0120/ZC	ENT45-B0120/ZC	ENT45-C0120/ZC
200	ENT45-A0200/ZC	ENT45-B0200/ZC	ENT45-C0200/ZC
280	ENT45-A0280/ZC	ENT45-B0280/ZC	ENT45-C0280/ZC
360	ENT45-A0360/ZC	ENT45-B0360/ZC	ENT45-C0360/ZC
440	ENT45-A0440/ZC	ENT45-B0440/ZC	ENT45-C0440/ZC
520	ENT45-A0520/ZC	ENT45-B0520/ZC	ENT45-C0520/ZC
600	ENT45-A0600/ZC	ENT45-B0600/ZC	ENT45-C0600/ZC
680	ENT45-A0680/ZC	ENT45-B0680/ZC	ENT45-C0680/ZC
760	ENT45-A0760/ZC	ENT45-B0760/ZC	ENT45-C0760/ZC
840	ENT45-A0840/ZC	ENT45-B0840/ZC	ENT45-C0840/ZC
920	ENT45-A0920/ZC	ENT45-B0920/ZC	ENT45-C0920/ZC
1000	ENT45-A1000/ZC	ENT45-B1000/ZC	ENT45-C1000/ZC
1080	ENT45-A1080/ZC	ENT45-B1080/ZC	ENT45-C1080/ZC
1160	ENT45-A1160/ZC	ENT45-B1160/ZC	ENT45-C1160/ZC
1240	ENT45-A1240/ZC	ENT45-B1240/ZC	ENT45-C1240/ZC
1320	ENT45-A1320/ZC	ENT45-B1320/ZC	ENT45-C1320/ZC
1400	ENT45-A1400/ZC	ENT45-B1400/ZC	ENT45-C1400/ZC
1480	ENT45-A1480/ZC	ENT45-B1480/ZC	ENT45-C1480/ZC
1560	ENT45-A1560/ZC	ENT45-B1560/ZC	ENT45-C1560/ZC
1640	ENT45-A1640/ZC	ENT45-B1640/ZC	ENT45-C1640/ZC
1720	ENT45-A1720/ZC	ENT45-B1720/ZC	ENT45-C1720/ZC
1800	ENT45-A1800/ZC	ENT45-B1800/ZC	ENT45-C1800/ZC
1880	ENT45-A1880/ZC	ENT45-B1880/ZC	ENT45-C1880/ZC
1960	ENT45-A1960/ZC	ENT45-B1960/ZC	ENT45-C1960/ZC
2040	ENT45-A2040/ZC	ENT45-B2040/ZC	ENT45-C2040/ZC

25 protective heights × 3 distance classes = 75 complete models on this page.

ENT45 standard models / 2 of 2

45 mm resolution | Default mounting: /ZC | Protective height in mm

Height	A / 0-10 m	B / 0-16 m	C / 0-5 m
2120	ENT45-A2120/ZC	ENT45-B2120/ZC	ENT45-C2120/ZC
2200	ENT45-A2200/ZC	ENT45-B2200/ZC	ENT45-C2200/ZC
2280	ENT45-A2280/ZC	ENT45-B2280/ZC	ENT45-C2280/ZC
2360	ENT45-A2360/ZC	ENT45-B2360/ZC	ENT45-C2360/ZC
2440	ENT45-A2440/ZC	ENT45-B2440/ZC	ENT45-C2440/ZC
2520	ENT45-A2520/ZC	ENT45-B2520/ZC	ENT45-C2520/ZC
2600	ENT45-A2600/ZC	ENT45-B2600/ZC	ENT45-C2600/ZC
2680	ENT45-A2680/ZC	ENT45-B2680/ZC	ENT45-C2680/ZC
2760	ENT45-A2760/ZC	ENT45-B2760/ZC	ENT45-C2760/ZC
2840	ENT45-A2840/ZC	ENT45-B2840/ZC	ENT45-C2840/ZC
2920	ENT45-A2920/ZC	ENT45-B2920/ZC	ENT45-C2920/ZC
3000	ENT45-A3000/ZC	ENT45-B3000/ZC	ENT45-C3000/ZC
3080	ENT45-A3080/ZC	ENT45-B3080/ZC	ENT45-C3080/ZC
3160	ENT45-A3160/ZC	ENT45-B3160/ZC	ENT45-C3160/ZC
3240	ENT45-A3240/ZC	ENT45-B3240/ZC	ENT45-C3240/ZC
3320	ENT45-A3320/ZC	ENT45-B3320/ZC	ENT45-C3320/ZC
3400	ENT45-A3400/ZC	ENT45-B3400/ZC	ENT45-C3400/ZC
3480	ENT45-A3480/ZC	ENT45-B3480/ZC	ENT45-C3480/ZC
3560	ENT45-A3560/ZC	ENT45-B3560/ZC	ENT45-C3560/ZC
3640	ENT45-A3640/ZC	ENT45-B3640/ZC	ENT45-C3640/ZC
3720	ENT45-A3720/ZC	ENT45-B3720/ZC	ENT45-C3720/ZC
3800	ENT45-A3800/ZC	ENT45-B3800/ZC	ENT45-C3800/ZC
3880	ENT45-A3880/ZC	ENT45-B3880/ZC	ENT45-C3880/ZC
3960	ENT45-A3960/ZC	ENT45-B3960/ZC	ENT45-C3960/ZC

24 protective heights × 3 distance classes = 72 complete models on this page.

SRB Safety Relay Modules

SRB-2A1B | Two normally open safety contacts and one normally closed auxiliary contact

The SRB module monitors compatible dual-channel PNP/NPN signals from safety light curtains and, where the electrical and safety architecture is appropriate, SH safety laser scanners.

- Manual or automatic reset; external muting inputs.
- Self-monitoring with lockout on channel discrepancy.
- Reverse-polarity protection and removable terminals.
- 35 mm DIN-rail mounting; clear status indicators.



Parameter	Specification
Supply / rated power	24 V DC $\pm 10\%$ / < 3 W
Response / relay pick-up / start-up	< 10 ms / < 50 ms / < 1 s
Electrical relay life	≥ 1 million operations
Safety inputs	Dual NPN or dual PNP inputs
Contacts / ratings	2 NO potential-free safety contacts + 1 NC potential-free auxiliary contact; AC-15: 5 A / 250 V; DC-13: 6 A / 24 V
Operating / storage temperature	-30 to $+50$ °C, non-condensing / -40 to $+70$ °C
Operating / storage humidity	35-85% RH / 35-95% RH
Ingress protection / dimensions	IP20 / $114.5 \times 99.5 \times 22.5$ mm
Vibration / shock	5-55 Hz; 0.35 ± 0.05 mm; 20 sweeps per X/Y/Z axis / 10 g; 16 ms; 1,000 impacts per axis
Safety levels listed in source	PL e / Category 4 (EN ISO 13849); SIL 3 (IEC 61508 / IEC 62061)

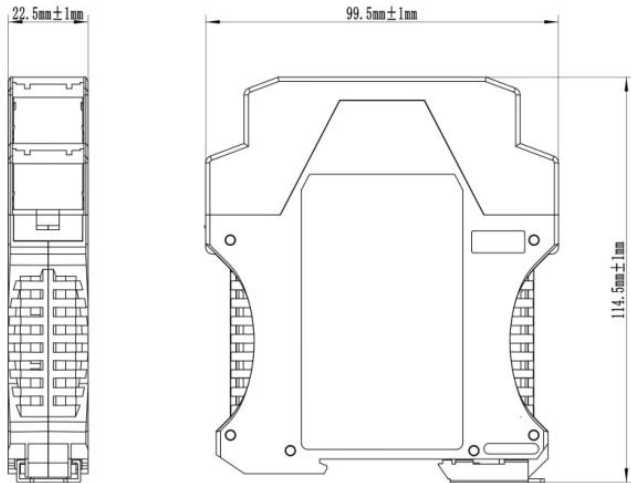
Indicators: CH1 and CH2 (green): corresponding relay energized. ERROR (red): detected fault. POWER (red): power supplied. The NPN/PNP selector must match the connected safety device.

Model code: CCH-SR, B application variant, 2A1B contact arrangement.

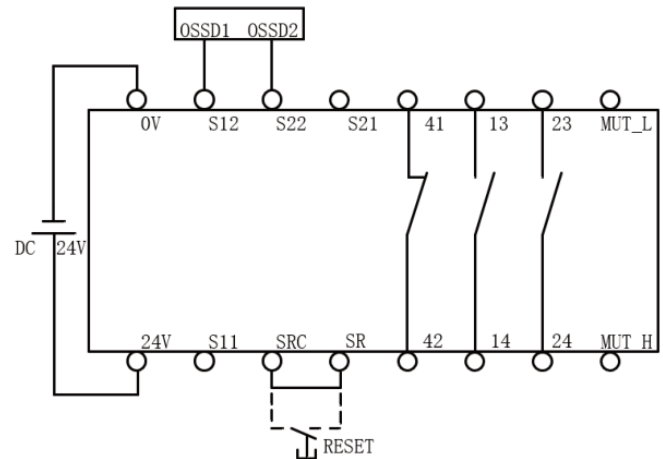
Source-listed EMC: EN 61000-4-2:2009; -3:2006+A1:2009+A2:2010; -4:2004+A1:2010; -6:2014; -8:2010. Verify revisions and scope against the applicable technical documentation.

SRB dimensions & wiring

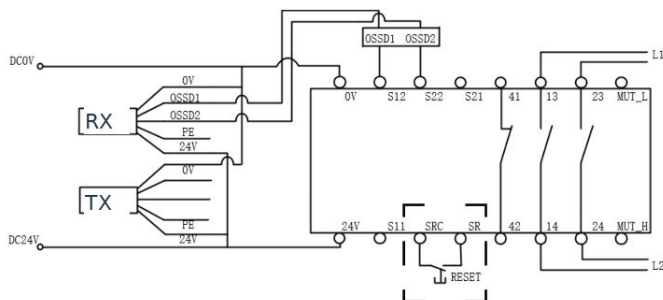
All dimensions in millimetres | Wiring illustrations reproduced from the supplied catalogue



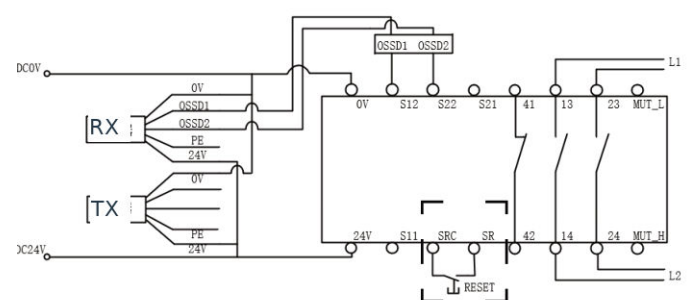
22.5 mm wide × 99.5 mm deep × 114.5 mm high



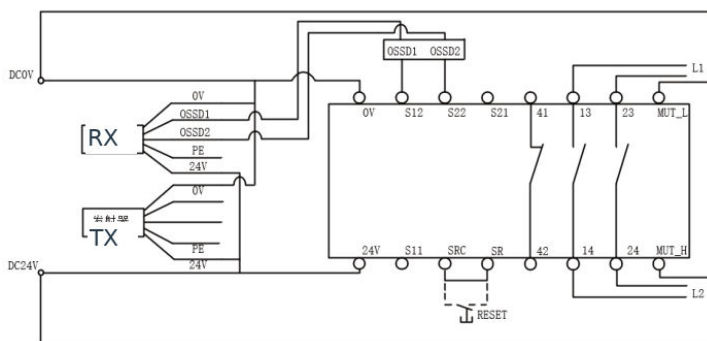
Functional block diagram



Manual reset



Automatic reset



External muting inputs

With the module powered, MUT_H = 24 V and MUT_L = 0 V place the relay in its muting state. In this state, the light-curtain signal does not control the relay output; CH1, CH2 and POWER remain illuminated.

Muting requires the appropriate external sensors and control logic for the application. ENT does not independently recognize people or material.



Sensing for industrial automation.

Product selection. Application support. Project-specific supply.



SAFETY LIGHT CURTAINS



SAFETY LASER SCANNERS



2D LiDAR

Contact us

CCH Shanghai Technology & Intelligence Co., Ltd.
International sales

IndustrialSafetySensor.com/contact-us/

Manufacturer
CCH Technology & Intelligence Co., Ltd.
Building 3, Yongxing Digital Industrial Park,
Xiaoshan District, Hangzhou, Zhejiang, China